

AN ANALYSIS OF THE VARIOUS METHODS OF PRESENTING THE
KEYBOARD IN BEGINNING TYPEWRITING

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Bachelor of Science

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Submitted to the Department of Business Education

Oklahoma Agricultural and Mechanical College

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

1942

APPROVED BY:

OKLAHOMA
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JUL 16 1942

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ACKNOWLEDGMENT

The writer wishes to acknowledge her appreciation to Mr. J. Andrew Holley, Head of the Department of Business Education, Oklahoma A. and M. College, for his guidance in the collection of material for this research.

Thanks are also expressed to Mr. M. Fred Tidwell and to Miss Maxine Anderson for their interest and criticisms which have been invaluable in the preparation of this paper.

A. D. L.

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CHAPTER I

INTRODUCTION

Typewriting has played an important part in our school system for some fifty years.¹ During this time many significant changes in the teaching of this art have taken place, and with the ever-increasing demand for typists, the best methods and time-saving devices possible must be utilized.

According to Book, one of the most remarkable achievements in the acquisition of human skills is the increase in speed and accuracy that has been made in typewriting during the past twenty years.²

This does not mean, however, that methods of teaching typewriting have been standardized. There are almost as many techniques of presenting the keyboard as there are teachers.³ Lessenberry views this condition with approval:

A study of the different methods of teaching typewriting reveals many agreements as to teaching procedures, materials, and expected results. Such a study reveals differences, too. After all, this is right, for uniformity of method is neither desirable nor to be expected. Each teacher who modifies an existing method, creates a new procedure, or combines the procedures from many different methods into a new pattern, is making a contribution to our growing understanding of how to teach typewriting.⁴

The general purpose of this study is to acquaint the student of business education with developments of the various methods of teaching

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1. Blackstone, E. G. and Smith, S. L., Improvement of Instruction in Typewriting, Prentice-Hall, Inc., New York, 1937, p. 1
 2. Book, W. Frederick, Learning to Typewrite, Gregg Publishing Co., New York, 1925, p. 166
 3. Blackstone, E. G., op. cit. p. 8
 4. Lessenberry, D. D., "Methods of Teaching Typewriting," Balance Sheet, South-Western Pub. Co., Cincinnati, March, 1937, p. 296

typewriting so that he can make the best use of the experiences of others in working out for himself the most satisfactory method of presenting the keyboard.

NEED FOR THE STUDY

"A good or a bad typist is made at the beginning has more truth in it than many typewriting teachers think, because in any manipulative art-science like typewriting, more depends upon the initial steps than the beginner usually realizes."⁵

With this point in mind, it is essential that the teacher of beginning typewriting discover the very best methods as reported by scientific studies. It is extremely important that the teacher guide the learner in the correct technique of habit formation from the beginning and take advantage of the student's interest in the subject. To accomplish this, the teacher must be familiar with the various methods of presenting the keyboard and the value of each.

With the ever-increasing amount of literature being written on the methods of teaching typewriting, it would be impossible for the average busy teacher to study this material in detail. Therefore, a study which groups the various methods, analyzes, and summarizes the methods of presenting the keyboard to beginning typewriting students seems desirable.

Then, too, the value of a study of this kind to future research must not be over-looked.

It is assumed that the apprentice teacher needs to have guidance

5. Clem, Jane E., The Technique of Teaching Typewriting, Gregg Publishing Co., New York, 1929, p. 98

in gleaning from the many writings on the teaching of typewriting evidence on questions such as the following: (1) What are the various ways in which the keyboard can be taught? (2) What is the fastest method of becoming familiar with the operation of the keyboard? (3) What method would be most interesting to the student? (4) What method will insure development of good habits?

Of course, it is not assumed in this study that the correct and invariable answer to any of these questions can be found in the literature. What is assumed is that if the apprentice teacher can become familiar with the various methods and their bases in authority or experimentation, he will have advanced in understanding of the problems involved in beginning the teaching of typewriting.

PURPOSE OF THE STUDY

The purpose of this study is, first, to prepare a condensed but comprehensive treatment of the various methods of teaching beginning typewriting for the use of apprentice teachers; second, to group the various methods, for the convenience of the apprentice teacher, into a simple classification based on common elements; third, to summarize and analyze the arguments as to the merits or disadvantages of the various methods of presenting the keyboard.

MATERIALS AND PROCEDURE OF THE STUDY

The following materials were used in this study: Balance Sheet, Business Education World, Journal of Business Education, American Shorthand Teacher, An Experiment with Direct and Indirect Reaches for Key Location (unpublished thesis,) Methods of Teaching Typewriting (unpublished thesis,) National Business Education Outlook, Eastern

Commercial Teachers' Association Yearbook, National Business Education Quarterly, books on the methodology of teaching typewriting, typewriting textbooks, and teachers' manuals.

An examination of the literature was made to discover articles relating to the presentation of the keyboard to beginning typewriting students. In the process, the attempt was made to identify common elements by which the various methods could be grouped. It was found necessary to modify this grouping slightly several times, as further study brought out additional similarities or dissimilarities.

The organization followed was to present each method first in its "pure" form, together with statements concerning its advantages or its basis in some psychological principle. It was possible to trace an evolution of methods by showing how one method was developed to answer objections to a method previously used. In such simple organization as was sought here, it was necessary to postpone consideration of the many modifications or combinations of methods, as well as certain controversial elements of teaching beginning typewriting which were not necessarily associated with any particular method. Actually, such modifications may be more important in the progress of methods of teaching typewriting than the methods in their unmodified state would be. For that reason, they were treated in a separate section after the main outlines of methods had been drawn.

DELIMITATIONS

This study is limited to the literature on the presentation of the keyboard in beginning typewriting. The sources of the materials used are the articles published in educational journals, books on methodology of teaching typewriting, textbooks, and teachers' manuals.

Some of the literature dating from the beginning of instruction of typewriting in schools had to be surveyed in order to trace the development of early methods of presenting the keyboard. For the most part, however, intensive study of the literature was limited to the years 1931 to 1941 inclusive.

No attempt was made to evaluate the effectiveness of the different methods of presenting the keyboard except to report the results of related experimental studies that have been carried on by research workers.

DEFINITIONS

Definitions of a few terms to be used in this study will be helpful at this point.

Beginning typewriting refers to the period of time during which the letters and characters of the keyboard are presented. Beginning typewriting is defined by Lomax, Reynolds, and Ely⁶ as: "that period in the pupil's learning when he is acquiring a mastery of the typewriter as a mechanical device and a reasonable facility in the use of the typewriter keyboard."

Home-row is defined as: a s d f j k l ;

Indirect reach is traveling in a round-about way to the key to be struck. For instance, if you were to reach from the home-row key "j" to the key "y", you would travel first to the "u" and then to the "y"; thence return to home-row before making the next reach.

Direct reach would be a reach in which the finger traveled the

6. Lomax, Paul S., Reynolds, Helen, Ely, Margaret H., Problems of Teaching Typewriting, Prentice-Hall, Inc., New York, 1935, p. 95

most direct path from the key last struck to the key to be struck. For instance, if you were to write the word "at," you would strike "a" and go directly to "t" instead of going "a-s-d-f-t."

Lessenberry defines method as: "The term used to denote a basic plan of teaching."⁷

In this study the attempt was made to use the word method consistently and to avoid the use of such terms as procedure or technique which are sometimes used synonymously with method and sometimes in a different sense.

REVIEW OF RELATED LITERATURE

A brief review of two studies are here presented. They should be of interest because they appear to be rather closely related to the problem of the study.

One of these studies is entitled: "An Experiment with Direct and Indirect Reaches for Key Location in Beginning Typewriting" by Arnold E. Schneider.⁸ This study was carried on at the University of Iowa, Iowa City during the school year 1936-1937. The purpose was to ascertain by means of the experimental and control groups the relative effectiveness of teaching key locations in beginning typewriting by the direct and indirect reaches.

One group, the experimental class, composed of 20 students, was taught the keyboard by use of direct reaches. The control group,

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7. Lessenberry, D. D., "Lesson Plans and Teaching Procedures in Typewriting," Balance Sheet, Vol. 18, April, 1937, p. 344
 8. Schneider, Arnold E., An Experiment with Direct and Indirect Reaches for Key Location in Beginning Typewriting, University of Iowa, unpublished master's thesis

composed of 16 students, was taught the keyboard by using indirect reaches and returning to the home-row after each reach. In all other respects, instruction was identical for both groups.

During the second semester of the 1936-1937 school year, the same experiment was carried on in two classes in beginning typewriting at West Waterloo High School, Waterloo, Iowa.

From the evidence gathered in this study, it would seem that the direct reach is preferable to the indirect reach for increasing the efficiency of the beginner in learning the keyboard.

Methods of Teaching Typewriting in Secondary Schools, Ethel Crowley Herrell.⁸ This study was made at the University of Southern California in 1932. The purpose of this investigation was to make a study of the methods generally used in teaching typewriting in secondary schools.

In the years immediately preceding the publication of this study, a good deal was written about methods of teaching typewriting. An endeavor was made by the author to present the most outstanding ideas found in the literature on methods of teaching typewriting.

The current methods of teaching typewriting were considered under the following headings: correct position, learning the keyboard, acquiring speed, acquiring accuracy, scoring and grading.

Miss Herrell stated that learning the keyboard was the topic on which there was much wide disagreement. She found that many methods had been tried to determine the most efficient way of teaching this

8. Herrell, Ethel Crowley, Methods of Teaching Typewriting in Secondary Schools, University of Southern California, unpublished thesis

important part of typewriting, and that the home-row method was one of the most widely used. A recent tendency seemed to be to teach the keyboard as a whole and to start the writing of words before the individual letter making habits were too firmly established.

It was recommended by Miss Herrell that further scientific investigation be made to determine the best method of teaching the keyboard.

In summary of the related literature: In the first study the author was seeking to find the best method of key location, and it was found that the direct reach was the best method. In the second study there was an evaluation of existing methods of teaching typewriting.

In both studies the authors were interested in discovering time-saving methods of presenting the keyboard and in cutting out waste motion in typewriting.

CHAPTER II

EARLY METHODS OF TEACHING BEGINNING TYPEWRITING

A better understanding of the present variations in methods of teaching typewriting will be gained by a brief review of the evolution of typewriting from a literal "hit-and-miss" process to the present automatized skill.

The first method used in operation of the typewriter was the sight method, or what is now referred to as the "hunt and peck" method. The writing was done with the index fingers of each hand, and neither teacher nor text added a great deal. As commercial usage became more general, however, there was a greater need for more speed, and thus specific training was improved. About the first instructions, Harold Smith says:

It is not known exactly when the first published instruction was offered in connection with typewriting, but apparently it was contained in an undated circular put out by the Remington Sewing Machine Company, 258 W. Jefferson Street, Louisville, Kentucky. The date of a letter of recommendation printed in this circular is March 27, 1875, and we may conclude that publication occurred soon after.¹

The Story of the Typewriter states that the first school to teach typewriting was one opened by D. L. Scott-Browne at 737 Broadway, New York, in 1873.²

Gradually, more schools began to offer typewriting as a part of their accepted curricula because of the growing demand for stenographers

1. Blackstone, E. G., and Smith, S. L., Improvement of Instruction in Typewriting, Prentice-Hall, Inc., New York, 1937, p. 4

2. Ibid., p. 5

and typists; therefore, the typewriter companies found it desirable to issue textbooks and literature on the subject. The early textbooks were very crude. For the most part, they consisted of finger exercises, followed by some business letters and legal forms.³ The reason for this type of instruction was that most typewriting companies believed that lawyers and court reporters would be their best customers, and naturally the authors of the typewriting books adopted that idea.

The following instructions were printed on an undated circular put out by the Remington Sewing Machine Company:

Practice upon the above by touching each letter (one at a time) in any desired word, and the "space-key" after the word. One or two hours practice, daily, will soon enable you to write from 80 to 100 words per minute, upon the machine.⁴

Harold Smith states in the same article that it is interesting to note from the above instructions that at the very first the learning of typewriting was essentially by the "whole" method, so much talked about as a new idea fifty years later.⁵

TOUCH TYPEWRITING

Mr. Frank E. McGurkin was the first to take up the touch system and make it popular. According to Blackstone and Smith, Mr. McGurkin was told by his employer that he had seen a girl typing without looking at her hands, and making use of all her fingers. Mr. McGurkin

3. Clem, Jane E. op. cit. p. 33

4. Smith, Harold H., "The Teaching of Typewriting," American Short-hand Teacher, March, 1929, p. 240

5. Ibid., p. 240

says:

Boy-like I made up my mind that whatever a girl could do I could do, so I set to work to learn to operate without looking at the keyboard. Before the end of the year I could write upwards of 90 words a minute in new matter without looking at the keyboard. I did not meet the girl in Mr. Welch's office for two years after and then learned to my surprise that she did not operate the machine without looking at the keyboard and had never attempted to do so.⁶

There was much variety in the instructions given in the typewriting books and the methods used to teach typewriting before 1902. There was no assignment of keys to certain fingers, and in many cases the pupils started in to write sentences. There was no technique to any of it; in fact, each person developed his own style.⁷

John Harrison's Manual of the Type-Writer uses six exercises on the alphabet (using three fingers on each hand) and introduces 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. Torrey (First "touch" book) printed the right-hand figures and letters in bold face type, while the left-hand figures and letters were in ordinary type.⁸

Underhill uses the three-finger method of presenting the keyboard in his Handbook of Instruction for the "Typewriter." He suggests an elastic use of the third finger, also to interchange the work between

6. Blackstone, E. G. and Smith, S. L., op. cit., p. 5

7. Smith, Harold H., "The Teaching of Typewriting," American Short-hand Teacher, March, 1929, p. 240

8. Ibid., p. 241

the right and left hands in order to gain greater ease in writing. In other words, the author suggests to reach over as far as "e" in writing words such as scarcely. This would equalize the work of both hands. Torrey suggests that the student practice a word until he becomes familiar with the procedure and then look away from the keyboard--which is touch typewriting. VanSant says that the teacher should call the letters and spaces, keeping the class writing together.⁹

Mr. John Robert Gregg, in a talk given September, 1926 on the "Past and Present Methods of Teaching Shorthand and Typewriting," gives the following description of the beginning of Mrs. Longley's system:

Mrs. Longley read a paper at the first Annual Congress of Shorthand Writers, held at Cincinnati in 1882, advocating what she termed the "all-finger method," of typewriting. She boldly advocated the then new and strange idea that all fingers should be used in operating the typewriter. She said, "As well might a person expect to be a successful piano or organ player while using but two or three fingers of each hand as to expect to be a successful typewriter operator while using only a part of the fingers to strike the keys of the instrument; and who would expect to be a successful pianist or organist unless all fingers and the thumbs were brought into use."¹⁰

Mrs. Longley was so sincere in her belief that all the fingers should be used in typing the same as they are used in playing the piano or organ that she impressed others with this belief of hers, and they helped to make it popular.

It so happened that Mr. E. V. Howell, Manager of the Boston Office of the Remington Typewriter Company, was in the audience. Mr. Howell became impressed with Mrs. Longley's "all-finger" method, and it was through his interest in improving the instruction of beginning

9. Clem, Jane E., op. cit. p. 97

10. Ibid., p. 53

typewriting that he influenced many teachers to give this new idea a trial in their classrooms. Mr. W. E. Hickox was the first to take up the suggestion of Mr. Rowell's, and he introduced this new idea in his private shorthand school at Portland, Maine in 1892. He was the second educator in America, and the first in the East, to adopt this method. It was several years before he had any imitators.¹¹

In 1884, Mr. Rowell read a paper on the subject of typewriting in which he strongly endorsed Mrs. Longley's views and brought forward another argument in favor of the "all-finger method":

He said that it would enable the operator to keep his eyes on the copy and attain greater speed. This suggestion made a very great impression on many typewriting teachers.¹²

It was not long until other educators introduced the touch system into their schools. Many friendly contests were carried on among the schools and there resulted much achievement in skill among the students. Mr. A. C. VanRant and Mr. F. W. Mosher's pupils gained wide reputation for their skill in these contests.¹³

Ida Helenan Outler of Dubuque, Iowa was convinced that the logical method of beginning typewriting instruction was to start with the index finger instead of starting with the most difficult task, the training of the little finger. However, she followed the old plan of typing along one row of keys. Mr. Gregg purchased this method from her and asked Mr. SoRelle to compile some introductory lessons using this index-finger idea.¹⁴

11. Clem, Jane E., op. cit., p. 59

12. Ibid., p. 59

13. Smith, H. E., "Past and Present Methods of Teaching Shorthand and Typewriting," American Shorthand Teacher, V. 7, Sept., 1926, pp.8-10

14. Ibid., p. 9

Mr. SoRelle introduced the plan of compelling the student to make the "reaches" to the different banks of keys, thus forcing the correct hand position. The Rational Typewriting textbook marked a great step forward in the teaching of typewriting because it demonstrated the use of these two ideas.¹⁵

SIX STAGES OF TYPEWRITING INSTRUCTION

Adding together the results of browsing and contact with the older professional workers in the field, Smith¹⁶ says that historically, typewriting instruction has passed through six stages; he names the first as the "hit-and-miss" stage. During this period the novice learned to type by sheer practice on the less refined machines of the early days. Little, if any, supervision was given the students. It was thought that all the teacher needed to do was to check papers that were handed in each day.

About 1880, the second stage of typewriting instruction was introduced by the use of the "all-finger" method. This made it necessary to organize instruction, particularly in textbooks. The organization of instruction continued at a faster pace after the introduction of the touch idea with this stage.

The group instruction stage was introduced about 1900. This stage was opposed to the supervision that had been carried on in the classroom. Instruction in the teaching of typewriting was stressed.

The fourth stage was the organization of contests to promote

15. Ibid., p. 10

16. Smith, Harold H., "Trends in Typewriting," The National Business Education Quarterly, Spring, 1940, pp. 7-8; 31-35

skillful typewriting. These contests were conducted over a period of some twenty-five years. Out of these contests came state, district, and local contests, and various certificates and awards were given students. Some of these contests are still carried on, although the original International Typewriting Contests were discontinued after 1930.

The fifth stage was the introduction of courses in teacher-training institutions designed to train typewriting teachers. The practical typist or the non-college trained teacher was regarded with suspicion. In the teacher-training classes, the students were to study the different methods of teaching typewriting, the value of various types of practice material, and the study of methods of correcting typing errors. The instructors who offered these courses worked largely under the direction of educational theorists, psychologists, and academic scholars who headed up departments of education.

The sixth stage was the emphasis on standardized goals for typewriting students and on standardized preparation for the teachers of typewriting. There was a definite upward trend in the requirements for the student and the teacher. With this requirement, there was better teaching than ever before and students were sent out with better training.

Clem states that as late as 1929 educators outside the field of typewriting believed that the typewriter and the text were the only requirements in learning to typewrite, and that the only need of a teacher was to check papers and make assignments. The stenographic efficiency tests of Blackstone and Thurstone given about 1929 caused the business men to discover how poorly their typists were being trained by that

method. Business men demanded that the typists be better trained, and the schools really began to teach typewriting. Teachers and authors of typewriting textbooks have come to realize that the same pedagogical and psychological principles observed in the teaching of other subjects must be adhered to in teaching typewriting if desired results are obtained.¹⁷

The following gives an idea of the titles that the authors used for the early typewriting textbooks:

- 1884: Haven, Curtis. Haven's Complete Manual of Typewriting. (Philadelphia) A 3-finger method; no mention of "touch."
- 1891: Longley-Elias. The National Typewriter Instructor by the 8-Finger Method. (New York)
- 1893: McGurkin, Charles H. McGurkin's Method of Touch Typewriting . . . Treatise on the all-finger method of operation.¹⁸

SUMMARY

The first textbooks were very crude. At first the typists used only one finger, and later, two, and even three fingers. The first method used in operating the typewriter was the sight method. In 1882 Mrs. Longley advocated the use of the "all-finger method," of typewriting of which Mr. Frank E. McGurkin was the first to take it up and make it popular.

It was Ida McLenan Cutler who convinced Mr. Gregg that the logical method of beginning typewriting instruction was to start with the index finger instead of starting with the most difficult task, the training of the weak finger.

17. Clem, Jane E., Op. cit., p. 62

18. Smith, Harold H., Op. cit., p. 241

The six stages that typewriting instruction has passed through, according to Mr. Smith are: (1) the hit-and-miss stage, (2) the introduction of the all-finger method about 1880, (3) group instruction was started about 1900, (4) the organization of contests to promote skillful typewriter operators, (5) the introduction in colleges and universities of courses designed to train typewriting teachers, (6) emphasis on standardized goals for typewriting students and on standardized preparation for teachers of typewriting.

CHAPTER III

METHODS OF PRESENTING THE KEYBOARD

Book says that undirected learners may follow different methods in mastering the keyboard.¹ In fact, most skilled typists and authors of textbooks differ in regard to the best method. One author will say that the student must not touch a key until he has committed to memory the exact location of every letter and character on the keyboard, while another will decry the visual memorization of the keyboard as being a waste of time. One will attempt to teach all the letters on the keyboard as quickly as possible, and another will insist that the keyboard can best be taught in sections, a very few letters at a time.²

Typewriting instruction in the beginning made no use of association of certain letters with certain fingers--in other words, there was no system to typewriting in the very early stages of teaching. Smith has called it the "hit-and-miss" stage of learning to typewrite.³ With the idea of assigning each key to a specific finger there came many theories regarding the most effective and economical method of learning to typewrite.

TEACHING SEPARATE LETTERS

Since the first efforts to systematize the operation of the typewriter were the organization of schemes by which the same letters

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1. Book, W. F., Learning to Typewrite, New York, The Gregg Publishing Company, 1925, p. 170
 2. Ibid., p. 171
 3. Smith, Harold H., Op. cit., p. 8

would consistently be struck with the same fingers, it was natural that the methods of teaching typewriting should emphasize the relationships of separate letters to the individual fingers by which they were struck. A great deal of thought was given to the selection of letters which were to be presented first. Technique of stroking was also given special emphasis even at this early time, and present-day texts give evidence of a continued emphasis on stroking. Although controversies about which letter should be taught first or which finger should be used first no longer receive the heated attention they once did, there is no general agreement even yet.⁴

Home-row, or horizontal method: This method of presenting the keyboard to beginning students has been in use for a number of years. In this method the student is taught the home-row--a s d f j k l ;--first. The student uses all the fingers from the beginning.⁵ After the home-row is learned by using nonsense groups of letters and syllables such as "fff jjj faf j;j," the upper row of keys is added--q w e r u i o p. Then "t" and "y" are added. Similarly, the lower keys are introduced to the beginning student of typewriting. The students are instructed to keep their eyes on the copy, and their hands close to the home-row.⁶

Lomax, Reynolds, and Ely state that using this method of teaching the keyboard equalizes the use of all fingers; that is, one finger is not trained at a time, but all fingers are being trained in the method of mastering correct stroking from the beginning.⁷

4. Blackstone and Smith, Op. cit., pp. 170-171

5. Ibid., p. 167

6. Lomax, Paul, Reynolds, Helen, and Ely, Margaret, Op. cit., p. 102

7. Ibid., p. 103

Some authors object to the home-row method of presenting the keyboard because there is too much drill on the separate rows, and not enough drill on associating letters struck with the same fingers on different rows.⁸

Another objection to the home-row method, growing out of an entirely different point of view about the teaching of typewriting, is voiced by Guy S. George who argues that it develops a tendency of keeping the fingers too close to the home-row of keys thus handicapping freedom of action. Furthermore, he believes that the student is kept too long on the letter-level stage rather than being permitted to go ahead to the higher stages of learning to typewrite by words. He states his position strongly, "The more thoroughly the keyboard is learned by a beginner, the more certainly is he handicapped for life."⁹

This objection, however, applies not only to the home-row method but to any method of presenting the keyboard by separate letters; this will be more completely discussed when the word-pattern method is presented.

Vertical, or finger-section method: In an effort to find the most economical way of associating letters automatically with fingers, another variation of method, which is called "one-finger-at-a-time, vertical, or finger-section method, was introduced. In this method all the first finger associations are made at one time; then those to be struck by the second finger are made, and so on. After "fff" and "jjj" are

8. Ibid., p. 103

9. George, Guy S., "Typing Plateaus," Journal of Business Education, April 1932, V. 7, p. 19

10. Harris, Shelly Mae, "Typing Procedures and Classroom Tests," Fifth Yearbook, National Business Education Outlook, (1939), pp. 269-272

written a number of times by the two index fingers, the drills "frf" and "juj" are given. Using this drill, the index fingers must reach upward to the third bank of keys; then "fvf" and "jvj" are used to introduce the reach downward by the index fingers to the first bank of keys. The second fingers are similarly drilled--associating the fingers with letters d, e, and c for the left hand and k, i, and comma for the right hand.¹⁰

Arguments for economy of learning by this method are best stated by Smith:

. . . . is it better to try to associate one character with each of eight fingers or to associate one character with each of two homologous fingers (for instance, the index finger of each hand)?

Obviously, the latter is simpler and more likely to expedite the learning of these intensely practised individual character-producing movements.¹¹

The attempt to simplify the initial learning situation by the use of the vertical method was recognized in another way by Harris, who claimed that by starting with the index fingers and working outward, the fingers which are the easiest to control are used first and the weaker fingers are used to keep the place on the home-row keys.¹²

Smith makes the additional observation that the simplicity of the learning situation is enhanced when the approach is made through a single finger on each hand because the choice, at the outset, is only between the right and left hands, with the particular finger always

10. Harris, Shelley Mae, "Typing Procedures and Classroom Tests," Fifth Yearbook, National Business Educ. Outlook, (1939) pp. 269-272

11. Blackstone, E. G. and Smith, S. L. Op. cit., p. 167

12. Harris, Shelley Mae, Op. cit., p. 268

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in readiness. In respect to starting with the index finger there is general concurrence between Harris and Smith.

If the first, or index finger is chosen for this single-finger approach, we take advantage of the further fact that up to the time the average learner studies typing his first fingers are under better control than his other fingers; and so we simplify the learning problem just that much more.¹⁴

There are some, however, who argue that if the initial learning situation is made too simple the student experiences a feeling of mastery, which is destroyed when he begins to work with the weaker fingers, thus unduly discouraging him. This conviction is expressed further in the publication of typewriting texts which start the student working with the weak fingers rather than with the stronger and more independent index fingers. On the other hand, Dake in Modern Methods of Touch Typewriting takes a modified stand by using both strong and weak fingers in drills such as, "aaa, jjj, sss, kkk." The organization of the drill in this fashion is obviously deliberate as expressed in the sub-title of the book, "The Thought Action Way." Dake says that The Modern Method absolutely prevents the almost universal custom of exercising the fingers in sequence, which custom permits the student's mind to wander from the work in hand, and thereby interferes with efficient progress. (See Appendix, p. vi for examples of drills used by Dake.)

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WHOLE METHOD

When the psychological principle of learning by wholes rather than by parts began to pervade all subject matter fields, it occurred to

13. Blackstone, E. G. and Smith, S. L., op. cit., p. 167

14. Ibid., p. 167

15. Dake, L. Gilbert, The Modern Method of Touch Typewriting, Lyons and Carnahan, New York, 1931, p. 12

some thinkers that the psychological law pertaining to the memorizing of the whole rather than the part might apply to teaching the keyboard.¹⁶ After brief, localizing drills, in which the teacher explains by demonstration and use of wall charts the location of a number of different letters on the keyboard, words and sentences are given to the class.

Most of the arguments brought forward by exponents of the whole method are based on the economy of learning in a meaningful and natural situation. It is stated by one author that this type of keyboard presentation attempts to establish the command of the keyboard by means of practice on sense material and that it enables the learner to use his typing ability early.¹⁷

Lessenberry states the advantages of this method in the following words:

It is possible to initiate the control of the keyboard more quickly than we formerly thought could be done. The whole method emphasizes a basic principle of learning--that we learn best when our learning is in a natural-use situation... Teaching in the use situation makes the drill practice mean something to the student; he can be made to understand its purpose; he can learn to determine the type of practice procedure to use; he can learn to measure the effectiveness of his practice.¹⁸

Because of the interest in this method, it has been the topic of several research studies. Blackstone and Smith, in Improvement of Instruction in Typewriting, give the results of several of these

16. Blackstone, E. G. and Smith, S. L., op. cit., p. 168

17. Lomas, Paul S.; and Reynolds, Helen, op. cit., p. 104

18. Lessenberry, D. D., Methods of Teaching Typewriting, Monograph No. 36, South-Western Publishing Co., 1937, p. 7

studies and conclude that "the method of employing the entire keyboard from the start shows this method equal to or superior to the part
19
method."

Some teachers feel that the "whole method" of teaching typewriting does not go far enough and that the educational principle of learning by wholes should go further. It is argued that the word, phrase, or sentence rather than the letter could be used as the learning unit in typewriting, even as in the language arts.

TEACHING WORD PATTERNS

The distinguishing feature of the word pattern methods is that an effort is made to teach words as complete movement patterns, rather than to teach isolated finger strokes which are associated with isolated letters. The whole group of movements used in the writing of a short word are presented simultaneously and practiced the same way.

Stuart High Frequency Word Pattern Method: Stuart, one of the principal advocates of the word pattern method, emphasizes practicing all movements in the same rapid, skillful manner in which the expert performs them. As a matter of fact, she introduces the movements for carriage return, insertion of paper, and twirling the cylinder knob in the very first lessons together with correct position at the machine and proper stroking of the keys.

In the first lesson the teacher explains and demonstrates correct position at the machine. She explains the finger chart by which the

19. Blackstone, E. G. and Smith, S. L., op. cit., p. 168-169

student can find the proper finger to be used for a given key. Then the carriage is locked and the student learns how to hold his hands on the keys, how to make reaches, how to strike the keys, and how to locate certain keys by looking at the finger chart and not at the keyboard. The letters associated with the keys are not mentioned to the students yet. Teacher demonstration plays an important part. A few parts of the machine, such as paper rest, lateral paper guide, cylinder, cylinder knobs, and feed rollers are explained. Other parts of the machine are introduced as they are needed.

When the student has become familiar with the direction and distance that each finger has to travel, the instructor suggests that he try to operate the keys without looking at them. The emphasis is still on the movement and not on the letters. Next the instructor tells the student to watch and listen to him tap the keys. Then the student taps with the instructor. Instructions are given to tap other keys so that a word of two letters may be formed. The letters that have been made with these keys have not been mentioned to the student. After these movements have been automatized, the students are told that they have been writing a word, "if." As they write they pronounce the whole word, not the letters, as the word is typed. The word that they are typing is written on the blackboard, and it is pronounced by the teacher as the students write it. If some student is not following readily, the teacher simply spells the word two or

20. Odell, William R. and Stuart, Esta Ross, Principles and Techniques for Directing the Learning of Typewriting, D. C. Heath and Company, New York, 1935, p. 32-42

21

three times and then moves into the word-writing stage again.

Stuart lists three important changes in the word-pattern method from the separate letter method:

1. The teaching of the reach separate from the stroke.
2. The teaching of the manipulative mastery of the keys before any letter-associations are made with them.
3. Learning the keyboard by mastering the movements for word and phrase patterns ... 22

She enlarges on the third point by insisting that:

... learning the keyboard does not mean memorizing the letters distributed on the keyboard, because such a method forces the student to learn each letter in terms of its relative position to certain other letters. This is an uneconomical method of learning except for the writing of adjacent letter sequences, such as fr, as, we, ki. Learning the keyboard really consists of learning all the actual letter-sequences for which patterns must be established.²³

Other advantages for the word pattern method listed by Odell and Stuart are: "The chances for errors are decreased in all the stroking of the student if he begins his learning by mastering the movements for word-patterns which contain only two or three strokes ... The first learning exercises can be short, easy, and meaningful."²⁴

Stuart and Odell select the word if as the first word to be given the class because it uses alternate-hand strokes, which Odell claims are the fastest strokes, and because it uses the fingers that have²⁵ learned to work independently.

21. Ibid., p. 54,59,60.

22. Stuart, Esta Ross, Teacher's Manual for Stuart Typing, D. C. Heath, New York, 1934, p.5

23. Stuart, Esta Ross, "Learning Steps in Typewriting," Business Education World, Vol. 16, March, 1937, p. 531

24. Odell, William R., and Stuart, Esta Ross, op. cit., p. 64

25. Ibid., p. 64

(See Appendix, p. ix for examples of charts and drills.)

Direct Method: The direct method varies slightly from the Stuart "word pattern" method; in the first step the students are taught how to locate the keys on the typewriter, and the numbering of the fingers that will be needed in describing reaches. The first practice is done with locked keys. Home-row position is taught as a resting place for the fingers, and not as letters a,s,d,f,j,k,l,;. The teacher demonstrates a light, snappy touch on the keys for the students, as well as how to insert the paper, and how to return the carriage in connection with stroking.

Directions are given for the typing of a simple word. The students place their hands on home row and reach for and strike the key found with the second finger on the right hand above the home row; then the key found with the third finger on the left hand on the home row; and, lastly, they strike the space bar. During this process they may look at the keys. The students are given time to repeat this drill until they can type it rapidly and lightly. The word, "is," is placed on the board, and the teacher demonstrates and explains the correct method of typing. After the explanation and demonstration the students repeat the writing of the word. Another simple word is typed in the same manner. The words, "if, it, is," are then typed together as a phrase. Words and phrases are then put together into sentences.

26. Tidwell, M. Fred, "Direct Approach to the Teaching of Typing," Business Education World, Vol. 18, June, 1938, p. 789

27. Ibid., p. 790

Lessenberry sums the main points in teaching by the direct method as follows:

1. The teaching is done from the board, on which a sentence is written.
2. Through the use of a diagram of the keyboard, the teacher demonstrates, by placing his fingers on the correct keys, the fingers and the bank to be used for each letter of each word.
3. First practice is done with locked machines.
4. As the teacher pronounces a word and writes it on the board, the students tap the word with him; then they practice the entire sentence alone several times.
5. Each sentence is typed several times. By typing two sentences to a line, the spacing after the period is taught. As the words are pronounced, the teacher claps for the number of times the keys and space bar are to be struck.²⁸

According to Lessenberry the student makes rapid progress using the direct method, and the alphabet is introduced in the first six lessons.²⁹ This is one of the differences between the direct method and the word-pattern method, where the first four or five lessons are employed in teaching correct position, correct carriage return, the reach, the correct handling of the paper, before typing of words is begun.

MODIFICATIONS AND COMBINATIONS OF METHODS

Of course, it must not be assumed that all of these methods

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28. Lessenberry, D. D., Methods of Teaching Typewriting, Monograph Number 36, South-Western Publishing Co., Cincinnati, 1937, p. 7
29. Lessenberry, D. D., Review of 20th Century Typewriting, p. 2

have been kept completely separated by different teachers. Elements belonging to two or more of the methods were frequently merged in the organization of a typewriting text or used by typewriting teachers in presenting the keyboard.

Louise McKee carried on an experiment in teaching the keyboard by what she calls the sentence method. Before any writing is attempted the students are made familiar with the necessary parts of the machine. The guide keys were taught with the aid of a chart. The students are drilled on "fff jjj" and the other keys on the guide row until they are sure of the fingers used on each key, the letters associated with each key, and have a good touch. The first writing is done with the ribbon thrown off as it is in stencil writing.

The first two sentences given to the class are "Ask Dad. Dad asks." The pupils locate the letters a, s, and k. They feel these letters a number of times, and the word "ask" is written slowly and smoothly, until the pupils can write it as a word unit. The use of the shift key and the period are next taught. The entire sentence is located by feeling the keys a number of times, and then the pupils write it slowly but smoothly. The ribbons are engaged, and the pupils are permitted to write the sentence. Each group of sentences must be written perfectly before going to the next group. The letter "e" is the next one taught, and words such as "see, sell, seed, and Jess" are given. Then sentences are written with these words.

The advantages given for this method are:

Natural and interesting way of learning and affords the maximum of drill on the writing of connected matter.

An ideal is set up, and by careful planning and grading of

the work, is made a practical one. Pupils are made aware of their ability to write with few errors, because they actually do so.

The method is adapted to the pace of the various individuals ... The result is fewer failures ... and a higher standard of accuracy throughout the grade.³⁰

Gregg Typing: In the Gregg Typing textbook the first lesson starts with the first-finger keys f,g,h,j,r, and u. The second lesson adds the first finger keys for t,v,b,y, and n and introduces the second finger keys d,e,c, and k, i, comma. A keyboard chart is given with each lesson until all the keys are presented. It can be seen that this is an adaptation of the vertical method. Words are formed with the first-finger letters and typed several times. In the second lesson, the letters that are struck with the second fingers are introduced and words are formed using the first and second letters. Sentences containing commonly used words are presented in this lesson. ³¹ This is apparently an attempt to make learning realistic by using actual words as soon as possible.

Smith, one of the authors of the text, says that words may be typed "as a succession of isolated strokes, as they must be in the early lessons; as a sequence of strokes in a single motion pattern, as the flash words are typed beginning with Lesson Five; and as a combination of these two techniques, that is, partly as isolated strokes and partly in sequence." The authors introduce words early in the course but they are on the letter level. The "flash word" drill is intended to encourage the student to write on the word level. Smith says: "The individual motions involved in a combina-

30. McKee, Louise, "An Experiment In Teaching the Keyboard," Fifth Yearbook, Eastern Commercial Teachers Association, 1932, p. 157-160

31. SoRelle, Rupert P., Smith, Harold H., Foster, William R., Blanchard, Clyde I., Gregg Typing, The Gregg Publishing Co., New York, p. 608

tion of movements are usually executed faster when the combination is executed as a whole than when the motions are made separately." ³²

(See Appendix, p.vi for examples of drills.)

Rowe Typing: In the Rowe Typing textbook, the keyboard reaches are covered quickly by a combination of horizontal and vertical methods. The authors use the term "Contrast Method." This appears to refer to the tendency to present contrasting movements in the same lesson such as the downward reach for one finger and the upward reach for another. It may also have reference to the wide separation of lessons presenting reaches easily confused, such as i and e. The entire keyboard is covered in fifteen lessons. The home-row drill with the "fff jjj" finger is used first, then the "faa j;;" drill. After a number of lines of letters on the home-row are given, the next is the bringing in of the vertical or the "frf juj" drill. Accuracy is strongly emphasized from the first. Two and three letter words are introduced early in the book, but they are included with the nonsense letter combinations and are presumably typed on the letter level. For example, if is introduced in the line with af, ju, fr, ki, gr, lu, da, fi, ji, ³³ ga, ji, fa, uj.

(See Appendix, p.viii for examples of charts and drills.)

Dictaphone Method: Lomax, Reynolds, and Ely describe the dictaphone method as follows: "The dictaphone method of teaching typing

32. Smith, Harold H., Gregg Typing Teacher's Handbook, The Gregg Publishing Company, New York, p. 57-60
33. White, Walter T., and Reigner, Charles G., Rowe Typing, The H. M. Rowe Co., Chicago, 1937, p. 14

combines the auditory stimulus with the visual stimulus. The pupils copy exercises which are at the same time dictated to them by the dictaphone. The rate of the pupil's writing is, therefore, controlled by the rate of dictation, which can be increased or decreased to suit the pupil's need. This method seeks to vitalize the pupil's learning by increasing the number of avenues through which he receives the stimulus. By breaking the class into ability groups, each controlled by a dictaphone, the instruction can be adapted to class groups of different abilities.³⁴ The experimental work with this method is interesting but inconclusive. It has been widely used in Chicago schools.

QUESTIONS RAISED ON THE FEATURES OF VARIOUS METHODS

Because of the great variety of methods of presenting the keyboard, it is natural to question where the truth really lies. It is not within the scope of this study to try to answer these questions but rather to stimulate thinking about them.

Home-row or horizontal method:

1. Why keep the fingers so close to home-row?
2. What value is the equalizing of all fingers at the beginning of the course?

Vertical Method:

1. Could drill on vertical rows be used to advantage without calling attention to the nonsense group of letters thus written?

Whole Method:

1. Does the introduction of many keys at one time lengthen the learning process?

34. Lomax, Paul S., Reynolds, Helen, and Ely, Margaret H., op. cit., p. 104

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2. Should the effectiveness of the whole method be employed by careful selection of words to be written and fingers to be utilized in the first lessons?

Stuart High Frequency Word Pattern

1. Is too much time taken up for manipulation of paper insertion, carriage return, and practicing the reach before actual typing is done? Does the interest of the student lag?
2. To what extent is the word pattern actually used and does she believe that word pattern can be used in every instance?
3. Do students write the word patterns when they say words, especially when writing two letter words which they started spelling.
4. Is there too much repetition?

Direct Method:

1. Is there a tendency for piling of letters, transposition of letters, uneven stroking to accompany teaching the word as a unit?
2. Is rapid learning at the first discouraging to the student later in the course because he does not progress as fast as at the beginning? Or is this taken care of by very simple words at first and a great deal of repetition?
3. What value is the repetition of a word for a great number of times? Tidwell says "it does little or no good to write a line of one word. To repeat several lines of a sentence is equally bad. If the words and phrases can be repeated so that there is variety, a world of good can be accomplished."³⁵
4. Is drill on speed an essential element of the word pattern methods?
5. Quoting Tidwell: "Short speed drills can be given as soon as the students feel at ease in operating their machines."³⁶

35. Tidwell, M. Fred, "Direct Approach to the Teaching of Typing," Business Education World, 18, June, 1938, p. 790

36. Ibid., p. 790

6. To what extent can the movements of the expert really be duplicated by awkward beginners?
7. How should rhythm be explained to beginners? It is frequently stated as striking each key in exactly the same fraction of a second but studies have shown that even experts do not type with an exact metronomic rhythm? Does this mean that evenness and regularity of stroke can be ignored?
8. Can accuracy be gained after speed? According to Tidwell, the procedure for acquiring this (rapid writing level) is to locate the keys and type every sentence or paragraph rapidly regardless of errors.³⁷

Dake, Modern Method:

1. Does the repetition of nonsense group of letters produce mental fatigue?
2. Is it practicable to start writing sentences and paragraphs without capitals?
3. Is there too much emphasis on speed on materials which high speed cannot be obtained. (Words in the first lesson in which the speed is stressed--adults, harass, a surly, lass; ask truthful daddy.)
4. Is there too great emphasis on accuracy required when the students are to hand in three perfect copies?
5. Is more required of the student than he can accomplish without undue fatigue.

Sentence Method:

1. Are the first words used selected or chosen at random?
2. Is it purposeful that the beginning situation should be so difficult? The weak fingers are used first by giving the word "ask" and also introduces the capital letter and period. Dake and McKee agree that first letters should be with weak fingers. Lessenberry and Stuart both disagree with her and say that the initial learning situation should be simple.

37. Ibid., p. 791.

3. How does this sentence method differ from the word method?
4. Is accuracy stressed too much? Is it the best method to require beginning students to write sentences perfectly before attempting to write other sentences?

SUMMARY

Typewriting instruction in the beginning made no use of association of certain letters with certain fingers. The first efforts to systematize the operation of the typewriter were the organization of schemes by which the same letters would consistently be struck with the same fingers.

Emphasis was placed on the home-row or horizontal method of teaching the keyboard to beginning typewriting students. The student uses all the fingers in the first day of typing, learning first the home-row, next the third row, and finally the first row.

In an effort to find a more economical way of presenting the keyboard, the vertical, or finger-section method was introduced. All the first finger associations are made at one time, thus associating letters to be struck with the index fingers only instead of with all eight fingers. Then the keys to be struck with the second, third, and fourth fingers are introduced.

It occurred to some teachers that the law of learning by wholes could be applied to teaching the keyboard. The teacher explains by demonstration and use of wall charts the location of a number of different letters on the keyboard then brief drill on key position, alphabetic sentences and paragraphs were given to the class. Actually, letters are learned, but in a sentence setting.

It was felt by some teachers that the whole method should go further. It was argued that the word, or sentence rather than the letter could be used as the learning unit in typewriting.

The Stuart High Frequency word pattern method and the direct method as discussed by Tidwell are examples of this attempt to use simple words, such as if, it, is, as initial learning units. Much emphasis is placed on the movement pattern while learning the separate letters involved is minimized.

There is one modification of the word pattern method given by McKee as the sentence method. The guide keys are drilled on until the students are sure of the fingers used on each key, the letters associated with each key, and have a good touch. The first two sentences given to the class are "Ask Dad. Dad asks." The entire sentence is located by feeling the keys a number of times, and then the pupils write slowly but smoothly. Features given for this method are: natural and interesting way of learning, affords maximum of drill, ideal is set up, and the method is adapted to the pace of the various individuals.

In the Gregg Typing textbook the first lesson starts with a few first-finger keys. The second lesson contains keys struck by the first and second fingers. A keyboard chart is given with each lesson until all the keys are presented. It can be seen that this is an adaptation of the vertical method. Words are formed with the first-finger letters and typed several times. Smith says that words can be typed as a succession of isolated strokes, as sequence of strokes in a single motion pattern, or a combination of these two methods.

In the Rowe Typing textbook, the keyboard reaches are covered quickly by a combination of horizontal and vertical methods. The author uses the term "Contrast Method." This appears to refer to the tendency to present contrasting movements in the same lesson such as, the downward reach for one finger and the upward reach for another. The entire keyboard is covered in 15 lessons. The home-row drill is used first. Accuracy is strongly emphasized from the first.

The Dictaphone Method combines the auditory stimulus with the visual stimulus. The pupils copy exercises from the book at the same time they are dictated to by the dictaphone. The rate of the dictation can be controlled according to the pupil's need.

There is considerable lack of agreement on the best method of presenting the keyboard to beginning typists. Some questions concerning the features of the various methods were pointed out to provoke further thought and study on the part of apprentice teachers in beginning typewriting.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study set out to prepare a condensed but comprehensive analysis and summary of the various methods of teaching beginning typewriting; to group the various methods into a simple classification based on common elements; to describe the methods in their "pure" form, together with statements concerning the advantages of the method; and modifications of the methods given in the beginning typewriting.

By using an historical approach, it was revealed that the first method used to operate the typewriter was the sight method, also referred to as the "hunt and peck" method. The writing was done with the index fingers of each hand, and neither teacher nor text added a great deal. The text books were very crude; for the most part, they consisted of finger exercises followed by some business letters and legal forms. Mrs. Longley was so sincere in her belief that all fingers should be used in typewriting as they were used in playing the piano that in 1882 she advocated what she termed as the "all-finger method" of typewriting.

Ida McLenan Cutler was convinced that the logical method of beginning typewriting instruction was to start with the index finger, most independent finger, instead of starting with the most difficult task, the training of the little finger.

Smith says that historically, typewriting instruction has passed through six stages: (1) the hit-and-miss stage, (2) the introduction of the all-finger method about 1880, (3) group instruction about 1900, (4) organization of contests to promote skillful typewriting operators, (5) introduction in colleges and universities of courses designed to

train typewriting teachers, (6) emphasis on standardized goals for typewriting students and on standardized preparation for teachers of typewriting.

Most skilled typists and authors of textbooks differ in regard to the best method. One author will say that the student must not touch a key until he has committed to memory the exact location of every letter and character on the keyboard, while another will say that it is a waste of time. One will attempt to teach all the letters on the keyboard as quickly as possible, and another will insist that the keyboard can best be taught in sections, a very few letters at a time.

Since the first efforts to systematize the operation of the typewriter were the organization of schemes by which the same letters would be struck consistently with the same fingers, it was natural that the methods of teaching typewriting should emphasize the relationship of separate letters to the individual fingers. In the home-row, or horizontal method, the student is taught the home-row-- a s d f j k l ;--first. After the home-row is learned, the upper row of keys is added, and lastly the lower row is introduced. The student uses all the fingers from the beginning. The advantage stated for this method is the equalization of all fingers. The objections of this method are: too much drill on separate rows; keeps fingers too close to home-row; insufficient drill on associating letters struck with the same fingers; and keeps students on letter-level stage rather than permitting them to go ahead to the higher stages of learning to type-write by words, phrases, and sentences.

In an effort to find the most economical way of associating letters automatically with fingers, another method was introduced, which is called "one-finger-at-a-time, vertical, or finger section-method." The first finger associations are made at one time; then those to be struck by the second finger; and so on. For instance, drills are given such as, frf juj fvf jmj to introduce the keys struck by the index finger. Smith says that it is better to try to associate one character with each of two homologous fingers than to associate one character with each of eight fingers. Starting with the index fingers and working outward is better since the index finger is easier to control and the weaker fingers keep the place on the home-row keys.

It occurred to some thinkers that the psychological principle pertaining to the memorization of the whole rather than the parts might apply to teaching the keyboard. After brief, localizing drills, in which the teacher explains by demonstration on the keyboard, words and sentences are given to the class. The advantage for this method is the economy of learning in a meaningful and natural situation.

The whole method did not go far enough according to some teachers, and the word pattern was introduced. In this method an effort was made to teach words as complete movement patterns, rather than to teach isolated finger strokes which are associated with isolated letters. Emphasis is placed on rapid, skillful movements such as is used on the expert level. The teacher demonstrates the correct method of writing words, and explains a few parts of the machine. Directions are given for the writing of a two letter word, but no mention is made

to the students about what letters are made in using these keys. After these movements have been automatized, the students are told that they have been writing the word "if." As they write they pronounce the whole word and if a student fails to follow, the teacher simply spells the word two or three times and then moves again into the word-writing stage. The advantages listed for the word pattern method are: first learning exercises can be short, easy, and meaningful; chances for errors are decreased if the student begins learning by mastering the movements for word-patterns which contain only two or three strokes and gradually increases.

The direct method varies slightly from the Stuart "word pattern" method. The keyboard is covered more rapidly in the direct method than it is in the word pattern method.

Some of the modifications of the preceding methods are: the sentence method as given by McKee, in which the entire sentence is located by feeling the keys a number of times and then the pupils write the sentence slowly and smoothly; the contrast method by White and Reigner, which is a combination of the horizontal and vertical methods; and the Gregg method, which is a combination of the vertical method and the writing of words on the letter level.

CONCLUSIONS

The following conclusions seem to be warranted by this study:

1. Later thinking tends toward partial or complete adoption of movement pattern for words as the initial learning unit.
2. There is a need for a reconciliation of ideas which appear reasonable in themselves but which in reality conflict

with each other.

3. Most of the arguments appear to be based on practical experience rather than scientific experimentation as shown by the fact that authors tend to speak empirically rather than scientifically.
4. The efficacy of skill in the learning stages is as important as the performance when performance is measured in terms of terminal outcomes.

RECOMMENDATIONS

It is recommended that apprentice teachers in typewriting examine various methods critically since no one best method has been definitely determined.

It is also recommended that more experimentation be done in practical classroom situations as well as scientific laboratory situations.

It is further recommended that conclusions on efficiency of methods of teaching the keyboard be reserved until rather high levels of skill are attempted, since it is quite positive that the kinds of habits learned at the beginning may be strongly felt when the student attempts to reach higher and higher levels of performances.

APPENDIX

BIBLIOGRAPHY

Source of Materials

A. Books

- Blackstone, E. G. and S. L. Smith, Improvement of Instruction in Typewriting, Prentice-Hall, Inc., Publishers: New York (1937).
- Book, William F., Learning to Typewrite with A Discussion of the Psychology and Pedagogy of Skill, The Gregg Publishing Company, Publishers: New York (1926).
- Clem, Jane E., The Technique of Teaching Typewriting, The Gregg Publishing Company, Publishers: New York (1929).
- Dake, L. Gilbert, The Modern Method of Touch Typewriting, The "Thought-Action" Way, Lyons & Carnahan, Publisher: New York (1931). Typewriting Textbook.
- Dvorak, August, Nellie L. Merrick, William L. Dealey, Gertrude Catherine Ford, Typewriting Behavior, American Book Company, Publishers: New York (1936).
- Good, Carter V., A. S. Barr, Douglas E. Seates, The Methodology of Educational Research, D. Appleton-Century Company, Publishers: New York (1938).
- Lessenberry, D. D. and E. A. Jevon, Manual for 20th Century Typewriting, South-Western Publishing Company, Publishers: Cincinnati (1938).
- Lessenberry, D. D. and E. A. Jevon, 20th Century Typewriting, South-Western Publishing Company, Publishers: Cincinnati (1937). Textbook.
- Lessenberry, D. D. and E. A. Jevon, Review of 20th Century Typewriting, South-Western Publishing Company, Publishers: Cincinnati (1937).
- Lomax, Paul S., Helen Reynolds, and Margaret H. Ely, Problems of Teaching Typewriting, Prentice-Hall, Inc., Publishers: New York (1933).
- Odell, William R. and Esta Ross Stuart, Principles and Techniques for Directing the Learning of Typewriting, D. C. Heath and Company, Publishers: New York (1935).
- Smith, Harold H., Gregg Typing Teacher's Handbook, The Gregg Publishing Company, Publishers: New York (1936).
- SoRelle, Rupert P., and Harold H. Smith, Gregg Typing Techniques and Projects, The Gregg Publishing Company, Publishers: New York (1931).
- SoRelle, Rupert P., Harold H. Smith, William R. Foster, and Clyde I. Blanchard, Gregg Typing, The Gregg Publishing Company, Publishers: New York (1937).

Stuart, Esta Ross, Stuart Typing, D. C. Heath and Co., Publishers:
New York (1932).

Stuart, Esta Ross, Teacher's Manual for Stuart Typing, D. C. Heath
and Company, Publishers: New York (1934).

White, Walter T., and Charles G. Reigner, Rowe Typing, The H. M. Rowe
Company, Publishers: Baltimore (1937). Typewriting Textbook.

B. Periodicals

Adams, Edith O'Neill, "How I Teach Elementary Typewriting," Business
Education World, 17 (January 1937) p 328-330.

Ahlering, Inez, "How I Teach Elementary Typewriting," Business Education
World, 17 (October 1936) p 88-94.

Ayers, Celia M., "Tell You How to Teach Typewriting? No!" Balance Sheet
16 (October 1934) p 78.

Clark, Edith E., "Teaching Beginning Typewriting," Business Education
World, 17 (March 1937) p 499-503.

Clem, Jane E., "New Trends In The Teaching Of Typing," Business Education
World, 19 (April 1939) p 629.

Craver, Cecil C., "A Few Notes On The Typing Approach," Business
Education World, 19 (December 1938) p 272.

Dvorak, August, and Nellie L. Merrick, "Correct Typing Motions,"
Business Education World, 17 (April 1937) p 555-559.

Dvorak, August, and Nellie L. Merrick, "Typing Speed and Accuracy,"
Business Education World, 17 (May 1937) p 656-660.

George, Guy S., "Typing Plateaus," Journal of Business Education, 7
(April 1932) p 19.

Griggs, M. C., "A Period In Beginning Typing," Journal of Business
Education, 7 (April 1932) p 19.

Jones, Cecil L., "The Beginning Typing," Business Education World, 17
(June 1937) p 758-761.

Klauservitz, Harry, "First Two Days in Typing," Journal of Business
Education, 7 (March 1932) p 19.

Kramer, Edward D., "Typing Habits Multiply," Business Education World,
18 (January 1938) p 360-361.

Lessenberry, D. D., "Lesson Plans and Teaching Procedures in Typewriting,"
Balance Sheet, 18 (April 1937) p 344-348.

- Lessenberry, D. D., "Methods of Teaching Typewriting," Balance Sheet, 18 (March 1937) p 276-299.
- Lessenberry, D. D., "The Right Kind of Practice to Develop Typing Power," Balance Sheet, 18 (February 1937) p 247-249.
- O'Brien, Guy E., "Typing as a Process," Business Education World, 19 (October 1938) p 141.
- Odell, William R., "Rhythm and Patternism in Typing," Business Education World, 19 (March 1939) p 537-543.
- Rady, Ivy L., "The Most Effective Use of the Typewriting Class Period," The American Shorthand Teacher, 13 (September 1932) p 13.
- Reynolds, Helen and Doris Sponseller, "Methods in Teaching Beginning Typing," Journal of Business Education, 8 (December 1932) p 17.
- Richards, William A., "Habits: Your Servants in Typing," Business Education World, 19 (November 1938) p 203.
- Schneider, Arnold E., "Streamlined Rhythm," Business Education World, 19 (March 1938) p 536-538.
- Smith, Harold H., "Half-Truths and Misstatements," Business Education World, 19 (June 1939) p 820.
- Smith, Harold H., "Past and Present Methods of Teaching Shorthand and Typewriting with a Forecast of Future Methods," The American Shorthand Teacher, 7 (September 1926) p 8-10.
- Smith, Harold H., "The Teaching of Typewriting," American Shorthand Teacher, 9 (March 1929) p 240-243.
- Smith, Harold H., "Training Routine for Typists, No. 1--Introductory Work," Business Education World, 20 (December 1939) p 291.
- Smith, Harold H., "Trends in Typewriting," The National Business Education Quarterly, (Spring 1940) p 7, 8, 31-35.
- Smith, Harold H., "Typing Teachers--Athletic Coaches," Business Education World, 20 (November 1939) p 192-195.
- Southwick, Helen, "Start Right If You Want to Typewrite," Business Education World, 20 (June 1940) p 855-858.
- Tidwell, M. Fred, "Direct Approach to the Teaching of Typing," Business Education World, 18 (June 1938) p 769-793.
- Wood, Ethel H., "The Beginner in Typing," Journal of Business Education, 7, (1932) p 27.

C. Publications of Education Organizations

- Church, Jane and Margaret Peters, "Lesson Plans and Aids for Teaching the Typewriter Keyboard by the Direct Method," Gregg Educational Monographs, The Gregg Publishing Company, New York, 1933.
- Dvorak, August, "Problems and Issues with Reference to Teaching Procedures in Typewriting," Seventh Yearbook, National Business Teachers Association, p 323-330, 1941.
- Everett, Pauline, "The Presentation of Beginning Typewriting," Second Yearbook, National Business Education Outlook, p 222-266, 1936.
- Ferguson, Eula G., "Developing the Individual Through Training for Business," Fifth Yearbook, The Commercial Education Association of the City of New York, p 329-334, 1934-1935.
- Goldstein, Louis, "What Skills Should be Developed in Stenography and Typewriting," Fourth Yearbook, The Commercial Education Association of New York City and Vicinity, p 113-118, 1933-1934.
- Harris, Shelly Mae, "Typing Procedures and Classroom Tests," Fifth Yearbook, National Business Education Outlook, p 269-274, 1939.
- Lessenberry, D. D., "Methods of Teaching Typewriting," Monograph Number 36, South-Western Publishing Company, Cincinnati, 1937.
- Lessenberry, D. D., "The Teaching of Typewriting," Sixth Yearbook, National Business Education Outlook, p 451-456, 1940.
- McKee, Louise, "An Experiment in Teaching the Keyboard," Fifth Yearbook, Eastern Commercial Teachers' Association, p 269-274, 1932.
- Odell, William R., "What Skills Should Be Developed in Stenography and Typewriting," Fourth Yearbook, The Commercial Education Association of New York City and Vicinity, p 119-125, 1933-1934.
- Simpson, Gertrude, "Correct Technique in Presenting the New Keys, e, i, r, u," Fifth Yearbook, The Commercial Education Association of the City of New York and Vicinity, 1934-1935, p 196-215.
- Smith, Harold H., "Problems of Typewriting," Thirteenth Yearbook, Eastern Commercial Teachers Association, 1940, p 189-198.
- Stuart, Esta Ross, "How Provision May Be Made in Secretarial Subjects for Varying Abilities of Pupils," Eleventh Yearbook, Eastern Commercial Teachers' Association, 1938, p 106-115.
- Stuart, Esta Ross, "Means by Which Skill May Be Developed in Typewriting," Fourth Yearbook, The Commercial Education Association of New York City and Vicinity, 1933-1934, p 126-136.

Stuart, Esta Ross, "Revamping the Teaching of Typewriting to Conform to the Modern Trends in Education and Business," Fourteenth Yearbook, Eastern Commercial Teachers Association, 1941, p 75-84.

Woodside, C. W., "New Techniques of Teaching Typewriting," Third Yearbook, National Business Education Outlook, 1936, p 163-169.

D. Unpublished Theses

Harrell, Ethel Crowley, "Methods of Teaching Typewriting in Secondary Schools," M. S. Thesis, University of Southern California, 1932.

Schneider, Arnold E., "An Experiment with Direct and Indirect Reaches for Key Location in Beginning Typewriting," M. S. Thesis, University of Iowa, 1937.

Examples of drills given in the Dake Modern Method of Touch

Typewriting: Notice emphasis on weak fingers a and s; use of alternate strokes; deliberate subordination of meaning to unusual sequences presumably to encourage "concentration."

First Lesson:

ajsk dlf;
a sad lad
alas a lad falls as a lass

Second Lesson:

alfalfa alaska
salad flask alaska flash lash gash hash
hash all shad salad

Third Lesson:

hurry a harsh artful hussy
frat halt hulk lard lark hurt hush last

Examples of drills given in the Gregg Typing:

First Lesson:

jjjj ffff jjjj ffff jjjj ffff
fur rug jug hum mum gum (first-finger word drill)
ruff gruff

Second Lesson:

in my him mum kin ink
be re fee get red bed (first-and-second-finger word drills)

they think the eight men met in the church (sentences containing
her friend hid the junk under the big tree commonly-used words)
bring my dinner there every night by nine,

Third Lesson:

oh, no, you look oil
we sew vex were rest

jjj jJj Ju Ju Just (first-second-and-third-finger drill
lll lLl lLi Li Lis List plus shift)

(Examples of drills given in the Gregg Typing - continued:)

Just tell them they must wire this week.
List your four lots down town very soon.

Fifth Lesson

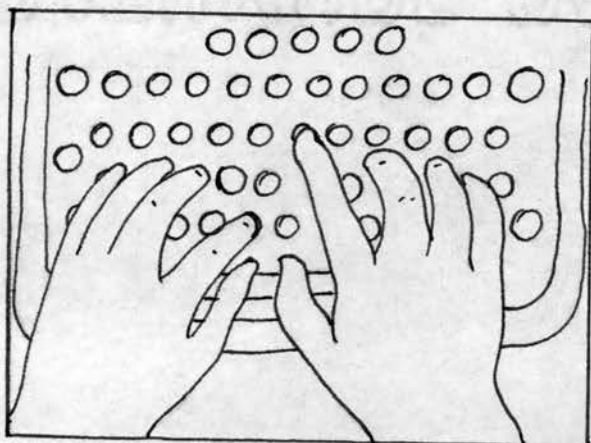
Just after taking off, Jimmy bounced over an ax, split a ski,
and fell quite dazed. (Alphabetic Sentence)

have with over right things return (Flash Drill)

hazy lazy next relaz strike quickly (fingering drill--words re-
quiring practice in finger
reaches)

Examples of drills given in Rowe Typing:

Notice chart showing contrasting reaches; combination of horizontal and vertical method in first lesson; introduction of words in same line with nonsense group of letters.



The f-finger making the downward v-stroke.

The j-finger making the upward y-stroke.

First Lesson:

fff aaa faf jjj ;;; j;j
adsfa ;klj; adsfa ;klj;

juj jjj faf fff dfd j;j
frf faf far fju frf fur

if is af ju fr ki fi j;
as ar af ku ju lu gi ig

Second Lesson:

fff jjj fsf jlj
ask dug rid jug dig sir

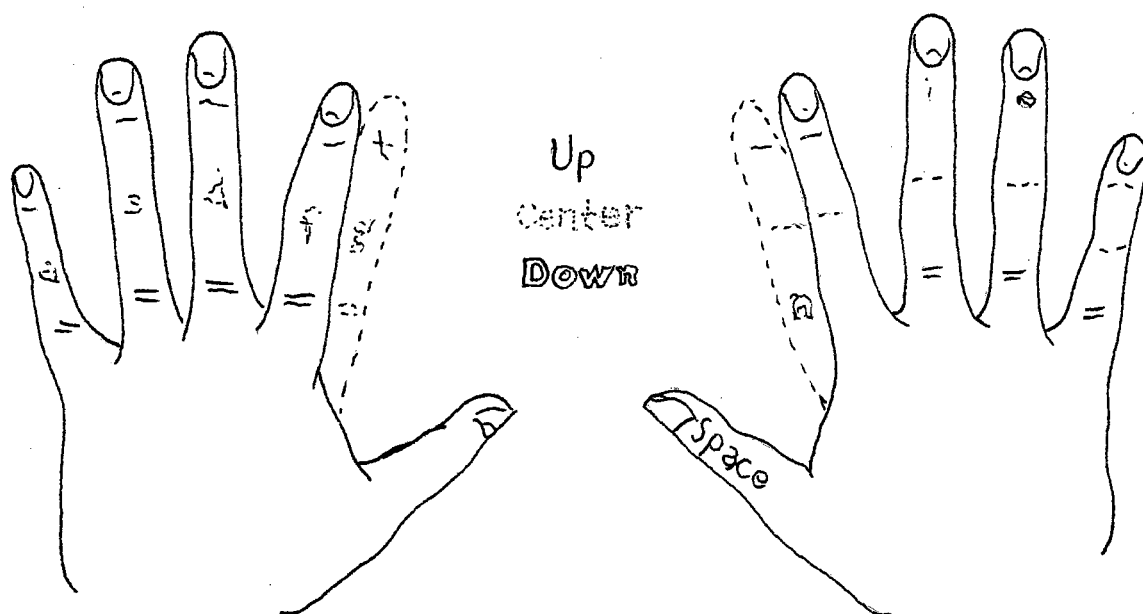
frf ftf kik fit jut jug
Rur Uru F;a Ja; R;f Har

Third Lesson:

fr uj ft ik rf l.
ddd ded juj ded
nit ken hen end ten den

ed .l j; af re nh ik uj
fade jade king hand send
He had his hat as he left the dark little hall.

Stuart's Hand Chart



Examples of drills given in Stuart, High Frequency Word Pattern

Method: Notice chart emphasizing finger movements rather than sentences;
immediate use of simple and meaningful words, phrases, and sentences;
comment beside each drill.

First Lesson:

	if if if if if if if if	
	if if if if if if if if	
"Throw the carriage twice to make the double space be- tween the groups of lines."	it it it it it it it it it it it it it it it it if it if it if it if it if it if it if it if it	"Pronounce each word as you write."
	is is is is is is is is is is is is is is is is	
	it is it is it is it is it is it is it is it is	
	if it is if it is if it is if it is if it is if it is	

Second Lesson:

	It is It is It is It is	
	It is It is It is It is	
"Do you always practice on locked keys first?"	It is I It is I It is I It is I It is I It is I Is it I Is it I Is it I Is it I Is it I Is it I	"Are your fingers arched?"
	As it is I As it is I As it is I As it is I As it is I As it is I	

Third Lesson:

	so so so so so so so so	
	so so so so so so so so	
"Did you spell s-o?"	is so is so is so is so is so is so is so is so it is so it is so it is so if it is so if it is so	"Is your right margin even?"

Typist: Eleanor Amend