

A HISTORICAL STUDY OF THE METHODS OF TEACHING TYPEWRITING

By

ADA BELLE EDEN

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APPROVED BY:

J. E. Libbertson
Chairman, Report Committee

Judson Hall
Member of the Report Committee

Charles H. Kelley
Head of the Department

D. G. McIntosh
Dean of the Graduate School

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Ada B. Eden

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CHAPTER I

INTRODUCTION

This study is an attempt to record chronologically a history of the methods of teaching beginning typewriting. The basis for chapter divisions was taken from Harold H. Smith's "Trends in Typewriting," published in the March, 1940 issue of The National Business Education Quarterly.

The term "method" is used to denote a basic plan of teaching. Specific methods mentioned in the study are defined in the content of the study.

It is hoped that the study will acquaint the student of business education with the progress made in the various methods of teaching typewriting so that he might profit from the teaching experiences of others in working out for himself the most satisfactory method to use. If the student will acquaint himself with the various methods he will be aware of many problems involved in teaching beginning typewriting.

No attempt is made to evaluate the effectiveness of the different methods of teaching except to report findings from related experimental studies.

Secondary sources are used in compiling the study. The study is limited to the literature on the methods of teaching beginning typewriting taken from business education periodicals, year books, typewriting textbooks, books on teaching methods, history of the typewriter and unpublished theses listed in the bibliography.

CHAPTER II

TYPING PRIOR TO 1830

As early as 1714 attempts were made in England to invent a typewriter. There is a record in the British Patent Office which shows a patent for a writing machine granted by Queen Anne to Henry Mill, an English engineer, in that year. This is the first extant historical record of a typewriter.¹ About a century and half later, writing machines were invented in America and in Europe. In 1829 such an attempt was made in the United States. Between 1829 and 1870 patents for "typographers" and similar machines were taken out by considerable numbers, but it was not until 1867 that the work on the first successful writing machine was begun. Christopher Latham Sholes is the undoubted producer of "the typewriter that wrote and kept on writing, doing better work from its inception to the present hour."² He started on the machine in a little machine shop in Milwaukee, Wisconsin, in 1867. It was he who gave the machine the name "typewriter."

Several attempts were made by Sholes and two of his friends, Carlos Glidden and Samuel W. Soule, before a successful writing machine was completed. The early machines were so crude that they would scarcely be recognized as typewriters today.

An important event in the history of the typewriter was in the year 1873. At this time Sholes, aided by Glidden, had improved the mechanics enough to interest E. Remington & Sons, the famous gunmakers, in making a contract to manufacture their typewriter. They manufactured the first

¹ Harry D. Kitson, Commercial Education in Secondary Schools, p. 314.

² Edwin Garfield Knepper, A History of Commercial Education in United States, p. 59. (Unpublished Thesis)

practical machine, which today is known as "Model 1 Remington." This typewriter wrote capital letters only, had a foot treadle by which to return the carriage, and looked like a sewing machine.

During the next twelve years, the mechanical structure of the typewriter was improved markedly, but the public manifested curiosity in the machine mingled with ridicule rather than with buying interest. Kitson relates the story of a Kentucky Mountaineer who on receiving his first typewritten letter returned it after indignantly scribbling on the margin:³
"You don't need to print no letters to me. I kin read writin."

The first really popular machine appeared in 1878, Remington Model No. 2. It must have received publicity abroad for Lloyd George of England, during his younger days as an obscure and struggling lawyer, owned and operated this model. Mark Twain was the first author to submit a typewritten manuscript to a publisher, and his first typewritten letter dated December 9, 1874⁴ is in existence today.

The origin of the universal keyboard is of great interest to educators. The arrangement, contrary to the rather general belief, has nothing to do with the arrangement of the letters in a printer's case. With only a few exceptions, the universal or standard keyboard of today is a reproduction of Sholes' original typewriter. His reason for the arrangement is unknown except that he did experience great difficulty in preventing the keys from sticking and colliding at the writing point, and it is thought he settled on this arrangement as the best adapted to the continuous operation of the keyboard.

³ Kitson, op. cit., p. 315.

⁴ Ibid., p. 315.

In 1886 the typewriter proved a commercial success. This was due to a large extent to its utility as a time-saving and labor-saving device and to the efforts of its new owners, founders of the Remington Typewriter Company, who purchased the patent rights and plant from E. Remington & Sons.

The typewriter came into existence during the period in the development of America called the "Period of the Inventor." The great expansion of industry and trade made it necessary to improve the methods of communication. Thus, the typewriter is a product of economic and business needs.

"Growing as it did out of the demands of the century, out of the industrial revolution, and, more immediately, out of the invention of the typewriter, instruction in typewriting had no time for development of theory or philosophical consideration of comparative methods. The thing to do was to write, to use the machine, and for this one or two fingers on each hand were amply sufficient for everybody." 5

Prior to 1880, the method is often referred to as the "hit and miss" or "hunt and peck" method of typing. Since the typist looked at the keyboard to locate the keys, the method is also known as the sight method. The typist used the index fingers of each hand while typing. The novice learned to type by sheer practice with a minimum of instruction and supervision.

"In The Story of the Typewriter it is stated that the first school which taught typewriting of which there is a positive record was opened by D. L. Scott-Browne at 737 Broadway, New York, in 1878." 6

Although the superiority of the touch system over the "hit and miss" method was conclusively demonstrated in 1878, it was not until 1901 that the all-finger touch method became fully recognized and extensively used. Prior

5
E. G. Blackstone, and S. L. Smith, Improvement of Instruction in Typewriting, p. 4.

6
Ibid., p. 5.

to 1880 some typists had begun using more than their index fingers to strike the keys, but as a general rule no more than two or three fingers on either hand were used.

The all-finger touch system initiated the use of all eight fingers in striking the keys, the use of both thumbs for spacing and required the operator not to look at the keyboard while typing.

CHAPTER III

EARLY STAGES OF ALL-FINGER METHOD,
1880-1906

It took fifteen to twenty years for the all-finger method to gain acceptance among typing teachers after Frank McGurrian, the first speed expert, 1878, and later Mrs. M. V. Longley, the first educator, introduced it in Cincinnati in 1881-1882. In 1882 Mrs. Longley prepared a 12-page instructor called Typewriter Lessons. It was for the use of teachers and learners, adapted to Remington's perfected type-writers, and published at Cincinnati.⁷ This publication was the first printed system for teaching the all-finger method. The advertisement described the system as "a series of lessons and exercises--by a system of fingering entirely different from that of other authors and teachers."⁸ The first business school to begin systematic instruction to pupils by the all-finger method was Longley's Shorthand and Typewriter Institute of Cincinnati, Ohio. Mrs. Longley's method was a genuine touch system in its results, but not in its main purpose, which was avowedly to secure an improved method of fingering. It was seven years later that the all-finger method become simply a means to an end--the ability to write by touch.⁹

Frank McGurrian is credited as the first speed expert and the first real "touch typist." He learned on a Model 1 Remington in 1878. Considering the

⁷ Harvey A. Andruss, Better Business Education, "Common Sense in Typewriting" by Harold H. Smith, p. 140.

⁸ Herkimer County Historical Society, The Story of the Typewriter, pp. 111-112.

⁹ Ibid., p. 113.

fact that many of the early typewriters were intended for the use of the blind, had they been successful, and further, that the "piano" type of keyboard was used, even by sholes, it would have seemed but natural that the operator would have been instructed not to watch the keyboard in writing. This, however, was not the early practice and when McGurrian demonstrated his ability as a touch typist it was looked upon as sort of a trick demonstration. Louis Traub, an instructor in typewriting and agent and expert operator of the leading double-keyboard machine of the day, was among those who doubted the touch system. He was in the habit of watching the keys while writing.

The exhibitions given by McGurrian in different cities of the country during the eighties were of the very highest educational importance. The most notable of these was the contest between McGurrian and Traub, arranged at Cincinnati on July 25, 1888. Traub used a double keyboard and watched the keys, while McGurrian used the touch method on the single shift keyboard. There were two forty-five minute tests, one from dictation, the other from copy. The material used was unfamiliar to the contestants. McGurrian's victory convinced Traub that the touch method was superior. He subsequently became an expert touch operator of the shift key machine. This test, together with actual tests by the the writers themselves, appear to have furnished, quite early, rather conclusive evidence of the superiority of the touch method.

Ed J. Manning related his experience thus:

"My highest speed was reached when I learned to operate upon blank keys. I found that the characters on the keys were confusing when writing at a very rapid rate, so I effaced them. I found that I could write not only more speedily, but more correctly without the characters. The operation became more purely mechanical, and my fingers found the right keys unconsciously. I found, also, that I could write without looking at the

keyboard, which is, of course, a great advantage when copying is required." ¹⁰

Along with tests to determine the best method to get the highest speed was also a desire to determine what style of keyboard was most desirable. These tests came during the time of strong competition between the single shift keyboard and the complete keyboard. The Caligraph was the outstanding competitor of the Remington. It had one key for each character, while the latter had a single shift to secure the capitals and certain other characters. One nationally known test was held in Toronto, Canada, August 13, 1888, in which these two machines were the only ones to compete. First and second places were taken by operators of the single shift keyboard, the Remington machine. Various other tests indicated that the shift keyboard with its smaller number of keys was an aid in increasing speed of operation.

Prior to and concurrent with the all-finger method were the one finger, two finger, and three finger methods. As early as 1880, N. T. Underwood, New York, prepared and published a Handbook of Instruction. It gave inductive exercises, and was arranged with a typical guide to correct use of the fingers. In 1885, D. L. Scott-Browne published in New York his Typewriter Instructor which claimed to be adapted to all writing machines. It gave preliminary instructions on the following points: position, touch, spacing, removing paper from the typewriter, reversing the carriage, the use of the bell, ribbon reversing, adjusting the paper, scale, capitals, and fingering. The author, however, did not specify which keys were assigned to each finger except "the ones most convenient to each." ¹¹ Three fingers on each hand

¹⁰ Knepper, op. cit., p. 64.

¹¹ Ibid., p. 62.

were to be used. Great emphasis was placed on accuracy. Practice was first on words, then common phrases, and finally on sentences.

In 1889, Robert H. Elder published a manual in which he proposed a unique scheme of learning to typewrite. His new method advocated learning the keys by position rather than by sight. He claimed this procedure would greatly reduce the learning time and would also aid in acquiring speed. This seems to be the first time any author had designated the use of "home keys" in his text book. The keys chosen by Elder were "f" and "p."¹² Although he provided for "two-finger per hand" exercises, he claimed that more fingers were advantageous for presistent application for many hours.

M. V. Longley's Typewriter Instructor showed an early attempt at scientific analysis of the keyboard and advocated a touch system of writing. His text was dedicated to Mrs. M. V. Longley, designated as the "Originator and First Teacher of the Eight-Finger Method of Manipulating the Remington and Caligraph Typewriters; author of the first instruction book in accordance with the same."¹³ Longley's work was divided into two editions. One was for the Remington keyboard while the other was called the scientific keyboard edition. The latter was based on the following assumptions: that standard operators use all fingers of both hands; that a methodical fingering was preferable to a haphazard one; that the first and second fingers of each hand are more easily and forcibly used in manipulating the keys and should therefore be more frequently used; that such arrangement favors writing by touch, without watching the keyboard.

¹² Ibid., p. 63.

¹³ Ibid., p. 63.

In referring to an operator of the typewriter, Longley called her a "typewritist"; the term "typist" apparently was not yet in use.

In the late nineties fingering became an important issue. There were different opinions regarding the advisability of attempting to use more than one finger on each hand in typing. The number advocated ranged from two fingers on each hand to the inclusion of all fingers of both hands. Most writers seemed to believe, however, that the best arrangement was to use three fingers on each hand. The operators of non-shift machines practically always favored the use of at least three fingers because of the larger keyboard to be covered.

There was much variety in the instructions given in the typewriting books and the methods used to teach typewriting prior to 1902. In many cases no assignment of keys to certain fingers were given. Pupils started in to write sentences from the beginning in many cases. There was no technique to any of it; in fact, each person developed his own style for typing.

Among the few to systematize instruction for school purposes was John Harrison. His Manual of the Type-Writer gave six exercises on the alphabet, used three fingers on each hand, and introduced a few frequent words and sentences. In exercise 11, the business letter is introduced, with much emphasis on spelling, punctuation, rhetoric, and business abbreviations. A number usually appeared above or below the letter indicating the correct finger to use. Harrison's manual was published in London, 1888.¹⁴

In 1889 Bates Torrey's Practical Typewriting appeared on the market. It gave the right-hand letters in bold face type, while the left-hand letters

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Harold H. Smith, "The Teaching of Typewriting," American Shorthand Teacher, VII (March, 1929), 241-242.

and figures were in ordinary type. ¹⁵

Edward Fitch Underhill used the three-finger method of presenting the keyboard in his Handbook of Instruction for the "Typewriter" published in 1884. He suggested an elastic use of the third finger, also to interchange the work between the right and left hands in order to gain greater ease in writing. ¹⁶

Although many authors advocated the use of three fingers on each hand, there were a few educators and authors much interested in the all-finger method and did much to increase its popularity among teachers of typing. Among such promoters was Mr. Charles H. McGurkin. He believed one could learn typewriting without instruction, but could accomplish the best results only by some systematic method. He wrote Method of Touch Typewriting . . . ¹⁷ Treatise on the all-finger method of operation, in 1893. The book was reprinted as late as 1900.

After H. V. Rowell, then manager of the Boston office of the Remington Typewriter Company, heard a paper written by Mrs. Longley of Cincinnati at the First Annual Congress of Shorthand Writers in 1882, he became much interested in her new all-finger method. Two years later Rowell attended the Fourth Annual Congress of International Association of Shorthand Writers, Harrisburg, Pennsylvania and read a paper indorsing the views of Longley, and brought forward another argument in favor of the all-finger method: "that it enabled the operator to keep her eyes on the copy and thus attain

¹⁵ Ibid., p. 241.

¹⁶ Jane E. Clem, The Technique of Teaching Typewriting, p. 57.

¹⁷ Smith, op. cit., p. 240.

greater speed."¹⁸ This statement made a great impression on many teachers.

Soon after this, Mr. W. E. Hickox, Mr. B. J. Griffin, and Mr. Bates Torrey became practical exponents of the new idea in teaching typewriting. Both Griffin and Bates Torrey published manuals in 1889 bringing out such idea. It was Torrey who introduced the term "touch typewriting" which had never been used before.¹⁹

Educators thus far mentioned were influential in spreading the all-finger touch method of typing in the eastern part of the United States. Early exponents in the middle west were W. C. Lowe and A. C. Van Sant of Nebraska. In 1899-1900 Van Sant gave an address before the National Commercial Teachers' Federation, followed by a demonstration by two of his students. His address was so eloquent and logical, and the demonstration so impressive, that touch typewriting began to sweep the country.

Van Sant's textbooks have formed the basis for many of the "new" methods and he is sometimes considered as the "father of touch typing."²⁰ In Van Sant's Touch Typewriting (1898-1902) on page 1, it states the "teacher should call the letters and spacing, the class writing together, and at the end of the line returning the carriage at a given signal."²¹

The early textbooks were very crude. Usually they consisted of some fingering exercises, followed by business letters. Many of them contained legal forms due to the fact that lawyers were among the large buyers of type-

¹⁸ John Robert Gregg, "Past and Present Methods of Teaching Shorthand and Typewriting, With Forecast of Future Methods," American Shorthand Teacher VII (September, 1926), 8.

¹⁹ Ibid., p. 8.

²⁰ Blackstone and Smith, op. cit., p. 5.

²¹ Smith, op. cit., p. 242.

writers and authors of the typewriting texts naturally adopted their style. Instruction in the early all finger method always started with the little finger and proceeded along a single row of keys from the outside as asdfg ;lkjh. The result of this, that the student, instead of "reaching" for the keys, moved the entire hand along the line when striking a key in the center of the keyboard.

It was Mrs. Ida McLenan Cutler of Dubuque, Iowa who first introduced the method of beginning with the index finger. This she claimed began with the simple and went to the complex instead of starting with the most difficult task, the training of the little finger. Her method, however, still proceeded along the one row of keys. John Robert Gregg was convinced by Mrs. Cutler that her method was a logic one and purchased the idea from her. Later he asked Rupert P. SoRelle to prepare some lesson plans introducing the use of the index-finger idea. When the lessons were completed SoRelle not only used the index-finger idea, but introduced the plan compelling the student to make the "reaches" to the different banks of keys, and thus enforcing the correct hand position. The publication of Rational Typewriting embodying these two ideas, marked the next great step forward in the teaching of typewriting.

In 1901 a survey was made by the Remington's of all the schools in America to ascertain the extent to which the touch system was then in use. It was found that half the schools of the country had already begun instruction by the touch method and of the remainder, the great majority announced their intentions of doing so with the beginning of the fall term. ²² However, it was not until 1910 that anything like standardization on touch developed.

²² Waxler County Historical Society, op. cit., pp. 113-114.

CHAPTER IV

EFFECT OF TEACHER TRAINING MOVEMENT ON METHODS OF TEACHING TYPING

As early as 1900 the possibilities of typewriting instruction as opposed to supervision began to be appreciated by a few leaders, but individual practice, under teacher supervision, prevailed generally until the first World War when huge classes forced adoption of the group method. This of course brought about a different approach to teaching methods. The demand for commercial courses in our high schools made a corresponding demand upon our colleges and normal schools for teachers of these subjects. For the most part the colleges were not prepared to train teachers in commercial work. Commercial teachers had to take their professional work in these schools and then apply those methods to their knowledge of business subjects.

Commercial work in the high school began about 1900. The first high school teachers in these subjects were obtained by robbing the business colleges of the best they had, but this supply was soon exhausted.²³ About 1910 the Normal School at Plattsburg, New York opened a course for the training of commercial teachers. Three years later the Whitewater, Wisconsin Normal added commercial teacher training to its curriculum. Salem, Massachusetts Normal was offering a similar program in 1912.

Between 1910 and 1920 about thirty normal schools were offering commercial training for teachers. We are indebted to those smaller colleges and normal colleges for the service they have rendered. The larger schools were awakened to the need and demand for special training for commercial teachers. When such schools as Harvard, Columbia University, and the University of

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James C. Reed, "Training of Commercial Teachers in Normal Schools,"
Balance Sheet, IV (October, 1921), p. 6.

Chicago along with others of equal prominence announce special courses for commercial teachers it is a happy indication of the trend in commercial training.²⁴

The normal schools were originally set up to train grade and rural teachers so the inclusion of the training for commercial high school teachers gave rise to much criticism and in many cases commercial work in these schools was a failure.²⁵ One mistake of early courses for commercial teachers in the normal schools was too much theory in comparison with the academic work that was required. "You do not need any theory to teach if you do not know any thing to teach. You ought not to be teaching at all."²⁶

It has often been said that the typist is either "made or broken" during the first few days or weeks of class meetings. It is of importance, therefore, that the teacher guide the learner in the correct techniques of habit formation from the very beginning and to take advantage of initial rapid rise in the development of learning.²⁷ Unless the teacher has been trained in these procedures, she cannot guide her pupils in the right direction.

Harold Gilbreth made an observation which proved the need of teachers' guidance to pupil learning. He watched several intelligent and mature individuals learn typewriting by the so called "touch system" without the supervision and guidance of a typewriting teacher. The attempt was made only because of the desire the pupils had to teach themselves, which was in itself a powerful motivation. However, at the end of a two-year period not one of

²⁴ M. E. Studebaker, "The Present Trend in Commercial Teacher Training," Balance Sheet, VII (May, 1926), p. 18.

²⁵ Reed, op. cit., p. 8.

²⁶ Ibid., p. 24.

²⁷ Harold Gilbreth, "The Psychological Course of Learning in Typewriting," National Business Education Quarterly, VII (October, 1938), p. 18.

those individuals whose progress had been watched could approach the efficiency of the average pupil who had been taught in high school classes in either speed or in accuracy. ²⁸ Among other causes, they had not put into practice certain psychological principles which Gilbreth states are of importance in the development of typewriting skill. Typewriting learning, he further stated, is based primarily on psychological principles and unless these principles are applied or unless students are guided in their applications Gilbreth thinks failure is apt to be the final outcome.

Experts have established definite fundamental principles which govern the acquisition of skill, but actual improvement in the teaching of any subject depends more upon the classroom teacher than upon the experts in that field. ²⁹ Stuart emphasizes in her article the function of the teacher in the application of the basic principles of the learning of typewriting. She states two functions for the teacher. First, that the teacher needs to make the student aware of exactly what he is to learn. This she calls the "knowledge-learning" part. It is best taught, not by lecture, but, by demonstration made by the teacher and followed by the pupil. The second function of the teacher is to direct the learner's skill-acquiring activities so that he may learn most economically and effectively. ³⁰

Book stressed the need for a teacher in the learning situation he set up. He implied that expert direction from a skilled sympathetic teacher

28

Ibid., p. 17.

29

Esta Ross Stuart, "Basic Principles upon Which Correct Typewriting Teaching Techniques Are Built," National Business Education Quarterly, VII (March, 1940), p. 13.

30

Ibid., p. 14.

should tend to keep the learner from forming many interfering habits and training himself in mistakes. He also stated, "The learner, at the 'critical stages', has special need of the guidance and help of a skilled teacher."³¹

Typewriting, according to Bonde, is merely acquiring certain habits that soon become automatic. Bad habits are just as likely to be acquired as good ones, so the teacher of this subject must be constantly on the alert to detect incorrect methods of operation and to correct them before they become fixed ones.³²

When commercial teacher training was in its initial stages in colleges and universities, psychological and educational theories had their effects upon the philosophy and methodology that were to be taught to prospective teachers of typewriting. The instructors who taught these courses worked largely under the direction of educational theorists, psychologists, and academic scholars who headed up departments of education. Many of these teachers lacked experience or contact with typewriting. "The 'principles of education' and rapidly changing psychological laws were everything."³³ Interpretations of these principles and laws often clashed, always starting with some theory and ending with "tentative" conclusions by their naive students. Teachers who had taken typewriting but had no training in college were regarded with suspicion.

Studebaker believed that the courses in educational psychology and in the fundamentals of education offered in many of the colleges and universities

³¹ William F. Book, The Psychology of Skill, p. 202.

³² Edwin M. Bonde, "Psychology of Touch Typewriting," Balance Sheet, V (February, 1924), p. 14.

³³ Harold H. Smith, "Trends in Typewriting," National Business Education Quarterly, VIII (March, 1940), p. 31.

would aid the prospective teacher to improve methods of presenting her subject matter to the boys and girls in her class room. ³⁴

A part of the demand for commercial teacher training courses offered by many of the normal schools and universities was due to a change in the requirements for teaching in most states. As early as 1926 in most instances at least two years of training was required above the regular four years of high school work for a license to teach commercial subjects. There was at that time too, a strong tendency to make these requirements exact a four-year course with a degree in education as a minimum. As teachers of commercial subjects were required to take courses to qualify for licenses to teach it indicated a beginning for certain standards. Before such training was given, there were many phases of the learning processes unknown to the teacher.

There was no system to typewriting in its very early stages of teaching. Individual practice prevailed from the first. Between 1895-1900 the trend was toward developing a systematic approach to the subject. This easily took the form of what we know now as the "keyboard" approach and since the keyboard was divided into rows, it naturally took the form of the "row method" approach. ³⁵

When Rupert P. SoRelle wrote a textbook, Rational Typewriting, which compelled students of typewriting to make the "reaches" to the different banks of keys, he made a step forward in the teaching of typewriting. ³⁶

³⁴ Studebaker, op. cit., VII, 19.

³⁵ Smith, op. cit., VII (March, 1929), p. 243.

³⁶ Ibid., p. 243.

Emphasis swung over from the "keyboard" to the "difficulty of teaching." The next step was to be an emphasis upon the "difficulty and order of learning."

Prior to 1903 emphasis was always upon the teacher's part more than upon the learner's. Before this time little was known about the learning process. Smith states that teachers did not realize that each student had to train each finger to make certain specific movements, with specific force, in a certain timing relationship, and to control their accuracy of reach at various rates with extreme nicety. They thought in terms of the brick and mortar--the materials used--not the complex nervous pathways, discharges of energy, and control that exacted the house of habit or skill.

Until 1916 all textbooks regarded the guide keys as "a" and ";" called "anchor" keys. This long duration of the idea was entirely due to the emphasis placed upon the subject as a matter of teaching and not as a matter of learning. Time came when some teachers thought not so much of the teaching problem alone, but of the best way for students to learn. The commercial teacher training program incorporated into various normal schools, colleges, and universities paved the way for studies and thought along this line.

Conventions and teachers' conferences also exerted a large influence upon the content and methods of teaching typewriting.

M. E. Studebaker had this comment to make: "Would that I might be able to inspire you to the realization that the only way you can do better work in training boys and girls to meet the present demands of the business man is to fully equip yourself with the best in the way of special training for your work." ³⁷

CHAPTER V

TYPING METHODS DURING PERIOD OF INTERNATIONAL TYPEWRITING CONTESTS, 1906-1930

Shortly after Van Sant introduced the touch system of typing into the middle west the new method began to sweep the country. Typewriting companies gave their hearty support. Demonstrators of the various machines were soon traveling all over the country in support of the new method and in the interest of selling their machines. Then came the National Typewriting Contests in which the rivalry of the typewriting companies concentrated attention upon the scientific aspects of training the operators to a greater extent than ever before. In 1906 the interest in skillful typewriting culminated in the organization of the International Typewriting Contests, which were to be conducted over a period of about twenty-five years. ³⁸

In addition to the national contests there were district, state, county, and local contests in which typists might compete. During this period the leading typewriting companies gladly distributed materials for speed and accuracy tests. Teachers had only to write to the educational departments of the companies represented by the makes of machines used to obtain such materials. The awards given by typewriting companies were an incentive to the student to become an expert typist. During the year beginning October 1, 1923 and ending October 1, 1924 one of the typewriting companies awarded over 55,000 medals and certificates numbering into hundreds of thousands. ³⁹ Figures from other leading companies probably were just as high.

³⁸ Smith, op. cit., VIII (March, 1940), 8.

³⁹ Ruth Lawrence, "Teaching Typewriting," American Shorthand Teacher, VII (June, 1926), 392-393.

These awards were not limited to typewriting companies alone. Various publishing companies sponsored similar tests and awards. Some tests were restricted to high school students while others made no restrictions on age or experience. The Cragg Writer was one to sponsor the latter type. Another test opened to any typist in the United States and in Canada was the All American Typewriting Championship Contest, one of the largest contests ever to be held. In the July, 1922 issue of The American Shorthand Teacher such a contest is announced, listing first prize in Class A division the title "American Typewriting Champion, 1922," and in addition a Baby Grand piano. The contest was strictly in accordance with International Contest Rules, as most of the competitive contests were.

There is no doubt but that the results obtained in teaching typewriting depend greatly upon the method of procedure and upon the arrangement of the course so it will appeal to the student. Another factor, however, that is decidedly an incentive to the student is the awards given by typewriting companies and prizes given by other companies and agencies. Competition increased interest among the students.

During the period of International Typewriting Contests various methods were used in teaching typing. Authors and teachers differed as to the order in which letters on the keyboard were to be presented, the length of time in covering the keyboard, which fingers to use first, whether to use only the right thumb or both thumbs for spacing, the number of copies to be handed in, and the order and time for teaching parts of the machine, but for the most part little if any issue was made of the slogan, "get accuracy first and speed will take care of itself."

In 1904, L. J. Egelston stated that accuracy should be the goal which every student in typewriting should strive for and this all important factor

should be inculcated in his mind from the first day he enters school. "Typewriting to be good must be accurate, and it makes no difference how much speed a student acquires, it is valueless unless the work is correct."⁴⁰

Egelston did not consider it necessary to cover the keyboard up with an obstruction of any kind provided the students were properly taught by wide-awake teachers who could create a spirit of enthusiasm among students and impress upon their minds the many advantages of touch over the sight method. He believed a student could not write too slowly and that a student should never strike a key until he was certain beyond a doubt that it was the right one. He advised against the use of erasers.

At the National Shorthand Teachers' Association meeting, December, 1905, B. J. Knauss gave an address in which he emphasized accuracy and gradual formation of correct habits of work. He protested against trying to get results without the use of keyboard shields in teaching touch typewriting. He advised the use of three blindfold tests, one after the 7th, the 14th, and the 20th lessons.⁴¹

In the New Practical Typewriting manual, 1907 edition, the author makes the following suggestions: that a perfect copy of each lesson be handed in to the teacher, blank keyboard be used exclusively while learning to write by touch, a few parts of the machine be taken up each day until all parts are learned, either thumb be used for spacing, and that the student sit erect before the typewriter and avoid the habit of leaning over the machine. He further suggested that the forearm be on a level with the keyboard or

⁴⁰ L. G. Egelston, "Accuracy in Typewriting," Gregg Writer, VII (December, 1904), p. 135.

⁴¹ B. J. Knauss, "Beginners in Typewriting," Gregg Writer, VII (January, 1906), p. 179.

inclined slightly downward. No statement is made about rhythm. The fourth fingers are to lightly touch the guide keys, "a" and ";" while other fingers reach out to operate the other keys in all the rows as needed. The home row keys are introduced in the first lesson with continued drill on them in the second lesson. Both letter combinations and three-letter words make up the drill work. All letters are presented in the first eleven lessons with numbers introduced in the twelfth, and signs and punctuation marks taught in the thirteenth lesson. The keys are taught by sections with alternate right- and left-hand letters presented in different lessons. First finger sections are taught followed in order by the second, third, and fourth finger sections. Drills, following new letter introductions, are made up of high frequency words. Students are requested to write very slowly while learning new keys and words. They are not to erase if a mistake is made but are to do the work over again.⁴²

In the November, 1909 issue of Gregg Writer a discussion is given relative to which thumb to use for spacing. Previously teachers had been asked to send in their opinions on the question. Fifteen of the twenty-two teachers to reply favored the use of either thumb for spacing, while the other seven advocated the use of only the right thumb. Since the letters "a" and "e" which occur so frequently are struck with the left hand, the latter group claimed the work is more nearly evened up for that hand if only the right thumb is used for spacing.

Rupert P. SoRelle claims that until accuracy is a matter of habit, speed must be reduced somewhat; that is, one must write within his speed.⁴³

⁴² The Practical Text Book Company, Typewriting, pp. 1-8.
(no author given)

⁴³ Rupert P. SoRelle, "Comments," Gregg Writer, XII (January, 1910), 247-248.

Miss Ross Fritz said, "First thing a young typist should learn is accuracy--speed will come of itself."⁴⁴ She believed in finger exercises to keep the hands in good shape for typing. Students, she thought, should be given a variety of copy work to do.

A. C. Van Sant had the following to say in an address given before the Central Commercial Teachers' Association and Western Commercial Managers' Association, Omaha, Nebraska in May, 1910:⁴⁵

"The time to train an expert typist is before the first key is struck on the typewriter. The student should be placed in an easy and correct position. The manner of striking keys and quickly withdrawing fingers, the method of spacing between words (the use of either thumb) should all be carefully explained. Teach students how to return the carriage and to know how to heed the bell. Teachers should dictate each stroke and caution students not to strike a key or the space bar until the letter or space is called. This should be continued until the student learns to think what key he is to strike before he hits it. He should produce each page without an error before taking up the next one. The foundation for expertness must be laid in accuracy."

The ideals expressed by the co-authors of Expert Typewriting are that accuracy should be stressed first, next constant and progressive development, and finally speed. Miss Fritz, winner of thirteen consecutive championship contests, and Edward H. Eldridge stress the use of the right thumb always. They suggest that the guide keys be taught first and after they are mastered not more than four new keys be presented in a lesson. The keys are taught by sections and those letters which are fingered by the stronger fingers (first and second) are taught first. No word in the first seven lessons necessitates the moving of a finger more than from one row to the next at any time. Combination of letters and words make up the practice material.

⁴⁴ Rose L. Fritz, "Comments," Gregg Writer, XII (March, 1910), 372.

⁴⁵ A. C. Van Sant, "Convention Notes," Gregg Writer, XII (June, 1910), 342.

The first sentence for practice work is found in the tenth lesson worded as follows: "Accuracy in typewriting is the first essential." It is suggested that 10 perfect copies be made of this sentence, along with the same number of copies for eleven other sentences.⁴⁶ The beginner is not allowed to erase. When an error is made the authors suggest that the student destroy the sheet and start over. Students are cautioned to write evenly and slowly to avoid making errors. Parts of the machine are introduced in their proper places as needed.

Rupert P. SoRelle believed, as did many other authors and teachers, that accuracy should be given first consideration. Speed, he contended, was necessary but that it should be built on the solid foundation of accuracy. The least said about speed to beginners, except to be warned to let speed alone until they have acquired habits of accuracy in typing, the better it is, was SoRelle's opinion. He further claimed that the first step in acquiring skill in operating the keyboard was to learn exactly the location of each key. His method of presenting the keys was by sections in the order of first, second, third, and fourth finger keys. Rhythm was an important part in the method of teaching typing as given by SoRelle.⁴⁷

In 1917 SoRelle and Mrs. Ida McLenan Cutler were co-authors of Rational Typewriting, a manual which won the highest award at the Panama-Pacific International Exposition. We find in this manual some of the same ideas expressed by SoRelle in previous years. The student begins to operate the

⁴⁶ Rose L. Fritz, and Edward H. Eldridge, Expert Typewriting, (1912), p. 27.

⁴⁷ Rupert P. SoRelle, "Speed In Typewriting," Gregg Writer, XII (February, 1914), 331. "Speed up the Fingers," Gregg Writer, XIV (September, 1914), 33-36.

keyboard with the index fingers, and proceeds gradually to the use of the little fingers by a series of logically arranged fingering exercises. Quality of practice rather than quantity is stressed. Rhythm plays an important part in the teaching of typing as given in the manual. Students are warned not to look at the keyboard. Guide keys are "a" and ";"--little fingers rest on these. The work on each lesson is not complete until a correct copy is made by touch. Exercises are repeated until a perfect copy is produced. Words of high frequency are among the drill work. Practice on these words is stressed until the student reaches a high degree of accuracy and speed. Machine parts are taken up early in the course and presented as need demands. Learning the keyboard as quickly as possible is one of the features of this edition of the Rational Typewriting manual. Alphabetical sentences are given in the fourth lesson. The budget plan is used for handing in work to the teacher.

J. E. Fuller, in his manual The Typist published in 1918, gives somewhat different ideas about teaching than do the authors previously mentioned in this chapter. He suggests that the teacher put a premium upon accuracy without insisting upon perfection in every copy. He stresses the importance of keeping the beginning student cheerfully doing his best, following the method faithfully, acquiring a good technic, and writing at a proper speed. He suggests that the teacher might require one perfect copy with an allowance of one or more errors per hundred words in other copies. The budget plan is recommended to systematize work and to simplify handling of papers. Numerous short drills are provided and comparatively few repetitions are

⁴⁸ Rupert P. SoRelle, and Ida McLenan Cutler, Rational Typewriting, (1917), p. 2.

required. The author thinks that it is better to change drills often and sustain interest than to dwell on one exercise, however good, until monotony makes it irksome. Special exercises are available in the manual for the fingers, hands, and wrists, but Fuller is inclined to believe that more profit might be gained through writing suitable drills. In the manual rhythm is considered second only to that of concentration and may be obtained by dictation, tapping, or using music. Fuller insists that the student finish lines and exercises no matter how many errors he has made and suggests that he be penalized if he fails to do so. The right thumb is used for all spacing. Fingering is taught by sections. New keys for the right and for the left hand are taught in the same lesson. Part of the second and third division keys on the lower and third rows are taught prior to some of the first division keys. The little finger sections are taught last. Blank keys are recommended because they lessen the temptation to look. The letter keyboard is taught in the first eight lessons and all the keyboard in thirteen lessons.

Other educators, in addition to Fuller, were placing much emphasis on rhythm about this time. Philip Munchausen in 1921 had this to say about typing to music:

"This is not a fad. It is a direct definite, scientific method of teaching. The aim is touch typewriting. The crest of the effort is accuracy and evenness of touch. Teaching processes that do not employ rhythm as a basic feature of instruction invariably produce an operator whose chief characteristics are spasmodic typing, evident nerve tension, carelessness, unavoidable inaccuracy and final failure."

He further stated that accuracy could not exist without concentration.

⁴⁹ J. E. Fuller, The Typist, (1918), p. 6.

⁵⁰ Philip Munchausen, "Typing to Music," American Shorthand Teacher, I (July, 1921), 356.

Fredia Dietzler was among the many who believed that accuracy, not speed, should be the goal of the beginner; that quality is more important than quantity; that it is not how much is done but how well it is done that is important and that if we teach the student to be accurate by the correct manipulation of the keyboard, speed will come without his knowing it. ⁵¹

Elizabeth Starbuck Adams, author of Junior Typewriting, suggested that sectional presentation of the keyboard be taught in the order of index finger, second, third, and fourth finger sections. Figures are presented along with the letters. Prior to this time, figures were taught after the letters were introduced. Right and left hand fingering are presented in the same lesson. The use of gymnastic drills to develop unused muscles and to secure flexibility and relaxation are recommended in the manual. Drills to give mental control were gaining in favor with teachers about this time. Some favored several days of preliminary tapping through drills before any attempt was made to start the actual writing. If this method is followed, Mrs. Adams suggested the tapping be continued through the finger-training drills in the first four sections before actual writing is begun. The right thumb is used altogether for spacing. Mrs. Adams is not so strict in requiring perfect work as some of the previously mentioned authors. Words and letter and figure combinations are used for drill work in several lessons before sentences are given. Parts of the machine are introduced daily. Very little mention is made as to rhythm in typing. ⁵²

⁵¹ Fredia Dietzler, "Training Stenographers," American Shorthand Teacher, II (March, 1922), 252.

⁵² Elizabeth Starbuck Adams, Junior Typewriting, pp. iii-iv.

Sister M. Bonaventure gives a six weeks' outline for seventeen lessons on beginning typing instructions in the November, 1923 issue of Balance Sheet. The first period is spent memorizing keys and acquiring proper touch, position, and practicing slowly on the home row keys. She insists that students do not watch the keyboard. Finger gymnastics are common throughout the entire outline. Two to four new keys are introduced in a lesson. The keyboard is taught by sections with right and left fingering presented in the same lesson. The index finger keys are taught first. Second, third, and fourth finger sections are presented in the order as listed. Letter, words, and phrase combination are dictated. Perfect lessons are required by the students. Rhythm drills are given in letter combinations of four each as; ffff jjjj gggg. Parts of the machine are introduced as need arises for them. After the tenth lesson, alphabetical sentences and special drills for fingering are given. One-minute speed tests on short words are given in the eleventh lesson. Numbers and special characters are not taught until the seventeenth lesson.

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In 1923 SoRelle put a new edition of his typewriting manual on the market. This manual, The New Rational Typewriting, was based on the idea that the main object sought in the study was the development of power.

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Special attention is directed to the following features:

1. X-Ray learning charts which make it possible to illustrate accurately both hand positions and the keyboard.
2. Absence of meaningless drills. Repetition is employed in a new way. Word-building practice has a meaning and an interest that are totally lacking in other types of drills.

⁵³ Sister M. Bonaventure, "Outline for Teaching Twentieth Century Touch Typewriting," Balance Sheet, V (November, 1923), 12-15.

⁵⁴ Rapert P. SoRelle, The New Rational Typewriting, pp. ii-iii.

3. Various drills such as rhythm, concentration, location, facility, accuracy tests, and laboratory exercises are included.
4. Figures are introduced early. Figures for the first finger are introduced in the first section, and others progressively.
5. Keyboard is learned quickly. The new method of developing the keyboard technique makes it possible for the student to acquire a high degree of mechanical skill in thirty periods of laboratory work.
6. Constructive problems are provided for students to use their own judgment in working out.
7. There is less copy work. Laboratory exercises, which require more mental ability replaces some of the strictly copy exercises. This feature has been utterly neglected hitherto.
8. Words of high-frequency have been used in the exercises.
9. Phonograph records have been worked out to articulate with the exercises in the New Rational manual. These form a part of the whole scheme of teaching the keyboard technique."

SoRelle suggests that beginners do not erase. The right thumb is used altogether for spacing. The budget plan is not provided for in this edition of SoRelle's manual.

J. E. Fuller discusses some of the issues of teaching typing in 1925 and gives his opinion on some of them. He thinks that rhythm drills are important but that the inexperienced teacher must guard against wasting valuable time on unsuited or superfluous rhythm drills. Fuller recommends the use of blank keys because they lessen temptation to look at the keys. He thinks that no writing should be attempted until the use of the needed operative parts are so well learned that they will not distract the learner's attention from the keyboard and thereby interfere with his concentration on fingering.

Different opinions exist on the division of the keyboard, especially as affecting the fourth or upper row. Some advocate the uniform oblique division between sections because of its apparent simplicity. This gives the left fourth finger nothing to do on the upper row. Others maintain that the relative positions of the keys in the third and fourth rows are unimportant; that the keys of the fourth row may be learned and fingered as easily

by association with the second row. Some assign the figure 6 to the left first finger even though they conform in general to sw2, de3, fr4 grouping, because the f-6 reach is slightly shorter than the j-6 reach.

Fuller states that there is a general agreement among authors and teachers as to a recognized "home" position on the keyboard for each hand, and the usual keys are asdf ;lkj, yet some do use awef and ;oij. As to what should be the first step in training the fingers, there is a divergence of theory and practice.

One plan is to put all the fingers to work in the first lesson. Advantages claimed by this group are: it emphasizes the necessity for and the value of the "home" position for the beginner; it establishes at once in the beginner's mind the fact that all fingers must be used, thus minimizing the temptation to use only the more manageable fingers; it properly begins at once the strengthening and the training of the weaker fingers and therefore more quickly develops a muscularly balanced hand, upon which depends even touch, rhythmic operation, and other manifestations of correct technic.

The other plan is to use only the first or first and second fingers to start with. Arguments given in support of this plan are: it follows the line of least resistance, postponing the evil hour when the student must become aware of the weakness and awkwardness of the third and fourth fingers, and faces the necessity of training them. In this way it avoids discouraging flabby beginners at the start.

The number of keys to be presented in any one lesson is a debatable issue. The consensus of opinion is that it is better to present a few keys with intensive drills that provide for sufficient review of keys previously learned, even though the number or variety of new words made available may be limited.

Other issues at this time were: shall the teacher set up requirements of perfect accuracy in one or more copies of every unit of the lesson? Shall she require a certain percentage of accuracy in every unit? Shall fractional credit be allowed for units having one or more errors? "These are questions that always have been, and perhaps always will be, vexatious." Fuller further states that it is the quality of the effort that counts; not the quality of the product. He claims that it is the method that is of the first importance and with perfection of method and technic comes an approximation to perfection of results. His opinion is that a too rigid insistence upon long-sustained accuracy will obscure the real objective of the
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 beginner.

Repetitive drills and exercises are also debated upon among teachers and authors. The early text books required altogether too much repetition of drills and were so constructed that the greater part of the work done on them was done inattentively and mechanically. Fuller thinks that repetition is profitable only so long as it can be continued with pleasurable interest, with real concentration, and with conscious effort to improve in some definite particular.

Toward the latter part of the period 1906-1930, a few educators were trying new methods of presenting the keyboard. One such method was the use of the dictaphone. This method was devised by Charles Miller. He is the author of The New and Revolutionary Direct Method of Teaching Typewriting. By the use of the multiple tube system and a set of practice records, each group of students has the equivalent of an individual instructor. Miller

55 James Edmund Fuller, "Typing," Methods in Commercial Teaching, by J. W. Miller, Chapter XI.

claimed 50 to 60 per cent more efficient progress in the method given in his manual over other methods. In 1928 the Board of Superintendents in Chicago decided to adopt this method in all junior high schools and for as many senior high schools as it was financially practical to equip. The large number of cases involved showed the beneficial effect of direct dictation typewriting on all types of students.⁵⁶ About this same time, David Pearson claimed 59 per cent better results from dictaphone pupils who were allowed to look at their fingers while learning the keyboard.⁵⁷ The consensus of opinion among teachers was to keep the student from looking at the keyboard while typing.

Pearl V. Turner suggests that in drills given on blindfold keys the teacher should call the letters and have the pupil touch them until he has learned their location then let him watch his fingers in action. She would have all fingers set to work from the beginning giving special drill for the fourth fingers.⁵⁸

Lucy C. Moore was among those who thought that drill work should be made up of meaningful practice material. Her reasons are that speed and accuracy is developed to a greater extent than is secured from the practice of single isolated words or one or two lines of the same word; that you get sufficient practice on the most frequently occurring letters. Regardless of the method

⁵⁶ Marion F. Tedens, "Typewriting in Three Terms Instead of Four," Journal of Business Education, IV (September, 1930), 21-22.

⁵⁷ Frances Moon Butts, "Research Material In Typewriting," Eastern Commercial Teachers' Association, First Year Book, 1929, p. 183.

⁵⁸ Pearl V. Turner, "Developing the Keyboard," Balance Sheet, VII (March, 1926), 3-4. (April, 1926), 7-8, 11.

used in presenting the keyboard, sentences can be devised for typewriting, beginning with almost the first lesson. Miss Moore suggests that perfect copies of exercises through the first nine lessons be handed in to place emphasis upon accuracy. She uses the vertical method to present the keyboard.⁵⁹

These new ideas and issues caused some of the educators to become interested in research studies. In the latter part of the period 1906-1930, the following studies were among those made: In 1926, J. W. Barton did a research on the whole-versus-part method of learning the keyboard. One class of beginners was required to learn the keyboard in sections, while another class was required to memorize the keyboard before it began to type. When this second class actually began to typewrite, exercises involving the use of the entire keyboard were given. Barton reported that at the end of the fifth week the class using the whole method was superior in copying ability to the group using the part method, although the latter group had already been given sixteen weeks of instruction.⁶⁰

A similar study was conducted by Barbara Gamwell. She gave one group nonsense syllables, such as asdf, juyj, and etc., as learning exercises, while another group was given complete sentences from the start. The results of both groups were similar.⁶¹

In 1929, Charles F. Hainfeld found that those taught by the whole method showed greater accomplishment than did the group using the part method. In the same year Catherine N. Long made a study to determine whether the horizontal, vertical, or skip-around method of learning the keyboard was most

⁵⁹ Lucy C. Moore, "The Use of Meaningful Materials for Drills in Typewriting," Balance Sheet, IX (November, 1927), 16-18.

⁶⁰ Blackstone and Smith, op. cit., p. 168.

⁶¹ Ibid., p. 168.

effective. In every test the group using the vertical method scored lowest, and the group using the skip-around method scored highest.⁶²

E. A. Fleming made a study on the whole-versus-part method of learning the keyboard in 1930. The two groups achieved about the same results.

Dr. Roy E. Hoke shows by graphics on page 34 of The Improvement of Speed and Accuracy that the third and fourth fingers are the weaker ones and that the first and second fingers carry heavier loads.⁶³ Dr. Hoke made this study in 1922 at the Johns Hopkins University.

In A Study of the Social Intelligence of High School Pupils, Edith Louise Grosvenor concluded that beginning typewriting is mainly dependent upon mechanical aptitude rather than intelligence. Her study is given in American Physical Education Review, November, 1927.⁶⁴

These studies and many others not given in this chapter seem to indicate that typewriting thought is fast turning from the dim paths of guesswork and unsupported personal opinion into the bright highway of scientific methods and measurement which will make for better teaching in the future.

⁶² Ibid., p. 169.

⁶³ Butts, op. cit., p. 181.

⁶⁴ Ibid., p. 184.

CHAPTER VI

LATER DEVELOPMENTS IN METHODS OF TEACHING TYPEWRITING 1930-1949

The year 1930 marks a great change in the objective of teaching typewriting. Prior to this, the consensus of opinion among teachers was copy, the objective. The student was given an exercise to do and attempted to reproduce it letter for letter as it was given in the textbook until he succeeded in turning out what is known as a perfect copy. The student was then allowed to proceed with the next exercise. "It is a slow, discouraging, wasteful operation, particularly upon speed in stroking and fluency in writing."⁶⁵

Methods of teaching in any field are slow to change. Blackstone has used the term "educational lag" to describe the manner in which people tend to perpetuate educational methods in existence because they have been used in the past and have become more or less traditional.⁶⁶ This new technique objective did not take place suddenly. For some time a few educators had begun to make an issue of the objective which most of the teachers were using in their typewriting classes. In the late twenties and early part of 1930 two distinct objectives in typewriting were in vogue: namely--copy, the objective, and technique, the objective. The copy objective was at one time very popular, but a survey taken in 1930 showed that 75 per cent of the teachers had adopted the technique objective in their typewriting classes.

Teachers coming out of teacher training courses in normal schools, colleges, and universities who had absorbed something of the modern

⁶⁵ John Robert Gregg, "Techniques in Teaching Typewriting," American Shorthand Teacher, X (April, 1930), 303-304.

⁶⁶ Blackstone and Smith, op. cit., p. 12.

educational philosophy were thinking more in terms of the technique objective than they were of the copy objective. Not only was much discussion given to this new objective in the early part of 1930, but it is characteristic of the entire period discussed in this chapter.

Esta Ross Stuart states that technique is a set of habits that constitutes the mechanical part of typewriting. She relates technique and control as the two things that we must bear in mind in teaching any skill subject.⁶⁷

When the copy objective was popular and accuracy was given first consideration the student was urged to type slowly. Now that technique was gaining in popularity with it came a different manner of striking the keys.

"The feel of the movement in stroking a key or a sequence of keys on the typewriter is greatly affected by the speed with which the stroking is done. A slow movement in reaching and stroking produces an entirely different feel from that produced by a quick movement."⁶⁸

This statement was made by John Robert Gregg who believed that the beginning student should strike the keys rapidly even though longer intervals between the strokes were necessary, owing to the unfamiliarity of the student with the location of the keys. He further stated that the student's efforts be centered on the pure practice phases of typing--learning to make the reaches and strokings correctly; learning the operation of the mechanical features of the machine; learning rhythm, fluency, and accuracy of operation. The student's work should be confined solely to skill development in the

⁶⁷ Esta Ross Stuart, "The New Trend in the Teaching of Skill Subjects," American Shorthand Teacher, X (May, 1930), 336.

⁶⁸ John Robert Gregg, "What Happens When Perfect Copy is Required?" American Shorthand Teacher, XI (March, 1931), 245-246.

technique of operation and his progress measured by how he is performing all the machine operations, and not by the kind of copy he produces according to Gregg.

Gregg criticizes the perfect copy objective in that those who require it treat the student both as a beginner and as an expert. He thinks that there is no greater fallacy in the typewriting teaching field than the theory of trying to obtain a professional standard of performance on the finished product before the preliminary work of learning to operate the machine as a writing instrument is completed. "To be completely logical the demand for the perfect copy should be changed to the demand for the perfect copy typed at perfect speed with perfect fluency." ⁶⁹ Gregg further states that the perfect copy is only a result; it reveals nothing of the processes by which it was obtained. Therefore, emphasis should be placed first on correct technique, and when that has been accomplished, emphasis should be shifted to the application of that technique to practical problems in arrangement. All effort in typing should have accuracy for one of its main aims, but accuracy with skillful operations.

In the textbook, Gregg Typing, written by Rupert P. SoRelle and Harold Smith, there is a further development of the technique-first conception of learning typewriting introduced for the first time in the Rational series of textbooks. The Rational approach to the keyboard--the first fingers first--and other basic principles of the earlier editions of the Rational series have been retained in this new textbook, Gregg Typing. The keyboard is presented in eight periods of work. Words are introduced in the second

period, phrases in the third, sentences in the sixth, and business letters in the twenty-sixth lesson. The budget plan is used for handling in work. Correct, rapid reaching and stroking are basic in the development of typing as presented in the Gregg Typing textbook. Motivation is given much emphasis.

Iva L. Rady gives some of her ideas on the copy objective and the technique objective approach to teaching typewriting as follows:

"With the copy-objective method, the student tries to write a perfect copy. If he fails the copy is attempted a second time and the student's nerves become tenser and tenser because of the fear of making an error. The determination to produce the correct copy forces him to proceed hesitatingly and slowly, to steal a few glances at the keyboard when the reaches are made, to push the key way down, and to dislike to release that key when once the finger has found the location. Much time may be spent on one exercise. Moreover, if a correct copy is produced, it means nothing, because the reaches, strokes, etc. were mostly made contrary to correct technique. This copy-method is inconsistent, for skillful performance is required before fundamental machine operative skills have been mastered. Why require a beginner to make perfect copies when the champion typists, after years of practice, continue to make errors?"

Miss Rady further states that with the technique-objective in mind, emphasis is placed on becoming familiar with the machine and acquiring skill in its use. The mind can concentrate on this one important aim. The teacher should not be too much concerned over the accuracy of the exercises written by the student during the first month. It is her belief that as soon as the operative skill of the typewriter has been acquired, the perfect copy will soon follow as a natural consequence. She suggests that the student be given a minute or two to relax after intense drill.

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John Robert Gregg, "About Gregg Typing," American Shorthand Teacher, XII (September, 1931), 19-21.

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Iva L. Rady, "The Most Effective Use of the Typewriting Class Period," American Shorthand Teacher, XIII (September, 1932), 13-16.

Harold Smith thinks that the perfect copy objective is worthless; that the learner's aim is definitely wrong. The student is producing the exercise, without thinking about, much less originating, improving, or fixing the mental responses and manual motion technique for which these exercises were probably created. Smith states that mass drill should be used sparingly. It should be used only where it serves the useful purpose of economically presenting a definite "how to practice" technique or standard of performance to all or most of the members in the class. Very little unison practice has aimed at the mastery by individual students in the class of "right motions at standard speeds." Teachers should present ideas in typewriting by demonstration. "Teaching by telling" is notoriously the worse form of teaching any subject according to Smith. He stresses record keeping for the typewriting student in order that the student may know how he is progressing.

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In 1934, George L. Hossfield, world's champion typist eight times during 1918-1930, gives some comments on a much debated issue, rhythm in typewriting. From his own observation and study, he thinks that rhythm is an essential factor in gaining typing speed and accuracy. The principal difference of opinions seem to center around the question of whether or not rhythm has the same interpretation for the beginning student as for the advanced one. In the early stages of his career, the student should write with a regular and even stroke, but as the student progresses he learns to hit certain combinations faster than others, due to their being simple words, properly balanced words, or oft-repeated words. On the other hand, he will write

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Harold H. Smith, "Common Sense in Typewriting," Business Education World, XII (June, 1934), 632-634.

other words or combinations slower than his normal speed, due to the necessity of striking most of the keys with one hand, on awkward combinations, or an unfamiliar word. In neither case is it necessary to sacrifice rhythm. It may be necessary to change the tempo of the rhythm, but the keys can still be struck with an equal lapse of time, either faster or slower, between the strokes. Hossfield thinks that many teachers misinterpret the slower and faster tempos as being evidence of erratic operation. His belief is that erratic writing takes place whenever the student allows his fingers to get out of control which is the case when the student tries to exceed his normal speed, when he is pushing himself to the utmost. According to Hossfield we have varied tempos in typewriting just as we have them in music and these tempos in typewriting, as in music, must be rhythmic. ⁷³

Dr. E. G. Blackstone disposes of the argument for rhythm by stating: ⁷⁴

"A sensible analysis of the nature of typewriting work would indicate that, while rhythm may be possible, it is totally undesirable, at least if the term is defined as the same amount of time devoted to each stroke. Typing movements involve: first, movements on home keys, which are directly under the fingers and require no reaches; second, various reach movements. It is obvious that the student can successfully strike the letter "f," which is directly under his finger, in less time than he can strike the figure "5," which is two rows of keys above. On the other hand, it is probably true that some fingers are better controlled than others, at least for beginners. Most students have difficulty in controlling the third and fourth fingers. Consequently, it is easier and quicker to strike the "f" than the "x" or the "z." This means that every student has some keys which he can strike successfully at a more rapid rate than others."

Blackstone thinks that J. M. Lahy probably had this situation in mind when he said that exact rhythm would be fatal to speed.

⁷³ George L. Hossfield, "What is Rhythm in Typewriting?" Business Education World, XV (September, 1934), 15-16.

⁷⁴ Blackstone and Smith, op. cit., p. 186.

In connection with the discussion on varying rates of strokes, Schneider states that a large number of errors pupils make are due to the fact that they fail to recognize the need for change of pace when writing from straight copy. To prevent this difficulty he has students practice at varying speeds for the straight stretches and for the curves, as he calls them. Special arranged drills are given for fast and for slower strokes in order to give training in developing such speeds.

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Another much discussed issue at this time was the automatization idea. It involves the concept that common words or syllables shall become so well known that the entire syllable, word, or phrase may be typed by a sort of serial reaction in which no conscious thought is required. Blackstone says that there is much to be studied on the matter of automatization, but it is his belief that habitual or automatic typing is of great significance because the student who types automatically, by serial reactions, probably types faster, makes fewer mistakes, and used less mental effort than the one who types with conscious attention to individual letters. Blackstone further states that although perfect automatization is probably not to be achieved by any one, it would be well for the student to master the thousand most common words which represent about 90 per cent of all the words one writes and in doing so he would presumably be able to write 90 per cent of his words much faster, and probably more accurately, than he could by the old-fashioned rhythmic writing.

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Arnold E. Schneider, "Streamlined Rhythm," Business Education World, XVIII (March, 1938), 536-537.

76
Blackstone and Smith, op. cit., pp. 165-166.

Another factor in the teaching of typewriting that was stressed during 1930-1949 was typing power. D. D. Lessenberry wrote an article in 1937 stating that neither speed nor accuracy nor the combination of the two give typing power, because typing power is excellent skill plus related understandings that make for effective use of the skill.⁷⁷ He also stated that typing from straight copy is but a means; yet in many classrooms it has become the end and not the means. Typing power, as given by Lessenberry, must be determined by the rapidity and the accuracy with which problems involving different elements of difficulty are typed. He thinks that in all probability, the next step in the development of efficient typists will be teaching for power to type from problem situations. In his further discussion Lessenberry tells the teacher that it is right for her to stress the importance of accuracy and rapid work but the history of development in the improvement in methods of teaching typewriting shows that we have passed through the time when accuracy at all costs was stressed and erasing was punished as a behavior that ranked high in the list of classroom crimes, and are now recognizing the necessity of teaching for speed as well as for accuracy. The next step, according to Lessenberry, will probably be the development of speed and accuracy in typing from problem situations.⁷⁸

Little discussion thus far has been given to testing. It is a big problem in itself. Therefore, only general facts will be mentioned about the subject. Lessenberry says that testing in typing is but one phase of

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D. D. Lessenberry, "The Right Kind of Practice to Develop Typing Power," Balance Sheet, XVIII (February, 1937), 247-249.

78

D. D. Lessenberry, "Typewriting," Balance Sheet, XX (October, 1938), 89.

the whole teaching process; teaching is the function of the teacher. Many teachers feel it is essential to mark every exercise and record all errors. Teachers who disagree are experimenting with a plan to use tests at stated intervals and depend on a sampling of selected exercises for the check on daily work.

Mrs. Rose Fenner Garrison requires that only work done in class be handed in while the student is typing exercises to memorize the keyboard. She gives the student 85 per cent for one perfect copy of the exercise. With one error and one copy, he is given 80 percent. Two perfect copies of the exercise gives the student 90 per cent; three perfect copies, 95 per cent; and four perfect copies, 100 per cent. A deduction of 5 per cent is made for each error. Mrs. Garrison used this same system to grade the budgets later in the course.

James L. Mursell says that errors are symptoms--signs of faulty organization and poorly placed rhythm. The typist who makes many mistakes in his copy has a poorly established rhythmic flow. He thinks that the stenographer who commits blunder after blunder is not picking up the auditory cues in a compact, orderly, controlled manner. In general, if the process of reorganization is going as it should, accuracy will take care of itself in time. Mursell further states that there is a strong tendency for speed and accuracy to go together in all motor skills that have been experimentally investigated. This happens, however, only when the whole learning process is intelligently directed. If one pushes for speed beyond his control, accuracy will suffer. On the other hand, if one thinks of nothing

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Rose Fenner Garrison, "How Shall Typing Papers Be Checked?"
Balance Sheet, XVII (October, 1935), 75.

but accuracy as an end in itself, his very anxiety becomes an obstacle. Mursell thinks that speed and accuracy flow from the same source--properly placed interval control and an organized flow of rhythmic effort. It is this that we must strive to establish.

Prior to 1930, much stress was given to memorizing the letters on the keyboard in relation to other letters, but Esta Ross Stuart states that learning the keyboard does not mean memorizing the letter distribution, because such a method forces the student to learn each letter in terms of its relative position to certain other letters and that this is an uneconomical method of learning except for the writing of adjacent letter-sequences, such as "fr," and "as."

On the other hand, Edith O'Neill Adams teaches all letters on the keyboard with relation to letters on the home row. She presents the keyboard in two weeks. Numbers and characters are introduced after all the letters are taught. As soon as enough letters are learned with which to form words, her students write words and short sentences, as well as the letter combinations. After the keyboard is learned her students spend the first five minutes of each period on a warming-up drill. New work is then introduced and practiced. Sometimes her students write two-minute accuracy or rhythm drills, using the Victrola. As the students type, she observes their technique in writing.

⁸⁰ James L. Mursell, "The Acquisition of Skill," Business Education World, XVII (November, 1936), 157-160.

⁸¹ Esta Ross Stuart, "Learning Stages in Typewriting," Business Education World, XVI (March, 1936), 531-534.

⁸² Edith O'Neill Adams, "How I Teach Elementary Typewriting," Business Education World, XVII (January, 1937), 328-329.

Inez Ahlering gives some of her procedures in teaching elementary typewriting as follows: the first finger sections are taught before the other sections are presented. The second, third, and fourth finger sections are taught in the order mentioned. Phrases and sentences are written as soon as progress in learning words permits: perhaps on the second day. Words of high frequency are used in teaching the keyboard. Individual practice with the help and under the supervision of the teacher is provided, since there are as many problems as there are students. Students are asked to write the word, sentence, or paragraph rapidly, noting difficult combinations, words, or phrases. The budget plan is used, but daily assignments rather than weekly or monthly ones are made. Miss Ahlering thinks that daily budget assignments tend to promote promptness, encourage the wise use of time, and stimulate students to work up to the level of their ability every day; furthermore, daily budget work affords an opportunity for the teacher to check the progress of students from day to day, to note individual or class difficulties, and to plan remedial work if necessary.

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As late as 1937 some teachers were still using eight weeks to present the keyboard letters. Miss Cecil L. Jones was among the group. Her students were not allowed to look at the keyboard while locating the keys. The alphabet was taught on stencil and actual writing on paper was begun later. Two new letters were presented in a lesson. A week was given to learning the home row.

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83

Inez Ahlering, "How I Teach Elementary Typewriting," Business Education World, XVII (October, 1936), 88-90.

84

Cecil L. Jones, "The Beginning Typist," Business Education World, XVII (June, 1937), 758-761.

D. D. Lessenberry made the statement that each teacher who modifies an existing method, creates a new procedure, or combines the procedure from many different methods into a new pattern, is making a contribution to our growing understanding of how to teach typewriting. In the same article, he defines the methods taught in 1937. The following definitions bring out the general idea as expressed by Lessenberry:

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The traditional method of teaching indicates that method of teaching that makes use of letter combinations for drill; that initiates the keyboard from four to six weeks, one period a day; and that leads students from the letter-by-letter level of typing to word recognition.

The whole method of teaching typewriting is that procedure which initiates the control of all letters of the alphabet in one or, at the most, two class periods. It emphasizes a basic principle of learning--that we learn best when our learning is in a natural-use situation. The acceptance of this does not rule out drills of so-called nonsense combinations, such as "frf juj;" for this type of drill can be used to improve a particular technique that is isolated for special improvement.

The direct method, in theory, emphasizes the typing of words rather than individual letters; but before one can type, the controlling fingers must know the reaches to be made, and no other fingers must experience these reaches. The teaching is done from the board on which a sentence is written. Through the use of a diagram of the keyboard, the teacher demonstrates, by placing his fingers on the correct keys, the finger and the bank to be used for each letter of each word.

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D. D. Lessenberry, "Lesson Plans and Teaching Procedures in Typewriting," Balance Sheet, XVIII (April, 1937), 344-348. Also "Methods of Teaching Typewriting," XVIII (March, 1937), 296-299.

The dictaphone method of typewriting makes no use of keyboard charts. The student may keep his eyes on his fingers and the keyboard as he strikes each new key for the first time. When the student reaches a plateau and cannot write a record at a given speed, he is advanced to a record dictated at a higher speed. After he has worked with this for awhile he is put back on the speed that proved troublesome. The customary requirement of perfect copies is not used with this method of teaching.

Lessenberry states that no one method has a monopoly on ideas nor are the procedures different in all respects. Much of the best teaching is done by a combination of the steps in procedure taken from different methods.

M. Fred Tidwell gives further explanation on the direct method of teaching typewriting in an article written in 1938. The following ideas express in general his opinions: The direct approach to the teaching of typewriting has been discussed by leading psychologists and typewriting teachers for some time, and publishing companies are now flooded with textbooks. This popular movement cannot be attributed to any one individual or to any one school, for it is rather well known that many individuals were working, or at least thinking and weighing, the same ideas at about the same time. Correct technique and rapid writing should precede accuracy and precision. Deliberate typing is incorrect because the student is concentrating on accuracy--letter by letter--which is opposed to the direct approach in teaching typewriting. Accuracy is subordinate to speed with the direct method approach. After the student has learned how to locate the keys on the typewriter the next step is to teach him the home-row position, not from the standpoint of letters but from the standpoint of home position or resting place. The teacher need not limit the word drill to two and three-

letter words. There are some four and five-letter words that are very easy to type.
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For the most part, teachers for several years have been in agreement that the correct stroking of the keys should be swift, forceful, and directed toward the exact center of the key, and that it should be somewhat of an arc. The terms used to describe this stroke are often colorful: "tiger stroke," "cat's paw," and "snatch." It is generally recommended that the finger be drawn back toward the center of the hand, that a quick getaway be used, and that the fingers be kept well curved. Finger motion only is frequently suggested, with very little, if any, hand or wrist motion. E. G. Blackstone and Ollie Mae Sills do not agree with such statements. They criticize the "snatch stroke" which requires the lifting of the fingers in an arc because in all cases it is not the shortest reach that could be made. They claim that no single type of stroke is equally fast and efficient for all reaches, and a faster type of stroking must be found than the old-fashioned, roundhouse type of "snatch stroke."
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Teachers who had a part in the training of World War II typists were teaching under different situations than are found in our public schools, yet Alfred Essock made this summary of statements in an article which was written in April, 1945:

1. "Upon returning to civilian teaching I will devote the first semester of my course in typewriting almost entirely to the development of the manipulative skill of the typewriter. In one semester the student will be required to write as fast as is now required in two semesters.

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M. Fred Tidwell, "Direct Approach to the Teaching of Typing," Business Education World, XVIII (June, 1938), 789-792.

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E. G. Blackstone and Ollie Mae Sills, "The Snatch Stroke in Typewriting is a Fallacy," Business Education World, XXII (April, 1942), 678-679.

2. Students will be given daily timed writings, starting with the first complete class periods. Length of timings will be progressively increased from one-half minute to ten minutes.
3. Students will be given a daily or weekly goal to achieve. How they succeed in attaining these goals will determine grades.
4. I will emphasize speed, controlled typereading and fingering speed, stroking skills, and how to practice.
5. Three major teaching steps--demonstration, participation, and application--shall surely be evident in each class period." ⁸⁸

Essock's reason for daily timed writings is that they give the student reason for wanting to snap his fingers, strike the keys with the tips of his fingers, hold his hands properly, and manipulate the machine correctly. The timed writings give the student a daily objective. He will want to write faster today than he did yesterday.

Another teacher, Edna L. Gregg, also favors timed writings. She says that as the semester progresses, more and more emphasis is placed on one-minute timed writings. She does not call them tests because of the undesirable connotation it has to most students. ⁸⁹

A later development in speed is given by Dr. Blackstone in an article written in 1943. In part he says that for years leading thinkers have been suggesting that typing could be speeded up, that it could be taught at higher speed from the start. It has never been very clear, however, how this could be done. Research and experimentation at the University of Southern California for the past five years has revealed at least some of the procedures for achieving greater speed from the beginning, without sacrificing accuracy. Blackstone further states that typing is about the

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Alfred Essock, "What I Learned About Teaching Typing in a Naval Training School," Business Education World, XXV (April, 1945), 415-416.

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Edna L. Gregg, "Our Beginning Typists Are Fun," Business Education World, XXVII (September, 1946), 13-17.

only skill that is taught at slow motion rates. He claims that students can type at the rate of 40 words a minute on the very first day if they are taught only a few keys at a time. Almost any beginner can strike a single key 60 times in 18 seconds, which is at the rate of 40 standard words a minute. The student can do this for combinations of two, three, or four letters, but beyond that number of keys, the choices become so numerous and confusing that he has to take too long to think, between strokes. Blackstone states that there is no proved merit in presenting the keyboard quickly. Though the student may cover the keyboard in a few weeks, they are unable to use it rapidly or accurately in that time. It is not known, yet, just how many keys should be presented at the start, but considerable success has been attained by teaching only four keys the first day and adding a single new key each succeeding day, together with continuous, cumulative daily review of all previously taught.

Accurate movements are probably impossible at the start, but speedy movements are possible. With practice, accurate movements can be combined with the speed to attain a speed of 40 gross words a minute on even the first day's exercise and to maintain that speed throughout the succeeding lessons. Accuracy may not be high until the muscles begin to come under control, but after a week or two, as high a degree of accuracy can be attained, at 40 words a minute, as used to be secured at the slow, faltering speeds of the accuracy-approach method. Blackstone further states that the student should watch the keyboard and his fingers as he types the first line of a new letter so that he will get a correct and accurate mental and tactual impression of the distance and direction of the reach. After one or two lines, challenge the student to strike the key without looking at the keyboard or his fingers. Present exercises in the form of words,

phrases, sentences, and paragraphs, rather than as nonsense combinations. Teach the use of the shift key in about the second lesson so that students can write real sentences early. Avoid the budget method, wherein students type along at individual and leisurely paces. Keep pressing them toward maximum effort.

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Viola DuFrain made a recent study to determine the practicability of emphasizing speed before accuracy in elementary typewriting. The study was planned definitely to develop speed first, before accuracy, in experimental group, seeking to have the students experience the highest possible speed levels in continuity typewriting as early as possible in the learning process. After they had attained an arbitrary speed-level, the plan was to direct them to shift attention to accuracy while retaining their high level of speed. Once they had reached an arbitrary degree of accuracy, the plan was to have them repeat this cycle of speed and accuracy emphasis, aiming for an arbitrary higher speed-level, and later, for the arbitrary degree of accuracy, the same as before. The plan was to compare the results of this experimental method with results obtained by using a contrasting control method which directed the students to aim primarily for accuracy throughout the seventy lessons, with timed writings in alternate lessons. The conclusions of her study revealed considerable evidence in favor of the experimental group. Emphasizing speed before accuracy in elementary typewriting was found to be practical. This conclusion means that, at the beginning of learning, students can attain this speed in spite of a high error rate. It

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E. G. Blackstone, "How to Speed up Typewriting," National Business Educational Quarterly, XII (December, 1943), 21-26, 65.

means that they can reduce high error rates phenomenally in a subsequent accuracy emphasis. It means that students can gain a superior speed rate during the speed emphasis and maintain this rate while reducing the errors, compared to students who emphasize accuracy from the beginning. ⁹¹

S. J. Wanous says that a high rate of speed on straight copy work in typing does not automatically result in high rate on letters, manuscripts, or other types of work. The learning is not automatically transferred from one kind of work to another. Straight typing is different from typing office forms and techniques acquired on the first do not carry over to the second. One of the best ways to stress good technique in typing production copy is to have students set a goal by typing from paragraph material for a short time, then to have them type from office copy for the same period of time. The goal serves to motivate the work of the students. ⁹²

The inclusion of office terms and simple business letters seem to be a common thing in the later textbooks on typewriting used today.

There is no simple formula which will improve or raise the standard of efficiency in teaching typewriting: teachers do, however, need to review and put into practice the essentials which have enabled professional typists to acquire a degree of efficiency that is far superior to the average business office requirements, and add some teaching and practice of normal office procedures. Teachers should put into practice those five essentials of technique which have helped professionals to acquire their proficiency. Posture, concentration, rhythm, keeping eyes on the text and elimination of useless motions are the foundation on which to build. Students can acquire speed

⁹¹ Viola DuFrain, "The Practicability of Emphasizing Speed Before Accuracy," National Business Education Quarterly, XIV (May, 1946), 29-30, 35-40.

⁹² S. J. Wanous, "How to Achieve High Standards in Office Work," Balance Sheet, XXX (March, 1949), 292-294.

and accuracy with far greater ease when they strive carefully and ambitiously
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to practice and master these five essentials.

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George L. Hossfield, "How to Improve the Teaching of Typewriting,"
Journal of Business Education, XXIV (November, 1948), 25-28.

CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Since the invention of the typewriter by Christopher Latham Sholes in 1873, many changes have taken place in the methods of teaching typewriting. Prior to 1880 students were given very little instruction or supervision. The method they used to operate the typewriter was known as the sight method because they looked at the keyboard to locate the key they wished to strike. This early method is also referred to as the "hit and miss" or the "hunt and peck" method.

The first writing was done by using the index fingers of each hand. Next, two or three fingers on each hand were used and finally in 1878 the all-finger method made its appearance. Mrs. M. V. Longley introduced the all-finger method of operating the keyboard. In 1882 she prepared a 12-page instructor called Typewriter Lessons for the use of both teacher and learner. This publication was the first printed system for teaching the all-finger method. Mrs. Longley's method was a genuine touch system in its result, but not in its main purpose, which was avowedly to secure an improved method of fingering. In 1889 the all-finger method became simply a means to an end--the ability to write by touch.

Instruction in the early all-finger method always started with the little fingers and proceeded along the home row of keys from the outside. This was known as the horizontal method of presenting the keyboard. After the home row of keys was learned, the upper row was presented, and lastly the lower row was taught. The result of this, that the student, instead of "reaching" for the keys moved the entire hand along the line when striking a key in the center of the keyboard.

Mrs. Ida McLenan Cutler was convinced that it was more logical to begin with the index fingers and leave the little fingers until the last. SoRelle further developed the index finger method by introducing a series of typewriting lessons which compelled the student to make the reaches to the different banks of keys and thus enforce the correct hand position. The lessons introduced keyboard learning by the vertical section divisions, instead of the horizontal row.

Shortly after the introduction of the touch method of typewriting and the improved system of finger reaches, the typewriting companies gave their hearty support to the new method by sending their representatives over the country to give demonstrations on their typewriters. They further increased interest in sponsoring contests and sending out free contest materials. In 1906 the interest in skillful typewriting culminated in the organization of the International Typewriting Contests, which were to be conducted over a period of about twenty-five years.

The consensus of opinion among typewriting teachers, during the greater part of the twenty-five years, was to give accuracy the first consideration in their typing classes. They insisted that perfect copies of exercises be handed in. The student was urged to type slowly to help prevent errors. Speed was necessary, but it should be built on the solid foundation of accuracy. Speed should not be mentioned to beginners except to discourage it.

Teacher training courses helped to develop new theories in teaching of skill subjects. Teachers coming out of teacher training courses in the normal schools, colleges, and universities, who had absorbed some of the modern educational philosophy, were thinking more in terms of a new teaching

objective which educators had been writing about. This new objective was the technique approach which was soon to replace the copy objective and the accuracy first procedure in teaching typewriting. Now that technique was gaining in popularity it brought with it a different manner of striking the keys. Correct, rapid reaching and stroking are basic in the development of typing skill. Less emphasis was given to perfect papers. All effort in typing should have accuracy for one of its main aims, but accuracy with skillful operations. In beginning typewriting classes accuracy was temporarily sacrificed for speed. An experiment made by Viola DuFrain showed that emphasizing speed before accuracy in elementary typewriting was practical.

Prior to the introduction of the technique objective, it had occurred to some thinkers that the psychological principle pertaining to the memorizing of the whole rather than the parts might apply to the teaching of the keyboard. Thus, the whole method was introduced. It initiated the control of all letters of the alphabet in one or two class periods then introduced words and sentences. It emphasized a basic principle of learning--that we learn best when learning is in a natural-use situation.

The direct method went a step further and introduced the word pattern. An effort was made to teach words as complete movement patterns rather than to teach isolated finger strokes which were associated with isolated letters. The direct method emphasizes rapid, skillful movements such as is used in the technique objective approach.

Another approach to the development of speed was the automatization idea which involves the concept that common words or syllables be so well known that the entire syllable, word, or phrase may be typed by a sort of serial reaction in which no conscious thought is required. This concept

brought about much discussion for the idea seemed to be in direct conflict with the theory that rhythmic typing is desirable. George L. Hossfield says that there are different tempos in typewriting the same as there are in music and the tempos in typewriting as in music are rhythmic.

A recent trend in thought is grading the student on his typing power ability rather than on straight copy work. High rate on straight copy work in typing does not automatically result in high rate on letters or other types of office work. The learning is not automatically transferred from one kind of work to another and for this reason the student needs practice in both types and needs to be graded on his ability to do each one.

CONCLUSIONS

1. There has been great improvement in typewriting methods but there is still no one best method in its entirety over all the other methods.

2. Later thinking tends toward the following practices in the teaching of beginning typewriting: teacher demonstration, emphasis on technique and speed, adoption of partial or complete movement patterns for words as the initial learning unit, meaningful material for drill work, less straight copy work replaced by typing power problems, and the use of open faced keys.

3. There is need of more scientific experimental research in typewriting methods. Most of the articles reviewed by the author were based on the practical experiences of the writers.

RECOMMENDATIONS

1. The best scientific rule for the teacher of beginning typewriting is to start with and follow sound experimental results from research. She should not necessarily follow any particular method, since no one best method has been definitely determined, but should select the combination of methods that she can be enthusiastic about.

2. It is further recommended that classroom teachers carry on research work in their own classrooms where enough students are enrolled to make it feasible.

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