AN ANALYSIS OF WORD PROCESSING INSTRUCTION IN SECONDARY BUSINESS EDUCATION DEPARTMENTS IN MONTANA'S PUBLIC SCHOOLS

by

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A professional paper submitted in partial fulfillment
of the requirements for the degree

of

Master of Science

in

Business Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

August 1983

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APPROVAL

of a professional paper submitted by

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ABSTRACT

The purpose of this study was to examine the status of word processing instruction in the business education curriculums of the public secondary schools in Montana during the 1982-83 school year. General information examined by the study included structure of the class, the content of word processing instruction, equipment used in word processing instruction, and instructor qualifications.

The population of this study consisted of one member of each of the 169 business education departments in the public secondary schools in Montana. The data from the returned questionnaires were analyzed as to the number responding to each question and converted to a percentage. Since every respondent did not answer each question the percentage was determined by the total number who did answer the question.

The conclusions of the study were: (1) A significant percentage of the business education departments did not offer word processing instruction, (2) Equipment cost was the major reason for not offering word processing instruction, (3) Word processing was offered primarily as a unit of instruction in another course, (4) Word processing instruction was offered primarily to juniors and seniors, (5) Typing was the major prerequisite to word processing instruction, (6) The major methodology used was placing a student on a machine at a self-paced rate, (7) Microcomputers were available to most departments who offered word processing instruction, (8) Ability to operate equipment was a primary basis for student evaluation, (9) Many instructors had no formal training in word processing instruction, (10) Offering word processing instruction has not had an impact on offering shorthand, (11) Lack of adequate equipment presented the major instructional problem, and (12) Many word processing units/courses concentrated on machine operation.

The major recommendations of this study included the following: (1) Make teachers and administrators aware of the need for word processing instruction in the business education curriculum, (2) Develop a state curriculum guide for word processing, (3) Re-evaluate teacher education programs to insure that prospective business teachers are receiving the skills and methodology necessary for teaching word processing, and (4) Develop viable inservice programs to meet the needs of current teachers.

CHAPTER I

INTRODUCTION

Since the coining of the term textverarbeitung (text processing) early in the 1960s, the concept of word processing has had a tremendous impact on the handling of communication in business. Advanced technology along with the necessity for increased efficiency and lower costs have resulted in the implementation of word processing concepts in thousands of business and governmental offices. Projections by information processing industry experts indicate that the use of word processing will continue to grow as business firms seek to increase the productivity of office workers. Robert L. Fronk of Arthur D. Little, Inc., a management consulting firm, cites "... social and economic changes, increased business complexities, and the availability of advanced technology as factors that are ... moving us toward the inevitability of office automation" (Ellis, 1982:18).

> Word processing is a systematic approach to office work. . . . Word processing is the handling or processing of words. Processing is nothing new. The ancient Egyptians engaged in word processing when they conceived and wrote primitive symbols on the walls of tombs. The great religious writers practiced word processing with quill and ink. Words have been processed for as long as people have been communicating ideas. Then why all the fuss about word processing? Simply because word processing is a system which involves the coordination of people, procedures, and equipment (Kruk, 1977:3).

This systems approach, new procedures, rapid changes in office technology, the changing nature of office jobs, growing opportunities for advancement, and new careers related to information processing have brought about the need for new basic skills and knowledges in today's automated offices (Holley, 1982:22).

> As automation takes place in dicatation, typing, micrographics, reprographics, and record retrieval, schools will be required to prepare people who can function in this new environment, including individuals to operate the machinery, and managers and executives who will be charged with the responsibility of planning effective use of the equipment (Kruk, 1977:1).

The use of automated systems has far surpassed the prediction for the early 1980s. The International Data Corporation indicated that by 1985 the installed base of word processing keyboards will expand fivefold to 2.3 million and another 2.5 million low-end electronic typewriters will be installed (Wagoner, 1982:223).

"As industry continues to automate the office, schools will obviously be required to prepare people who can function within this new environment" (Kruk, 1977:18). The 1979 International Information Word Processing Association's Human Resources and Word Processing Study shows that 28 percent of the respondents in its national sample cited the limited supply of skilled, experienced word processing personnel as a major problem (Wallace, 1983:8).

Business educators must recognize that word processing is an employment area which will continue to grow in demand and develop instructional programs which will provide students with the word processing knowledges, skills, and competencies necessary for the present and future office.

The influence of word processing has created new directions for business education in the public secondary schools. The general opinion of experts is that word processing must be a part of the business education curriculum. A Position Paper by the Policies Commission for Business and Economic Education states that a ". . . major challenge to business education is the development of a curriculum to reflect the rapidly changing technology and its impact on society" (Journal of Business Education, Feb. 1983:191).

The influence of word processing has created new directions for business education in the public secondary schools.

> The basic challenge to business educators is accepting WP was a viable part of the business world and a necessary part of the business curriculum. WP is a change from the traditional and may require revising teaching methods and attitudes. However, WP is here to stay; and anyone, regardless of the size of the school, can and should teach the concepts (Turner, 1981:24).

The need for the inclusion of word processing instruction in the business curriculum of the public secondary school has been established.

The purpose of a word processing program should be to provide students with a broad background necessary for the changing office. This purpose requires that more than machine training be included in education for word processing. Some of the major effects of this concept have to do with management techniques, changes in jobs and careers, and new office procedures and systems. Many of the instructional objectives can be added to existing business classes and many of the objectives can be accomplished without expensive equipment (Anderson; Kusek, 1977:63).

Three basic strategies have been used in teaching word processing: (1) equipment training only, (2) theory and concepts, and (3) a combination of theory and equipment (Turner, 1981:24). Obviously the combination of theory and equipment would be the best preparation for the automated office, but this approach is not always possible because of a lack of equipment. In a study by Ivan Wallace, the majority (78.9 percent) of the schools reported that equipment was not adequate to meet their individual program objectives (Wallace, 1983:10).

Word processing can be integrated into existing courses even though the school system may not have word processing equipment. The basics of word processing have always been taught by business education teachers; however, it is now time to integrate more specifics regarding word processing skills, terminology, and concepts (Pibal, 1980:11).

The word processing courses that have been developed in public secondary schools show a lack of consistency in what units are being taught and at what level the skills are

being taught. After studying 38 schools in the United States, Anderson and Kusek made the following comments:

> The wide variety of course sequences and course titles is due to the newness of word processing, differences in these schools, and a lack of word processing curriculum guidelines. In the future there will be a need for more consistency in order to facilitate what is being taught in word processing.
>
> Examination of the 38 word processing education programs found no common sequence of courses. Furthermore, there was no common order in which skills and concepts were introduced (Anderson; Kusek, 1977:61).

Statement of the Problem

This study was designed to examine word processing instruction in the business education departments of the public high schools in Montana during the 1982-83 school year. Specifically the study investigated the following questions:

1. Was word processing offered in the business education department, and if so, was it in the form of a separate course and/or a unit in another course.
2. For what reason(s) was word processing instruction not offered in the business education curriculum.
3. What was the content of the word processing courses and/or units offered by the business education department.
4. What equipment was available to word processing students.
5. What were the instructors' qualifications for teaching word processing.

Need for the Study

The concensus of most authors writing in current educational literature is that word processing should be included in the business education curriculum of secondary schools. Areas of emphasis and methods of organization are now areas of concern.

Currently there are no Montana state guidelines for curriculum in the area of word processing. Many public schools in Montana do not offer word processing instruction, and many of the schools that do offer word processing instruction are in the process of developing their programs.

Research to determine the status of word processing instruction in business education curriculums of Montana is needed so that administrators and faculty may make intelligent decisions concerning word processing instruction in their curriculums.

Also, higher education institutions in the state of Montana involved in teacher preparation need information in order to update and develop new courses and methods which will prepare the prospective business education teacher.

The Montana Office of Public Instruction could utilize this study to develop a curriculum guide and to advise school officials regarding word processing equipment and course content.

Finally, this study could be used as a basis for further study in word processing instruction, curriculum, and equipment.

Limitations of the Study

This study considered the status of word processing instruction as it applied only to business education curriculums in the public secondary schools of Montana. No attempt was made to survey other areas of the high school curriculum where word processing may be taught.

This study was further limited to the responses of the individuals who returned a completed questionnaire, and the results were applicable only to the population surveyed.

Definition of Terms

1. *Word processing*–A method of producing written communication at a top speed, with the greatest accuracy, the least effort and the lowest possible cost–through the combined use of proper procedures, automated equipment, and trained personnel.
2. *Word processing course*–A course which has as its objective the understanding of word processing concepts and the development of word processing skills, with or without the use of automated equipment.
3. *Word processing unit of instruction*–A unit of instruction in word processing which is incorporated in another business education course with or without the use of automated equipment.
4. *Business education instructor*–An instructor who is qualified by the Montana Office of Public Instruction as qualified to teach business education subjects at the high school level.
5. *Business education curriculum*–An organized sequence of courses in business education which leads to competence in business and qualifies the student for high school graduation.

Organization of the Study

This research project is organized into five chapters. Chapter I is the statement of the problem, the need for the study, the limitations of the study, and the definition of terms.

Chapter II includes a review of literature and has been divided into four sections. Section I is devoted to relevant research findings related to employment requirements and opportunities in word processing. Section II explores related literature concerning the determination of skills and concepts necessary to work effectively in a word processing

system. Section III emphasizes literature related to word processing curriculum models, types of courses, and course content. Section IV explores literature related to the future of word processing and its implications for the business education curriculum.

Chapter III is a review of the procedures used in completing this project. This chapter covers the areas of population description, construction of survey form, administration of survey instrument, and analysis of data.

Chapter IV contains the results of the study. Findings of the questionnaire are presented and analyzed.

Chapter V summarizes the study. Conclusions and recommendations for this research project are also included in this chapter.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

A review of literature related to word processing education at the secondary level from 1966 to the present was made by completing a search of the ERIC database using the DIALOG Information Retrieval Service. Literature relevant to the writer's study was examined and some of the more significant findings and conclusions are presented in this chapter. This chapter is divided into four sections.

Section I is devoted to relevant research findings related to employment requirements and opportunities in word processing.

Section II explores related literature concerning the determination of skills and concepts necessary to work effectively in a word processing system.

Section III emphasizes literature related to word processing curriculum models, types of courses, and course content.

Section IV explores literature related to the future of word processing and its implication for the business education curriculum.

Section I

Section I deals with research findings regarding the current status and employment requirements in word processing employment.

Claffey Study (1979)

In 1979 George F. Claffey conducted a study of the organization, operation, and use of word processing centers in selected firms in New England. The purpose of the study was to provide data to be of use to educators and business people interested in the subject of word processing.

An in-person interview-observation technique was used to gather data. Interview-observation guides were prepared. Sources of the data for the case study were 15 managers of word processing centers, 14 word processing supervisors, 108 operator personnel, 63 administrative secretaries, and 133 word processing center users.

Claffey concluded the following:

Supervisory Personnel

1. The word processing function was intended to provide quality typing of handwritten and dictated material on a timely basis. Considerable variety existed in the organization, purpose, and operation of word processing centers.
2. Ten of 14 word processing center supervisors had had experience as administrative assistants or secretaries. Only four of the supervisors recommended formal postsecondary education programs for someone in their position.
3. Ability to get along with people was the principal quality required of someone in a supervisory position.
4. Evaluation of operators was based on efficiency, productivity, effectiveness or competency, and initiative.

Nonsupervisory Personnel

1. Fewer than half of the operator personnel indicated that they had post-secondary training of any type.
2. Only two individuals thought that training on the text-editing equipment should be taught in a school setting.
3. Nearly half of the word processing personnel felt that the ability to get along with others was important for someone in their position.

Administrative Assistants

1. Nineteen of 63 administrative assistants specifically recommended post-secondary training for someone in their position.
2. More than two-thirds of the administrative assistants believed that the ability to get along with others was important in their positions.

Users of Word Processing Centers

1. Nearly all companies provided users with general information for operating dictating equipment. Training sessions for the majority of individuals were directed toward mechanical functions or toward following the proper procedure for providing information for operators.
2. Nearly a third of the users did not provide all the punctuation and some relied solely on the operators to punctuate their work. More than half of the users stated that they wanted the operators to make changes in punctuation or spelling when it was incorrect.

Delta Pi Epsilon National Study of Word Processing Installations (Holley, 1982)

The research study published by Delta Pi Epsilon provided comprehensive data concerning current practices in word processing installations in more than 300 organizations throughout the United States. The responses to this survey had the largest representation from finance, insurance, and real estate; manufacturing; and government sectors.

The following are some significant findings on the current status and employment practices in word processing installations.

Word Processing Supervisors

1. Although recent literature indicates that many organizations are moving away from the centralized approach to word processing, 62 percent of the respondents in this study reported a centralized form of organization.
2. More than 80 percent of the supervisors reported that secretaries were typing correspondence (repetitive, revised, and original), narrative reports and manuscripts of varying lengths, and statistical work.
3. More than 90 percent of the supervisors reported that secretaries received handwritten input, while roughly 70 percent cited machine dictation input. Typewritten input with light and heavy revision was reported by more than 75 percent of the supervisors.
4. More than 90 percent of the secretaries reported that word processing secretaries were used as "back-up" administrative support secretaries when needed.
5. About half of the supervisors indicated a need for training in information processing equipment and systems.
6. The most frequently cited major weakness of word processing secretaries, according to supervisors, was inadequate grammar skills. Specific weaknesses identified were spelling, punctuation, and proofreading.

Word Processing Secretaries

1. More than 90 percent of the secretaries had graduated from high school, 11 percent had attended a postsecondary institution, and an additional 10 percent had attended a four-year institution.
2. Seventy-two percent of the working time of word processing secretaries was spent in keyboarding. Major activities reported were typing letters, memos, and short documents of ten or fewer pages—very often from handwritten copy. Nearly three-fourths of the secretaries proofread their own documents.
3. Among the other duties of word processing secretaries, reported by more than half of the respondents, were organizing and maintaining filing systems for stored or recorded data, logging work in and out, and maintaining and updating stored data bases.
4. The respondents in this survey also emphasized the need for skill in using a dictionary and other reference manuals; another major responsibility noted by 85 percent of the respondents was the ability to follow directions.

Merrier Study (1980-81)

In 1980-81 Patricia A. Merrier conducted a survey to determine the testing procedures used by word processing operations of business/organizations located in the Midwest; to determine the relative importance placed on seven criteria as prerequisites for employment in word processing; and to determine if the pre-employment tests which are given to applicants addressed those items which word processing practitioners felt were important to success in word processing.

Questionnaires were mailed in the fall of 1980 to 438 members of Word Processing Society, Inc., and Word Processing Association of Minnesota. A second mailing was made in February 1981. A total of 307 responses (70 percent) was received; 274 (62.5 percent) were usable.

Merrier concluded the following:

Testing Procedures

1. Typewriting timings and grammar tests were the two most frequently administered tests.
2. These were followed, in rank order, by tests for clerical aptitude, rough draft typewriting, proofreading, machine transcription, mathematics, and general information about word processing.

Importance of Selected Criteria

1. When ratings of all organizations were combined, grammar was identified as the skill which was most important.
2. Grammar was followed in rank order by typewriting/keyboarding, proofreading, knowledge of word processing concepts, machine transcription, the ability to use reference materials, and mathematics.

Comparison or Perceived Importance Ratings with Testing Procedures

1. The results revealed a statistically significant relationship in skill importance rating and test administration procedures in only two areas—machine transcription and typewriting/keyboarding.

Section II

Section II explores related research directed toward the determination of skills and concepts necessary to work effectively in a word processing center.

Claffey Study (1979)

George F. Claffey studied the organization, operation, and use of word processing centers in 15 selected firms in New England.

Some implications of Claffey's study were of importance to business educators. He concluded that English grammar skills and typewriting skills are essential and that business educators need to redouble their efforts in promoting a sound fundamental education in basic English grammar and spelling for all students. Also, knowledge of the typewriter keyboard or some keypad will be required for almost everyone involved in office operations of the future.

In addition, every facet of Claffey's study pointed to the need to offer interpersonal communication (human relations) skills. The ability to cooperate and interact with others is essential for nearly all positions in business.

Delta Pi Epsilon National Study of Word Processing Installations (Holley, 1982)

The research study published by Delta Pi Epsilon provided data concerning current practices in word processing installations in more than 300 organizations throughout the United States. The survey instrument was designed to determine competencies needed by the entry-level secretaries and where the word processing secretaries believed those competencies should be learned.

Competency in listening and in following directions was cited by 93 percent of the respondents. Other competencies cited included ability to type (89 percent), keyboarding documents with satisfactory turnaround time (83 percent), proofreading typed documents (80 percent), typing from typed copy (77 percent), and typing from rough draft copy (74 percent)

The secretaries believed the following competencies should be learned in school:

Spell, punctuate, and capitalize correctly.

Construct proper forms of sentences.

Demonstrate good vocabulary.

Alphabetize and use the dictionary and secretarial manuals.

Keyboard documents with satisfactory turnaround time.

Proofread typed documents.

Type letters and memos.

Type from typed copy and from typed proofread copy.

Secretaries believed that the following competencies should be learned on the job:

Ability to order the preparation of documents.

Ability to handle confidential correspondence and data.

Ability to organize and maintain a file for stored and recorded data.

The largest percentage of the respondents indicated that the following competencies were responsibilities shared by both schools and employing firms:

Typing from handwritten notes.

Operation of dictating and transcribing equipment.

Reading and interpreting business documents.

Following directions.

Keyboarding and revising information on magnetic media.

Setting priorities on documents and tasks.

The competencies named by word processing secretaries as being a joint responsibility of schools and businesses clearly indicate the need for more dialogue between schools and businesses.

Merrier Study (1980-81)

Merrier surveyed word processing practitioners who worked in varied employment settings. One conclusion of the study was that testing was used as a pre-employment procedure for word processing and recommended that business educators familiarize themselves and their students with testing procedures used in word processing operations.

Merrier also recommended that business educators should emphasize or continue to emphasize grammar in their classes and that business educators should provide their students with opportunities to measure their skill on five-minute timed writings.

One finding of Merrier's study was that word processing work experience and postsecondary school training in word processing were desirable qualifications for employment in word processing. From this finding, three recommendations were made: (1) The scope of word processing courses/programs at postsecondary schools should exceed that offered at secondary schools, (2) business educators should continue their efforts at

determining what should be taught at which levels, and (3) students should be encouraged to participate in office occupations internship to obtain work processing work experience.

Another finding of Merrier's study was the relative importance of machine transcription as a skill necessary for success in word processing. Because of this, business educators should acquaint students with the concepts of word processing and the way in which machine transcription fits into the overall concept. Emphasis should be placed on transcription as a process involving keyboarding, grammar, and proofreading.

In his article, "What Business Educators Should Know About Word Processing," B. Scot Ober states the following implications regarding business education and word processing instruction:

1. Less emphasis should be placed on shorthand speed and more emphasis on transcription ability. Likewise, less emphasis should be placed on typewriting speed and more emphasis on technical and production typing.
2. Students should be exposed to machine transcription.
3. An increased amount of time in a student's capstone business class should be spent on editing and abstracting copy, composing, and handling classified and rush projects.
4. The student should develop ability to work without supervision and under pressure, should develop good judgement and initiative, and should develop the ability to make decisions and follow through (Ober, 1972:32).

Carolyn Crawford Dolecheck stated that business educators must know what skills and concepts students must possess in order to work effectively in word processing systems and then strive to develop a program for teaching these skills. She suggested the following as a beginning point for educators as they try to determine what skills and knowledge deserve priority in their efforts to teach word processing.

1. All business students should possess a basic vocabulary and understanding of the word processing concept.
2. All students should be aware of career opportunities in word processing.
3. Basic communication skills such as speaking, listening, and using correct grammar are a necessity.
4. Opportunities to gain experience in machine transcription must be available.
5. Speed as well as grammar skills should be emphasized in typing.
6. Internships to provide work experience in word processing will increase employment opportunities for students.

7. Business teacher education programs should be designed so that future business education teachers can learn to teach word processing concepts and skills (Dolecheck, 1973:18).

Phyllis Morrison in her article, "Two Weeks in a Word Processing Center," reported that during the summer of 1980 twenty business teachers worked for two consecutive weeks as employees of Westinghouse Electric Corporation in the word processing center. As a result of this experience, business educators outlined the recommendations they would make to their schools regarding word processing instruction, and the word processing managers made recommendations for all business teachers concerned with word processing.

One point upon which all business teachers agreed was that they must develop a positive attitude toward word processing. Educators should integrate word processing concepts, terminology, and editing skills into the business curriculum. Provision should be made for practice in working as a member of a team, making decisions, and setting priorities. Career paths should be stressed and visits to word processing centers should be arranged so that students will know where the jobs are, what types of equipment are being used, and what type of work is done in a word processing center.

Managers made the following recommendations to business educators:

1. Keep up to date on grammar rules and spelling. Every instructor must be an English teacher.
2. Instruct students in typing numbers by touch.
3. Time production work so students learn to manage time.
4. Emphasize editing and proofreading skills.
5. Provide students with opportunities to work as a team; yet, encourage them to work without supervision.
6. Train students to be flexible.
7. Teach specialized word processing vocabulary.
8. Discuss the various jobs in word processing such as trainee, proofreader, word processor, coordinator, manager of a word processing center, and managers of administrative services.
9. Discuss human qualities needed in word processing.
10. Discuss work procedures in word processing.
11. Recruit males for word processing (Morrison, 1981:19).

Section III

Section III emphasizes literature related to word processing curriculum models, types of courses, and course content for secondary education.

Word processing programs can be implemented in a variety of ways. The most appropriate model will depend upon the objectives to be achieved, the resources available, and the philosophy of the instructional staff. The three approaches to education for word processing include the one course model, the integrated model, and the complete curriculum model.

One Course Model

The one course model involves the creation of a new course which would cover some or all of the following skills and knowledges:

I. Introduction to Word Processing
   - A. Definition of the concept
   - B. Five phases of word processing
   - C. Types of jobs and skill requirements
   - D. Career opportunities

II. Machine Transcription Techniques
   - A. Operation of the transcribing machine
   - B. Language arts review or remedial work
   - C. Machine transcription techniques
   - D. Previewing material by listening to the item
   - E. Rough drafting
   - F. First-time final practice
   - G. Production skill development

III. Magnetic Keyboarding
   - A. Mastery of basic record and playback operations
   - B. Familiarity with more advanced special operations
   - C. Application problems

IV. Word Processing Simulation
   - A. Planning and organizing work area and work load
   - B. Teamwork
   - C. Decision-making
   - D. Initiative
   - E. Time management
   - F. Interpersonal relations
   - G. Integration of concepts

H. Transcription skills
I. Keyboarding

V. Word Processing Management/Supervision
A. Introduction to how offices have changed
B. Systems approach
C. Cost control
D. Office organization
E. Future of word processing (Anderson, Marcia A.; Kusek, Robert W., 1977:65)

Integrated Model

The integrated model includes emphasis on word processing in courses which exist in the business education curriculum. This can be done even if school systems may not have funds for word processing equipment. The basics have always been taught by business educators. They need now to integrate more specifics regarding word skills, terminology, and concepts (Pebal, 1980:11). Listed below are business education courses and the word processing skills, terminology, and concepts which may be incorporated into them as described by three different researchers.

I. Typewriting
A. Keyboarding skills
B. Word processing terminology and equipment systems
C. Oral and written instructions implemented into written output
D. Format problems
E. Proofreading
F. Composition at typewriter
G. Timed production
H. Setting priorities
I. Reference materials
J. Language skills
K. Backspace and strikeover drills (Clack, 1982:7-9, 14)

II. Shorthand
A. Language arts
B. Editing
C. Proofreading
D. Formatting
E. Following directions
F. Decision-making
G. Composing letters
H. Using reference materials
I. Dictation skills
J. Work measurement
K. Word processing terminology and procedures (Morrison, 1983:6-7)

III. Office Procedures
   A. Concept of word processing
   B. Use of automated typewriters as "copying" machines
   C. Reprographics
   D. Office file
   E. Decision-making, time management, work organization, and teamwork
   F. Personal interaction skills (Anderson, Marcia A.; Kusek, Robert W., 1977:66)

IV. Office Management
   A. Traditional offices versus offices with word processing
   B. Methods of organizing word processing
   C. Implementation of word processing
   D. Phases of word processes
   E. Measurement and control techniques
   F. Personnel considerations (Anderson, Marcia A.; Kusek, Robert W., 1977:66)

V. Business Correspondence/Communications
   A. Language arts skills
   B. Business letter and report writing
   C. Verbal communication
   D. Outlines
   E. Dictation equipment
   F. Correspondence–drafting and revising (Anderson, Marcia A.; Kusek, Robert W., 1977:66)

Word processing concepts and terminology can also be integrated as a unit in any other business course.

Complete Curriculum Model

The complete curriculum model involves the creation of a series of courses in areas such as magnetic keyboarding, machine transcription, administrative support services, word processing, word processing model office simulation, and word processing cooperative office experience.

The following content outlines are suggested for these courses:

I. Magnetic Keyboarding
   A. Introduction to keyboarding as one of the five phases of word processing
   B. Basic record, playback, adjust and revision operations
   C. Applications, record, playback, adjust, and revise
   D. Special operations
   E. Special applications
   F. Specialty applications: medical, legal, technical, etc.

II. Machine Transcription
  A. Introduction to machine transcription in word processing
  B. Machine operators
  C. Language skills review or remediation
  D. Special techniques: previewing by listening to or rough drafting item, and first-time final transcription
  E. Specialty forms and terminology
  F. Realistic productivity standards comparable to those established for shorthand transcription courses

III. Administrative Support Services
  A. Combine data processing/computer developments and procedures with areas of office procedures:
    1. telecommunications
    2. mail systems and procedures
    3. filing and records management
    4. reprographics
    5. work station organization
    6. time management
    7. setting priorities
    8. making decisions
    9. personal interaction
    10. teamwork
    11. research techniques and use of references
    12. analyzing and reporting data
    13. managing calendars
    14. arranging travel
    15. originating correspondence
    16. arranging meetings
    17. career planning and job getting
  B. Emphasize people and procedures, rather than equipment

IV. Word Processing
  A. Concepts and careers
    1. definition and description of the concept
    2. the five phases of word processing
    3. types of jobs and skill requirements
    4. career opportunities
  B. Supervision
    1. work flow techniques
    2. procedure writing
    3. planning and conducting training
    4. psychology
    5. management
    6. budgeting
  C. Systems and management
    1. comparison of traditional offices and offices with word processing
    2. ways in which word processing is organized
    3. determining the feasibility of word processing
    4. how to implement word processing
    5. the five phases of word processing
    6. job design/enrichment/enlargement

7. personnel considerations
8. future of word processing

V. Word Processing Model Office Simulation
   A. Content similar to all simulations. Integrate skills developed in other courses, especially teamwork, decision-making, setting priorities, managing time, and organizing work stations
   B. Alternatives
      1. develop a simulation based on the state curriculum guide
      2. adapt simulations such as Lester Hill or Apex
      3. create a series of in-baskets for use in a mini-simulation

VI. Word Processing Cooperative Office Experience
   A. Content similar to existing co-op programs
   B. Contacts and relationships with personnel in offices with word processing must be established and maintained (Anderson, Marcia A.; Kusek, Robert W., 1977:67-68)

> Traditionally, three basic strategies have been used in teaching word processing: (1) equipment training only, (2) theory and concepts, (3) combination of theory and equipment. Obviously, the third approach is the one that provides the ideal preparation for the electronic office (Turner, 1981:24).

Much of the literature contends that word processing has always been at the heart of business education but that advanced technology has established a need for more emphasis on some of these competencies, knowledges, and attitudes. According to Jeanne Holley there is a need for more emphasis on the following skills and competencies:

1. Language arts
2. Proofreading
3. Figure/symbol typing
4. Formatting
5. Typing from longhand copy with revisions and from proofread typed copy
6. Speed and control on timed production
7. Standardized procedures and formats
8. Word processing terminology
9. Using reference materials
10. Listening to and following directions
11. Ability to think, make decisions, set priorities, meet deadlines, accept responsibilities
12. Machine transcription skills
13. Machine dictation skills
14. Ability to compose, edit, and revise documents
15. Teamwork and interpersonal relations
16. Time management skills
17. Managerial and supervisory techniques
18. Importance of work ethic (Holley, 1982:33)

Holley also indicated that the emphasis on word processing will result in a decreased emphasis in the following traditional business activities:

1. Straight copy timed writing
2. Learning many letter styles
3. Typing from correctly punctuated copy with explicit instructions
4. Complex tabulation problems
5. Spirit, stencil, and offset duplication
6. Addressing envelopes and cards
7. Manuscripts and manuscript style
8. Carbon copies (Holley, 1982:23)

Section IV

Section IV explores literature related to the future of word processing and its effect on the business education curriculum.

Carol Yacht, in the article, "The Office of the Future, Today," states that information workers will form the matrix of the future office states that in many ways the office of the future already exists. Yacht speculates that the future office will have the following effects on the business education curriculum:

1. Typing will be needed and should be taught on machines used in the real world. Eventually there will be an overlapping of data and word processing.
2. Symbolic shorthand systems will disappear and alphabetic shorthand will become increasingly dominant. Machine shorthand might become dominant because of its tie-in to computer transcription.
3. Business English and communications will supersede both typing and shorthand as the focus of business education.
4. Dictaphone dictation and transcription will be another emphasis in the business education curriculum.
5. Business machines will still be taught.
6. Word/data/information processing concepts courses will be taught (Yacht, 1981:18-19).

The Delta Pi Epsilon National Study of Word Processing Installations provides information which can be helpful to business educators planning for the future. Likely trends and future developments in word processing and how these might affect education were expressed by 13 well-known industry experts.

Changes in the Office

All experts agreed that there will be greater interaction between word processing and data processing. Some indicated that the two will merge into a single information processing discipline.

Software will receive considerable emphasis in the office systems market in the next five to ten years. Most believed that training people to use available technology would be a major problem.

Changes in Employee Opportunities and Skill Requirements

Generally the experts agreed that jobs of the future are likely to require individuals with even higher level skills.

Amy Wohl stated, "Higher-level, judgmental jobs, requiring analysis, intelligence, and judgment (and, therefore, additional education) will become available" (Wagoner, 1982: 222).

Another comment of interest to educators was, "All students should be learning to use typewriters as easily as older people were taught handwriting" (Wagoner, 1982:222).

Changes in Objectives and Goals of Word Processing

> Emphasis will be increasingly placed on effectiveness rather than efficiency—automation rather than mechanization. More emphasis will be placed on the management/support team as opposed to the boss/secretary relationship.... The aim is towards total information management....
>
> Word processing will cease to be a sub-system and become an integrated part of the total system.
>
> The goals and objectives of word processing in the office of 1985 should be far less paper oriented; and word processing specialists should become more conversant with the data processing and systems terminology, equipment, and people (Wagoner, 1982:222).

Changes in Technology

Laser printing, voice recognition, teleconferencing, and executive work stations will generally be available.

Productivity

There will be far more emphasis on the need for improvement of management productivity through more timely and better decision making.

Secretaries will be of a paraprofessional nature, truly assisting the manager. To function at this level, secretaries will need a broad educational background.

General Outlook for the Office

The future office will show restructured human relationships and roles. Increased numbers of office workers will perform their work at home.

Role of Education

To summarize the role of education in preparation for the office of the future, as revealed in this review of literature, the following suggestions were made:

1. Business departments need to stress English skills
2. Keyboarding should be taught to all students
3. Programs preparing people for office positions should have a strong focus on the relationship between word processing and data processing.
4. Secretarial programs should prepare graduates to interface with technology and to assume more responsibility in assisting management
5. Close contact with business is essential to keep up to date with the changes taking place.

Summary

This chapter presented the findings of literature related to word processing and its implications for the public secondary schools. The chapter was divided into four sections.

Section I was devoted to relevant research findings related to employment requirements and opportunities in word processing.

The findings indicated that the majority of word processing personnel in the firms surveyed had had no training beyond the secondary level. According to these employees, the ability to get along with people was the most important quality for job success.

Typewriting timings and grammar tests were the two most frequently administered tests for employment in word processing positions.

Keyboarding from both handwritten and dictated input was the major activity of word processing secretaries.

The most frequently cited major weakness of word processing secretaries was inadequate grammar skills.

Section II explored related literature concerning the determination of skills and concepts necessary to work effectively in a word processing system.

Most writers agreed that English grammar skills, typewriting skills, competency in listening to and following directions, human relations skills, proofreading skills, and machine transcription skills were essential to work effectively in a word processing system. Work experience was mentioned as a desirable qualification for employment, and many respondents felt that businesses and schools shared the responsibility for the development of some of the competencies necessary for word processing.

Section III emphasized literature related to word processing curriculum models, types of courses, and course content.

Most educators agreed that many of the concepts of word processing instruction have always been a part of business education but that advanced technology demands a change in emphasis. There is agreement that word processing should be taught whether it is a separate course, integrated into the existing curriculum, or as a complete curriculum approach.

Section IV explored literature related to the future of word processing and its implications for the business education curriculum.

Experts agreed that the role of word processing will become more important and will perhaps become integrated with data processing. The role of the secretary will evolve into that of a managerial secretary.

Business departments need to stress English skills, teach keyboarding to all students, focus on the relationship between data processing and word processing, prepare students to assume more responsibility in assisting management, and maintain close contact with business to keep up to date with changes taking place.

CHAPTER III

PROCEDURES

The purpose of this study was to determine the status of word processing instruction in the business education department curriculums of the public secondary schools in Montana during the 1982-83 school year. To accomplish this objective, a survey was conducted of the business education departments in the public secondary schools in Montana. The study was designed to examine general information pertaining to word processing instruction, equipment, course content, and teacher qualifications. The purpose of this chapter was to describe the procedures followed in completing the study.

Population Description

The population of this study consisted of one member from each business education department in the public secondary schools of Montana. The 1982-83 Montana Business and Office Education Personnel list was obtained from the Office of Public Instruction, Helena, Montana. Since no department chairmen were designated on this list, a name was randomly selected when more than one instructor was listed for a school. The cover letter accompanying the questionnaire requested that the questionnaire be given to the instructor most involved with word processing instruction if that person had not received the questionnaire. A total of 169 business education department members were survey.

Construction of Survey Form

A questionnaire (Appendix) was constructed based on a review of related literature which identified elements considered important to be included in the survey.

The questionnaire was submitted to Dr. Daniel Hertz, Montana State University, and, as a result of his suggestions, changes were made in the instrument. The resulting questionnaire was designed to gather information about word processing instruction in the business education departments of the respondents' high schools.

Administration of Survey Instrument

The initial cover letter and questionnaire (Appendix) were mailed to 169 business education department members on April 15, 1983. A total of 122 or 72.19 percent of the questionnaires were returned.

Table 1. Survey Responses.

Responses	Number	Percent
Questionnaires returned	122	72.19
Questionnaires not returned	47	27.81
Totals	169	100.00

Analysis of Data

The purpose of this study was to determine the status of word processing instruction in the business education curriculums of the public secondary schools in Montana during the 1982-83 school year. No attempt was made to examine word processing instruction in any other departments in the high schools.

Information provided by the respondents was compiled and tables indicating the total number of responses to the questions and equivalent percentages were prepared. Each question was analyzed by looking at the total number of responses to an individual question and converting this to a percentage basis. Since every respondent did not answer each question, the percentage was determined by analyzing the total number who did answer the question.

The first column of each table lists the possible responses the instructor could have selected. The next four columns were a breakdown into the four school classifications as designated in the first question on the questionnaire. Each respondent was to check one classification which included AA, A, B, and C. Each classification was further broken down into number and percentage of responses. The last column listed the total number and percentage of responses for each possible response from column one. Each column of the table was totaled to the number who had actually responded to the particular question being analyzed. In addition, each column of the table was totaled to 100 percent with 100 percent being the number of responses to the question. A descriptive analysis is also presented for each table.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presented and analyzed the data gathered from the returned questionnaires sent to 169 business education departments in the public secondary schools in Montana. The purpose of this questionnaire was to gather information regarding word processing instruction in the business education departments of the public high schools in Montana.

The original mailing resulted in 122 or 72.19 percent responses.

The results of each question are presented in the order in which the questions were stated on the questionnaire (Appendix). Tables 2 through 22 are the resulting statistical information gathered by the researcher.

School Classification

The four classifications of high schools were taken from the accreditation standards for Montana high schools. Each respondent was to check one classification which included AA, A, B, and C.

Table 2 indicates that out of 122 responses, 12 were from AA schools, 13 were from A schools, and 33 were from B schools. The largest number of returns was from C schools with 64 or 52.89 percent responses.

Word Processing Instruction

Question number two of the questionnaire asked: Do you offer word processing in your school. In the AA classification, nine out of 12 responding schools answered yes. Nine of 13 responding schools in the A category answered yes. Of the 33 responding B

Table 2. School Classifications.

Responses	Number	Percent
AA	12	9.84
A	13	10.66
B	33	27.05
C	64	52.45
Totals	122	100.00

schools, 15 responded yes. Twenty-six of the 64 responding C schools answered question two affirmatively.

Those instructors who responded negatively to whether or not word processing was offered were asked to complete question three and return the questionnaire.

Table 3. Number of Business Education Departments Offering Word Processing.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Yes	9/ 75.00	9/ 69.23	15/ 45.45	26/ 40.62	59/ 48.36
No	3/ 25.00	4/ 30.77	18/ 54.55	38/ 59.38	63/ 61.64
Totals	12/100.00	13/100.00	33/100.00	64/100.00	122/100.00

Reasons for Exclusion of Word Processing Instruction

In the AA classification, two or 66.67 percent of the respondents mentioned that they would begin word processing instruction in the 1983-84 school year. The other respondent in this category cited equipment cost as the reason for not offering word processing.

Two or 50.00 percent of the four respondents in the A classification also stated that word processing instruction would be offered in the 1983-84 school year. The other two respondents cited equipment costs as the reason for not offering word processing instruction.

Curriculum limitations were mentioned by 11 or 25.59 percent of the respondents in the B classification as the reason for not including word processing in the curriculum. Equipment costs was the next most frequently stated reason with ten or 23.26 percent choosing it. Enrollment limitations, faculty limitations, word processing class has not been considered, lack of instructor qualifications, and lack of administrative support were listed next in order. In the "other" response category, six schools or 13.95 percent stated that word processing would be offered in the 1982-83 school year.

Respondents in the C classification cited both curriculum limitations and equipment costs 20 or 23.80 percent of the time as the reason for not offering word processing. These two responses were followed closely by enrollment limitations with 18 or 21.42 percent. Word processing has not been considered, faculty limitations, lack of instructor qualifications, and lack of administrative support followed next in order. The other responses included the statements that word processing would be offered in the 1983-84 school year and that word processing may be offered in the 1983-84 school year.

Many business education instructors indicated several responses to this question. The statistics for this question are presented in Table 4.

The 59 or 48.36 percent of the respondents who stated that they did offer word processing were asked to complete questions four through 20 and return the questionnaire.

Courses in Word Processing in the Business Education Curriculum

Question four asked if word processing was a course in itself or a unit of another course. The respondent was asked to specify the title of the course itself and/or the title of the course(s) into which word processing instruction was incorporated.

In the AA classification, two or 22.22 percent stated that word processing was a class in itself which was titled "Word Processing." Seven or 77.78 percent responded that word processing instruction was part of another course or courses. Office education and office

Table 4. Reasons for Exclusion of Word Processing Instruction.

Responses	Classification of Schools				
	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Class has not been considered	0/0	0/0	3/ 6.98	7/ 8.33	10/ 7.46
Curriculum limitation	0/0	0/0	11/ 25.59	20/ 23.81	31/ 23.13
Enrollment limitations	0/0	0/0	4/ 9.30	18/ 21.43	22/ 16.42
Equipment costs	1/ 33.34	2/ 50.00	10/ 23.26	20/ 23.81	33/ 24.63
Faculty limitations	0/0	0/0	4/ 9.30	7/ 8.33	11/ 8.21
Lack of administrative support	0/0	0/0	1/ 2.32	2/ 2.39	3/ 2.24
Lack of instructor qualifications	0/0	0/0	3/ 6.79	6/ 7.14	9/ 6.72
Other	2/ 66.66	2/ 50.00	7/ 16.28	4/ 4.76	15/ 11.19
Totals	3/100.00	4/100.00	43/100.00	84/100.00	134/100.00

procedures were the two courses specified as having word processing instruction incorporated into them.

In the A category, all nine or 100.00 percent of the respondents indicated that word processing was part of another course. Eight or 88.89 percent of the respondents listed office education and the other respondent or 11.11 percent listed advanced typing as the courses where word processing instruction was included.

In the B classification all 15 respondents or 100.00 percent stated that word processing was part of another course. Seven or 46.67 percent listed office procedures and four or 26.67 percent listed typing as the courses which contained word processing instruction. Other courses mentioned into which word processing instruction was incorporated included reprographics/word processing, math, computer basics, and automated business.

Two or 7.68 percent of the respondents in the C classification stated that they offered a separate course in word processing. The other 24 or 92.31 percent of the respondents indicated that word processing was part of another course. Office procedures was listed by 17 or 53.13 percent of the respondents. Typing was listed nine or 28.13 percent of the time. Other courses cited as including word processing instruction were computers, accounting and business math.

Table 5. Courses in Word Processing in the Business Education Curriculum.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Course in itself	2/ 22.22	0/0	0/0	2/ 7.68	4/ 6.78
Part of another course	7/ 77.78	9/100.00	15/100.00	24/ 92.31	55/ 93.22
Totals	9/100.00	9/100.00	15/100.00	26/100.00	59/100.00

As indicated in Table 5, of the 59 schools which offered word processing, four or 6.78 percent had separate courses and 55 or 93.22 percent offered word processing as part of another course. Table 6 indicates the titles of courses listed by instructors which included instruction in word processing.

Length of Word Processing Instruction

As indicated in Table 7, four one-semester courses in word processing were offered in business education departments in the state of Montana during the 1982-83 school year. Two of these were in the AA classification and two were in the C classification. Six schools offered word processing as part of another course for a one-year period. Two of these were in the B classification and four were in the C classification. Twelve schools incorporated word processing instruction into other classes for a period of one semester. Two of these were in the A classification, four in the B classification and six in the C classification. Nine

Table 6. Titles of Courses Including Word Processing Instruction.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
Office procedures	4/ 44.45	0/0	7/ 46.66	17/ 53.12	28/ 43.07
Office education	5/ 55.55	8/ 88.89	0/0	0/0	13/ 10.00
Typing	0/0	1/ 11.11	4/ 26.66	9/ 28.12	14/ 21.54
Computers	0/0	0/0	1/ 6.67	3/ 9.38	4/ 6.15
Accounting	0/0	0/0	0/0	2/ 6.25	2/ 3.08
Math	0/0	0/0	1/ 6.67	1/ 3.13	2/ 3.08
Reprographics/ WP	0/0	0/0	1/ 6.67	0/0	1/ 1.54
Automated business	0/0	0/0	1/ 6.67	0/0	1/ 1.54
Totals	9/100.00	9/100.00	15/100.00	32/100.00	65/100.00

weeks was the time period cited by 21 or 35.59 percent of the respondents as the length of the course which incorporated word processing instruction. Six AA, five A, three B, and seven C respondents listed this time period. Other responses included a range of two weeks to five weeks.

Table 7. Length of Word Processing Instruction.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
Course in itself					
One semester	2/ 22.23	0/0	0/0	2/ 7.69	4/ 6.78
Part of another course					
One year	0/0	0/0	2/ 13.34	4/ 15.38	6/ 10.17
One semester	0/0	2/ 22.23	4/ 26.66	6/ 23.07	12/ 20.34
Nine weeks	6/ 66.66	5/ 55.54	3/ 20.00	7/ 26.93	21/ 35.59
Other	1/ 11.11	2/ 22.23	6/ 40.00	7/ 26.93	16/ 27.12
Totals	9/100.00	9/100.00	15/100.00	26/100.00	59/100.00

Sections of Word Processing Offered

The data in Table 8 indicate that more than 25 percent of the responding business education departments did offer more than one section of word processing instruction daily.

Of the nine reporting business education departments in the AA classification, six or 66.67 percent indicated that they offered more than one section of word processing instruction daily. Three offered only one section.

Nine or 100.00 percent of the responding business education departments in the A classification stated that they offered one section of word processing daily.

In the B classification, 11 or 73.33 percent reported that they offered only one section of word processing daily as opposed to four or 26.67 percent that did offer more than one section daily.

Respondents in the C classification indicated that seven or 26.92 percent offered more than one section of word processing instruction daily while 19 or 73.08 percent responded that they offered only one section.

The responses to the question concerning the number of sections of word processing daily are shown in Table 8.

Table 8. Sections of Word Processing Offered.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Yes	6/ 66.67	0/0	4/ 26.67	7/ 26.92	17/ 28.81
No	3/ 33.33	9/100.00	11/ 73.33	19/ 73.08	42/ 71.19
Totals	9/100.00	9/100.00	15/100.00	26/100.00	59/100.00

Enrollment Limitations

Question seven asked if there was a limit on the number of students who could enroll in word processing. Over 50 percent of the respondents in all classifications of schools indicated that there was a limit on the number of students who could enroll in word processing. Although the question was not asked, 13 or 39.39 percent of those who said that enrollment was limited cited the lack of equipment as the reason for the limitation. Twenty-six or 44.07 percent responded that there was no limit on the number of students who could enroll in word processing instruction.

Table 9 documents the statistics for the question concerning enrollment limitations in word processing instruction.

Table 9. Enrollment Limitations in Word Processing Instruction.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Yes	7/ 77.78	7/ 77.78	7/ 46.67	12/ 46.15	33/ 55.93
No	2/ 22.22	2/ 22.22	8/ 53.33	14/ 53.85	26/ 44.07
Totals	9/100.00	9/100.00	15/100.00	26/100.00	59/100.0

Word Processing Instructional Level

The grade level at which students received word processing instruction varied from the freshmen through the senior year. Many departments checked more than one response indicating that students are permitted to take word processing instruction at different levels.

The majority of the business education departments which offer word processing instruction enroll primarily seniors and juniors in their courses. Fifty-nine or 47.20 percent allowed seniors to enroll in word processing and 45 or 36.00 percent allowed juniors to enroll.

Sophomores were allowed to enroll in word processing in 16 or 12.80 percent of the business education departments. Only five or 4.00 percent of the schools offering word processing instruction allowed freshmen to enroll in the course. Four or 80.00 percent were from C schools and one or 20.00 percent was from a B school.

Table 10. Instructional Level at Which Word Processing is Offered.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Seniors	9/ 64.29	9/ 60.00	15/ 48.39	26/ 40.00	59/ 47.20
Juniors	5/ 35.71	5/ 33.33	10/ 32.26	25/ 38.46	45/ 36.00
Sophomores	0/0	1/ 6.67	5/ 16.13	10/ 15.38	16/ 12.80
Freshmen	0/0	0/0	1/ 3.22	4/ 6.16	5/ 4.00
Totals	14/100.00	15/100.00	31/100.00	65/100.00	125/100.00

Prerequisites to Word Processing Instruction

As Table 11 indicates, over 80 percent of the respondents required either one, two, or three semesters of typing as a prerequisite to word processing instruction. Five respondents or 6.76 percent stated that no prerequisites were required to enroll in word processing instruction. Other responses included office education class, office machines, and accounting.

Organization of Word Processing Class

Students placed on a machine at a self-paced rate was the most frequently mentioned instructional method used by the responding departments that offered word processing instruction. Thirty-five departments indicated that they used this type of organization. Lecture, with emphasis on things such as spelling, grammar, punctuation, and proofreading, was cited by 29 departments. Simulations were used by 22 of the departments responding. Other responses included field trips, dictionary unit, programmed learning, teacher instruction, and incorporation into another class.

Table 11. Prerequisites to Word Processing Instruction.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
None	0/0	0/0	1/ 5.26	4/ 12.90	5/ 6.67
Typing I	4/ 30.76	5/ 45.45	9/ 47.37	15/ 48.39	33/ 44.59
Typing II	6/ 46.16	2/ 18.18	8/ 42.11	11/ 35.48	27/ 36.49
Typing III	1/ 7.70	1/ 9.09	0/0	1/ 3.23	3/ 4.05
Other	2/ 15.38	3/ 27.28	1/ 5.26	0/0	6/ 8.11
Totals	13/100.00	11/100.00	19/100.00	31/100.00	74/100.00

In each school classification except A, student being placed on the machines at a self-paced rate was the major method of word processing instruction.

The statistics for the methods of organization in word processing instruction are shown in Table 12.

Table 12. Organization of Word Processing Class.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
Self-paced on machine	7/ 36.84	2/ 13.33	8/ 30.77	18/ 43.91	35/ 34.66
Lecture—emphasis on spelling, grammar, punctuation	6/ 31.58	6/ 40.00	8/ 30.77	9/ 21.95	29/ 28.71
Simulations	4/ 21.05	5/ 33.33	6/ 23.08	7/ 17.07	22/ 21.78
Other	2/ 10.53	2/ 13.34	4/ 15.38	7/ 17.07	15/ 14.95
Totals	19/100.00	15/100.00	26/100.00	41/100.00	101/100.00

Equipment Used in Word Processing Instruction

Forty-two or 36.21 percent of the business education departments reported that microcomputers were available for use in word processing instruction. Dictaphone/trans-

cribing equipment was the second most frequently mentioned equipment with 27 or 23.28 percent listing this equipment.

In order of frequency were electronic typewriters, memory typewriters, and dedicated word processors. All five or 19.24 percent of the respondents who reported having dedicated word processors were in the AA classification. IBM Displaywriter, Olivetti TES401, IBM System Six, and CPT were the types of dedicated word processors. Listed in the other equipment section were computer terminals, Mag I, and correcting selectrics.

Many business education departments made several responses to this question. The resulting statistics for this question are presented in Table 13.

Table 13. Equipment Used in Word Processing Instruction.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Electronic typewriter	4/ 15.38	6/ 27.28	3/ 12.00	6/ 13.95	19/ 16.38
Memory typewriter	4/ 15.38	1/ 4.54	5/ 20.00	6/ 13.95	16/ 13.79
Dedicated word processor	5/ 19.24	0/0	0/0	0/0	5/ 4.31
Microcomputer	3/ 11.54	6/ 27.27	13/ 52.00	20/ 46.51	42/ 36.21
Dictaphone/ transcriber	6/ 23.08	7/ 31.82	4/ 16.00	10/ 23.26	27/ 23.28
Other	4/ 15.38	2/ 9.09	0/0	1/ 2.33	7/ 6.03
Totals	26/100.00	22/100.00	25/100.00	43/100.00	116/100.00

Type of Microcomputer Used in Word Processing Instruction

As Table 14 indicates, the 42 business education teachers who said that they used microcomputers were asked to specify the kind of microcomputer used. Many business departments marked several responses to this question.

Apple and Radio Shack were the two most frequently cited types of microcomputers in use in word processing instruction. In both cases, 19 or 40.43 percent of the respondents indicated these types.

Five or 10.63 percent of the respondents listed Pet as the type of microcomputer used and four or 8.51 percent listed other. Other types of microcomputers listed included Osborn, IBM, and Digital Rainbow.

Table 14. Type of Microcomputer Used in Word Processing Instruction.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Apple	0/0	3/ 42.85	6/ 46.16	10/ 41.67	19/ 40.43
Pet	2/ 66.67	1/ 14.29	1/ 7.69	1/ 4.17	5/ 10.63
Radio Shack	1/ 33.33	2/ 28.57	5/ 38.46	11/ 45.83	19/ 40.43
Other	0/0	1/ 14.29	1/ 7.69	2/ 8.33	4/ 8.51
Totals	3/100.00	7/100.00	13/100.00	24/100.00	47/100.00

Software Used with Microcomputer

Those business education teachers who responded that they used microcomputers were also asked to indicate what software was used with the computer. Scripsit, or a form of it, was the most frequently mentioned software with 17 or 35.41 percent listing it. Apple Writer followed with 15 or 31.25 percent stating this was the software they used. Other types of software were listed by nine or 18.75 percent of the respondents and included Zardax, Screen Writer, Lazzy Writer, Magic Wand, Word Perfect, Executive Secretary, and a program designed by the school's computer class.

Business Education Departments Which Share Microcomputers

Over 70 percent of the business departments using microcomputers in word processing instruction shared the microcomputer with one or more other departments within the

Table 15. Software Used in Word Processing Instruction.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
Magic Window	0/0	0/0	0/0	0/0	0/0
Apple Writer	0/0	2/ 28.57	5/ 33.33	8/ 34.78	15/ 31.25
Wordstar	0/0	1/ 14.29	1/ 6.67	0/0	2/ 4.17
Word Pro	2/ 66.67	1/ 14.29	1/ 6.67	1/ 4.35	5/ 10.42
Paper Clip	0/0	0/0	0/0	0/0	0/0
Quick Brown Fox	0/0	0/0	0/0	0/0	0/0
Scripsit	1/ 33.33	2/ 28.57	5/ 33.33	9/ 39.19	17/ 35.41
Other	0/0	1/ 14.28	3/ 20.00	5/ 21.74	9/ 18.75
Totals	3/100.00	7/100.00	15/100.00	23/100.00	48/100.00

school. In the AA classification only one or 25.00 percent indicated that the microcomputer was shared. Three or 42.86 percent of the schools in the A classification shared their microcomputer with the math department.

Ten or 76.92 percent of the respondents in the B classification indicated that they shared the microcomputer. Five or 50.00 percent of the respondents shared with the math department. In the C classification 18 or 85.71 percent shared the microcomputer with other departments. Math was the department shared with by six or 33.33 percent of the respondents.

Table 16 presents the data gathered from this question.

Source of Funding for Word Processing Equipment

The most frequently mentioned source of funding for equipment used in word processing instruction, according to 41 or 60.29 percent of the respondents, was general funds. This was the result in each school classification. Seventeen or 25.00 percent of the respon-

Table 16. Business Education Departments Which Share Microcomputer.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Yes	1/ 25.00	3/ 42.86	10/ 76.92	18/ 85.71	32/ 72.11
No	3/ 75.00	4/ 57.14	3/ 23.08	3/ 14.29	13/ 28.89
Totals	4/100.00	7/100.00	13/100.00	21/100.00	45/100.00

dents indicated that funding for word processing equipment came from block grants.

In the other category, vocational funding was the most frequently mentioned source with eight or 47.06 percent of the respondents in the other category specifying vocational funding. Five or 29.41 percent of the respondents indicated that they did not know the source of funding for the word processing equipment in their departments.

Many business education teachers indicated several responses to this question. Table 17 presents the data gathered from this question.

Table 17. Source of Funding for Word Processing Equipment.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Block Grant	1/ 8.33	1/ 9.10	4/ 23.53	4/ 14.29	10/ 14.71
General Funds	5/ 41.67	5/45.45	9/ 52.94	18/ 78.57	41/ 60.29
Other	6/ 50.00	5/ 45.45	4/ 23.53	2/ 7.14	17/ 25.00
Totals	12/100.00	11/100.00	17/100.00	28/100.00	68/100.00

Evaluation of Word Processing Students

Respondents who offered word processing instruction were asked to indicate how students enrolled in word processing were evaluated. Twelve or 9.84 percent of the respondents evaluated only on the student's ability to operate the equipment. The other 110 or 90.16 percent indicated that evaluation was based on a number of criteria. Ability to

operate the machine was the criterion most frequently cited for evaluating word processing students with 47 or 25.82 percent of the respondents selecting it. Spelling, punctuation, and proofreading were the second most frequently mentioned criteria for evaluation. Thirty-two or 17.58 percent of the total indicated these areas.

The third most frequently mentioned criterion was mailability with 31 or 17.03 percent. The other responses included terminology, timings, mailability, and dictating procedures and three or 2.46 percent indicated that they had not established the criteria for evaluation.

The data for this question are presented in Table 18.

Table 18. Criterion for Evaluation of Word Processing Students.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Transcripts	7/ 21.87	4/ 16.67	6/ 13.64	14/ 17.07	31/ 17.03
Tabulations	2/ 6.25	2/ 8.33	5/ 11.36	9/ 10.98	18/ 9.89
Manuscripts	4/ 12.50	3/ 12.50	7/ 15.91	14/ 17.07	28/ 15.39
Logging for rate	2/ 6.25	0/0	2/ 4.54	4/ 4.88	8/ 4.40
Lines per day	1/ 3.13	0/0	0/0	2/ 2.44	3/ 1.65
Spelling, punctuation, proofreading	5/ 15.62	5/ 20.83	7/ 15.91	15/ 18.29	32/ 17.58
Operation of machine	8/ 25.00	6/ 25.00	13/ 29.55	20/ 24.39	47/ 25.82
Other	3/ 9.38	4/ 16.67	4/ 9.09	4/ 4.88	15/ 8.24
Totals	32/100.00	24/100.00	44/100.00	82/100.00	182/100.00

Methods Used to Obtain Professional Preparation to Teach Word Processing

As Table 19 indicates, workshop attendance and self-taught were the two most frequently mentioned means of acquiring professional preparation to teach word processing.

Respondents from AA schools chose these two areas seven or 31.82 percent of the time and respondents from A school selected these two areas six or 42.86 percent of the time.

In the B classification, 12 or 50.00 percent of the respondents indicated that they were self-taught in word processing instruction. Self-taught, chosen by 20 or 40.82 percent of the respondents in the C classification, was the most frequently mentioned method of professional preparation. Other responses included work experience, CPT instruction, assistance from the computer teacher, and attendance at evening vocational education classes.

Table 19. Methods of Obtaining Professional Preparation for Teaching Word Processing.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Workshop	7/ 31.82	6/ 42.86	5/ 20.84	17/ 34.69	35/ 32.11
Undergraduate work	2/ 9.10	0/0	3/ 12.50	8/ 16.33	13/ 11.93
Graduate work	3/ 13.64	2/ 14.28	2/ 8.33	3/ 6.12	10/ 9.17
Self-taught	7/ 31.82	6/ 42.86	12/ 50.00	20/ 40.82	45/ 41.28
Other	3/ 13.64	0/0	2/ 8.33	1/ 2.04	6/ 5.55
Totals	22/100.00	14/100.00	24/100.00	49/100.00	109/100.00

Impact of Word Processing on Offering Shorthand

Fifty-two or 94.55 percent of the respondents to the question of whether or not offering word processing instruction had had any impact on the offering of shorthand indicated that it had not. One business educator in the AA classification indicated that enrollment in shorthand had dropped but indicated that this could be because of factors other than offering word processing. One respondent in the B classification also indicated that enrollment in shorthand had decreased. The other business educator who responded that the offering of word processing had had an impact on shorthand enrollment was in the

C classification. This respondent stated that the school was offering shorthand again after not having offered it for the last five years.

The data for this question are presented in Table 20.

Table 20. Impact of Word Processing on Offering Shorthand.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Yes	1/ 11.11	0/0	1/ 6.67	1/ 4.17	3/ 5.45
No	8/ 88.89	7/100.00	14/ 93.33	23/ 95.83	52/ 94.55
Totals	9/100.00	7/100.00	15/100.00	24/100.00	55/100.00

Instructional Problems in Offering Word Processing Instruction

The most frequently mentioned problem in offering word processing instruction according to 35 or 35.71 percent of the respondents, was a lack of adequate equipment. This was the result in each school classification. The next most serious instructional problem was inadequate length of class time as reported by 12 or 12.24 percent of the respondents. Teacher training was also a concern to ten or 10.20 percent of the instructors.

Inadequate resources and teaching aids were cited by 7 or 7.15 percent of the respondents. The next most serious instructional problems related to teaching word processing were cost of equipment and software and instructors' lack of expertise on equipment. This was reported by six or 6.13 percent of the instructors.

Table 21 lists the statistics as tabulated for this question.

Units of Study in Word Processing Instruction

Respondents were asked to indicate the content of word processing instruction by indicating the titles of units of instruction. Operation of machine was the most frequently mentioned title and was cited by 31 or 27.68 percent of the respondents. This unit was

Table 21. Instructional Problems in Offering Word Processing Instruction.

Responses	Classification of Schools AA No/%	A No/%	B No/%	C No/%	Totals No/%
Instructor's expertise on equipment	4/ 22.24	0/0	0/0	2/ 4.35	6/ 6.13
Equipment	8/ 44.46	5/ 33.33	6/ 31.59	16/ 34.78	35/ 35.71
Down time on equipment	1/ 5.55	1/ 6.67	0/0	0/0	2/ 2.04
Students' basic language skills	1/ 5.55	0/0	0/0	2/ 4.35	3/ 3.06
Length of class period	1/ 5.55	1/ 6.67	1/ 5.26	9/ 19.56	12/ 12.24
Not a separate class	1/ 5.55	0/0	0/0	0/0	1/ 1.02
Limited/declining enrollment	1/ 5.55	2/ 13.33	0/0	2/ 4.35	5/ 5.10
Software selection	0/0	1/ 6.67	0/0	0/0	1/ 1.02
Computer service out of town	0/0	1/ 6.67	0/0	0/0	1/ 1.02
Teacher training	0/0	1/ 6.67	4/ 21.05	5/ 10.87	10/ 10.20
Teacher aids and resources	0/0	0/0	3/ 15.79	4/ 8.70	7/ 7.15
Manuals	0/0	0/0	1/ 5.26	0/0	1/ 1.02
No established program	0/0	0/0	0/0	1/ 2.17	1/ 1.02
Typing skills of students	0/0	0/0	0/0	2/ 4.35	2/ 2.04
Cost of equipment/software	1/ 5.55	2/ 13.33	3/ 15.79	0/0	6/ 6.13
Location of machines	0/0	1/ 6.66	1/ 5.26	3/ 6.52	5/ 5.10
Totals	18/100.00	15/100.00	19/100.00	46/100.00	98/100.00

the most frequently mentioned title in each school classification with the exception of the A classification which listed software most frequently with 8 or 30.77 percent. Software was the next most frequently mentioned title with 18 or 16.07 of all respondents indicating it was a unit of instruction.

Word processing concepts was listed as a unit of instruction by 13 or 11.61 percent of the respondents. Twelve or 10.71 percent of the business education departments included transcribing as a unit of instruction. Both "simulations," and "grammar, punctuation, and spelling" were listed by nine or 8.04 percent of the respondents.

The statistics for the units of study in word processing instruction are documented in Table 22.

Table 22. Units of Study in Word Processing Instruction.

	Classification of Schools				
Responses	AA No/%	A No/%	B No/%	C No/%	Totals No/%
Operation of machine	5/ 16.13	6/ 23.08	5/ 21.74	15/ 46.88	31/ 27.68
Word processing concepts	6/ 19.35	1/ 3.85	3/ 13.04	3/ 9.38	13/ 11.61
Transcribing	4/ 12.90	2/ 7.69	3/ 13.04	3/ 9.38	12/ 10.71
Proofreading	3/ 9.68	2/ 7.69	2/ 8.70	1/ 3.12	8/ 7.14
Formatting review	1/ 3.23	0/0	0/0	0/0	1/ 0.89
Simulation	2/ 7.45	2/ 7.69	3/ 13.04	2/ 6.25	9/ 8.04
Dictation	1/ 3.23	1/ 3.85	1/ 4.35	1/ 3.12	4/ 3.57
Grammar, punctuation, spelling	3/ 9.68	2/ 7.69	3/ 13.04	1/ 3.12	9/ 8.04
Reference materials	2/ 6.45	0/0	0/0	0/0	2/ 1.79
Software	4/ 12.90	8/ 30.77	2/ 8.70	4/ 12.50	18/ 16.07
Terminology	0/0	2/ 7.69	1/ 4.35	2/ 6.25	5/ 4.46
Totals	31/100.00	26/100.00	23/100.00	21/100.00	112/100.00

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The primary objective of this study was to examine the word processing instruction in business education departments in the public secondary schools in Montana during the 1982-83 school year.

Continuous evaluation of the business education curriculum is of primary importance in this age of rapidly changing technology. It is therefore important that business departments examine and evaluate their programs in order to keep up to date and to meet the needs of their students.

There is a lack of knowledge and agreement among educators regarding word processing instruction in the secondary schools. Studies such as the one conducted by this researcher are important to help administrators and business education departments clarify the role of word processing instruction in the business education curriculum.

A search of related literature was made, and the significant findings and conclusions are presented in Chapter II of this study. Based on this review of selected literature, a questionnaire was designed to obtain information concerning the status of word processing instruction in the business education departments of Montana's public secondary schools. A letter of explanation and the questionnaire were mailed to 169 business educators in the public secondary schools of which 122 or 72.19 percent responded.

Summary

The summary of the findings of this study are reported in this chapter according to the order of questions on the questionnaire and utilized in Chapter IV to analyze and present the data received from the business educators.

The major findings about word processing instruction in Montana's public secondary schools include the following:

1. Fifty-nine or 48.16 percent of the business education instructors of the public schools in the state of Montana who responded to the questionnaire offered word process- instruction during the 1982-83 school year.

2. The basic reason for not including word processing instruction in the business education curriculum as reported by 33 or 24.63 percent of the respondents was equipment cost. Curriculum limitations and enrollment limitations were listed as the second and third most frequently mentioned reasons for excluding word processing instruction.

3. Four or 6.78 percent of the respondents indicated that they offered word processing as a separate course. Two of these were in the AA classification and two were in the C classification.

4. A majority of the respondents, 55 or 93.22 percent, indicated that they offered a unit in word processing in some other business course in the business education curriculum. Office procedures was the course into which word processing instruction was incorporated by 28 or 43.07 percent of the respondents.

5. Although word processing instruction was offered at all high school grade levels, the curriculum was directed to the senior grade level with 59 or 47.20 percent of the respondents indicating instruction at this level.

6. Sixty-three or 85.13 percent of the respondents required some level of typing instruction as a prerequisite to word processing.

7. The method of instruction for 35 or 34.66 percent of the respondents was placing a student on a machine and allowing the student to work at his/her own pace.

8. Microcomputers were used in 42 or 36.21 percent of the business education departments in which word processing instruction was offered. Thirty-two or 72.11 percent of the departments in which microcomputers were used shared the microcomputer with one or more other departments in the school.

9. Ability to operate machine was cited by 47 or 25.82 percent of the respondents as a criteria for evaluation of students.

10. Forty-five or 41.28 percent of the instructors indicated that they were self-taught in word processing instruction.

11. The offering of word processing instruction had not had an impact on the offering of shorthand according to 52 or 94.55 percent of the respondents.

12. Insufficient equipment was listed as a problem in word processing instruction by 35 or 35.71 percent of the respondents.

13. Operation of the machine was the most frequently mentioned unit of instruction. This area was listed by 31 or 27.68 percent of the respondents.

Conclusions

Based on the data gathered and analyzed for this study, the following conclusions were derived.

1. At the time of the study, a majority of the business education departments in the public secondary schools in Montana did not offer any form of word processing instruction.

2. Equipment cost was the major reason for not offering word processing instruction.

3. The business education departments which offered word processing instruction did so primarily as a unit of instruction in another course.

4. Word processing instruction was offered primarily to juniors and seniors.

5. Typing was the main prerequisite to word processing instruction.

6. The major instructional method used was placing a student on a machine at a self-paced rate.

7. Most business education departments had a microcomputer available for word processing instruction although in many cases the microcomputer was shared with other departments.

8. Ability to operate the machine was a primary basis for student evaluation.

9. Many instructors have taught themselves about word processing.

10. Offering word processing has not had an impact on the offering of shorthand.

11. Lack of adequate equipment presented the major instructional problem to business education departments.

12. Many word processing units/courses concentrated on machine operation.

13. Business education departments in Montana's public secondary schools are behind in offering word processing instruction.

Recommendations

Based on the findings of this study and the resulting conclusions, the researcher made the following recommendations:

1. It is recommended that business educators and school administrators in Montana be made aware of the need for word processing instruction in some form in the business education curriculums.

2. It is recommended that guidelines for a word processing curriculum be established by business educators and administrators in cooperation with the Office of Public Instruction and teacher education institutions.

3. All business education departments should offer word processing instruction either as a separate course or as a unit in another course.

4. Business education instructors must investigate every possible means of exposing students to word processing equipment but business educators must realize that word processing can be taught without expensive equipment.

5. Teacher education institutions in the state should examine their teacher preparation programs in business education to insure that prospective business education teachers are receiving the skills and methodology necessary for teaching word processing.

6. Teacher education institutions should conduct inservice programs for current teachers.

7. Local and state surveys should be conducted to determine the need for vocational word processing courses in the business education department.

8. Additional study is needed in the following areas of word processing:

   a. Determine the needs of business and industry in word processing as a basis for curriculum development.

   b. Determine whether word processing programs in business education curriculums are preparing students in terms of general and vocational education.

   c. Conduct an in-depth analysis of course offerings in the field of word processing.

   d. Determine what should be the responsibility of the various institutions of learning regarding word processing instruction.

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APPENDIX

129 Anderson Blvd.
Helena, MT 59601
April 15, 1983

(Teacher's Name)
(Name of School)
(Number and Street)
(City, State, and Zip Code)

Dear (Teacher's Name),

No other trend has had such an impact on the business education curriculum as word processing has. I am interested in finding out how business education departments in Montana's high schools have responded to the need for word processing instruction. For that reason and also to complete the requirements for a Master's in Business Education from Montana State University, I am conducting this survey.

Would you take ten minutes of your time to complete the enclosed questionnaire. If you are not the person in your school who is involved with word processing, would you please give the questionnaire to the person in your department who is.

When the questionnaire is completed, please return it to me by April 30, 1983. Thank you for contributing to the dependability of the results of this questionnaire. Your comments will be greatly appreciated.

Sincerely,

Jane Slattery

Enclosures
Questionnaire
Envelope

QUESTIONNAIRE

DIRECTIONS

Please place a check mark(s) on the appropriate line(s) and answer all the questions which apply to your school.

1. Designate the classification of your school.

   _____ AA _____ A _____ B _____ C

2. Do you offer word processing in your school?

   _____ A. Yes

   _____ B. No

If you checked "Yes" to Question 2, please disregard Question 3 and continue to Question 4.

If you checked "No" to Question 2, please answer only Question 3 and return the questionnaire.

3. What are the reason(s) you do not offer word processing?

   _____ A. Word processing class has not been considered

   _____ B. Curriculum limitations

   _____ C. Enrollment limitations

   _____ D. Equipment costs

   _____ E. Faculty limitations

   _____ F. Lack of Administrative support

   _____ G. Lack of instructor qualifications

   _____ H. Other _____
   (Please specify)

4. Is word processing a class in itself or a unit of another course?

   _____ A. Course in itself _____
   (Specify title of class)

   _____ B. Part of another course _____
   (Please specify)

5. For what length of time is the word processing class/unit offered?

_____ A. One year

_____ B. One semester

_____ C. Nine weeks

_____ D. Other _____
(Please specify)

6. Is more than one section of word processing offered during the school day?

_____ A. Yes _____
(Please specify)

_____ B. No

7. Is there a limit on the number of students who may enroll in word processing?

_____ A. Yes _____
(Please specify)

_____ B. No

8. Students in what grades are allowed to enroll in word processing?

_____ A. Seniors

_____ B. Juniors

_____ C. Sophomores

_____ D. Freshmen

9. What are the prerequisites to the word processing class?

_____ A. None

_____ B. Typing I (First semester)

_____ C. Typing II (Second semester)

_____ D. Typing III (Third semester)

_____ E. Other _____
(Please specify)

10. How is your word processing class organized?

_____ A. Is the student placed on a machine with a manual and self-paced?

_____ B. Is some of the class lecture with emphasis on such things as spelling, grammar, punctuation and proofreading?

_____ C. Are simulations used?

_____ D. Other _____
(Please specify)

11. What type of equipment is used in the word processing class?

_____ A. Electronic typewriter

_____ B. Memory typewriter

_____ C. Dedicated word processor _____
(Specify type and brand)

_____ D. Microcomputer

_____ E. Dictaphone/Transcriber

_____ F. Other _____
(Please specify)

12. If a microcomputer is used, what kind is it?

_____ A. Apple

_____ B. Pet

_____ C. Radio Shack

_____ D. Other _____
(Please specify)

13. If you have a microcomputer, what software do you use?

_____ A. Magic Window

_____ B. Apple Writer

_____ C. Wordstar

_____ D. Word Pro

_____ E. Paper Clip

_____ F. Quick Brown Fox

_____ G. Scripsit

_____ H. Other _____
(Please specify)

14. If a microcomputer is used, is it shared with any other departments?

_____ Yes _____
(Please specify)

_____ No

15. What was the source of funding for the word processing equipment?

_____ A. Block Grant

_____ B. General Funds

_____ C. Other _____
(Please specify)

16. How are the students who take word processing evaluated?

_____ A. Transcripts

_____ B. Tabulations

_____ C. Manuscripts

_____ D. Logging to determine rate

_____ E. Number of lines per day

_____ F. Spelling, punctuation, proofreading

_____ G. Ability to operate machine

_____ H. Other _____
(Please specify)

17. How was the teacher's professional preparation to teach word processing obtained?

_____ A. Workshop attendance

_____ B. Undergraduate preparation

_____ C. Graduate preparation

_____ D. Self-taught

_____ E. Other _____
(Please specify)

18. Has the offering of word processing had an impact on the offering of shorthand?

_____ A. Yes _____
(Please specify)

_____ B. No

19. What are the three biggest drawbacks to teaching word processing?

1. _____

2. _____

3. _____

20. Please list the general content of your word processing class by indicating the titles of your units of instruction.

_____

_____

_____

_____

_____

_____

_____

Questionnaire number _____
(For follow-up purposes only)