

**A STUDY OF STRAIGHT-COPY TEST SCORES AS
COMPARED WITH LETTER-PRODUCTION TEST SCORES
EARNED DURING ONE SIX-WEEK GRADING PERIOD
AT STRATFORD HIGH SCHOOL NASHVILLE, TENNESSEE**

BY

MARGARET JEANETTE BROWN

A STUDY OF STRAIGHT-COPY TEST SCORES AS
COMPARED WITH LETTER-PRODUCTION TEST SCORES
EARNED DURING ONE SIX-WEEK GRADING PERIOD
AT
STRATFORD HIGH SCHOOL
NASHVILLE, TENNESSEE

A Research Paper
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in Education

by
Margaret Jeanette Brown

August 1970

August 1970

To the Graduate Council:

I am submitting herewith a Research Paper written by Margaret Jeanette Brown entitled "A Study of Straight-Copy Test Scores as Compared With Letter-Production Test Scores Earned During One Six-Week Grading at Stratford High School, Nashville, Tennessee." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Business Education

Christine Stoop
Major Professor

Accepted for the Council:

Wayne E. Stamp
Dean of the Graduate School

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
The Problem	2
Statement of the problem	2
Importance of the study	2
Limitations of the study	3
Definitions of Terms Used	4
Sources of Data	5
Procedures	5
Scoring of Papers	7
Letter tests	8
Straight copy	9
Organization of Research Paper	10
II. REVIEW OF RELATED LITERATURE	11
A Preview of Periodical Literature to Straight Copy and Letter Production	11
Review of Studies	14
Gemmell study	15
Martin study	16
Penar study	16
Crawford study	17
West study	18
Banner study	19
Davidson study	20

CHAPTER	PAGE
Summary	21
III. DESCRIPTIVE BACKGROUND FOR STUDY	22
Students in the Study	22
Administration of Tests	23
Copy Used and Method of Administering Tests	24
Letter-production tests	24
Straight-copy tests	26
Summary	27
IV. REPORT OF FINDINGS	28
Analysis of Letter Copy	28
Net production rate a minute	29
Uncorrected errors	29
Analysis of Straight-Copy Tests	30
Gross words a minute	31
Errors a minute	32
Comparison of Data	32
Changes in Speed and Accuracy From First to Last Test	34
Relationship of Speed Scores on Straight Copy to Letter Copy	35
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	38
Summary	38
Conclusions	39
Recommendations	40
BIBLIOGRAPHY	41
APPENDIX	45

LIST OF TABLES

TABLE	PAGE
I. Students in Study	23
II. Schedule of Administration of Tests	23
III. Mean Net Production Rates and Uncorrected Errors on Letter-Production Tests	28
IV. Mean Gross Words a Minute and Errors A Minute on Straight-Copy Timed Writings	31
V. Comparison of Mean of Letter-Production Tests to Straight-Copy Tests	33

CHAPTER I

INTRODUCTION

In this era of dynamic changes in education, the value of knowing the skill of typewriting seems to be increasingly important. Marguerite Crumley¹ predicts that typewriting will become a common tool of communication--as common as the pen is now. The business teacher today not only finds vocational typewriting pupils in class, but pupils who wish to typewrite their own words rather than being forced into the laborious task of turning out a finished paper in longhand. To equip pupils in typewriting classes with the skills and experiences needed in tomorrow's world challenges today's business teacher.

The business teacher's obligation has been summed up in the following paragraph:

The teacher of typewriting is responsible for teaching students to meet high production requirements of business. The teacher must train students to meet these high production demands by developing speed and accuracy in typewriting straight copy as well as in planning and typewriting letters, tables, manuscripts, reports and so forth. Much of the time in the classroom should be devoted to driving for improved accuracy and speed, and the time given to production typewriting should be used wisely.²

The basic objective of typewriting in the secondary school is to develop competent typists working under the pressure of time and producing accurate and attractive work. For this reason, the writer of this

¹Marguerite Crumley, "Business Education in Transition--Tomorrow," Business Education Forum, 24:4, February, 1970.

²Mona Carlberg, and Cleo P. Casady, "More Production, Less Confusion in Typewriting," Business Education Forum, 20:24, January, 1966.

investigation decided to study the records made by two classes in first-year typewriting during the fifth six-week grading period (March 9, through April 24, 1970) at Stratford High School in Nashville, Tennessee.

A study of this type was suggested by Mary Ruth Banner as a result of her study completed at The University of Tennessee in March 1953.

I. THE PROBLEM

Statement of the Problem

This investigation proposed to compare speed (Gross Words A Minute for 5-Minutes) on straight-copy timed tests with speed (Net Production Rate A Minute for 20-Minutes) on letter-copy timed tests. The tests were given to 61 first-year typewriting students each week during the fifth six-week grading period. The letter-production tests and straight-copy tests taken by the two classes were used to determine (1) what change took place in speed and accuracy from the first to the last test given in the six-week grading period, and (2) to what extent speed scores on straight copy predict speed scores on letter tests.

Importance of the Study

Approximately one-half of the school population enter employment after graduation from Stratford High School, an inner-city school. The other half plan to enter a four-year college.³ This means that typewriting pupils must develop both vocational and nonvocational competencies. Because of the varying objectives of the vocational and nonvocational student, this writer wished to provide a variety of opportunities for each

³"Summary of School and Community Survey," Evaluative Study of Stratford High School, November 2-5, 1964, p. 7.

student to develop abilities necessary for performing tasks such as: using the various parts of the typewriter, developing speed and accuracy in typing letters, tabulated reports, manuscripts and business forms. These duties are typical of those performed by a beginning typist in an office as well as of those needed for personal use.

Because letter writing is one of the duties of almost every office worker as well as for personal use, this study which included this all-important phase of typewriting seemed justified.

Through the study of the materials collected for this research paper, this teacher expects to improve instruction in typewriting by determining the relative amount of emphasis and time which should be placed on 5-minute timed writings and 20-minute letter-production timed writings. Furthermore, analysis of the data helped the teacher to understand (a) interference of external factors and (b) amount of growth to expect.

Limitations of the Study

This investigation was limited to a study on straight-copy test scores as compared with letter-production test scores earned during one six-week grading period at Stratford High School, Nashville, Tennessee. The timing of letter-production tests was chosen because typing business letters is one of the more frequent tasks of the office typist.⁴ A further limitation, one six-week grading period was used in order not to reduce the time allotted to the study of tabulation, manuscript typing,

⁴Allien R. Russon, and S. J. Wanous, Philosophy and Psychology of Teaching Typewriting (Cincinnati: South-Western Publishing Company, 1960), p. 34.

letters with tabulated material, two- and three-page letters, addressing envelopes, and business forms such as: interoffice memorandums, invoices, telegrams, and voucher checks. Other limitations included the use of only textbook and workbook materials, the records of the students in one school, and one teacher with two classes.

II. DEFINITIONS OF TERMS USED

Acceptable Letter. An acceptable letter is attractively placed on the page; is typed with uniform (even) key stroking, and has all errors neatly erased and corrected. It has "eye appeal" and makes a good impression on all who see it.⁵

GWAM. GWAM means gross words a minute. Five strokes are counted as one standard word.⁶

N-PRAM. N-PRAM means net production rate a minute. When all errors have been erased and corrected during the typing of the problem.

Speed Scores. Speed scores means gross words a minute for straight-copy timed writings or net production rate a minute for letter-copy timed writings.

Straight-Copy Timed Test. Straight-copy timed test means typing for a designated number of minutes on paragraph material.

Letter-Production Timed Test. Letter-production timed test means the typing of letters in an acceptable form for a designated length of time.

⁵D. D. Lessenberry, T. James Crawford, and Lawrence W. Erickson, 20th Century Typewriting (ninth edition; Cincinnati: South-Western Publishing Company, 1967), p. 221.

⁶Ibid., p. 10.

III. SOURCES OF DATA

Data for this investigation were obtained from a series of six tests administered to 61 students in two classes of typewriting at Stratford High School in Nashville, Tennessee.

The material used on the six straight-copy timed writing tests and the six letter-production timed tests was taken from the textbook, 20th Century Typewriting⁷ and its correlating workbook. Although 61 students took the tests only 49 were retained for this investigation since twelve students were eliminated for one of the following reasons:

1. Absence for more than one test
2. Dropped from roll
3. Transferred

IV. PROCEDURES

As the first step in the preparation of this paper, the writer consulted the basic tool of the library, the card catalog, and selected pertinent material. In addition to this material, two theses were ordered through intra-library loan and two Monographs were obtained from South-Western Publishing Company. A summary of this material is presented in Chapter 2.

During the conferences and discussions of the problem with the advisor, a time for the investigation and materials to be used in the tests were selected. Beginning the first week of the fifth six-week grading period, one straight-copy timed writing test and one letter-production

⁷Ibid.

timed test were given to each class each week for analysis in this research paper. Because of the one-week spring vacation, the six-week grading period covered a span of seven weeks instead of the usual six, March 9, through April 24, 1970.

As the papers were collected weekly, they were scored and returned to the students for review. The straight-copy timed writing tests were checked for errors and gross words a minute as marked in the text. The letter-production tests were checked for errors. Net production rate a minute was computed by the following formula:

$$\text{Total Net Words} = \text{Total Words Typed} - \text{Total Penalty}$$

$$\text{N-PRAM} = \frac{\text{Total Net Words}}{\text{Time}}$$

Total words mean the number of words in the letter as shown in the text. The penalty⁸ was computed by multiplying 15 times each error and when this was subtracted from total words typed, the result was total net words. Using total net words and dividing by the number of minutes typed gave net production rate a minute. These scores were compiled on a Work Completion Record for each student. A sample of this Work Completion Record is given in the Appendix.

At the end of the six-week grading period, all papers were collected by the investigator who took the following steps in assembling and interpreting the data:

1. Working papers were set up for each class for the purpose of

⁸D. D. Lessenberry, T. James Crawford, and Lawrence W. Erickson, Teacher's Manual for 20th Century Typewriting (ninth edition; Cincinnati: South-Western Publishing Company, 1967), p. 107.

recording gross words and number of errors for each student on all timed-writing tests of straight-copy material. A sample of these working papers is given in the Appendix.

2. Additional working papers were set up for each class for the purpose of recording net production rate a minute and uncorrected errors. A sample copy is given in the Appendix.

3. The mode, the median, and the mean were all considered before the mean was chosen because it took into account the extreme of the sequence, while in some cases more than one mode existed.

4. The error rates a minute on straight-copy timed writings and letter-production copy, and the speed rates a minute for straight-copy and letter-production copy were combined for both classes.

5. An analysis of straight-copy speed scores as compared with letter-copy speed scores for combined classes on Test 2 was made to see whether speed scores on straight-copy can be used to predict speed scores on letter copy.

5. A test of the results from Step 5 was made.

V. SCORING OF PAPERS

As the students in this study were enrolled in the typewriting classes of the investigator, the decisions to keep the scoring uniform presented no particular problem. Since the International Typewriting Contest Rules were modified to some extent, a summary of the rules used in scoring letter tests follows:

Letter Tests

1. One error is counted for each misspelled word or transposition of letters within a word.
2. An extra space resulting from uneven stroking is one error.
3. Omission of reference initials is counted as one error.
4. An end-of-line word division is one error if it is not divided according to 20,000 Words.⁹
5. A letter raised above the line of writing is not counted as an error unless a portion of the letter could not be seen.
6. A change in a word or a mark of punctuation from the printed copy is considered an error.
7. The omission of a word is counted as one error.
8. A lightly struck letter is no error if it can be recognized.
9. A penalty of 15-words was assessed for any uncorrected error in determining net production rate a minute.¹⁰
10. All words were counted in acceptable problems in computing scores. One-half of the total words were counted in letters which were considered unacceptable because of errors in arrangement, letterhead paper torn from the workbook in such a way as to cause a ragged edge, or in an effort to make correction of phrases or a portion of a line erased (or scrubbed) the paper so hard causing it be extremely thin. No credit could be allowed in case a hole had been erased in the paper.

⁹Louis A. Leslie, 20,000 Words (New York: The Gregg Publishing Company, 1965).

¹⁰Lessenberry and others, loc. cit.

Straight Copy

As the copy in the text is marked for scoring, the students were asked to determine gross words a minute and identify errors. By the fifth six-week period the students are familiar with rules for determining errors. The rules listed below were used since the International Typewriting Contest Rules were modified.

1. A lightly struck letter is no error if it is discernible.
2. A letter raised above the line of writing is no error unless part of the letter is cut off.
3. An extra space resulting from uneven stroking is one error.
4. A crowded word resulting from uneven stroking is one error.
5. The omission or the typing of a punctuation mark not according to the copy is an error.
6. Paragraph indentions varying from five spaces counts one error.
7. Single spacing is one error for each two typewritten lines.
8. Any omission of a word or words is one error for each word.
9. Uneven left margin resulting from faulty carriage return is considered as one error.
10. In case of words being rewritten, omitted, or misspelled an error is charged for each word.
11. A wrongly divided word at the end of the line must be counted as an error.
12. An error made in the last word whether the word written is completed or not, must be charged.
13. The use of an eraser is not allowed.

VI. ORGANIZATION OF RESEARCH PAPER

Chapter I, the introduction to the study, includes a statement of the problem, the importance of the study, the limitations of the study, definition of terms used, sources of data, procedures, and organization of research paper.

Chapter II, divided into three sections, is a review of literature with a discussion of (1) straight-copy and letter-production writings, (2) studies from secondary and primary sources, and (3) a summary.

Chapter III contains a description of the background for the study which includes: (1) students in the study, (2) administration of tests, (3) copy used in the tests, and (4) a summary.

Chapter IV reports the findings of the study with an analysis of straight-copy test scores and letter-production test scores.

Chapter V presents the summary of the findings followed by the investigator's conclusions and recommendations.

The Appendix contains a sample copy of the Work Completion Record and the working papers for analyzing the data. Other contents are copies of each straight-copy test and letter-production test.

CHAPTER II

REVIEW OF RELATED LITERATURE

The basic tool of the library, the card catalog, guided the writer to books and indices used in this research paper. A search through Business Education Index (under the topic of "Typewriting" from Volumes 1955-1968), Business Periodicals Index (under the topics "Business Education" and "Typewriting" from Volumes 1958-1969), Readers' Guide to Periodical Literature (under the topics "Business Education" and "Typewriting" from Volumes 1951-1968), and State Educational Journal Index (under topics "Business Education" and "Typewriting" 1963-1966) all revealed articles relevant to this investigation. However, Business Education Index and Business Periodicals Index were rich with listings for straight-copy and production typewriting.

Other sources of information were two Monographs requested from South-Western Publishing Company and two theses received through the intra-library loan at Austin Peay State University.

The materials reviewed are summarized under two headings: (1) A Preview of Periodical Literature to Straight Copy and Letter Production, and (2) Review of Studies.

I. A PREVIEW OF PERIODICAL LITERATURE TO STRAIGHT COPY AND LETTER PRODUCTION

Typewriting has always been a mainstay of the business curriculum. Because of increased enrollments of both nonvocational and vocational

students, Tonne¹ suggests that it is imperative that teachers of type-writing examine and reexamine the change in subject matter and methodology demanded by the situation. The American Business Education Yearbook² suggests that standards used in business should be used in schools and typewriting classes in school should be as nearly as possible like an office situation.

Simply teaching typewriting is not enough, an office employee must be able to interpret oral and written instructions, handle materials other than those related to typing jobs as well as person-to-person problems. Of course being able to handle production copy efficiently does not necessarily make an employable and promotable employee, but a high level of typewriting ability eases the load of the typist in the office.

The typewriter is a tool of literacy as well as a communication machine says Rowe.³ Students in class may lose points for misspelled words, but in business repeated errors of any kind may cost him his job. Judgment for decision making on the job is adolescent at best for the high school youngster.⁴

To turn out truly competent students requires careful planning of

¹Herbert A. Tonne, Estelle L. Popham, and Herbert Freeman, Methods of Teaching Business Subjects (New York: McGraw-Hill Book Company, 1965), p. 112.

²John L. Rowe (ed.) Curriculum Patterns in Business Education, The American Business Education Yearbook XIII (Somerville, New Jersey: Eastern Business Teachers Association and National Business Teachers Association, 1956), p. 70.

³"As The Twig is Bent, The Tree's Inclined," Rotarian 93:39, October, 1958.

⁴H. R. Petryk, "Business Students Need Longer, Better Training," Administrative Management, 29:62, October, 1968.

the lessons from day to day and the carrying out of these plans by the teacher. Research has indicated that many typing graduates cannot meet the speed and accuracy standards set by business. This means course content should be better integrated focusing on job preparation, thus leaving fewer gaps in the student's learning.⁵ Timed writings of straight copy material must be recognized as not being ends in themselves but as tools to an end--typing power, control and speed.⁶ The typing of straight copy has advantages for timed-comparison drills. A student who types at a certain rate on straight copy has the likelihood of reaching that same rate on production copy. An inspiring goal for students is to narrow the gap between straight-copy rate and production-copy rate. Regardless of the pupil's purpose for taking a course in typewriting, his future use will be production typewriting which includes job-type activities, manuscript typing, and machine composition.⁷

Rhodes⁸ indicates that timed writings play a central role in the development of the student's typewriting skill; therefore activities which were formerly untimed are now added to the timed-writing category.

Production typing reflects how much a typist knows about his work and how much he can do in a certain length of time. Production capability

⁵J. Curtis Hall (ed.), Business Education: An Evaluative Inventory, National Business Education Yearbook, No. 6 (Washington, D. C.: National Business Education Association, 1968), pp. 35-37.

⁶Harm Harms, and B. W. Stehr, Methods in Vocational Business Education (second edition; Cincinnati: South-Western Publishing Company, 1963), p. 126.

⁷Arnola C. Bose, "Evaluating Production Typewriting," Business Education Forum, 23:20-21, April, 1969.

⁸George S. Rhodes, ". . . A New Design For Timed-Writing Copy," Business Education Forum, 23:7, November, 1968.

may be developed in different ways. One is developing production power by having typist engage in repeated typing of a limited number of similar problems.⁹ The improved attitude of the class members toward problem typing is an outgrowth of production typing. By production performance the student is aware of his achievements as compared with those of his classmates.¹⁰

Every typewriting teacher is challenged to develop competency for a job that includes a wider range of procedures than just the building of a skill.¹¹

We, the business teachers of the students who will comprise the work force of the seventies, need to examine our teaching in the light of current developments. A closer examination and application of proven techniques resulting from changing technology, new and old research, and experiments in our individual classrooms will result in vastly different teaching methods and students better prepared to face their future.¹²

II. REVIEW OF STUDIES

After a search of the literature, the investigator selected the studies described for discussion because they seemed most pertinent to the

⁹T. James Crawford, "Developing Production Skill," Business Education Forum, 23:15, October, 1968.

¹⁰Allien R. Russon and S. J. Wanous, Philosophy and Psychology of Teaching Typewriting (Cincinnati: South-Western Publishing Company, 1960), p. 236.

¹¹Helen B. Oerlein, "Typing Production and Job Competency," American Business Education, 14:101, December, 1957.

¹²Annice M. Jahn, "Evidence of Change in Typewriting," Business Education Forum, 23:2, November, 1968.

writer's investigation for this research paper. Duncan¹³ cited studies which date to the 1920's and he synthesized the master's thesis of Gemmell and the doctoral dissertations of Martin and Penar. The abstract of the Crawford dissertation and the West review article were also examined. The master's theses of Banner and Davidson were studied and summarized.

Gemmell Study¹⁴

The Gemmell study is an analysis and classification of factors affecting speed in typing letters as compared to straight-copy. He calculated rates for students on straight-copy material, business letters as well as for the following factors within the business letter: inserting paper, typing date, removing paper, typing inside address and salutation, typing the body of the letter, typing closing lines and reference notations.

As a result of this investigation, he concluded that students lost considerable production time in nontyping segments of production and that the transfer of speed from straight-copy material to letter copy is not automatic.

This writer's investigation is similar to the Gemmell study in that it, too, is a study of the results of straight-copy tests and letter-copy tests.

¹³Charles H. Duncan, "Major Contributions to The Theory and Practice of Production Typewriting," The Balance Sheet, 48:244-47, February, 1967.

¹⁴James Gemmell, "An Analysis of Some Factors That Affect Speed in Typewriting Business Letters," (unpublished Master's thesis, New York State College for Teachers, 1943 as reviewed by Duncan, Ibid., p. 245).

Martin Study¹⁵

The purpose of the Martin study was to make an analysis of using two methods to develop speed and accuracy from straight-copy material to problem-type material. "Continuous speed forcing" and "interval speed forcing" were the two methods used in working with an experimental group and a control group.

Instruction of problem-type copy was delayed until the second semester with the experimental group while speed and accuracy were emphasized the first semester. The control group received instruction on typing problems with fewer drills on speed and accuracy. Martin concluded that delaying instruction on problem copy resulted in no better speed and accuracy than that produced by the control group where speed and accuracy were emphasized continuously.

The investigation in this research paper differs from this study in that no effort was made to introduce problem-type activities any earlier than it was presented in the textbook.

Penar Study¹⁶

Penar attempted to determine transference of straight-copy skill to problem typing skill. He matched speed (3- to 5-minute tests) with rates (15-minute tests) on production copy. In measuring this transfer

¹⁵George S. Martin, "The Effects of Continuous and Interval Speed-Forcing Methods in Learning to Typewrite," (Doctorial dissertation, University of Pittsburgh, 1954, as reviewed by Duncan, op. cit. p. 245-46).

¹⁶Thaddeus H. Penar, "The Relationship Between Test Scores on Straight-Copy Typewriting and Test Scores on Selected Typewriting Problems," (Doctorial dissertation, University of Pittsburgh, 1953, as reviewed by Duncan, op. cit. p. 245).

of skill Penar substantiated that transfer of skill does exist, but in different amounts for different types of problems.

From these findings he concluded that high initial emphasis should be put on straight-copy skill and problems most unlike straight-copy should receive special attention. Erasing should be used when net words are relevant to the needs.

The present investigation is similar to the Penar study in that five-minute straight-copy tests were used and erasing was permitted on letter-production tests.

Crawford Study¹⁷

The Crawford study proposed to determine the effect of emphasizing production typewriting contrasted with speed typewriting in developing production typewriting ability.

The traditional speed-emphasis method and the experimental, production-emphasis method were used. Both the control group and the experimental group were required to cover the same problem areas in preparation for the production tests. Three times as much time was used by the experimental group to cover this material as did the control group use. The control group spent two thirds of the time on speed building and one third of the time on production typing. Equating devices for the two groups consisted of such factors as production ability, net stroking rates, net performance rates and related information.

Analysis of the Crawford study indicated that students taught by

¹⁷Thomas James Crawford, Production Typewriting (Monograph 97, South-Western Publishing Company, Cincinnati: March, 1960).

the production-emphasis method showed greater gains in production than those taught by the speed emphasis method. However, the levels of performance in production typewriting were consistently lower than those in net stroking.

The Crawford study analyzes rates of students enrolled at the university level over a period of one year, and the present investigation concerns the high-school level over one six-week period.

West Study¹⁸

The study made by West was to determine some relationships between straight-copy and performance on job-type activities. Examinees consisted of college students with at least one year of previous training in high school typewriting.

Two 10-minute timings were administered on new copy on the same day. Some days later in the testing period job-type activities were administered for a two-hour testing period. The job-type activities included: 30-minutes worth of ordinary business correspondence with envelopes, letters with tabulated report, manuscripts, unarranged table and rough draft copy. Each section of the job-type activities was used as a separate test and timed accordingly. Students were to correct errors on all parts of the examination except the 30-minute business correspondence test where papers were scored for gross words per minute with an arbitrary set of penalties for different kinds of errors.

¹⁸Leonard J. West, "Some Relationships Between Straight-Copy Typing Skill and Performance on Job-Type Activities," Delta Pi Epsilon Journal, 3:17-27, November, 1960.

Some conclusions drawn from the study made by West showed that stroking speed accounts for approximately one quarter of the factors that make up speed on jobs.

This investigation is related to the West study only in that letter-production encompasses the whole production test and in the West study it was one of the sub-sections of the test.

Banner Study¹⁹

This study proposed to compare letter-production test rates and straight-copy test rates on a series of tests given in eight high schools in the state of Virginia. Nineteen typewriting classes took the tests and the records were analyzed according to gross speed rates and error rates. Related-knowledge tests were also given.

A test on straight-copy and letter-production was given near the end of each six-week period beginning with the third 6-week period until the end of the school year. This meant four tests for each had been given for analysis.

From this analysis Banner found that the average error rate changed very little from Test 1 to Test 4 on straight copy. However, the speed rate on straight copy increased 4.16 gross words from Test 2 to Test 3. The average error rate on letter-production decreased on each test after Test 2. Gross speed rates increased 2.89 words a minute from Test 1 to Test 4.

¹⁹Mary Ruth Banner, "A Study of The Relationship Between Letter-Production Test Rates and Straight-Copy Test Rates in High School Typewriting (Virginia)" (unpublished Master's thesis, The University of Tennessee, Knoxville, 1953).

This present investigation is related to the Banner study in that both used straight-copy tests and letter-production tests for study. It differs from the Banner study in that Banner used 30-minutes for letter-production tests while the present investigation used 20-minutes.

Davidson Study²⁰

Davidson attempted to determine timed-writing and production speed standards in a selected group of metropolitan schools. The schools selected were in metropolitan cities of 100,000 population or more. The regions included were the North Central, Northeast, South, Southwest, and West.

Some conclusions from his findings were: first-year typewriting is most commonly offered at the 10th, 11th, and 12th grade levels, most business departments believe that timed-writings and production should be a part of total evaluation, erasing is not allowed on straight-copy timed writings, but it is permitted on timed production, five-minute and 20-minute production writings are the most commonly used time lengths.

Although this investigation does not relate directly to the Davidson study the findings of the Davidson study do correspond with the class activities used to secure materials for the present investigation.

²⁰Jerry C. Davidson, "A Study of The First-Year Typewriting Timed Writings and Production Speed Standards in a Selected Group of Metropolitan Secondary Schools" (unpublished Master's thesis, Kansas State College of Pittsburg, Pittsburg, 1963).

III. SUMMARY

In the review of each study similarities and dissimilarities were revealed. This investigation is similar to the Banner and Gemmell studies because all three studies investigated the results of straight-copy and letter-copy test scores. However, the Banner study used 30-minutes letter-production tests and this investigation used only 20 minutes. It is similar to the Penar study due to both permitting erasing on letter-production tests and using five-minute straight-copy tests.

This investigation is dissimilar to the Crawford study in that the Crawford study covered a period of one year at the university level while the present investigation covered only six weeks at the high-school level. West's study and this investigation are dissimilar on account of the letter production in this investigation was the total production test whereas West used letter production as a sub-section of the test. Martin's testees were introduced to problem-type activities before they were presented in the text, this investigation did not use this method, therefore the two studies are dissimilar.

The Davidson study and this investigation are not related except the findings in the Davidson study do reveal that class activities used to secure material for this investigation do correspond with those found in the Davidson study.

CHAPTER III

DESCRIPTIVE BACKGROUND FOR STUDY

Tests in any course should measure to some extent how well the students have accomplished the objectives of the course. The tests used for analysis in this investigation were given in order to measure achievement in one phase of typewriting--business letters. From the results of these tests a comparison of letter-production tests and straight-copy timed tests was made in order to determine what changes, if any, took place in speed and accuracy during the testing period.

I. STUDENTS IN THE STUDY

Six tests were given to two classes of first-year typewriting students at Stratford High School in Nashville, Tennessee.

The two classes had a total of 61 students when the study was started. Only 49 of these were retained in this study. Twelve students were eliminated because:

1. Absence for more than one test. Ten students were eliminated from the study because they were absent for more than one test. Both third and fourth periods had five students each who were eliminated.
2. Dropped from roll. The fourth period class had one student to be dropped from roll.
3. Transfer student. One student in the third period class transferred to the school and had not completed the assignment in the text previous to the material used in this study. Not having completed these previous assignments disqualified this student for this study.

Table I summarizes the number of students who participated in the study and of those who were eliminated.

TABLE I
STUDENTS IN STUDY

Class Period	No. of Students	No. Absent More Than One Test	No. of Transfers	No. Dropped From Roll	No. in Study
3	34	5	1	-	28
4	27	5	-	1	21
Total	61	10	1	1	49

II. ADMINISTRATION OF TESTS

The letter-production tests and the straight-copy tests were given in both classes on the same date for Tests 2, 3, and 6. The other three tests were scheduled differently because presentation of the textbook material and other class activities necessitated this variation.

Table II shows the dates each test was given in each class.

TABLE II
SCHEDULE OF ADMINISTRATION OF TESTS

Test	Letter Production		Test	Straight Copy	
	Third Period Class	Fourth Period Class		Third Period Class	Fourth Period Class
1	Mar 13	Mar 13	1	Mar 11	Mar 11
2	Mar 19	Mar 19	2	Mar 19	Mar 19
3	Apr 1	Apr 1	3	Apr 1	Apr 1
4	Apr 8	Apr 8	4	Apr 7	Apr 7
5	Apr 15	Apr 16	5	Apr 15	Apr 16
6	Apr 22	Apr 22	6	Apr 22	Apr 22

III. COPY USED AND METHOD OF ADMINISTERING TESTS

The six tests given to the two classes of first-year typewriting at Stratford High School provided the data from which the findings were extracted. Each class was given one straight-copy test and one letter-production test each week during the fifth six-week period (March 9, through April 24, 1970).

At the time for the first test both classes had completed the same material in the text. Both classes were taught by the same teacher. The only planned difference in the two groups was the period each was scheduled. The tests were given on any day of the week with the exception of Monday.

Before the timing on each letter-production test started, the students were allowed three minutes for planning. Each letter showed the number of words contained. The tests given are described in the following paragraphs. A copy of each test used and a sample copy of the Work-Completion Record is given in the Appendix.

Letter-Production Tests

Six 20-minute letter-production tests were used in this investigation. Beginning with the week of March 9 and ending with April 24 a letter-production test was given once each week except the week of spring vacation, March 23-27.

On each letter test the students were instructed to erase and correct all errors on all letters and to use the current date. No carbon copies or envelopes were required because considerable emphasis is placed

on these two factors the last six weeks of the school year.

Letter Test 1. The first test consisted of two average-length letters (181-192 words) to be typed in modified block style with paragraph indentions. Mixed punctuation was to be used in these two letters. The students were instructed to refer to the Letter Placement Table on Page 162 of the text to determine margins and date line position. In the closing lines the official title was to be typed below the name and the students were to use their own reference initials. In case any student completed both letters in less than twenty minutes they were to start over using plain paper with the second typing.

Letter Test 2. The second test required the students to type three average-length letters (205-256 words) in block style with open punctuation. The students were allowed to refer to the Letter Placement Table in the text to determine margins and date line position. Instructions called for typing the letters on letterhead paper and if the student completed the letters before time was called, he could start over using plain paper. The students were expected to type the official title in the closing lines in its correct position and use his reference initials.

Letter Test 3. The third letter test consisted of two average-length letters (186-249 words) to be typed in modified block style with no paragraph indentions. On this test the students were instructed to supply needed punctuation, capitalization, or missing letter parts. Each student had the privilege of referring to the Letter Placement Table for directions to determine margins and date line position. These letters were to be typed on plain paper and if the student completed the two letters before time was called, he could start over.

Letter Test 4. The two letters in Test 4 were average-length letters (156-199 words). Instructions for the two letters stated that one letter was to be typed on plain paper and the other letter on a letterhead page. Both letters were to be typed in modified block style with mixed punctuation. The line length, return address position, and date line were also given. One letter instructed the student to sign his name, and one letter instructed him to use his reference initials.

Letter Test 5. The fifth test consisted of three average-length letters (160-249 words). Two of the letters were to be typed in modified block style with indented paragraphs, one letter was to be typed in modified block style with no paragraph indentions. If necessary, the student was permitted to refer to the Letter Placement Table in the text. Needed punctuation, capitalization, or missing letter parts were to be supplied by the student. All three letters were to be typed on letterhead paper.

Letter Test 6. The sixth test consisted of two average-length letters (160-192 words). One letter was to be typed in modified block style with indented paragraphs and open punctuation, and one letter was to be typed in block style with mixed punctuation with the student supplying an appropriate salutation. Both letters were to be typed on letterhead paper. The students were instructed to address an envelope; but since no other test had involved addressing envelopes, this was omitted with 12 words deducted from the total words given.

Straight-Copy Tests

A straight-copy test was given to the students one day during each week of the six-week testing period for use in this investigation.

Robinson¹ indicates that the results of such writings should be used as evidence of progress, basis for setting new goals, and as measures of skill growth and levels of skill attainment.

Different copy was used for all straight-copy tests except for Tests 2 and 3. As spring vacation fell between these two tests, (making at least ten days between the tests) it was thought that this repetition would be acceptable.

Copies of material used for the timed writings are given in the Appendix.

IV. SUMMARY

The records of 61 students used in this study were those obtained from the classes taught by the investigator. Absences, transfer, or being dropped from roll necessitated that 12 students who began the study be eliminated.

All material used for the straight-copy tests came from the textbook. This material was to be typed using a 70-space line, a 5-space paragraph indentation, and double spacing.

The letters used for testing were all average length ranging from 156-256 words. Instructions for typing the letters varied between block and modified block styles, and open and mixed punctuation.

¹Jerry W. Robinson, "Matching Copy Structure To Practice Purpose in Typewriting," reported in Practices and Preferences in Teaching Typewriting. Monograph 117. (Cincinnati: South-Western Publishing Company, March, 1967), p. 54.

CHAPTER IV

REPORT OF FINDINGS

Data for this investigation were collected from two classes in first-year typewriting at Stratford High School in Nashville, Tennessee. Six 20-minute letter tests and six 5-minute straight-copy tests were checked and analysed for this investigation. Findings which were extracted from these tests are presented in this chapter in tabulated and narrative form.

I. ANALYSIS OF LETTER COPY

The net production rate and the uncorrected errors for each class and the mean of the two classes are presented in Table III. A discussion of the combined scores as well as the scores for each class is presented in the following paragraphs.

TABLE III
MEAN NET PRODUCTION RATES AND UNCORRECTED ERRORS

ON LETTER-PRODUCTION TESTS

Test	Net Production Rate A Minute			Uncorrected Errors A Minute		
	Third Period Class	Fourth Period Class	Both Classes	Third Period Class	Fourth Period Class	Both Classes
1	15.05	17	15.85	.15	.14	.145
2	16.45	17.06	16.72	.20	.12	.168
3	13.81	13.67	13.75	.10	.12	.1125
4	12.96	13.03	12.99	.19	.14	.1625
5	14.43	14.70	14.54	.18	.11	.15
6	16.06	14.65	15.46	.24	.18	.217

Net Production Rate A Minute

The mean net production rate on letter-production tests for the combined classes showed a decrease of .39 words a minute from Tests 1 to 6, inclusive. An increase of .87 words a minute was shown from Tests 1 to 2, a decrease of 2.97 words a minute from Tests 2 to 3, a decrease of .76 words a minute from Tests 3 to 4, an increase of 1.55 words a minute from Tests 4 to 5, and an increase of .92 words a minute from Tests 5 to 6. The mean score revealed a decrease after Test 2 and continued the downward trend until Test 5 when an increase is shown.

Each class showed an increase in net production rate from Tests 1 to 2. A decrease was shown in each class from Tests 2 to 3, and a further decrease from Tests 3 to 4. After Test 4 each class showed an increase in net production rate on Test 5 and the third period class showed a greater increase on Test 6, while the fourth period class showed a decrease of .05 on Test 6. The third period class averaged a score on Test 6 which exceeded the score on Test 1. Although the mean score in the fourth period class had started to climb, it did not exceed the score on the first test.

The greatest variation in the score was between Tests 2 and 3. This was true for each class separately as well as the mean score.

Uncorrected Errors

The uncorrected errors on the letter-production tests for the 49 students at Stratford High School showed an increase of .072 uncorrected errors for the combined classes from Tests 1 to 6, inclusive. A further analysis of the uncorrected errors for the combined classes reveals the

up-down combination. From Tests 1 to 2 the uncorrected errors increased .023, Tests 2 to 3 a decrease of .0555, Tests 3 to 4 an increase of .0500, Tests 4 to 5 a decrease of .0125, and Tests 5 to 6 an increase of .067.

A review of the uncorrected errors a minute for each class showed that the third period class increased in the number of uncorrected errors from Tests 1 to 2 while the fourth period class decreased. From Tests 2 to 3 the third period class decreased the number of uncorrected errors the fourth period class remained unchanged. From Tests 3 to 4 the third period class indicated a sharp rise in uncorrected errors with the increase in the number of uncorrected errors in the fourth period class only slight. Tests 4 to 5 showed a decrease with fourth period class showing a greater decline than the third period. From Tests 5 to 6 both classes showed an increase in the number of uncorrected errors.

Typists in an office are expected to type acceptable letters at a reasonable rate. Opportunities to develop proofreading and error-correction skill help to make the classroom into a more office-like situation. A number of factors may influence results in the classroom. Some of the external factors are the differences in (1) student abilities, (2) time of class meeting, (3) interruptions in class--this might be a one day incident such as a fire drill, in-service education or a week's interruption such as spring vacation, or (4) extra curricular activities.

II. ANALYSIS OF STRAIGHT-COPY TESTS

During each week of the six-week testing period timed writings on straight-copy material were given. However, on the day of the test only one timed writing was given and collected for use in this study. All of

the writings were scored according to gross words a minute. The mean of the gross words a minute and errors a minute was determined for each class and for the combined classes. This information is presented in Table IV.

TABLE IV
MEAN GROSS WORDS A MINUTE AND ERRORS A MINUTE
ON STRAIGHT-COPY TIMED WRITINGS

Test	Gross Words A Minute			Errors A Minute		
	Third Period Class	Fourth Period Class	Both Classes	Third Period Class	Fourth Period Class	Both Classes
1	36.76	40.66	38.37	1.64	2.08	1.8
2	36.69	36.52	36.61	1.73	1.74	1.74
3	37.08	39.10	37.95	1.28	1.25	1.23
4	37.12	39.88	38.24	1.37	1.4	1.38
5	37.64	40.15	38.69	1.12	1.32	1.2
6	38.11	40.05	38.94	1.32	1.94	1.58

Gross Words A Minute

In the combined classes the gross words a minute increased .57 words from Tests 1 to 6, inclusive. From Tests 1 to 2 the gross words a minute decreased by 1.76, Tests 2 to 3 showed an increase of 1.34 words, Tests 3 to 4 an increase of .29 words, Tests 4 to 5 an increase of .45, Tests 5 to 6 an increase of .25 words a minute. Beginning with Test 2 the combined classes showed a gradual increase through Test 6.

The gross words a minute for the third period class showed a decrease of .07 words from Tests 1 to 2. Tests 2 to 3 increased .39 words and beginning with Test 3 the number of gross words increased through

Test 6. The score on Test 6 was 1.35 gross words higher than the score on Test 1.

The fourth period class recorded a drop of 4.14 gross words from Tests 1 to 2. However, beginning with Test 2 the number of gross words increased through Test 5. The score on Test 6 indicated a drop of .10 gross words a minute. Even though an increase was recorded from Test 2 through Test 5, the score for the fourth period class did not exceed the score on Test 1.

Errors A Minute

For the combined classes the error rate decreased by .22 from Tests 1 to 6, inclusive. From the analysis of the error rate a minute for the combined classes the up-down combination is expressed. From Tests 1 to 2 there was an error rate decrease of .06, from Tests 2 to 3 a decrease of .51, from Tests 3 to 4 records an increase of .15, from Tests 4 to 5 a decrease of .18, and from Tests 5 to 6 an increase of .38 errors a minute.

An analysis of the error rate a minute for the third and fourth period classes separately portrayed fluctuation. In spite of this each class showed a decrease in error rate from Tests 1 to 6. The decrease in the third period class was .32 errors from Tests 1 to 6, inclusive. The decrease in the fourth period class was .14 errors from Tests 1 to 6.

III. COMPARISON OF DATA

The findings of this study suggested that some comparisons of the data should be interesting. Table V shows a comparison of the mean of letter-production tests to straight-copy tests.

TABLE V

COMPARISON OF MEAN OF

LETTER-PRODUCTION TESTS TO STRAIGHT-COPY TESTS

(Combined Classes)

Test	Error Rates A Minute			Speed Rates A Minute		
	Letter Production		Letter Production As Per Cent of Straight Copy	Letter Production		Letter Production As Per Cent of Straight Copy
	Uncor- rected Errors	Straight Copy		Copy	Straight Copy	
1	.145	1.8	8.06	15.85	38.37	41.31
2	.168	1.74	9.7	16.72	36.61	45.66
3	.1125	1.23	9.15	13.75	37.95	36.23
4	.1625	1.38	11.77	12.99	38.24	33.97
5	.15	1.2	12.5	14.54	38.69	37.58
6	.217	1.58	13.73	15.46	38.94	39.70

Changes in Speed and Accuracy From First to Last Test

A comparison of the error rate a minute on straight copy and the uncorrected errors on letter copy is discussed. The speed rates on straight-copy tests and letter-production tests are also discussed.

No net improvement for the combined classes from Test 1 to Test 2 was recorded. The increase in net production rate on letters was offset by an increase in the number of uncorrected errors on letters. The decrease in errors on straight copy was so slight that it did not compensate for the decrease in the number of gross words.

The net improvement from Test 2 to Test 3 was an increase in gross words on straight copy with a decrease in the error rate. The decrease in the speed rate on letter production was offset by a decrease in the number of uncorrected errors.

No net improvement was apparent from Tests 3 to 4. The increase in the number of gross words on straight copy was accompanied by an increase in the error rate. The letter-production rate went still lower with the uncorrected errors going up.

A slight increase in the number of gross words on straight copy with a decrease in the number of errors indicated improvement from Test 4 to Test 5. The letter-production rate was apparent which, too, was accompanied by a decrease in the uncorrected errors.

From Tests 5 to 6 the speed scores on letter-production and straight-copy increased, but no improvement was evident because of the increase in errors on letter copy and straight copy.

Relationship of Speed Scores on Straight Copy to Letter Copy

Before any prediction from straight-copy speed scores could be made relative to net production rate a minute on letter-copy speed scores, the relationship of the test scores had to be determined.

The combined speed scores from Test 2 were chosen as a sample for comparison, because the students had been oriented to letter writing and because this test was given the week before spring vacation. Therefore, these scores were not influenced by this external factor.

To determine predictions the linear regression method described by Leabo and Smith¹ was used with X standing for speed scores on 5-minute straight-copy timed tests and Y standing for speed scores on 20-minute letter-production timed tests. A summary of these scores are:

X	Y	X ²	XY	Y ²
1721	786.10	64965.00	29865.40	14680.08
$\bar{X} = 36.61$	$\bar{Y} = 16.72$	$\bar{X}\bar{Y} = 63005.81$	$\bar{X}\bar{Y} = 28378.21$	$\bar{Y}\bar{Y} = 13143.59$
		$\Sigma X^2 = 1959.19$	$\Sigma XY = 1487.19$	$\Sigma Y^2 = 1536.49$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{1487.19}{1959.19} = .7590$$

$$r = \sqrt{\frac{b \Sigma XY}{\Sigma X^2}} = \frac{.7590 \times 1487.19}{1536.49} = \frac{1128.7772}{1536.49} = .7346$$

$$r = \sqrt{.7259} = .8571$$

Since the sample was less than 50 and r was less than .90, the z

¹D. A. Leabo and C. Frank Smith, Basic Statistics For Business and Economics, (Homewood, Illinois: Richard D. Irwin, Inc., 1964), p. 260.

transformation was used.² Table G. TABLE OF VALUES OF r FOR VALUES OF z^3 showed the nearest z value of .8571 to be 1.28. TABLE B.1 TABLE OF THE NORMAL CURVE,⁴ revealed the z value of 1.28 to be .39973. Rounding this off to the nearest one-hundredth indicates that speed scores on straight-copy timed writings should predict speed scores on letter-copy timed writings 80 per cent of the time. This is true because 40 per cent of the scores should fall between -1σ (standard deviation of population)⁵ and 0 while another 40 per cent should fall between 0 and $+1 \sigma$ in a normal distribution.

Table F. VALUES OF THE CORRELATION COEFFICIENT FOR DIFFERENT LEVELS OF SIGNIFICANCE⁶ shows an r value of .371 to be significant at the .01 level for 45 or n when $n = N - m$.

Although the G and F Tables showed correlations of 80 per cent probability and 1 per cent level of significance, an examination of the actual scores on the sample indicated a range of 66 to 18 per cent reliability. This examination was made in the following manner. Scores for each test were arranged in an array from high to low.

These scores were checked to see how many of the students who

²Ibid., p. 269.

³Ibid., p. 458, citing Table V-B of R. H. Fisher, Statistical Methods for Research Workers (eleventh edition; Edinburgh: Oliver and Boyd, Ltd., 1950).

⁴Ibid., p. 440.

⁵Ibid., p. 54.

⁶Ibid., p. 457, citing Table V-A of R. H. Fisher, Statistical Methods for Research Workers (Edinburgh: Oliver and Boyd, Ltd.).

ranked in the upper 40 per cent of the scores on the straight-copy tests also ranked in the upper 40 per cent of the speed scores on letter-copy tests. Out of the 18 students in the upper 40 per cent of the speed scores on the straight-copy tests, 13 or 72 per cent were also in the upper 40 per cent of the speed scores on the letter-copy tests. Out of the 18 students in the middle 40 per cent of the speed scores on straight-copy tests, 10 or 55 per cent were also in the middle 40 per cent of the speed scores on letter-copy tests. Out of the 18 students in the lower 40 per cent of the speed scores on the straight-copy tests, 12 or 66 per cent were also in the lower 40 per cent of the speed scores on the letter-copy tests. However, out of the 11 students in the middle 20 per cent of the speed scores on the straight-copy tests, only 2 or 18 per cent ranked in the middle 20 per cent of the speed scores on the letter-copy tests.

... part of this research paper gave a descriptive
 ... This included information relating to
 ... those who were retained and
 ... A schedule of the tests
 ... for each test was presented
 ... was a report of the
 ... according to net production rate
 ... for each class and for both classes
 ... reflected an increase in
 ... for each class and
 ... from Tests 1 to 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This investigation proposed to study the records of two classes of first-year typewriting at Stratford High School in Nashville, Tennessee in order to determine (1) what change took place in speed and accuracy from the first to the last test given in the six-week grading period, and (2) to what extent speed scores on straight copy predict speed scores on letter tests.

Summary

A five-minute straight-copy timed test and a 20-minute letter-production test were given to each class once a week for the fifth six-week grading period (March 9, through April 24, 1970).

The first major part of this research paper gave a descriptive background for the investigation. This included information relating to the number of students in the investigation, those who were retained and those who were dropped from the investigation. A schedule of the tests given and a description of the material used for each test was presented in tabulated and narrative form.

The second major part of this research paper is a report of the findings. An analysis of letter tests according to net production rate and the number of uncorrected errors for each class and for both classes were presented and discussed. These findings reflected an increase in the number of uncorrected errors from Tests 1 to 6 for each class and both classes combined. The net production rate from Tests 1 to 6

increased for the third period class while it decreased for the fourth period class and the combined classes. An analysis of the straight-copy tests revealed an increase in the number of gross words a minute for the combined classes. The third period class showed a 1.35 increase in gross words from Tests 1 to 6 while the fourth period class recorded a slight decrease in gross words. The error rate for the combined classes and for each class separately was the up-down combination. However, from Tests 1 to 6 the combined classes showed a decrease in the number of errors.

Test 2 was used as a sample for determining to what extent speed scores on straight copy predict speed scores on letter tests. This analysis showed a correlation of 80 per cent probability and 1 per cent level of significance. An examination of the actual scores on the sample indicated a range of 72 to 18 per cent reliability.

Conclusions

With careful consideration of the data collected and analyzed in this study, the literature reviewed, and through the interpretation of the writer, the following conclusions have been reached:

1. By the fifth six-week grading period of the school year, students have reached a plateau since very little change was reflected in the number of words or errors made by each student.
2. No significant growth was evidenced when tests were given each week.
3. External factors influenced students reactions.
4. Although not 100 per cent reliable, speed scores on straight-copy are a significant indication of students' ability to produce on

letter tests.

5. The straight-copy speed score's predictions are more reliable in the upper and lower groups than in the middle group.

Recommendations for Improving Instruction

1. More stress should be put on proofreading and error correction when typing letters than was done during this study.

2. Measuring production work should include planning time, typing envelopes, inserting and removing paper, making carbon copies, and typing letters with unusual features as tabulated reports and enumerated items.

3. Time devoted to production typewriting should be used wisely in order to drive for continuous improvement in speed and accuracy on straight-copy timed tests.

4. Speed scores on five-minute timed writings should be used to set speed goals for letter-copy timed writings.

Recommendations for Further Studies

1. A study be made on the high-school level for the entire second semester (18 weeks) to determine what change takes place over this length of time in straight-copy and letter-production tests.

2. A study be made of a series of straight-copy speed scores as compared with letter-copy speed scores for combined classes to see whether speed scores on straight copy can be used to predict speed scores on letter copy.

3. A study be made to determine what effect emphasis on production typing in the classroom has on an office workers' effectiveness on the job.

Collective Inventory.

Washington, D. C.:

Business Education.

McGraw-Hill Publishing Company,

Business and

1934, 120., 1934.

James W. Erickson. 20th

Chicago: South-Western

BIBLIOGRAPHY

James W. Erickson.

Business Typewriting.

McGraw-Hill Publishing Company,

James W. Erickson. Teacher's

Chicago, Cincinnati:

McGraw-Hill Publishing Company,

Education. The

1934, 120., 1934.

McGraw-Hill Publishing Company,

History of Teaching

McGraw-Hill Publishing Company,

Methods

New York: McGraw-

BIBLIOGRAPHY

BOOKS

- Hall, J. Curtis (ed.). Business Education: An Evaluative Inventory. National Business Education Yearbook No. 6. Washington, D. C.: National Business Education Association, 1968.
- Harms, Harm, and B. W. Stehr. Methods in Vocational Business Education, Second edition. Cincinnati: South-Western Publishing Company, 1963.
- Leabo, D. A., and C. Frank Smith. Basic Statistics For Business and Economics. Homewood, Illinois: Richard D. Irwin, Inc., 1964.
- Lessenberry, D. D., T. James Crawford, and Lawrence W. Erickson. 20th Century Typewriting, Ninth edition. Cincinnati: South-Western Publishing Company, 1967.
- Lessenberry, D. D., T. James Crawford, and Lawrence W. Erickson. Laboratory Materials for Parts 1 and 2, 20th Century Typewriting, Ninth edition. Cincinnati: South-Western Publishing Company, 1967.
- Lessenberry, D. D., T. James Crawford, and Lawrence W. Erickson. Teacher's Manual for 20th Century Typewriting, Ninth edition. Cincinnati: South-Western Publishing Company, 1967.
- Leslie, Louis. 20,000 Words. New York: The Gregg Publishing Company, 1965.
- Rowe, John L. (ed.). Curriculum Patterns in Business Education. The American Business Education Yearbook, Vol XIII. Somerville, New Jersey: Eastern Business Teachers Association and National Business Teachers Association, 1956.
- Russon, Allien R., and S. J. Wanous. Philosophy and Psychology of Teaching Typewriting. Cincinnati: South-Western Publishing Company, 1960.
- Tonne, Herbert A., Estelle L. Popham, and M. Herbert Freeman. Methods of Teaching Business Subjects, Third edition. New York: McGraw-Hill Book Company, 1965.

PERIODICALS

- "As The Twig is Bent, The Tree's Inclined," Rotarian XCIII (October, 1958), 39.
- Bose, Arnola C. "Evaluating Production Typewriting," Business Education Forum XXIII (April, 1969), 20-21.
- Carlberg, Mona, and Cleo P. Casady. "More Production, Less Confusion In Typewriting," Business Education Forum XX (January, 1966), 24,31.
- Crawford, T. James. "Developing Production Skill," Business Education Forum XXIII (October, 1968), 15-16.
- Crumley, Marguerite. "Business Education In Transition--Tomorrow," Business Education Forum XXIV (February, 1970), 3-4.
- Duncan, Charles H. "Major Contributions To The Theory and Practice of Production Typewriting," The Balance Sheet XLVIII (February, 1967), 244-47.
- Jahn, Annice M. "Evidence of Change In Typewriting," Business Education Forum XXIII (November, 1968), 2.
- Oerlein, Helen B. "Typing Production and Job Competency," American Business Education XIV (December, 1957), 101-4.
- Petryk, H. R. "Business Students Need Longer, Better Training," Administrative Management XXIX (October, 1968), 62.
- Rhodes, George S. ". . . A New Design For Timed-Writing Copy," Business Education Forum XXIII (November, 1968), 7-10.
- West, Leonard J. "Some Relationships Between Straight-Copy Typing Skill and Performance on Job-Type Activities," Delta Pi Epsilon Journal III (November, 1960), 17-27.

MONOGRAPHS

- Crawford, Thomas James. Production Typewriting. Monograph 97. Cincinnati: South-Western Publishing Company, 1960.
- Robinson, Jerry W. (ed.). Practices and Preferences in Teaching Typewriting. Monograph 117. Cincinnati: South-Western Publishing Company, March, 1967.

UNPUBLISHED MATERIALS

Banner, Mary Ruth. "A Study of The Relationship Between Letter-Production Test Rates and Straight-Copy Test Rates in High School Typewriting (Virginia)." Unpublished Master's thesis, The University of Tennessee, Knoxville, 1953.

Davidson, Jerry C. "A Study of The First-Year Typewriting Timed Writings and Production Speed Standards in a Selected Group of Metropolitan Secondary Schools." Unpublished Master's thesis, Kansas State College of Pittsburg, Pittsburg, 1963.

"Summary of School and Community Survey," Evaluative Study of Stratford High School, November 2-5, 1964.

RESEARCH TOOLS

Business Education Index. New York: Gregg Division of McGraw-Hill Book Company, 1955-68.

Business Periodicals Index. New York: H. W. Wilson Company, 1958-69.

Readers' Guide to Periodical Literature. New York: H. W. Wilson Company, 1951-68.

State Educational Journal Index. L. Stanley Ratliff (ed.), Fort Collins, Colorado.

APPENDIX

WORKING PAPER FOR RECORDING
STRAIGHT-COPY TEST SCORES

_____ Date

_____ Test

Class Period _____

No. of Papers _____

Class Period _____

No. of Papers _____

WORDS

ERRORS

WORDS

ERRORS

WORKING PAPER FOR RECORDING LETTER-COPY TEST SCORES

Date _____

Test _____

Class Period _____ No. of Papers _____ Class Period _____ No. of Papers _____
N-PRAM _____ Uncorrected Errors _____ N-PRAM _____ Uncorrected Errors _____

Write the official title below the typed name. Use your own initials for reference.

Use the word-count figures listed in parentheses at the ends of the letters and the Letter Placement Table (page 162 in the text) for determining proper placement.

Erase and correct all errors.

Application Skill Measurement--Letters

Problem 1

(current date) Mr. Kenneth Beddow	2495	8
1414 View Street Omaha, Nebraska	68103	16
Dear Mr. Beddow: (9)	Trouble free, econom-	23
ical operation of your car is vitally important to		34
you. To assure you of such performance for		42
your car, I would like to recommend Royal		51
Super gasoline--the finest premium gasoline on		60
the market today. (9)	If you are not now	68
receiving the benefits of a Royal credit card,		77
may I personally invite you to complete and		86
return the application enclosed. The conven-		95
ience of a Royal credit card assures you the best		105
in products and services from thousands of		114
Royal stations throughout the United States and		123
Canada. (9)	Even if you now have other oil	131
company credit cards, you owe it to yourself, to		141
your car, and to your budget to apply for a		150
Royal credit card. Take a moment now to fill in		160
and mail the application enclosed--we pay the		169
costage. Of course, there is no charge for the		178
card. Sincerely yours,	Roger S. Kent Con-	187
sular Services (xx)	Enclosure (160)	192

LETTER-PRODUCTION TESTS

Test 1

Instructions

1. Type the letters in Test 1 in modified block style with indented paragraphs and mixed punctuation.
2. Type each letter on the letterhead paper given in the workbook and if you complete both letters before time is called start over typing letters on plain paper.
3. Type the official title below the typed name. Use your own initials for reference.
4. Use the word-count figures listed in parentheses at the ends of the letters and the Letter Placement Table (page 162 in the text) for determining proper placement.
5. Erase and correct all errors.

Production Skill Measurement—Letters

Problem 1

(Current date) Mr. Kenneth Beddow	2495	8
Lakeview Street Omaha, Nebraska	68103	16
Dear Mr. Beddow: (91) Trouble free, econom-		23
ical operation of your car is vitally important to		34
you. To assure you of such performance for		42
your car, I would like to recommend Royal		51
Super gasoline--the finest premium gasoline on		60
the market today. (92) If you are not now		68
receiving the benefits of a Royal credit card,		77
may I personally invite you to complete and		86
return the application enclosed. The conven-		95
ience of a Royal credit card assures you the best		105
in products and services from thousands of		114
Royal stations throughout the United States and		123
Canada. (93) Even if you now have other oil		131
company credit cards, you owe it to yourself, to		141
your car, and to your budget to apply for a		150
Royal credit card. Take a moment now to fill in		160
and mail the application enclosed--we pay the		169
postage. Of course, there is no charge for the		178
card. Sincerely yours, Roger S. Kent Con-		187
sumer Services (xx) Enclosure (160)		192

Problem 2

(Current date) | Mr. Robert Leshin, Manager | 8
 American Business Forms, Inc. | 3592 Lafayette 18
 Avenue, South | Indianapolis, Indiana 46202 | 26
 Dear Mr. Leshin: | (¶1) We have continued your subscription beyond the date of its expiration. 34
 We did this because of the importance of uninterrupted service to you. (¶2) Each issue of 44
 THE WALL STREET JOURNAL forwarded to you 53
 has contained valuable news, original information, editorials, and interpretative articles that 62
 you would not want to miss. The editors are 70
 preparing some very important material for early 79
 publication. This material will cover the many 89
 changes now taking place in the business and 98
 financial world. You can get such information 108
 nowhere else at such nominal cost. (¶3) If your 118
 check is not handy, your word as to payment is 127
 as good as your bond with us. Just return the 136
 enclosed card now. | Sincerely yours, | 145
 Jonathan Kaufer | Circulation Manager | (xx) | 154
 Enclosure (137) 164
 172
 179
 181

(Current date) | Mr. Michael C. Hewett, Jr. | 8
 State Technology Laboratories | 2746 Coronado 17
 Avenue | Long Beach, California 90813 | Dear 26
 Mr. Hewett: | (¶1) Today many business firms 33
 use the block style letters for their correspondence. This letter is an example of that style. 42
 You will note that all lines start at the left margin. 52
 One advantage of this style is that the mechanical 61
 process of indenting opening and closing lines, 74
 or paragraphs, is eliminated. This practice saves 83
 time and space. (¶2) Open punctuation is used 98
 with this letter: Punctuation marks are omitted 108
 after the date, address, salutation, and complimentary close unless an abbreviation is used, in 118
 which case the period is typed as a part of the 121
 abbreviation. Elimination of these punctuation 131
 marks helps to increase letter production rates. 141
 Another recommended time-saving feature is to 150
 type only the typist's initials for reference when 160
 the dictation's name is typed in the closing lines. 169
 (¶3) As you can see, the block style of letter 180
 gives good placement appearance; and because 190
 very extra typing strokes and motions are eliminated, its use does help to increase letter production rates. It is the letter style that I recommend 198
 for use in the business office. | Sincerely yours | 207
 Scott Miller | Communication Consultant | 217
 (215) 227
 238
 248
 256
 258

Test 2

Instructions

1. Type the letters in Test 2 in block style with open punctuation.
2. Type each letter on the letterhead paper given in the workbook and if you complete all letters before time is called start over typing letters on plain paper.
3. Determine proper placement by using the Letter Placement Table on page 162.
4. Erase and correct all errors.

Building Production Skill—Letters

Problem 1

	Words
(Current date) Mr. Michael C. Hewett, Jr.	8
Space Technology Laboratories 2746 Coronado	17
Avenue Long Beach, California 90813 Dear	26
Mr. Hewett (q1) Today many business firms	33
use the block style letters for their correspon-	42
dence. This letter is an example of that style.	52
You will note that all lines start at the left margin.	64
The advantage of this style is that the mechanical	74
process of indenting opening and closing lines,	83
or paragraphs, is eliminated. This practice saves	94
time and space. (q2) Open punctuation is used	102
with this letter: Punctuation marks are omitted	112
after the date, address, salutation, and compli-	121
mentary close unless an abbreviation is used, in	131
which case the period is typed as a part of the	141
abbreviation. Elimination of these punctuation	150
marks helps to increase letter production rates.	160
Another recommended timesaving feature is to	169
type only the typist's initials for reference when	180
the dictator's name is typed in the closing lines.	190
(q3) As you can see, the block style of letter	198
gives good placement appearance; and because	207
many extra typing strokes and motions are elimi-	217
nated, its use does help to increase letter produc-	227
tion rates. It is the letter style that I recommend	238
for use in the business office. Sincerely yours	248
J. Scott Miller Communications Consultant	256
(xx) (215)	256

Problem 2

(Current date) Mr. Shelby Popham 9827	Words
Hickory Hill Drive Green Bay, Wisconsin	8
54301 Dear Mr. Popham (Q1) Do you know	16
how to get the most for your car at trade-in	23
time? Men who appraise trade-ins know that all	32
cars experience normal wear and tear. What	41
they do appraise, in effect, is how well you	50
cared for your car, and how competently repair	59
work was performed. The secret, then, is to	68
keep the value of your car high with planned	77
care. Periodic maintenance by our professional	86
staff will do just that; then when it's trade-in	96
time, your car will be worth more. (Q2) Remem-	105
ber that putting off scheduled maintenance may	114
allow minor troubles to grow into major ailments.	123
Why not let us help you keep your car good	133
looking and in top running order. Dents, wrin-	142
kles, dings, bumps, and blemishes disappear like	151
magic when we do the job. Our trained	161
mechanics have the "know-how" that it takes to	169
keep your car humming smoothly. (Q3) Just	178
give us a call and we'll arrange for a "loaner"	186
while your car is in the shop. Why not call us	195
right away. Sincerely yours James Robinson,	205
Head Service Department (xx) (187)	214
	219

Problem 3

(Current date) Mr. Steven Leish 1135 San	Words
Vicente Blvd. Santa Monica, California 90402	8
Dear Mr. Leish (Q1) Enclosed are four com-	18
plimentary theater tickets. These tickets will	25
admit you, and an entire carload of your guests,	35
to any West Coast Drive-In Theater. Each ticket	45
is good for one show of your choice during any	54
of the next three months. (Q2) We are making	64
this offer because our efforts for the past ten	72
years have been directed to upgrading the	82
drive-in theater concept. Today our screens are	90
the biggest being used for movie projection.	100
Our snack bars, and all other facilities, are	109
sparkling clean. You can understand, I think,	118
why we are eager for you to look us over. When	128
you come, remember there is no formality in	137
drive-in theater-going. (Q3) May we soon have	146
the pleasure of your company as one of our	154
honored guests. A first-run movie, leisure dress,	163
and no parking costs add up to a wonderful	173
evening of entertainment. Yours for pleasant	182
relaxation Robert E. Keislar Public Relations	191
Department (xx) Enclosures 4 (166)	200
	205

Test 3

Instructions

1. Type the following letters in modified block style without paragraph indentions.
2. Supply the needed punctuation, capitalization, and missing letter parts.
3. Use the word-count figures listed in parentheses at the ends of the letters and the Letter Placement Table on page 162 for determining proper placement.
4. Type the letters on plain paper, erase and correct all errors, and if you complete both letters before time is called start over.

Business Letter Production with Alertness Training

Problem 1

	Words
mrs. james w. robings 6318 w. 75th place los	12
angeles, california 90045 (91) We dislike	23
using superlatives, but these are some of the	33
exclamations that were heard at our first public	42
showing of the new Electra typewriter: Sensa-	52
tional! Amazing! Fantastic! (92) This remark-	60
able all-electric compact typewriter for home	69
and office use has every basic feature of the	79
full-size electric typewriters--and many new	88
features which even they don't have. We are	97
proud of the new automatic-set margins. You	106
simply set a "guide number" for the approximate	115
number of words in a letter, and the margins	124
will automatically adjust for the typing of a letter	135
of that length. You decide on the margin you	144
want at the bottom of the paper, set an appro-	153
priate number, and when the paper reaches this	163
position, a light flashes--much as the turn signal	173
on your automobile--to warn you that you are	182
at the bottom of the paper. (93) There's much	190
more we could tell you about this typewriter,	199
but you'll have to see it and try it to believe	210
it. Why not call us today for a demonstration	219
of the Electra in your home or office. You will	229
be under no obligation whatsoever to buy.	238
kurt templeman sales representative (216)	249

Problem 2

mr. michael g. verona 23847 mountain avenue	Words
denver, colorado 80219 (Q1) Your subscrip-	12
tion to the <u>Denver News</u> is being continued so	23
that you won't miss any of your favorite features	34
or the complete news coverage. This is being	44
done because I am sure that the only reason you	53
haven't renewed your subscription is that you	63
have been too busy. (Q2) The <u>Denver News</u> has	72
won national recognition for its complete and	83
objective news reporting. Its lively, picture-	92
packed sections devoted to sports, to modern	101
homemaking, to humor, to the theater, and to	110
other important facets of contemporary living	119
make it a great newspaper for the whole family.	128
(Q3) To insure getting the <u>Denver News</u> regu-	138
larly, just mail the enclosed card with your	148
renewal check in the postage-paid envelope. Be	157
sure to do it now. (miss) tanya papach mail	167
subscription department (143)	179
	186

Test 4

Instructions

1. Type the following letters in modified block style without paragraph indentions using mixed punctuation.
2. Use a 50-space line for both letters. In Problem 1 type your address for the return address on Line 16. In Problem 2 type the date on Line 14.
3. Type Problem 1 on plain paper and sign your name. Type Problem 2 on letterhead paper and use your initials for reference.
4. Erase and correct all errors. If you complete both letters before time is called, start over.

Problem Typing--Personal Letter and Business Letter

Problem 1

	Words
(Return address, date)	11
Candid Photo Company, 1889 Waverly Drive,	19
Palos Heights, Illinois 60463 Gentlemen (71)	28
May I please have 100 prints made of the en-	36
closed negative. I would like to have the order	46
apply to the special offer that appeared in the	56
ad in <u>Camera News</u> on December 23. (72) The	66
ad in <u>Camera News</u> stated that it was possible	77
to have a free enlargement with any order that	86
exceeded \$2.50. I would like to have the free	96
enlargement since my order comes to \$3.25.	105
(73) I would be very much pleased if I could	113
have the order sent to me by the end of next	122
week. My enclosed check for \$3.25 will be	130
money well spent, I know, since I have enjoyed	140
the prints you have made for me before. Sin-	148
cerely yours (your name) Enclosures	156

Problem 2

January 16, 19--	Johnson Sales & Service	Words
Inc., 699 Sunset Avenue, Santa Barbara, Cali-		8
fornia 93105 Gentlemen (H 1) Having a		17
bridge give way just as one is half way across		24
must be a terrifying experience for anyone.		33
Don't you agree? We had a similar experience		42
ourselves this week. (H 2) The Master Electric		51
Typewriter we purchased from you slightly more		60
than three months ago gave way right in the		69
middle of a very important project. Where were		78
we to turn? Our masters were being produced		88
with this unique type, and we were too far along		97
either to start over or to stop. Our three-month		106
guarantee had just expired. Finding ourselves		116
in mid-stream, we had to have the typewriter		126
repaired--at a cost of \$55. (H 3) Even though		135
the time is slightly over the guarantee period,		143
we feel that you will want to stand behind your		153
product and be willing to make an allowance		162
for us on the repairs we had made. May we		171
expect one of your representatives to call on us		180
next week? Sincerely yours Jack Knudsen,		189
Manager (your reference initials)		198
		199

Test 5

Instructions

1. Type Problems 1 and 2 in modified block style with indented paragraphs. Type Problem 3 in modified block style without indented paragraphs.
2. Use the word-count figures listed in parentheses at the ends of the letters and the Letter Placement Table in the text on page 162 for determining proper placement.
3. Type all three letters on letterhead paper and supply needed punctuation, capitalization, and missing letter parts.
4. Erase and correct all errors. If you complete all three letters before time is called, start over typing the letters on plain paper.

Business Letter Production with Alertness Training

Mr. Dale O'Brien, Office Manager | Metropolitan
Life Insurance Institute | 840 Madison Avenue |
New York, New York 10022 | (Supply an appropriate salutation) | (P1) It has often been said that "the spinal curve is directly related to the efficiency curve." In other words, a seated worker's "slump" leads to excessive fatigue and a "slump" in production. It is a matter of record, too, that correct posture increases speed, reduces fatigue, and improves efficiency and morale.

(P2) But don't take our word for these statements. Just mail the enclosed card for two new publications which are of interest to any forward-looking person. One publication discusses the value of correct sitting posture; the other describes the new Modern Posture Chairs. The Modern Posture Chairs encourages sustained and accurate work. The self-adjusting backs give the utmost in correct body support. What's more, there is a Modern Posture Chair for every executive and general office need. (P3) Be sure to mail the postpaid card today. The two new publications will reach you promptly. / (Supply closing) / Dan J. Belin / Sales Manager / (your initials) / Enclosure (180)

Words
12Words
23Words
12Words
21Words
30Words
34Words
44Words
53Words
63Words
73Words
83Words
93Words
101Words
110Words
120Words
130Words
139Words
148Words
157Words
167Words
176Words
186Words
194Words
203Words
210Words
219Words
221

Problem 2

mr. john h. norton 320 harper street pittsburgh,	Words
pennsylvania 15206 (Q1) Going places?	13
You'll go three times as far in the new Midas 98	23
Compact. Yes, one gallon of gasoline will take	33
you 36 or more miles even in city driving.	43
(Q2) Going places? You'll have more money to	51
spend if you invest in the best buy of all Com-	60
pacts--the Midas 98. The price is only \$1,795.	69
You'll have more money to spend, too, because	79
the new Midas 98 is really a miser with gasoline	88
on the open road. (Q3) Going places? Then	98
go right to the nearest mailbox with the enclosed	106
postal card. Just indicate the most convenient	116
time for your free-trial demonstration. The sup-	125
ply of new Midas 98 Compacts is going fast, so	135
you better hurry. joseph p. sansone sales	144
manager (127)	156

Problem 3

mrs. james w. robings 6138 w. 75th place los	Words
angeles, california 90045 (Q1) We dislike	12
using superlatives, but these are some of the	23
exclamations that were heard at our first public	33
showing of the new Electra typewriter: Sensa-	42
tional! Amazing! Fantastic! (Q2) This remark-	52
able all-electric compact typewriter for home	60
and office use has every basic feature of the	69
full-size electric typewriter--and many new	79
features which even they don't have. We are	88
proud of the new automatic-set margins. You	97
simply set a "guide number" for the approximate	106
number of words in a letter, and the margins	115
will automatically adjust for the typing of a letter	124
of that length. You decide on the margin you	135
want at the bottom of the paper, set an appro-	144
propriate number, and when the paper reaches this	153
position, a light flashes--much as the turn signal	163
on your automobile--to warn you that you are	173
at the bottom of the paper. (Q3) There's much	182
more we could tell you about this typewriter,	190
but you'll just have to see it and try it to believe	199
it. Why not call us today for a demonstration	210
of the Electra in your home or office. You will	219
be under no obligation whatsoever to buy.	229
kurt templeman sales representative (216)	238
	249

Test 6

Instructions

1. Type the following letters on letterhead paper. Problem 1 is to be typed in modified block style with indented paragraphs and open punctuation. Problem 2 is to be typed in block style with mixed punctuation and you are to supply the salutation.
2. Use the word-count figures listed in parentheses at the ends of the letters and the Letter Placement Table on page 162 in the text for determining proper placement.
3. Erase and correct all errors. If you complete both letters before time is called, start over typing the letters on plain paper.

Problem Typing--Business Letters

Problem 1

	Words
Current date	3
Mr. William Waack, 1457 Calle Madera, Sac	11
City, Iowa 50583 Dear Mr. Waack (11) Con-	19
gratulations on being chosen the businessman of	28
the year! Your efforts in making today's business	38
world better are a real tribute to the American	48
way of life. (12) We were quite interested in	56
seeing the statistics on the amount of traveling	66
you are doing. Traveling 25,000 miles in one	75
year requires the best kind of safety equipment	85
available. (13) Would you be willing to test	93
our Safety Plus seat belts for the next year?	102
We would like to install them in your car for	112
your safety. In return, we would like to be able	122
to use your name in our advertising literature as	132
a user of Safety Plus seat belts. (14) Won't you	141
please write to us to say you would like to accept	151
our offer? If so, our dealer in your city will be	161
instructed to install them at your convenience.	170
Sincerely yours Steven Redding, District Man-	179
ager (Address the envelope) (153)	192

Problem 2

Current date
 Business Systems, Inc., 502 Washington Avenue,
 White Water, Wisconsin 53190 (Supply an ap-
 propriate salutation) (Q 1) May I please have
 purple masters for the three boxes of red mas-
 ters that I am returning by parcel post. (Q 2)
 Our secretarial staff was surprised when it ran
 off 10 masters from the boxes that we are return-
 ing and found that they were red masters
 instead of purple. The carbon copy of our
 original order specified purple masters, so some-
 where along the line the red masters must have
 been sent by mistake. One of the boxes of red
 masters is missing ten of its masters which were
 used before we realized they were red. (Q 3)
 May we have the purple masters, please, before
 the end of next week. Sincerely yours Roger
 Gadsby, Office Manager (Address the envelope)
 (117)

Words

3

12

18

24

33

41

50

60

68

77

86

96

105

115

123

132

141

160

G W A M

51

53

56

59

62

65

68

72

75

78

80

83

86

89

92

94

96

98

Test 1

Instructions

1. Use a 70-space line, double spacing, and a 5-space paragraph indentation.
2. Start over if you complete both paragraphs before time is called

Growth Index—Straight Copy

The business letter is, in a sense, the personal envoy of the business firm that writes it. All firms give much care to the content of the letter so that it will be as effective as possible; however, if the letter is carelessly typed or poorly placed on the page, much of its effect may be lost. A letter tends to give a good or a poor image of the firm that sends it, depending upon the first impression it makes. All typists should recognize that good placement of the letter on the page is, therefore, of primary importance.

A letter must be carefully proofread before it is removed from the typewriter. Just be sure that you acquire this necessary habit. Here is an idea of some of the steps to follow: First, check the placement and the form of the letter. It should be well placed on the page, and it should look much like a picture in a frame. Every key stroke should be even or uniform. Second, be sure that all figures and amounts are exact. Be sure to see that the address is correct. Lastly, verify the content of the letter; also, the grammar and spelling. Be sure that all typing errors have been neatly corrected, and that there are no errors of word division, and the like.

G W A M
5'

3	51
5	53
8	56
11	59
14	62
17	65
20	67
21	69
24	72
27	75
30	78
32	80
35	83
38	86
41	89
44	92
46	94
48	96

to the person who is determined to win. Nothing worth-

extra effort will help you win your goal.

is still hard work. Don't accept the idea that "it

because for every achievement made against unusual odds

it could not be done, but somehow it was done." Free-

well as a good education so that you can make the most of

helped to make our country great.

52 105

Instructions

1. Use a 70-space line, double spacing, and a 5-space paragraph indentation.
2. Start over if you complete both paragraphs before time is called.

Growth Index—Straight Copy

	G	W	A	M
			5'	
Someone once said that it does not matter whether your ancestors	3			55
came to this country on the Mayflower; what does matter is what they did	6			58
after they got here. By the same token, it does not matter who your	8			61
parents are or what they do; what does matter is what you do with your	11			64
talents and abilities. Many persons sleepwalk through life; they have	14			66
no goal nor do they realize a just purpose in life. This blind effort is	17			69
quite unnecessary. If you formulate a goal while you are still young,	20			72
you will have a better chance of reaching that goal and succeeding in	23			75
life. Behavior habits that you form now carry over into adult life.	25			78
To improve your lot in life, you must first improve yourself. The	28			80
road to success is paved with many obstacles. To succeed, you must over-	31			83
come these problems and not be overcome by them, for problems are but	34			86
an opportunity to the person who is determined to win. Nothing worth-	36			89
while is easily won; extra effort will help you win your goal.	39			91
The key to success is still hard work. Don't accept the idea that "it	42			94
can't be done," because for every achievement made against unusual odds	45			97
it can be said, "It could not be done, but somehow it was done." Free-	47			100
dom to work, as well as a good education so that you can make the most of	50			103
your talents, has helped to make our country great.	52			105

Instructions

1. Use a 70-space line, double spacing, and a 5-space paragraph indentation.
2. Start over if you complete both paragraphs before time is called.

Growth Index—Straight Copy

There is an overwhelming amount of paper work in the modern office. 3 53

Because of this problem, many firms are using computers for the processing of much of the data which make up the paper work of the firms. 6 55

Although the speed with which these data can be processed has been dazzling 8 58

The use of computers for processing data is limited to work of a repetitive 11 61

nature. Contrary to the opinion of some people, a computer cannot think; 14 64

it can only react to the program that has been prepared for it. In this 17 67

process, the first step is for a person to study all the records of the 20 70

firm; then the next step is to prepare the program for the computer. 23 73

More than ever, the modern office worker must get a good education 26 76

if he is to find and hold a job. His worth is increased if he knows how 29 78

to type. The basic tool of the computer is the punched card. This card 32 81

may be punched indirectly as new records are prepared, or it may be 34 84

punched directly by the use of a card punch machine. Did you know that 37 87

this card punch machine has the letter keyboard of a standard typewriter? 40 90

A good typist can, with a small amount of instruction, operate a card 43 93

punch machine. Learning to type, then, is another way to enter the 46 96

exciting field of automation. 49 98

50 99

Instructions

1. Use a 70-space line, double spacing, and a 5-space paragraph indentation.
2. Start over if you complete both paragraphs before time is called.

Growth Index—Straight Copy

G W A M

5'

5 54

6 57

9 60

11 63

14 66

17 68

20 71

23 74

25 77

26 78

29 80

32 83

35 86

37 89

40 92

43 94

46 97

49 100

52 103

Instructions

1. Use a 70-space line, double spacing, and a 5-space paragraph indentation.
2. Start over if you complete both paragraphs before time is called.

Growth Index—Straight Copy

	G W A M
If you were to ask an employer what one quality he considers of most	5'
importance in an employee, chances are he would say dependability. To be	3 54
able to depend on a worker is of great importance to an employer who has	6 57
to plan the work so that it will be completed properly and on time. If	9 60
the employer isn't sure that the worker will be on the job and that he	12 63
can do the job, his problems increase. Another source of concern is the	14 66
worker who arrives at work ten to fifteen minutes late. All workers	17 69
should recognize that this practice does not make a good impression.	20 71
Dependability starts with being at work every day and being there on time.	23 74
Just being at work, however, is only the start on the road to depend-	26 77
ability. The employer also considers how well you do your work and the	29 80
way in which you do it. If he can assign an exacting task to you and	31 83
depend on your doing the task in the right way and on time, you should	34 85
quickly become a valued employee. If you are the type that can never	37 88
quite finish the task without coming back for further instructions, or	40 91
if the task sometimes must be corrected by someone else, watch out! Your	43 94
type can be replaced--and probably soon will be. Make it a practice to	46 97
be a dependable employee, and you can depend on continuous employment.	49 100
	51 103