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AN ANALYSIS OF STANDARDIZED TESTS
IN TYPEWRITING

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AN ANALYSIS OF STANDARDIZED TESTS
IN TYPEWRITING

By

VIVIAN C. PHILLIPS

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East Central State Teachers College

Ada, Oklahoma

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O. K. Reiff
Chairman, Thesis Committee

Ruth C. Williams
Member, Thesis Committee

O. K. Reiff
Head of Department

D. E. McIntosh
Dean of the Graduate School

146471

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V.P.

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CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to analyze the available standardized tests in typewriting in order that instructors in typewriting may have certain data upon which to base their choice of tests when their use is being considered.

As tests and measurements has been a neglected phase of business education, the number of standardized tests is small when compared with the large volume of such tests that are available in other fields.¹

It seems that relatively few standardized tests are available for use in typewriting, for after exhaustive search only five of this type were found. The great majority of the published tests are unstandardized, and many of these instruments are intended for use with some particular textbook only. In Tests in Business Education² eighteen tests are mentioned, five of which are standardized. The Bibliography of Tests in Business Subjects³ lists fifteen, of which the same five mentioned above are standardized. Sixteen tests are listed

1. Haynes, Benjamin R., M. E. Broom, Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company: Cincinnati, (1940) preface.

2. Segel, D. and K. B. Haas, Tests in Business Education, Washington, D. C., Office of Education, U. S. Department of the Interior, 1938.

3. Woodside, C. W. and S. J. Wanous, Bibliography of Tests and Testing in Business Subjects, Monograph # 42, South-Western Publishing Company, (1939) p 29.

in Tests and Measurements in Business Education⁴ of which four are standardized, these four are listed in each of the groups of standardized tests found in Tests in Business Education and in the Bibliography of Tests in Business Subjects.

One question that is asked frequently by teachers of business subjects, and by school administrators and supervisors is, "What standardized tests are available in this or that business subject?" It was with the thought of answering this question that this study was begun.

This analysis is concerned only with the standardized tests available in typewriting. An attempt has been made to present those tests that are available, and to supply certain specific information concerning the tests.

Since "Scientific procedures have extended into business education in the high schools in the last two decades,"⁵ every-thing should be done to carry this scientific attitude into the somewhat neglected field of standardized testing. This study is made with the hope that interest will be stimulated in this phase of business education.

It is an accepted truism that "anything that exists, exists in some quantity and may be measured with some degree

4. Haynes, Benjamin R., M. E. Broom, Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company: Cincinnati, (1940) pp 262ff

5. Ibid., p 15

of accuracy,"⁶....The essential thing for teachers to do is to choose those tests which are accepted - those which have been validated through proper methods of research. By this careful selection the movement for increased accuracy in the testing field will receive needed support.

Dr. Carlson⁷ says that if anything can be measured it can be measured accurately, and that there is little value in measurement if it cannot be done accurately.

The tool subjects in Business Education, such as typewriting, shorthand and bookkeeping lend themselves easily to measurement.⁸

Educators are becoming convinced that tests are tools in education, that they are measuring instruments and that in the hands of a skilled examiner who is motivated by the scientific attitude tests can yield valuable information about abilities, learning difficulties, and achievements of individual students. This being true, this analysis of available standardized tests in typewriting should be a worthwhile contribution.

6. Blackstone, E. G. and S. L. Smith, Improvement of Instruction in Typewriting, Prentice Hall, Inc.: New York, (1936) p 275.

7. Carlson, Paul A., "Tests and Measurements in Business Education," Lecture delivered at Oklahoma A. & M. College, June 12, 1942. Sixth Annual Summer Conference on Business Education.

8. Haynes, op. cit., p 16.

Need for the Study

Because of the current demand for typists and clerical workers business education teachers must work harder to maintain standards and to modernize their teaching programs.

In view of these circumstances a realization of the value of standardized measurement as a means of a modern, more reliable and scientific way of measuring the results of the teaching program should not be overlooked.

Scientific education aims to base its major decisions upon objective, reliable, valid data; upon information which is impersonal, unbiased, accurate, and worthwhile.⁹

Although there is a need for the use of the improved typewriting tests that are available, teachers have been more or less content to go along using the traditional straight-copy material tests. The new type tests that have been developed during the past few years have not been used extensively by typewriting teachers.¹⁰

The timed straight-copy speed test that has been universally used, does not function as an all-around check-up on the student's ability to do what has been taught. It does not measure all that is desirable in a course in typewriting any more than a test in addition measures all that is desirable in a course in arithmetic.¹¹

9. Carlson, Paul A., "The Measurement of Business Education," South-Western Publishing Company, Monograph # 18, p 5.

10. Price, Ray G., "A Comprehensive Testing Program in Typewriting," The Balance Sheet, 20 (February 1939) p 244.

11. Loc. cit.

It is evident that one cannot assume that a student who is able to type from straight copy at a high rate of speed, and with even a high rate of accuracy will be able to type miscellaneous office material with the same degree of accuracy and skill.¹²

The straight-copy tests need to be supplemented by tests that will measure students ability to do the things they will have to do in the business office, such as typing and setting up letters, copying from rough draft; tabulation, and preparation of business forms such as statements and invoices, et cetera. All of these jobs should meet reasonable office standards.¹³

Since the emphasis in straight-copy tests is placed upon the wrong phases of typewriting work, it is far from indicative of office requirements. The emphasis should be placed upon the work that will be done in the office not only through class-room instruction and budget work, but also through a well organized testing program.¹⁴

If these instructional units as outlined in the typewriting textbooks, are worth teaching certainly they are worth testing in order to determine the extent to which students have profited by the presentation of these units. A class in typewriting deserves to be and should be tested on the things which it has been taught.¹⁵

12. "Measuring for Vocational Ability in the Field of Business Education," Tenth Yearbook, Eastern Commercial Teachers Association, (1937) p 171.

13. Price, Ray G., "A Comprehensive Testing Program in Typewriting," The Balance Sheet, 20 (February 1939) p 244.

14. Ibid., p 245.

15. Ibid., p 244.

Although attention has been given in this study to the need of standardized tests it is fallacious reasoning to state that a test that has not been standardized is not so reliable as those that are standardized. The difference between a standardized test and one that is not standardized lies in the fact that the degrees of reliability and validity have been established in one and not in the other, and that definite norms have been or have not been established.¹⁶

Efficient teaching in typewriting demands a carefully planned testing program. Available standardized tests and printed unstandardized tests are adequate for use in many classroom situations. An estimate of student achievement is an important part of the work of the teacher. Such an estimate should be based on evidence that is obtained efficiently, accurately and impartially.

It would seem therefore, that the need for this analysis of the available standardized tests in typewriting is two-fold: the definite recognition of the value of scientific measuring in typewriting through the use of standardized tests, and the realization of the inadequacy of the present method of testing in typewriting through the general use of the straight-copy tests.

16. Haynes, Benjamin R., M. E. Broom, Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company, Cincinnati, (1940) p 373.

Limitations

This study is limited to the field of standardized testing in typewriting on the vocational level. Other fields have been mentioned only when they have a direct bearing on typewriting.

In recent years business educators have emphasized the personal use values of typewriting and in some instances have separated courses aimed to develop skills for personal use from courses aimed to develop the same skills for vocational use. No such division has been attempted in the tests presented in this study.

The scope of standardized tests available in typewriting on the vocational level is limited to achievement testing. Any other type of testing mentioned is for comparison only.

Methods and Materials

This is primarily a library study. The published material as indexed by Reader's Guide, Educational Guide, and Business Educational Index relating directly or indirectly to tests and measurements in typewriting have been carefully read and analyzed.

In attempting to make the list of tests analyzed as authoritative as possible, a letter was sent to all known publishers of tests in the business subjects, to educational institutions and research bureaus, asking for copies of their standardized tests in typewriting. All of those contacted sent tests. The following agencies co-operated in supplying the tests that are included in this study:

Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kansas.

Public School Publishing Company, Bloomington, Ill.

Joint Committee on Testing, Representating National Office Management Association and National Council of Business Education--Lawrence Hall, Cambridge, Mass.

World Book Company--Yonkers-on-Hudson, New York.

All of the tests received for consideration are not included in this analysis since they are not listed as standardized. Many printed and published tests are not standardized.

In the letter sent to each publisher request was made for copies of each test together with a manual and scoring key. Permission was requested also, and in all instances granted, to include one form of each standardized test in the study and to quote from the manual and key.

Although the reader may discover a few standardized tests in typewriting that are not described in this study, it is believed that this list can be accepted as representing the best-known standardized tests in typewriting.

No attempt has been made in this study to evaluate any test that is presented or described.

Definitions

An achievement test is one that measures students mastery of the subject matter taught.

A standardized test is one carefully constructed, for which definite rules for giving and scoring have been prepared, for which norms are available, and whose significance

and accuracy is known.¹⁷

An employment test is one that is given by the prospective employer to an applicant for a position.

A norm is a standard of value representing typical achievement, usually an average of the scores earned by a large, unselected number of students employed in standardizing a test.¹⁸

The validity of a test refers to the "worthwhileness" of a test. It is valid when it measures what it proposes to measure.

The reliability of a test expresses the same meaning as accuracy or consistency of a test.

17. Symonds, P. M., Measurement in Secondary Education, Macmillan Company: New York (1927) p 276.

18. Haynes, op. cit., p 27.

CHAPTER II

TYPEWRITING TESTS

Purpose of Testing:

It is important that the results of teaching be measured. This measurement can be facilitated by the use of standardized tests. One purpose of any test is to determine what knowledge pupils have of the subject matter that has been presented; the test should measure achievement in a given subject. Testing provides a method of ascertaining how much pupils have profited by class instruction. In type-writing the testing program should be one that measures the typing power attained by the individual pupil. Such a program will enable the teacher to adapt his procedures to the needs of his pupils.

Tests provide a means of evaluation and of diagnosis. They correct no educational evils but they provide information that can be used as a basis for remedial instruction. They indicate whether or not a problem exists.¹

It is possible, to a certain extent, to determine by means of tests the nature of existing problems. Tests are a means to aid in detecting, in analyzing, and in treating of students' difficulties. The real value of standardized tests, therefore, lies in the correct interpretation and use of the results that they yield.²

1. Haynes, Benjamin R., M. E. Broom, Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company: Cincinnati, (1940) p 18.

2. Ibid., p 17.

The most frequent use of test results is to determine school marks. Teachers must give some account of the work of his students. So long as such accounts are rendered in terms of school marks, it is necessary that the teacher do a fair and an accurate job of determining the marks. By using all of the tools that are available for scientific measuring and marking, the teacher will more nearly approach this ideal of fair and accurate grading.³

Donald G. Paterson, a well-known authority on student guidance, says:

The purpose of achievement tests is to determine not so much whether the student has "passed" or "failed" as it is to determine how he ranks in relation to his fellows who have enjoyed equal amounts of "exposure" to teaching and in what aspects of his schooling he has shown the greatest and the least relative amounts of progress. Thus the measurement of past achievement tends to be used as a gauge for future accomplishments.

The major purpose of these tests, then, should be to help in judging students in regard to their educational and vocational decisions. There are other uses of achievement tests besides those of guidance. They may be used for students in admission, promotion, and graduation. It is quite legitimate in some situations to set minimum standards of accomplishment. The student with low achievement scores will benefit if prevented from enrolling in courses beyond his capacity.⁴

3. Ibid., p 17.

4. Paterson, Donald G., Gwendolen G., Schniedler, Edmond G. Williamson, Student Guidance Techniques, McGraw-Hill Book Company, Inc.: New York, (1933) pp 95-96.

Kinds of Tests:

The standardized tests that have been prepared in typewriting so far are achievement tests.

Standardized achievement tests are tests which have been prepared by experts in their fields, and who have selected the items very carefully from the material which is most commonly taught. These tests have been given to a large number of pupils. From these results norms have been derived, together with information concerning the reliability and validity of the tests. Such tests are provided with exact procedures controlling the giving and scoring of the tests. If standardized tests are used and class norms for the test determined, the teacher is able to compare her class norms with the test norms. Each pupil may be informed as to how he ranks locally and nationally.⁵

Experimental evidence tends to indicate that standardized achievement tests are the more reliable and valid for tool subjects, especially when given at the time norms are provided.⁶

Odell classifies achievement tests as general survey tests, diagnostic tests, and prognostic tests.⁷

5. Lee, J. Murray, A Guide to Measurement in Secondary Schools, D. Appleton-Century Company: New York, (1936) p 24.

6. Ibid., p 25.

7. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930) p 22.

The survey test is one that yields a general or average measure of student achievement in the subject measured.⁸ It is usually so constructed, theoretically, that a sample of each important element of subject matter is given. The examples are usually arranged in one of two ways, either in units of increasing difficulty or topically.⁹

Survey tests usually are intended for use at the end of learning units, as well as for use as final examinations at the end of a particular course of study. In typewriting, these tests should aid in reducing the failures on the job in so far as it is humanly possible.¹⁰

Whatever may be the cause of the tendency to omit final examinations for vocational ability courses, those who give no such examinations are for the most part without the necessary information on the basis of which to recommend graduates for positions, to appraise the results of teaching in such a way as to reveal shortcomings which should be overcome, and to select somewhat more intelligently those who should be permitted to pursue vocational business courses. Then, too, most educators will agree that reasonably high standards should be set for vocational training and that if such standards are to be set and maintained, it is necessary to measure the results of teaching to ascertain whether or not desired standards have been reached.¹¹

8. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930) p 22.

9. Haynes, B. R., M. E. Broom, and Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company: Cincinnati, (1940) p 29.

10. Ibid., p 374.

11. "Measuring for Vocational Ability in the Field of Business Education," Tenth Yearbook, Eastern Commercial Teachers Association, (1937) p 14.

According to Dr. Odell's definition, "The diagnostic test is, as its name implies, one which is used to diagnose a pupil's capacity or performance."¹²

The diagnosis of pupil achievement constitutes the most important of the many uses of tests and test scores. There can be no hard and fast line drawn between diagnostic and general survey tests. Practically all tests are diagnostic, at least to a slight degree.¹³

Diagnostic tests are teaching guides. Their results indicate the learning that has taken place, and also the deficiencies in this learning that should be over-come through remedial teaching.¹⁴

Until recent years there has been only one widely used basis of diagnosis and remedial work in typewriting. It is often called the "perfect-standard copy." The diagnosing of only this one phase of typing fails to include the other measures of skill in using the typewriter such as form and arrangement of typed matter, and the time consumed in doing the work.¹⁵

12. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930) p 23.

13. Ibid., p 544.

14. Haynes, op. cit., p 370.

15. Smith, Harold H., "Problems in Diagnostic Testing and Remedial Teaching as Applied to Typewriting," Second Yearbook, Commercial Education Association of New York City and Vicinity, (1937) p 53.

The chief purpose then of diagnosis in typewriting is to discover the actual state of affairs.¹⁶

Prognostic tests in business education have not reached the degree of reliability that the educators had hoped would be reached.¹⁷ Mr. Smith says....

even though they had, what then? Aside from serving as guidance or sectionalizing purpose, in our democratic educational system, they could do little more than serve as an "I told you so" to the teacher harassed by failing students.¹⁸

Mr. Smith goes further to say, that he can see endless possibilities in prognostic tests and that he still believes these tests will be forthcoming and used for some definite, practical purpose to the advantage of the teacher and the student.¹⁹

16. Smith, op. cit., p 7.

17. Ibid.

18. Ibid.

19. Ibid.

CHAPTER III

CRITERIA FOR SELECTING TESTS

A satisfactory test should possess the following characteristics: validity, reliability, objectivity, ease of administration, and economy as to financial cost.¹

Validity:

The prime consideration in selecting a test should be its validity. It is the most important single characteristic of a good test. A test is valid when it measures what it is intended to measure.²

Validity refers to the pains taken to incorporate in a test or examination those elements or items which are of prime importance, and to the pains taken to eliminate non-essentials.³

The best check for judging the validity of the test is to be sure the items selected (1) measure the objectives of the course as nearly as possible, (2) that the items selected are the more important ones of the course, (3) that they parallel the actual teaching which has been done, and (4) that they represent a wide sampling of the materials taught.⁴

1. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930)

2. Ibid., p 52.

3. Ruch, G. M., The Objective or New-Type Examination, Scott, Foresman & Company: New York, (1929) p 28.

4. Lee, J. Murray, A Guide to Measurement in Secondary Schools, Appleton-Century Company: New York, (1938) p 324.

Reliability:

Reliability expresses the same meaning as accuracy or consistency of measurement. Reliability represents the degree of confidence which can be placed in the results. When a test is completely reliable, scores earned by individuals on two successive administrations of the instrument within a short time will be accurate and consistent for each individual; that is the scores yielded by the second administrations will be equivalent to those yielded by the first administration for the same individuals. It is not necessary that identical scores be earned by each individual on the test and the retest, but only that uniform relationship exists between the two scores. If such a uniform relationship exists between the two sets of scores obtained by two administrations of a test, the instrument is consistent in measuring what it purports to measure, and is reliable.⁵

The reliability of a test cannot be determined by examining the test itself, although inferences in regard to it can be made from such inspection. The test must actually be tried out to yield the desired information. Fortunately it is becoming an established custom for the authors of standardized tests to secure data on reliability before tests are placed on the market and for publishers to include these data in the teachers' manual or other supplementary material accompanying the test.⁶

Objectivity:

Objective measurements are those concerning the correctness of which there is no doubt. They permit of no disagreement

5. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930) p 58.

6. Ibid., p 59.

among competent persons as to what is the answer. A test is objective when different examiners using it to measure the same characteristic or characteristics secure comparable results. A good test is objective as to its administration and scoring, with exact directions and accurate scoring keys, which insure similar results by different examiners or by the same examiner at different times.⁷ "Objectivity is important; without it, there can be no assurance that scores obtained will be comparable."⁸

The use of objective measurements rather than those involving personal opinion or bias has many benefits in educational work just as in work along any other line.⁹

Ease of Administration:

From what might be called the theoretical or scientific standpoint, the ease with which a test can be administered is not of high importance. From the practical standpoint, however, it is decidedly important. The person selecting tests is, therefore, justified in paying attention to this feature.¹⁰

Odell¹¹ says, "The prime factor that makes for ease of administration is that the directions for giving and scoring the test be fairly simple and easily understood, but adequate."

7. Odell, op. cit., p 11.

8. Haynes, B. R., M. E. Broom and Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company, (1940) p 34.

9. Odell, op. cit., p 11.

10. Ibid., p 79.

11. Loc. cit.

They should make clear to both pupils and teachers just what is to be done and how it is to be done, but should not be necessarily long.

The test booklet which is placed in the hands of the pupils should not contain the directions intended for the teacher, but only those for the pupils. The provisions and directions for scoring should simplify that procedure and reduce the labor as much as possible.¹²

Cost:

The cost of a test is, of course, a very practical and necessary consideration in connection with the use of standardized tests. It is however, easily possible to over-emphasize it. The total cost of even a relatively heavy testing program is such a small proportion of the total cost of instruction that one should not strive to limit expenditures for this purpose at the possible sacrifice of the quality of the tests used.¹³ On the other hand, Odell says, "there is no reason why one should pay any more for good tests than is necessary."¹⁴

12. Odell, op. cit., p 80.

13. Ibid., p 81.

14. Loc. cit.

CHAPTER IV

ANALYSIS OF INDIVIDUAL TESTS

The five standardized tests in typewriting, which have been investigated and presented in this study are Achievement Tests. Three of the tests are further classified as survey tests, that is, they are used to secure a general measure of the level of achievement of the class. They are not intended to provide information which will enable a teacher to locate the cause or the nature of the deficiency if the class is deficient. The titles of the three survey tests are as follows: the "Typing Ability Test" by the Joint Committee on Tests, the "Blackstone Stenographic Proficiency Typewriting Test" by E. G. Blackstone, and the "Kauzer Typewriting Test" by Adelaide Kauzer and H. E. Schrammel.

The fourth test, the "Junior and Senior Typewriting Tests" by Jane E. Clem, is further classified as a diagnostic test. As previously stated, diagnosis furnishes direction to teaching. The purpose of diagnosis in education is to determine the cause or causes of unsatisfactory achievement and adjustment. After such causes have been determined, it is necessary to remove them wherever possible and correct the situation. Usually this process takes the form of remedial teaching.¹

The fifth test, "Examination in Typing: Form A," of the Thurstone Employment Tests is as it's title suggests an employment test of the diagnostic variety. It is particularly significant in this analysis in that business teachers,

1. Haynes, op. cit., p 370

administrators, and supervisors need to become familiar with the types of employment tests that are given to their graduates when they apply for office work. Both administrators and classroom teachers, if they know the findings of such employment tests will be able to give more accurate and helpful recommendations to employers regarding the graduate of the school who is an applicant for a position. Normally employment tests are not given until the student makes application for a job, so the uses of the test results in the school are relatively few. However, because of increasing emphasis being given to pre-employment tests pertaining to office activities, it should behoove business education teachers to determine the extent to which their teaching program is functioning to prepare students for employment after graduation.²

The tests which have been analyzed are shown in the succeeding pages.

2. Book, William Frederick, "How Progress in Learning to Typewrite Should be Measured and Why," The Business Education World, 16 (October 1934) p 101.

1. Typewriting Ability Test of the National Clerical Ability Tests*

The Typewriting Ability Test is a test intended to measure ability to do typing work similar to that which a typist might be called upon to do in any office.

It is one of the six vocational skill tests that go to make-up the National Clerical Ability Testing Program.

Through a period of five years a joint committee of the National Office Management Association and Eastern Commercial Teachers' Association carried on a research project which resulted in the establishment of a permanent clerical ability testing program under the direction of the National Office Management Association and the National Council of Business Education.³

The aims of the testing program are as follows:⁴

1. To provide an authoritative device, somewhat comparable to the College Board Examinations, for use in measuring the qualifications of public and private business school graduates for some of the more common office occupations for which vocational training is given.

*Prepared and Administered by the Joint Committee on Tests of the National Office Management Association and the National Council of Business Education. Distributed by The Joint Committee on Tests, 16 Lawrence Hall, Kirkland St., Cambridge, Massachusetts.

3. Hittler, George M., "The National Clerical Ability Testing Program," National Business Education Quarterly, 9 (March 1941) p 5.

4. Haynes, B. R., M. E. Broom and Mathilde Hardaway, Tests and Measurements in Business Education, South-Western Publishing Company, (1940) p 242.

2. To assist business teachers and others who are responsible for vocational business training programs in attempts to bring their course offerings and testing procedures somewhat more into line with sound principles and practices in the field of vocational education.
3. To assist educators in their attempts to insure for vocational business courses, students who possess the aptitudes, interests, and abilities required for the kinds of work for which they seek pre-employment training.
4. To provide employers of office help with a better means of appraising the qualifications of applicants for clerical positions, and to provide a certification plan which will, to some extent, obviate the necessity of giving employment tests to applicants who have graduated from public and private business schools.
5. To bring office managers and other employers of clerical help into a closer working relationship with business educators in public and private schools.

The scope of the testing program, covers six vocational skills. They are, (1) The Typewriting Ability Test, (2) The Bookkeeping Ability Test, (3) Stenographic Ability Test, (4) Filing Test, (5) Machine Transcribing Test, (6) The Machine Calculating Ability Test.⁵

This study is concerned only with the Typing Ability Test. A testee may take as many of the skill tests as he wishes, although seldom does any one take more than two of them. Each testee however, writes at least three tests, (1) a general information test, (2) a fundamentals test, and (3) the skill test. Each participant is rated by a personality rating scale.⁶

5. Turille, S. J., "Meeting the Requirements of Business with The National Clerical Ability Tests," National Business Education News, Dept. of Business Education, National Education Association of the United States, Washington, D. C.: 4:2 January 1942, p 4.

6. Loc. cit.

The General Information Test and Fundamentals Test are constructed to test a pupil's ability to retain and apply knowledge, to learn through observation, to formulate judgments and evaluations. They also test his ability to use the tools of grammar, spelling, punctuation and other elements of good sentence structure; and his ability to perform arithmetical calculations.⁷

It is said that, "The Typewriting Ability Test represents a cross-section of office typewriting work."⁸ Eight typing jobs were selected from the more important office activities in which the typist is likely to take part. Mr. Hittler lists them as follows:⁹

1. copying letters
2. filling in letters
3. addressing envelopes
4. preparing mailing lists on cards
5. arranging tabular forms
6. preparing lists of names in alphabetical or geographic order
7. copying from rough draft
8. preparing business forms such as statements and invoices

The content of the tests are subject to some variation each year; while all tests are similar in nature, but somewhat different in the topics covered.

7. Turille, S. J., "Meeting the Requirements of Business With The National Clerical Ability Tests," National Business Education News, Department of Business Education, Washington, D. C., 4:2 (March, 1942) p 4.

8. "Measuring for Vocational Ability in the Field of Business Education," Tenth Yearbook, Eastern Commercial Teachers Association, (1937) p 173.

9. Hittler, Geo. M., "The National Clerical Ability Testing Program" The National Business Education Quarterly, (March 1941) P 5.

The Joint Committee is convinced, after using various testing media and making numerous comparisons, that there is not necessarily any very close correlation between results obtained on a straight copy test in typewriting, with the score expressed in terms of net-words-a-minute and the period covered by the test as short as ten minutes, and scores obtained on a comprehensive typewriting test in which the testee is required to typewrite a variety of kinds of jobs he will be called upon to do in a typewriting position.^{10.}

No test measurable in words per minute is ever included in the Typing Ability test. Manipulative dexterity is emphasized, rather than stroking speed, through including a mass of material to be completed.¹¹

The tests taken by the testees sell for \$1.37 each, the actual cost of their construction and administration. A complete sample set of six tests are available at the price of \$1.55 for the preceding year's test or \$1.00 for tests two or more years old.¹² Mr. Turille says,...

It might be that financial subsidization of the tests by the National Office Management Association or some educational organization or both will take place soon. A decision has been reached within the last few months in reference to the employment of a full-time national director for the National Clerical Ability Tests.¹³

10. "Measuring for Vocational Ability in the Field of Business Education," Tenth Yearbook, Eastern Commercial Teachers Association, (1937) p 171.

11. Loc. cit.

12. Turille, op. cit., (March 1942)

13. Loc. cit.

The following statement shows the growth in popularity of this testing movement:

In 1937 the tests were administered to some 1,261 testees. In 1938, 1,300 testees participated. In 1939, approximately 2,400 testees took part. In 1940, over 3,000 took part and in 1941, 3,300 testees participated. It is believed now that the tests are becoming fairly well known and employers as well as educators are becoming familiar with their value as a basis for employment of office workers, growth of this program is likely to be more rapid in the future.¹⁴

The tests are given between May 15-20 each year. They may now be given in any center, regardless of the number of testees, where a business educator or employer will sponsor the program and nominate a test administrator for approval. Any school, where there is a teacher who wants to measure the results of his teaching in terms of occupational competency, may organize a center, nominate a competent test administrator who has not participated in the training of the testees, and procure the tests for his own students and any others who may be within reach of the place where the center is located.¹⁵

At first the administrators were selected by the Joint Committee to give the tests in each center. They had to be assured at least fifty testees to set up a center and provide an administrator. This was expensive and limited the scope of the program.¹⁶

14. Turille, S. J., "Meeting the Requirements of Business with the National Clerical Ability Tests," National Business Education News, Department of Business Education, Washington, D. C., 4:2 (January 1942) p 4.

15. Nichols, F. G., "National Clerical Ability Testing Program," Modern Business Education, 7:3, (March 1941) p 26

16. Loc. cit.

In measuring the ability of a typist to do practical typing work three things are taken into consideration by the Joint Committee: (a) Form and arrangement of typed matter; (b) Accuracy; (c) Time consumed. The testee is tested for all three of these items in the Typing Ability Test.¹⁷

Since there is not a separate grade for each of the above three factors in good typing, there is only one grade given for the test, but each of the three factors--form, accuracy, and speed are measured in making it. There are ten specific typing jobs. Each is judged as a whole. It is penalized if it contains uncorrected correctible errors. It is thrown out if it contains errors that cannot be corrected. The testee is judged as to speed on the basis of the total amount of acceptable work done during the whole testing period. Therefore, each testee is instructed to lose no time between jobs and to go directly and quickly from one task to another.¹⁸

The materials needed for taking the test are as follows: Test booklet, assembled material in envelope, typewriter, typewriter eraser, and two or three sheets of paper for practice.¹⁹

The following supplies are included in the materials furnished for the Typing Ability Test--Series 1941, which are assembled in the large manilla envelope:

17. Joint Committee on Tests--Typing Ability Test Manual--Series 1941. Copyright, 1941.

18. Ibid.

19. Ibid.

1. Typewriting paper
 - a. Four letterheads
 - b. Eight sheets of plain white paper
 - c. Three sheets of yellow paper for carbon copy
2. One sheet of carbon paper
3. Eight envelopes (two #9, two business reply, four #6 3/4)
4. Two paper clips
5. Five form letters
6. One application for credit
7. One reply card

The proper supplies for each job are selected by the testee. Each job is begun with a new sheet. All unused material is returned to the examiner. Neat erasures are allowed. If additional supplies are needed, the examiner is asked to supply them; but the time consumed in getting them is the nature of a penalty. Two hours are allowed for the test, but extra credit is given for completing it in less time.²⁰

General Directions for Giving
and Scoring the Test

Directions:

1. "Do not look the test through before beginning.
2. Complete each job before looking at the next one.
3. Read the instructions for each job carefully and do exactly as you are told. There will be a penalty for any failure to do as you are told.
4. Do not hurry, but do not waste time doing a job or going on to the next one. It is the total time taken for the whole test which counts.

20. Typing Ability Test Manual, op. cit., p 2.

5. Do not ask questions about the test after you begin it. Follow the instructions and do the best you can with each job.
6. Start at once when the signal to start is given by the examiner.
7. Stop at once when the signal to stop is given by the examiner.
8. If you complete the examination before the time is up, take your papers to the examiner immediately.
9. Write your name, the name of your school or employer, and the name of your city or town on the large manila envelope. Also write your registration number which appears on your card stub.
10. At the close of the examination all of your typed material is to be clipped together and put into this large manila envelope bearing your name and registration number."²¹

Examiner asks:²²

Are there any questions?

Examiner answers any questions, making instructions clear.

Examiner says:²³

All right, it is now (give time). Enter this time on your large envelope where it says "Hour Begun." Now take the test booklet and begin.

At the end of two hours examiner says, Stop!

Make a record of the time on each envelope handed in at this point.

Accept any completed set of papers whenever a testee presents it. Make a record on the envelope of the exact time at which it is received.

Scoring the Test:

The factors in scoring the papers are as follows:²⁴

21. Typing Ability Test Manual, op. cit., p 2.

22. Ibid.

23. Ibid.

24. Ibid.

- (a) Each piece of work is assigned a weighted number of points.
- (b) Each typed solution must be usable, or mailable.
- (c) Pieces not usable are rejected as a whole.
- (d) Manipulative dexterity is rewarded by awarding points for allowed time not used by the testee.
- (e) Penalties are deducted for uncorrected errors which do not necessitate rejection.
- (f) Score depends upon the total points earned.

No teacher or official in the local center sees copies of the tests until the day of the tests. As soon as the tests are computed, they are sent to the Joint Committee in Massachusetts for scoring. Up to 1940 the tests were manually scored; since 1940 they have been mechanically scored in the offices of the Joint Committee to insure uniformity and complete fairness to all parties concerned. The relative weights of each of the tests--fundamentals, general information, and skill--are determined by the Joint Committee. A composite score is used with skill receiving the largest weighting.²⁵

Reports of the test results are made available to every participating school. The teacher who entered students receives the individual rating for each of the three tests for each student and also is provided with national norms. The results are confidential; there is no embarrassment to the teacher. These tests utilize self-competition, not

25. Turille, S. J., "Meeting the Requirements of Business With the National Clerical Ability Tests," National Business Education News, Department of Business Education, Washington, D. C., 4:2, (March 1942)

competition for medals or prizes, et cetera. The testee either meets business standards and receives a Certificate of Proficiency or he does not.²⁶

26. Turille, op. cit.

NATIONAL CLERICAL ABILITY TESTS

Prepared and Administered by
Joint Committee on Tests
of the

National Office Management Association and the National Council for Business Education

Typing Ability Test - - Series 1941

To the Testee

For purposes of this test you are a typist for The Customer Service Company, 795 Railroad Avenue, Chicago, Illinois.

You will be given ten pieces of typing work to do. Follow instructions carefully.

All of your work is to be dated today.

Use "Gentlemen" as a salutation when addressing a company; otherwise use as a salutation the words "My dear" and the name of the person addressed, so that the salutation will be personalized, as in "My dear Mr. Jones," or "My dear Miss Brown."

Part I—Form Letters to be Copied

1. Send a *copy* of Form Letter D (from test envelope) to James A. Young, 928 East Fourth Street, Duluth, Minnesota, in answer to his letter dated yesterday. Address a large (#9) envelope. Mr. Young ordered one gross of #982 Stenographer's Notebooks. He is unknown to us and is not listed in any credit register available. Therefore we must not make shipment until we get further information.

Use letterhead paper. Make a carbon copy of the letter. Type your initials at the end of the letter in the proper place (MS for example).

A form for use in giving credit information (from test envelope) is to be enclosed. Fill it out as far as you have the necessary information. The letterhead shows that the "line of business" is stationer. Enclose a *business reply envelope* and a *reply card* (from test envelope).

2. Occasionally we are unable to fill a customer's order completely, because we have not all the goods in stock. Today we receive an order from James Smoat, 1314 Fairview Avenue, Bloomingdale, Illinois. His number for this order is 685-390. We find we shall be able to ship tomorrow all the goods ordered except:

1 pad No. 2243 Requisition blanks	25¢
1 pad No. 2449 Quotation record	15¢

The goods we can ship today are billed on our invoice C-51941-68. The two missing items are "back-ordered"; that is, we make a memorandum to ship them later. We expect to ship the delayed items in about ten days.

Instructions:

Send a *copy* of Form Letter M (from test envelope) notifying Mr. Smoat of the back-order. Fill in necessary information. Use letterhead paper. Make one carbon copy. Type your initials as in preceding letter. Address a small envelope.

Part II—Forms and Form Letters to be Filled in

3. Send Form Letter A (from test envelope) to John A. Ferree, 1960 High Street, Logansport, Indiana. Fill in the date, name, address and salutation. This customer's order bears no number, but is dated yesterday. Our Production Order for the printing is dated today, and bears No. P-968352. No carbon copy is required. Remember to type your identification initials. Address an envelope.

4. Our Credit Department tries not only to collect past due accounts but to develop good will. Therefore it has assumed responsibility for sending a form letter to each account that has been inactive for a period of three months. The credit manager wishes you to try to disguise the fact that this is a filled-in form letter. Such a letter is to be sent to Smith and Antwerp, 345 Lakeview Street, Chicago, Illinois.

Instructions:

Prepare Form Letter F (from test envelope) for mailing. Write the date, name, address, and salutation. Use your identification initials. Address the envelope. No carbon copy is required.

5. Miss Sarah Powers, 1300 West Main Street, Champaign, Illinois, has sent her fountain pen to us for a new point. Her letter about it was dated yesterday. We find that the pen also needs a new ink sac.

Instructions:

Send Miss Powers Form Letter X (from test envelope), filling in all necessary information. Address a #9 envelope. No carbon copy is required. Send a business reply envelope.

6. A salesman is to devote some time to developing business in Cincinnati, Ohio. He has given you the following list of old customers with instructions to arrange the names alphabetically (the surnames first). He also wants an asterisk written before the name of each customer who has not ordered goods during the past 30 days. The heading should be "Cincinnati Customers." The date given in each case is the date of the customer's last order. Make one carbon copy on good (not copy) paper.

Office Stationers, 316 Adams Street, March 31
Mrs. A. J. Mahan, 1617 Oakcrest, January 16
Neuman Typewriter Company, 630 Fulton Avenue, April 24

Mahan and Johns, 348 Jefferson Street, April 20
Office Equipment Company, 317 Madison Street, March 24

M & L Stationery Company, 416 Decatur Street, April 15

Reginald Mahoney, 14 West Washington February 6

A. L. Newman, 1639 Madison Street, April 22

Anderson & Ross, 362 Main Street, March 10

George Graham, 763 South Avenue, February

Henry Latimer, 1642 East End Parkway January 16

Charles Waters, 92 Crosstown Avenue, January 14

Office Supply Company, 162 West Avenue March 5.

Part III—Second Page of a Letter

7. Mr. George F. Meehan, Branch Manager of your employer, The Customer Service Company has given you a long letter to Mr. Enoch Anderson 556 South Halsted Street, Chicago, Illinois. Your employer's Stenographic Manual reads in part as follows:

Unless instructed otherwise:

Indent paragraphs 5 spaces.

Make one carbon copy of all letters.

Leave space equal to four lines for the dictator's signature.

Write "Yours very truly" for the complimentary closing.

Below the complimentary closing (1) type the name of the company in all capital letters (2) type "By" on the next line and leave space for the dictator's signature, and (3) type the official title of the dictator.

The dictator's initials and the typist's or stenographer's initials are to be typed at the left and below the signature with a colon between them (lc:mn).

Address an envelope for each letter.

Instructions:

Assume that you have filled the first page of the letter and that you have the following paragraph to type on a second page.

Therefore, much as we would like to meet your needs at once, we cannot ship the goods you have ordered before June 15. We appreciate the fact that this delay may cause you much inconvenience and we stand ready to help you meet this situation even if cancellation of your order is the only way out.

Type the proper heading for the second page and then finish the letter, noting instructions in the Manual carefully.

Part IV—Manuscript

8. A conference of all the salesmen of The Customer Service Company is to be held soon and a program for the session is to be printed.

Assume that the following data are given you with instructions to type the front page, from data in section 1, and the second page from data in section 2, using your own judgment as to arrangement of material for each page (no carbon copy is required):

Section 1—Data for first page

Tenth Annual Conference
Salesmen of The Customer Service Company
Traveler Hotel
Chicago, Illinois
June 16, 1941

Section 2—Data for second sheet

Monday, June 16, 1941
9:00–9:15 Welcome by Mr. James Warren, President of the Company. 9:15–9:45 Looking Back Through the Year, Mr. Charles Hamilton, Assistant Sales Manager. 9:45–10:30 Looking Ahead, Mr. Walter Bonbright, Sales Manager. 10:30–11:00 Branch Office Cooperation, Mr. George F. Meehan, Branch Manager. 11:00–12:30 Round-Table Discussion of these topics: Travel Costs, Order Forms, New Customers, and The Bonus Plan.

Part V—Tabulation

9. Your employer is considering the possibility of reducing shipping costs by operating a fleet of trucks. The traffic manager hands you the following data and asks you to tabulate it as you think best to show the charges made by each of several states for operating 3-ton trucks in 1930 so that a comparison can be made with present charges (no carbon copy is required):

Special Levies on Three-ton Trucks—1930.

Private Trucks—Alabama \$100; Arizona \$33.50; Arkansas \$125; California \$43; Colorado \$37.50; Maryland \$11.20; Massachusetts \$19.50; North Carolina \$75; Vermont \$104; Virginia \$60; District of Columbia \$1.

Contract-Carrier Trucks—Alabama \$100; Arizona \$33.50; Arkansas \$837.50; California \$43; Colorado \$37.50; Maryland \$11.20; Massachusetts \$19.50; North Carolina \$135; Vermont \$104; Virginia \$100; District of Columbia \$1.

Common-Carrier Trucks—Alabama \$260; Arizona \$408.50; Arkansas \$837.50; California \$750; Colorado \$650; Maryland \$269; Massachusetts \$19.50; North Carolina \$900; Vermont \$104; Virginia \$520; District of Columbia \$1.

Part VI—Notice of Meeting

10. **Instructions:** The following notice of meeting for June 10, 1941 is to be typed in the form in which it should be printed to send to the membership of the association. Any good arrangement will be accepted. Be alert to see that the copy you make is correct in every detail, not only as to arrangement, but also as to the wording. No carbon copy is required.

Marion Junior Chamber of Commerce, Marion, Indiana. Notice of Meeting. Place: Room 116, Chamber of Commerce Building. Date: June 10, 1941. Time: 7:30 P.M. Purpose: To hear reports of present officers, to consider their recommendations, and to elect new officers. It is of the utmost importance that every member be present. A number of important issues are to be debated. You will want to take part in these important discussions. A social hour will follow the business meeting. You will not want to miss that. Mark June 11 on your calendar so that you will not forget the date. Be prompt as the meeting will begin exactly at 7:45, the appointed hour.

THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE

CHICAGO - - ILLINOIS

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THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE

CHICAGO - - ILLINOIS

Your order dated _____ will be shipped in about one week. Your individual heading on the forms ordered requires special printing, as you will understand, and we therefore cannot give our usual twenty-four hour service.

Should you find it necessary to write to us about this order, please refer to our Production Order No. _____

Very truly yours,

THE CUSTOMER SERVICE COMPANY

By _____

Your order for _____ came this morning. They are being packed today and will be ready for shipment within a few hours.

Customers are entitled to prompt shipment. Usually we ship within 24 hours on all orders--especially on orders to old friends and customers. Sometimes, however, it is necessary to make new friends into old friends before we can give such prompt service; and that is the purpose of this letter.

The enclosed blank calls for answers to a few questions which supply information to be written on a new account card headed (write full name of new customer here). Of course this account card will hasten shipment on all future orders.

In the meantime just write your name on the enclosed postal card which reads "Please ship my order of _____ (date) _____ c.o.d." and drop it into the nearest mailbox. The goods will then be rushed to you.

Sincerely yours,

THE CUSTOMER SERVICE COMPANY

By

THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE

CHICAGO - - ILLINOIS

"Should auld acquaintance be forgot?"

Possibly you'll be surprised to get a letter from the Credit Department when you owe us no money at all; and we want you to be so much surprised that you'll let this "auld acquaintance" hear from you again. Of course, the Sales Department would like an order; but we are more interested in knowing whether there has been anything in the Credit Department's policy that has caused you to be silent so long.

Your account always has been in excellent condition and there must be some other reason for your silence; but a word from you will confirm our belief that our credit policies do lead to lasting friendships.

Sincerely yours,

THE CUSTOMER SERVICE COMPANY

By

Credit Manager

We know that you need the merchandise listed on your order No. _____, and the major portion of that order will be shipped _____. Our invoice number is _____.

Occasionally we find that our stock is short on some item ordered. Rather than delay shipment we place such items on back-order. It has been necessary to do this with the items listed below.

(Tabulate in columnar form)

Unless we hear from you again we shall ship the missing items on or about _____.

Very truly yours,

THE CUSTOMER SERVICE COMPANY

By

THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE

CHICAGO - - ILLINOIS

This morning we received your fountain pen which we shall have repaired in accordance with your letter dated unless we have further instructions from you within a few days.

Ordinarily we would send the pen to you by return mail; but our service department says that the real cause of your difficulty lies in the fact that the pen needs a new

Please give us your permission to put the pen in first-class condition instead of merely installing a new point.

Sincerely yours,

THE CUSTOMER SERVICE COMPANY

By

THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE
CHICAGO - - ILLINOIS

APPLICATION FOR CREDIT

Date _____

Name of Company
or Individual _____

Street _____ City _____

State _____ Phone _____

Line of business or profession _____

If incorporated, name of (1) President _____

(2) Treasurer _____

(3) Secretary _____

If partnership, name of partners _____

Location of home office _____

Bank reference _____

Business reference _____

Business reference _____

Remarks _____

Name of person taking application _____

Received at office

Investigated

Disposition

Eight plain white sheets of typing paper
are furnished with each test.

Three yellow sheets of typing paper
are furnished with each test.

(Sample for Student Use Only)
Cannot Be Mailed

FIRST CLASS
(Sec. 510, P.L.&R.)
Chicago, Ill.

FIRST CLASS
(Sec. 510, P.L.&R.)
Chicago, Ill.

FIRST CLASS
ec. 510, P.L.&R.)
Chicago, Ill.

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

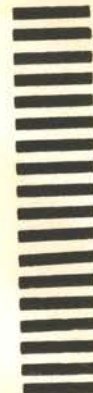
2c. POSTAGE WILL BE PAID BY
THE CUSTOMER SERVICE COMPANY

795 RAILROAD AVENUE
CHICAGO
ILLINOIS



Y

Y



AFTER FIVE DAYS RETURN TO
THE CUSTOMER SERVICE COMPANY
795 RAILROAD AVENUE
CHICAGO, ILLINOIS

2. Typewriting Test of the Blackstone Stenographic Proficiency Tests*

The Blackstone Typewriting Test consists of a series of tests designed to measure all the elements of typing skill which are needed by a stenographer. There are four alternative forms. Forms B, C, D, and E. It is customary to administer these in the order named. The alternate forms are provided so that the learner's proficiency may be measured at frequent intervals without repetition of material.

One of the strong features of the Blackstone test is the graphic method that has been devised to keep a record of the learner's score.²⁷

The tests enable the administrator, whether superintendent, principal, department head, or supervisor, to check up the results being obtained in typewriting classes, to the extent that where such results are unsatisfactory, investigations leading to proper readjustments may be made. The tests do not indicate causes, but only conditions. In case of unsatisfactory results, a diagnosis of causes must be made before remedies may be applied.²⁸

*Blackstone Stenographic Proficiency Tests--Typewriting Test, Forms B, C, D, and E, by E. G. Blackstone. Published by the World Book Company, Yonkers-on-Hudson, New York. Copyright 1923.

27. Book, W. F., Learning to Typewrite, Gregg Publishing Company: New York, (1925) p 389.

28. Blackstone, E. G., Typewriting Test Manual, World Book Company: New York, (1923) p 1.

The Blackstone tests consist of a carefully constructed series of letters, one letter in each test, which are similar in seven points:

1. Each contains approximately the same number of words.
2. Each contains approximately the same number of letters.
3. Each contains approximately the same number of e's, t's, a's, etc., with the frequency of the letters of the alphabet in conformity to the normal frequency as determined by studies of cryptography.
4. Each contains approximately the same number of letters to be struck with the right hand.
5. Each contains approximately the same number of letters to be struck with the left hand.
6. Each contains approximately the same number of carriage returns and shift-key strokes.
7. Each has particularly long or difficult words in approximately the same positions.²⁹

This similarity might affect their difficulty. The tests require slightly more than a thousand strokes of typing. They give a combined measure of speed and accuracy. Within the limited field of typing a business letter, these tests appear to give rather satisfactory results. They do not, however, test the pupil's ability to set up or to use various forms of business letters, tabulation, or manuscript writing.³⁰

29. Blackstone, E. G., Typewriting Test Manual, World Book Company: New York, (1923) p 2.

30. Skene, Etta C., "Diagnostic Testing and Remedial Teaching Applied to Typewriting, Second Yearbook, Commercial Education Association of New York City and Vicinity, (1932) p 70.

In the standardization of the tests, the unit of measurement, length of time, kind of material and probable error for a score were determined as follows:³¹

The Unit of measurement.

After experimentation the stroke unit was adopted. A stroke is defined as "any single movement in typing," and includes the striking of any key, whether it be a letter, figure, space bar, shift key, tabulator key, or back spacer, or the movement required to return the carriage to start a new line. In order to strike certain letters more than one stroke is required. For instance, in order to write the first capital letter of a new paragraph the following strokes are required: (1) carriage return, (2) tabulator key, (3) shift key, (4) letter key.

It was not maintained that all strokes are equal. In fact, it has been proved experimentally that they are not equal, either in the degree of difficulty required to reach them or in the amount of time required. But strokes are the most nearly equivalent units which it has been possible to find.

Studies were made of the effects on speed and on accuracy of long or short words, measuring the results in terms of strokes. Seven articles were prepared, ranging in difficulty from primer material which averaged about four strokes to the word, through seventh and eighth grade reader material, and then through legal and scientific material to a final one

31. Blackstone, E. G., Typewriting Test Manual, World Book Company: New York, (1923) p 1.

printed in Latin, with words which averaged more than seven strokes per word. It was believed that such a study would show what would be the effects on speed or accuracy of variation in the difficulty of reading or spelling or in degree of familiarity with the vocabulary used. The factors of practice and of fatigue were avoided by having the material scattered among the typists in accordance with a definite schedule, so that practice and fatigue would be scattered evenly among them. The results showed that only in the primer material and in the Latin article was there any significant variation. For the other five tests, ranging in stroke length from an average of 4.6 in the easiest to 7.6 in the hardest, the variation in median speed was less than twelve strokes per minute and in accuracy less than four errors per one thousand strokes. It was decided, therefore, that so long as test material is nearly equivalent in average number of strokes per word, there will be no great variation in results.

Length of time.

Pupils were given tests of 1 minute, 2 minutes, 3, 4, 5, et cetera minutes up to 10 minutes, and the results were compared. It was found that the results for 3 minutes were as regular as those for any longer period. The pupils who ranked high in the longer tests regularly ranked in approximately the same position in the 3-minute tests. The average letter typed by the stenographer probably does not require more than 3 minutes, and it is easier to administer a 3-minute test than a longer one. Therefore 3 minutes was selected as the time requirement.

Kind of material.

It was decided that since the ordinary business letter probably constituted the greatest part of the stenographer's work, a number of such letters should be analyzed and the average number of strokes per word determined. The average found was 5.6. Therefore the material used in the tests was made to conform to the requirements of ordinary business letter vocabulary, with a stroke average of 5.6.

The probable error of a score.

The probable error of a score determined by administering two forms of the test to the same groups of 105 pupils was found to be 5.8 points.

The median deviation (sometimes called P.E.) of the scores themselves of a group of pupils having had twenty months of instruction was 17.6 points. It was seen, therefore, that the probable error of a score was small in comparison with the variability of the scores of a group of pupils.

The reliability coefficient of correlation between two forms of the test averaged .93 for groups of pupils having had twenty months of instruction.³²

The specific directions for the teacher to follow in giving the tests are given in the manual. The main points are given below:

Furnish each pupil with a copy of the test and with two sheets of typewriting paper (one on which to take the test and one for preliminary practice).

32. Blackstone, op. cit., p 2

Teacher and pupils should read together the Directions for Taking the Test on the second page of the test. Read all the way through, and then have the pupils go back and follow the directions step by step.

Do not urge the pupils to do their best or say anything to them which may arouse a competitive or hurried attitude. It is desired to measure only the normal rate and accuracy of the pupil.

In timing be very accurate. When all are ready, say, "Start." At the end of exactly 3 minutes say, "Stop." Stop the typing on the exact second.

The directions for scoring the test are given on the second page of the test. The pupils should be instructed to follow them, step by step.

Provision is made for recording graphically the progress made by an individual in speed, accuracy and score. This is done on the Individual Progress Record on the first page of the test folder. The results of ten tests by the individual may be entered on a single Individual Progress Record. When the pupil does not use the Individual Progress Record of the test folder, the test folder may be used again.

Each time a pupil is tested, there should be entered in the table of the Individual Progress Record, the form used, date of the test, number of months of instruction the pupil has had at the time of the test, number of strokes per minute made in the test, number of errors made, and the score obtained.

It is suggested that each pupil record his own progress, or that this be done in each case by the pupil who scores

the paper and checked by the pupil whose progress is thus recorded. The pupil can see for himself just how he is progressing.

The directions for recording the scores on the Individual Progress Record are given on the second page of the test as follows:

Plot the point in the graph as follows:

1. Find the point on the scale at the bottom of the graph representing the number of strokes per minute which is entered in the table.
2. Move the pencil vertically from this point until it reaches the slanting line representing the number of errors made.
3. Make a dot at this point and write a small figure 1 above it. The height of this dot, as measured by the scale at the left of the graph, should correspond with the score as entered in the table. (If more than 12 errors are made, determine the height of the dot by the amount of the score as calculated.)
4. When the second test is taken, the same data should be entered in the table, a new point plotted in the graph, and a small figure 2 placed above it.
5. Join points 1 and 2 by a straight line. This will help to make the gain in score more vivid.
6. When subsequent tests are taken, these should be recorded in the same way and the new points joined to the former ones to make a continuous line showing the progress that has been made from test to test.

The progress of the class as a whole in speed and accuracy may be represented graphically on one of the Individual Progress Record sheets in exactly the same manner as in the case of an individual, by plotting the median number of strokes per minute and the median number of errors of the class. If desired, a dot representing the class medians in speed and accuracy may be placed on each Individual Progress

Record, with which the record of the individual may be compared. The class record in this case should be entered in red ink.

Cost of the test:

Each form of the Blackstone Typewriting Test, of four pages, is put up in packages of twenty-five tests, with Manual of Directions for one dollar net per package. A specimen set is 10¢.

BLACKSTONE STENOGRAPHIC PROFICIENCY TESTS

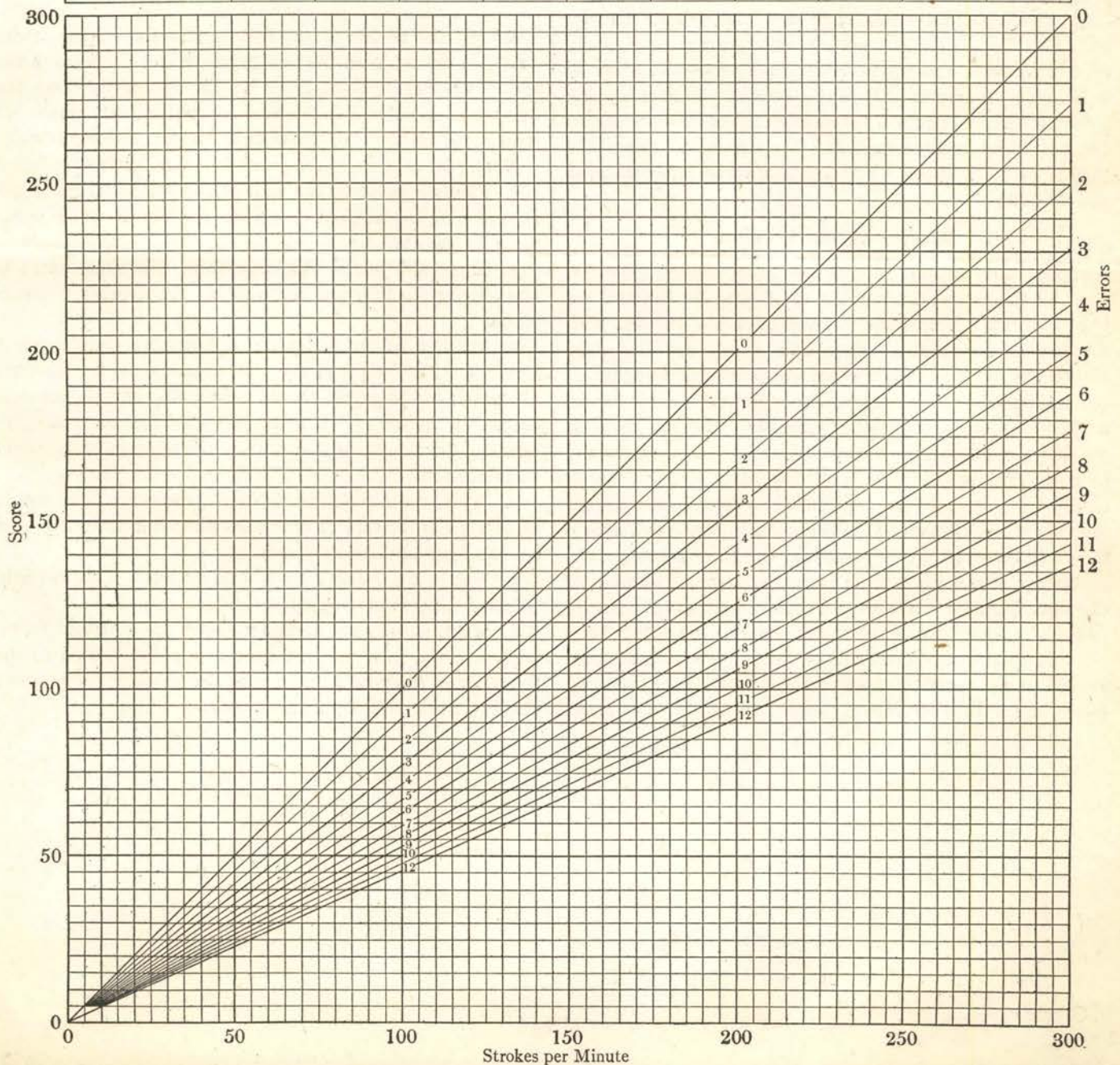
By E. G. BLACKSTONE, Detroit Teachers College, Detroit, Michigan

TYPEWRITING TEST: FORM B

Name..... Date of birth..... 19....
 Grade..... Teacher..... Examiner.....
 School..... City.....

INDIVIDUAL PROGRESS RECORD

Test	1st	2d	3d	4th	5th	6th	7th	8th	9th	10th
Form Used										
Date										
Months of Instruction										
Strokes per Minute										
Errors										
Score										



DIRECTIONS FOR TAKING THE TEST

1. If you have not taken the Blackstone Typewriting Test before, write your name, date of birth, grade, etc., in the spaces provided on the first page. (Use pen or pencil.) Otherwise, make no marks on this folder, as it may be used again.

2. Set the marginal stops at 5 and 75.
3. Set the machine for double spacing.
4. Set the tabulator key at 10.
5. Practice for five minutes on matter other than this test.
6. Place regular typewriting paper in the machine.
7. Begin about an inch from the top of the page and leave an inch margin at the left. (If you use an Elite typewriter, leave an inch and a half margin at the left.)

8. Type the first four lines on page 4, supplying all the information asked for except the blanks in the first line, which will be filled in after the test has been completed.

9. Set the typewriter to begin the words "Dear Sir," exactly as shown on page 4. When above directions have been carried out, leave page 4 in view and wait for the signal "Start" from the instructor. When this order is given, type the letter. You will be given three minutes in which to write. Try to write exactly as you would if you were copying a daily exercise. You will not be expected to finish the letter. Do not make any corrections. Stop instantly when the signal "Stop" is given. You will be marked for both speed and accuracy.

DIRECTIONS FOR SCORING

1. Exchange papers.
2. To determine the number of strokes per minute, see page 3, which contains the test you have just written, with the strokes per minute under each word. On this page find the last complete word which was written and under this you will find the number of strokes per minute. For instance, if the last word written was "expense" (the last word of the first paragraph), the number of strokes per minute would be 103. Disregard any unfinished words. If any words or letters were repeated or omitted, the count of strokes per minute must be corrected as follows: Add 1 stroke per minute for each three strokes repeated in the three minutes, and subtract 1 stroke per minute for each 3 strokes omitted in the three minutes. Write the number of strokes per minute so found after "Strokes per minute" at the top of the sheet.
3. To determine the number of errors, draw a small circle around every incorrect letter, stroke, punctuation, spacing, piling, etc. In determining what constitutes an error,

use the International Contest Rules. In general, an error is any stroke which is not like the copy, except that it is not necessary to have the same number of words to the line. Be sure to mark every incorrect letter. There may be more than one error in one word; in fact, there may be as many mistakes as there are strokes in the word. Write the number of strokes wrong after "Errors."

4. The measures of speed and accuracy are combined in a single score. Find the score for the paper as follows: Multiply the number of strokes per minute by 10. Divide this product by the number of errors plus 10. Thus,

$$\text{Score} = \frac{\text{Strokes per minute} \times 10}{\text{Errors} + 10}$$

Write the score thus found after "Score" on the test paper.

5. Hand in the papers as the teacher directs.

DIRECTIONS FOR RECORDING SCORES ON THE
INDIVIDUAL PROGRESS RECORD

Record the results of the first test in the column under "1st" in the table on the first page. Enter the form of the test — whether A, B, C, D, or E; the date of the test; the number of months of instruction completed; the number of strokes per minute; the number of errors; and the score.

Next, plot a point in the graph below as follows:

1. Find the point on the scale at the bottom of the graph representing the number of strokes per minute which is entered in the table.

2. Move the pencil vertically from this point until it reaches the slanting line representing the number of errors made.

3. Make a dot at this point and write a small figure 1 above it. The height of this dot, as measured by the scale at the left of the graph, should correspond with the score as entered in the table. (If more than 12 errors are made, determine the height of the dot by the amount of the score as calculated.)

4. When the second test is taken, the same data should be entered in the table, a new point plotted in the graph, and a small figure 2 placed above it.

5. Join points 1 and 2 by a straight line. This will help to make the gain in score more vivid.

6. When subsequent tests are taken, these should be recorded in the same way and the new points joined to the former ones to make a continuous line showing the progress that has been made from test to test.

Dear Sir:

We are very sorry to learn of the spoilage on cheese shipped
under date of October 15. Goods of this nature are thoroughly
inspected on the day of shipment, and it is unfortunate that you
did not report the matter when they came, as we should then have
had the cheese returned at our expense.

No one realizes better than we do the annoyances resulting to
a concern like yours through the failure of good inspection. We
have very strict rules and the most careful supervision, but as
long as people are human, errors will occur. Your reminder only
increases our determination to overcome the defect, however, for we
are very much troubled about it and we thank you for this new
incentive. We predict that it will be a long time before you are
annoyed in this way again.

We are referring this matter to our manager, Mr. Carson, who
will discuss it with you on his next visit, on Monday. In the
meanwhile, we trust that you will dispose of the goods quickly,
and at the best possible price, so as to keep the loss down to a
minimum.

Yours respectfully,

Form B	Strokes per minute.....	Errors.....	Score.....
Name		Age	
Grade	Teacher	Date	
School		City	

Dear Sir:

We are very sorry to learn of the spoilage on cheese shipped under date of October 15. Goods of this nature are thoroughly inspected on the day of shipment, and it is unfortunate that you did not report the matter when they came, as we should then have had the cheese returned at our expense.

No one realizes better than we do the annoyances resulting to a concern like yours through the failure of good inspection. We have very strict rules and the most careful supervision, but as long as people are human, errors will occur. Your reminder only increases our determination to overcome the defect, however, for we are very much troubled about it and we thank you for this new incentive. We predict that it will be a long time before you are annoyed in this way again.

We are referring this matter to our manager, Mr. Carson, who will discuss it with you on his next visit, on Monday. In the meanwhile, we trust that you will dispose of the goods quickly, and at the best possible price, so as to keep the loss down to a minimum.

Yours respectfully,

BLACKSTONE STENOGRAPHIC PROFICIENCY TESTS

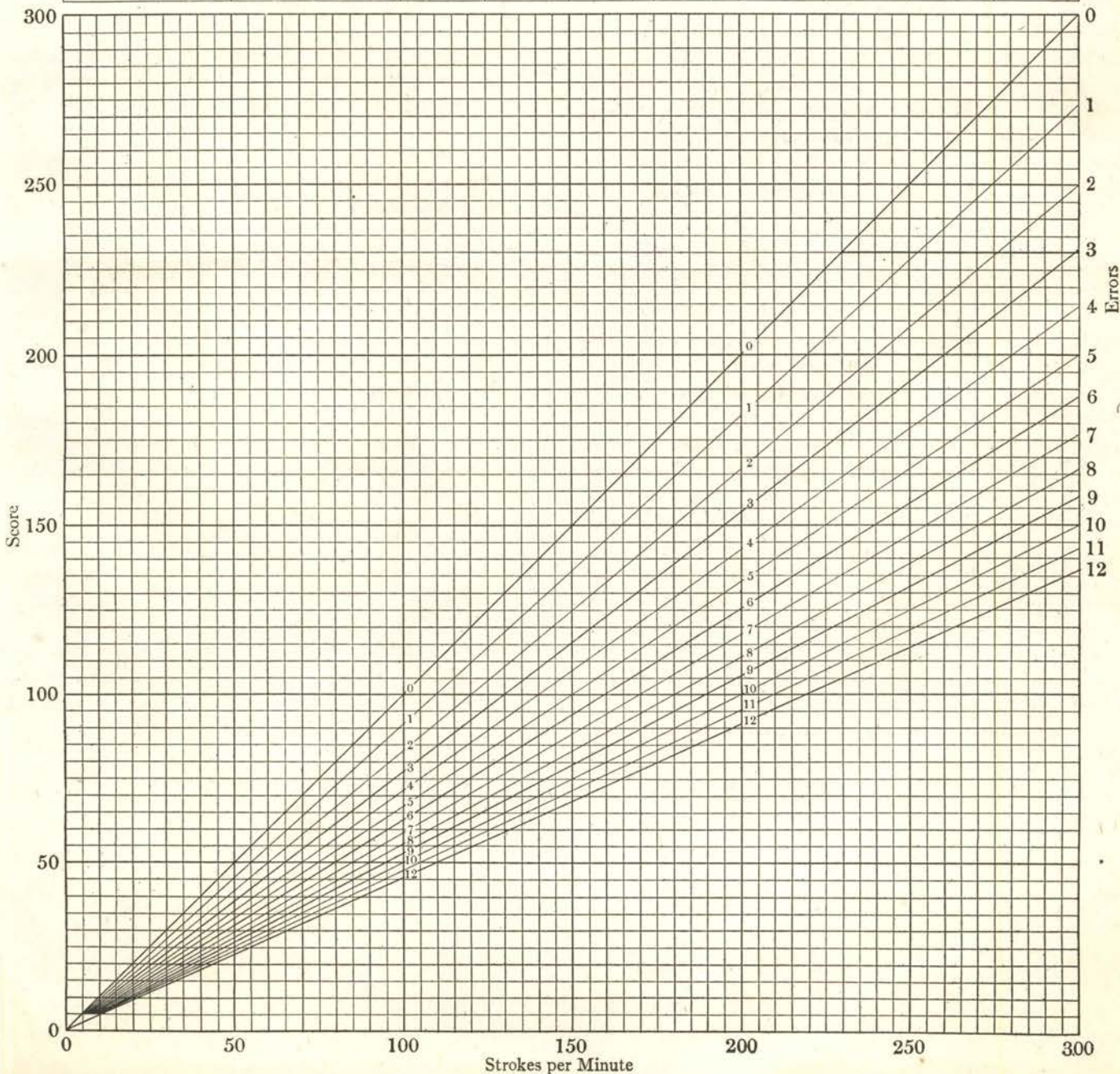
By E. G. BLACKSTONE, Detroit Teachers College, Detroit, Michigan

TYPEWRITING TEST: FORM C

Name..... Date of birth..... 19....
 Grade..... Teacher..... Examiner.....
 School..... City.....

INDIVIDUAL PROGRESS RECORD

Test	1st	2d	3d	4th	5th	6th	7th	8th	9th	10th
Form Used										
Date										
Months of Instruction										
Strokes per Minute										
Errors										
Score										



DIRECTIONS FOR TAKING THE TEST

1. If you have not taken the Blackstone Typewriting Test before, write your name, date of birth, grade, etc., in the spaces provided on the first page. (Use pen or pencil.) Otherwise, make no marks on this folder, as it may be used again.

2. Set the marginal stops at 5 and 75.
3. Set the machine for double spacing.
4. Set the tabulator key at 10.
5. Practice for five minutes on matter other than this test.
6. Place regular typewriting paper in the machine.
7. Begin about an inch from the top of the page and leave an inch margin at the left. (If you use an Elite typewriter, leave an inch and a half margin at the left.)

8. Type the first four lines on page 4, supplying all the information asked for except the blanks in the first line, which will be filled in after the test has been completed.

9. Set the typewriter to begin the words "Dear Sir," exactly as shown on page 4. When above directions have been carried out, leave page 4 in view and wait for the signal "Start" from the instructor. When this order is given, type the letter. You will be given three minutes in which to write. Try to write exactly as you would if you were copying a daily exercise. You will not be expected to finish the letter. Do not make any corrections. Stop instantly when the signal "Stop" is given. You will be marked for both speed and accuracy.

DIRECTIONS FOR SCORING

1. Exchange papers.
2. To determine the number of strokes per minute, see page 3, which contains the test you have just written, with the strokes per minute under each word. On this page find the last complete word which was written and under this you will find the number of strokes per minute. For instance, if the last word written was "doing" (the last word of the first paragraph), the number of strokes per minute would be 78. Disregard any unfinished words. If any words or letters were repeated or omitted, the count of strokes per minute must be corrected as follows: Add 1 stroke per minute for each three strokes repeated in the three minutes, and subtract 1 stroke per minute for each 3 strokes omitted in the three minutes. Write the number of strokes per minute so found after "Strokes per minute" at the top of the sheet.
3. To determine the number of errors, draw a small circle around every incorrect *letter, stroke, punctuation, spacing, piling*, etc. In determining what constitutes an error,

use the International Contest Rules. In general, an error is any stroke which is not like the copy, except that it is not necessary to have the same number of words to the line. Be sure to mark every incorrect letter. There may be more than one error in one word; in fact, there may be as many mistakes as there are strokes in the word. Write the number of strokes wrong after "Errors."

4. The measures of speed and accuracy are combined in a single score. Find the score for the paper as follows: Multiply the number of strokes per minute by 10. Divide this product by the number of errors plus 10. Thus,

$$\text{Score} = \frac{\text{Strokes per minute} \times 10}{\text{Errors} + 10}$$

Write the score thus found after "Score" on the test paper.

5. Hand in the papers as the teacher directs.

DIRECTIONS FOR RECORDING SCORES ON THE
INDIVIDUAL PROGRESS RECORD

Record the results of the first test in the column under "1st" in the table on the first page. Enter the form of the test — whether A, B, C, D, or E; the date of the test; the number of months of instruction completed; the number of strokes per minute; the number of errors; and the score.

Next, plot a point in the graph below as follows:

1. Find the point on the scale at the bottom of the graph representing the number of strokes per minute which is entered in the table.

2. Move the pencil vertically from this point until it reaches the slanting line representing the number of errors made.

3. Make a dot at this point and write a small figure 1 above it. The height of this dot, as measured by the scale at the left of the graph, should correspond with the score as entered in the table. (If more than 12 errors are made, determine the height of the dot by the amount of the score as calculated.)

4. When the second test is taken, the same data should be entered in the table, a new point plotted in the graph, and a small figure 2 placed above it.

5. Join points 1 and 2 by a straight line. This will help to make the gain in score more vivid.

6. When subsequent tests are taken, these should be recorded in the same way and the new points joined to the former ones to make a continuous line showing the progress that has been made from test to test.

Dear Sir:

To describe the work of the Smith Bible Institute is very
 pleasant indeed, for, strange to say, many are like you, having
 heard frequently of the institute but having obtained only dim
 ideas of the work it is doing.

It was founded in 1886 by the world-evangelist, H. L. Smith,
 and when he died in 1889, it was given his name. He wished to
 found schools where the men and women from all nations and all
 churches might come for a time, free of any charge, for instruction
 in the Bible and in methods of Christian work. It has been kept up
 on that basis, the expenses having always been met by the many gifts
 of God's own people.

In all the years of its life, over 13,000 people have received
 training here and 11,000 have been enrolled in one or more of its
 extension courses. Many of them now fill places as pastors, as
 teachers, as mission workers, and as missionaries. The requests for
 our trained workers continue to be greater than we can hope to
 supply.

We are always glad to answer any of your questions.

Yours sincerely,

Form C	Strokes per minute.....	Errors.....	Score.....
Name		Age	
Grade	Teacher	Date	
School		City	

Dear Sir:

To describe the work of the Smith Bible Institute is very pleasant indeed, for, strange to say, many are like you, having heard frequently of the institute but having obtained only dim ideas of the work it is doing.

It was founded in 1886 by the world-evangelist, H. L. Smith, and when he died in 1889, it was given his name. He wished to found schools where the men and women from all nations and all churches might come for a time, free of any charge, for instruction in the Bible and in methods of Christian work. It has been kept up on that basis, the expenses having always been met by the many gifts of God's own people.

In all the years of its life, over 13,000 people have received training here and 11,000 have been enrolled in one or more of its extension courses. Many of them now fill places as pastors, as teachers, as mission workers, and as missionaries. The requests for our trained workers continue to be greater than we can hope to supply.

We are always glad to answer any of your questions.

Yours sincerely,

BLACKSTONE STENOGRAPHIC PROFICIENCY TESTS

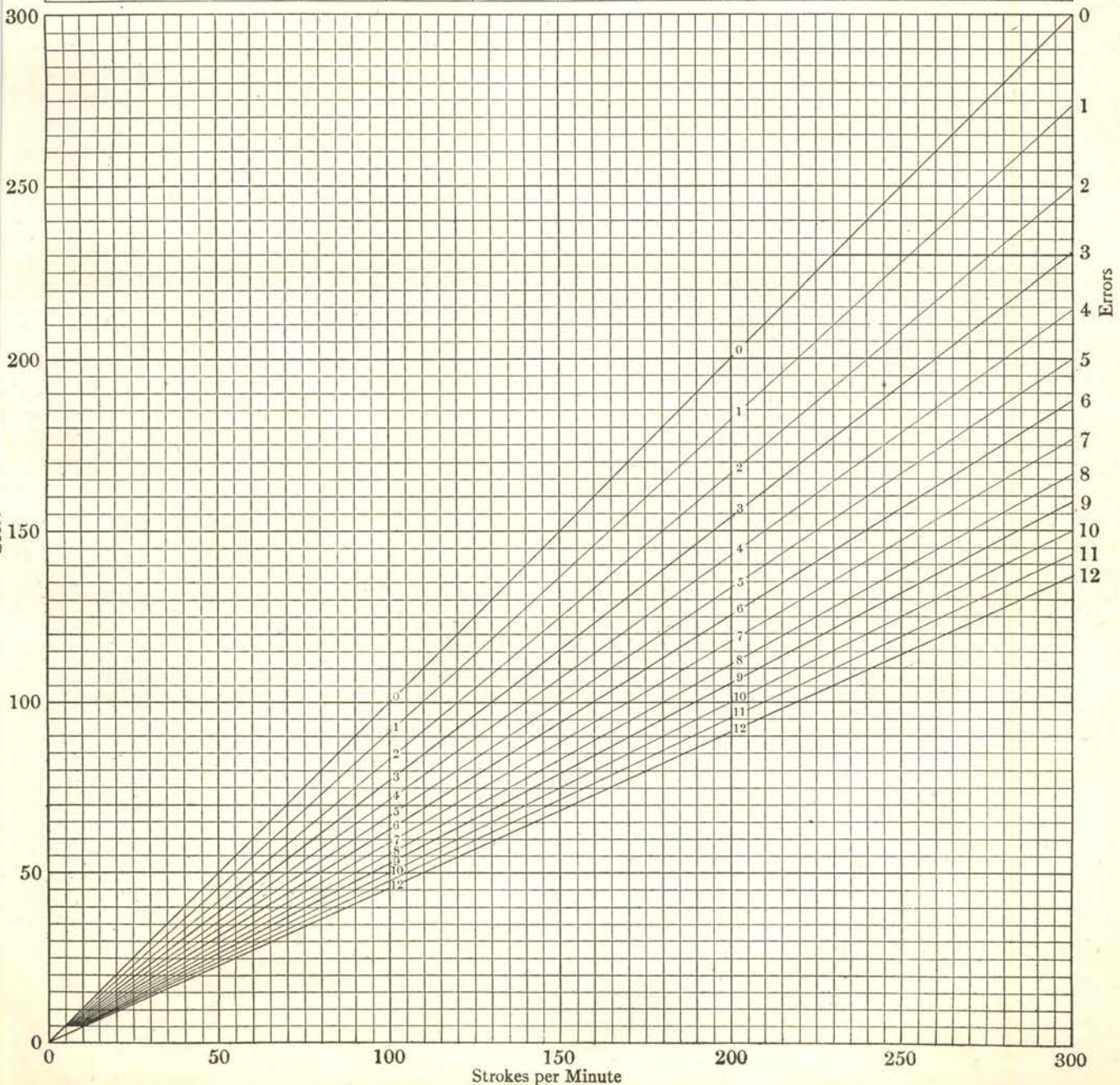
By E. G. BLACKSTONE, Detroit Teachers College, Detroit, Michigan

TYPEWRITING TEST: FORM D

Name..... Date of birth..... 19....
 Address..... Teacher..... Examiner.....
 School..... City.....

INDIVIDUAL PROGRESS RECORD

Test	1st	2d	3d	4th	5th	6th	7th	8th	9th	10th
Form Used										
Date										
Months of Instruction										
Strokes per Minute										
Errors										
Score										



DIRECTIONS FOR TAKING THE TEST

1. If you have not taken the Blackstone Typewriting Test before, write your name, date of birth, grade, etc., in the spaces provided on the first page. (Use pen or pencil.) Otherwise, make no marks on this folder, as it may be used again.

2. Set the marginal stops at 5 and 75.
3. Set the machine for double spacing.
4. Set the tabulator key at 10.
5. Practice for five minutes on matter other than this test.
6. Place regular typewriting paper in the machine.
7. Begin about an inch from the top of the page and leave an inch margin at the left. (If you use an Elite typewriter, leave an inch and a half margin at the left.)

8. Type the first four lines on page 4, supplying all the information asked for except the blanks in the first line, which will be filled in after the test has been completed.

9. Set the typewriter to begin the words "Dear Sir," exactly as shown on page 4. When above directions have been carried out, leave page 4 in view and wait for the signal "Start" from the instructor. When this order is given, type the letter. You will be given three minutes in which to write. Try to write exactly as you would if you were copying a daily exercise. You will not be expected to finish the letter. Do not make any corrections. Stop instantly when the signal "Stop" is given. You will be marked for both speed and accuracy.

DIRECTIONS FOR SCORING

1. Exchange papers.
2. To determine the number of strokes per minute, see page 3, which contains the test you have just written, with the strokes per minute under each word. On this page find the last complete word which was written and under this you will find the number of strokes per minute. For instance, if the last word written was "alone" (the last word of the first paragraph), the number of strokes per minute would be 124. Disregard any unfinished words. If any words or letters were repeated or omitted, the count of strokes per minute must be corrected as follows: Add 1 stroke per minute for each three strokes repeated in the three minutes, and subtract 1 stroke per minute for each 3 strokes omitted in the three minutes. Write the number of strokes per minute so found after "Strokes per minute" at the top of the sheet.
3. To determine the number of errors, draw a small circle around every incorrect *letter, stroke, punctuation, spacing, piling*, etc. In determining what constitutes an error,

use the International Contest Rules. In general, an error is any stroke which is not like the copy, except that it is necessary to have the same number of words to the line. Be sure to mark every incorrect letter. There may be more than one error in one word; in fact, there may be as many mistakes as there are strokes in the word. Write the number of strokes wrong after "Errors."

4. The measures of speed and accuracy are combined in a single score. Find the score for the paper as follows: Multiply the number of strokes per minute by 10. Divide the product by the number of errors plus 10. Thus,

$$\text{Score} = \frac{\text{Strokes per minute} \times 10}{\text{Errors} + 10}$$

Write the score thus found after "Score" on the test paper.

5. Hand in the papers as the teacher directs.

DIRECTIONS FOR RECORDING SCORES ON THE
INDIVIDUAL PROGRESS RECORD

Record the results of the first test in the column under "1st" in the table on the first page. Enter the form of the test — whether A, B, C, D, or E; the date of the test; the number of months of instruction completed; the number of strokes per minute; the number of errors; and the score.

Next, plot a point in the graph below as follows:

1. Find the point on the scale at the bottom of the graph representing the number of strokes per minute which is entered in the table.
2. Move the pencil vertically from this point until it reaches the slanting line representing the number of errors made.
3. Make a dot at this point and write a small figure above it. The height of this dot, as measured by the scale at the left of the graph, should correspond with the score entered in the table. (If more than 12 errors are made, determine the height of the dot by the amount of the score as calculated.)
4. When the second test is taken, the same data should be entered in the table, a new point plotted in the graph, and a small figure 2 placed above it.
5. Join points 1 and 2 by a straight line. This will help to make the gain in score more vivid.
6. When subsequent tests are taken, these should be recorded in the same way and the new points joined to the former ones to make a continuous line showing the progress that has been made from test to test.

Dear Sir:

Do you realize that speech bears somewhat the same relation to
 the mind that hammer and saw bear to the carpenter? It is the
 mind's most useful tool. It is the means by which the mind's
 products are carried, and it is essential also to the creation of
 such products and to their collection and classification. Thought
 probably does not exist alone.

So it is that if you deprive a child of speech you deprive him
 at the same time of his best means for mental growing, and it also
 follows that if you train and perfect his speech you must very much
 aid his brain power. In a normal child mental growth and speech
 growth are thought to go on at the same time. One cannot be said to
 precede the other. The child thinks and speaks.

If he does not talk when thinking, we immediately suspect that
 something is wrong with his speaking organism, and if he also fails
 to make use of other forms of expression, such as gesture and
 pantomime, we even doubt his ability to think. A child's capacity
 for education depends upon his desire for education.

Yours truly,
 361 363

Form D	Strokes per minute.....	Errors..	Score.....
Name		Age	
Grade	Teacher	Date	
School		City	

Dear Sir:

Do you realize that speech bears somewhat the same relation to the mind that hammer and saw bear to the carpenter? It is the mind's most useful tool. It is the means by which the mind's products are carried, and it is essential also to the creation of such products and to their collection and classification. Thought probably does not exist alone.

So it is that if you deprive a child of speech you deprive him at the same time of his best means for mental growing, and it also follows that if you train and perfect his speech you must very much aid his brain power. In a normal child mental growth and speech growth are thought to go on at the same time. One cannot be said to precede the other. The child thinks and speaks.

If he does not talk when thinking, we immediately suspect that something is wrong with his speaking organism, and if he also fails to make use of other forms of expression, such as gesture and pantomime, we even doubt his ability to think. A child's capacity for education depends upon his desire for education.

Yours truly,

BLACKSTONE STENOGRAPHIC PROFICIENCY TESTS

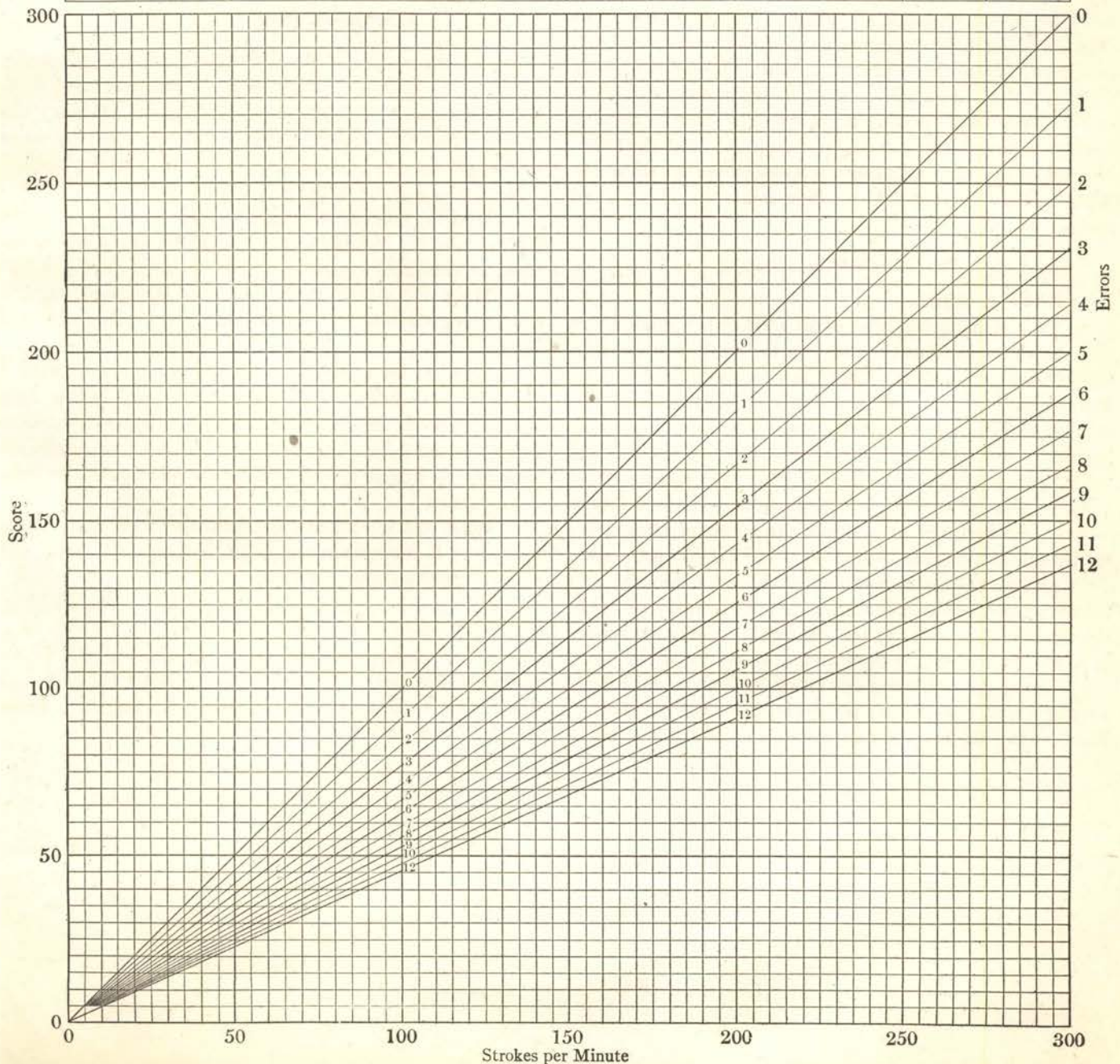
By E. G. BLACKSTONE, Detroit Teachers College, Detroit, Michigan

TYPEWRITING TEST: FORM E

Name..... Date of birth..... 19....
 Grade..... Teacher..... Examiner.....
 School..... City.....

INDIVIDUAL PROGRESS RECORD

Test	1st	2d	3d	4th	5th	6th	7th	8th	9th	10th
Form Used										
Date										
Months of Instruction										
Strokes per Minute										
Errors										
Score										



DIRECTIONS FOR TAKING THE TEST

1. If you have not taken the Blackstone Typewriting Test before, write your name, date of birth, grade, etc., in the spaces provided on the first page. (Use pen or pencil.) Otherwise, make no marks on this folder, as it may be used again.

2. Set the marginal stops at 5 and 75.
3. Set the machine for double spacing.
4. Set the tabulator key at 10.
5. Practice for five minutes on matter other than this test.
6. Place regular typewriting paper in the machine.
7. Begin about an inch from the top of the page and leave an inch margin at the left. (If you use an Elite typewriter, leave an inch and a half margin at the left.)

8. Type the first four lines on page 4, supplying all the information asked for except the blanks in the first line, which will be filled in after the test has been completed.

9. Set the typewriter to begin the words "Dear Sir," exactly as shown on page 4. When above directions have been carried out, leave page 4 in view and wait for the signal "Start" from the instructor. When this order is given, type the letter. You will be given three minutes in which to write. Try to write exactly as you would if you were copying a daily exercise. You will not be expected to finish the letter. Do not make any corrections. Stop instantly when the signal "Stop" is given. You will be marked for both speed and accuracy.

DIRECTIONS FOR SCORING

1. Exchange papers.
2. To determine the number of strokes per minute, see page 3, which contains the test you have just written, with the strokes per minute under each word. On this page find the last complete word which was written and under this you will find the number of strokes per minute. For instance, if the last word written was "year" (the last word of the second paragraph), the number of strokes per minute would be 156. Disregard any unfinished words. If any words or letters were repeated or omitted, the count of strokes per minute must be corrected as follows: Add 1 stroke per minute for each three strokes repeated in the three minutes, and subtract 1 stroke per minute for each 3 strokes omitted in the three minutes. Write the number of strokes per minute so found after "Strokes per minute" at the top of the sheet.
3. To determine the number of errors, draw a small circle around every incorrect *letter, stroke, punctuation, spacing, piling*, etc. In determining what constitutes an error,

use the International Contest Rules. In general, an error is any stroke which is not like the copy, except that it is not necessary to have the same number of words to the line. Be sure to mark every incorrect letter. There may be more than one error in one word; in fact, there may be as many mistakes as there are strokes in the word. Write the number of strokes wrong after "Errors."

4. The measures of speed and accuracy are combined in a single score. Find the score for the paper as follows: Multiply the number of strokes per minute by 10. Divide this product by the number of errors plus 10. Thus,

$$\text{Score} = \frac{\text{Strokes per minute} \times 10}{\text{Errors} + 10}$$

Write the score thus found after "Score" on the test paper.

5. Hand in the papers as the teacher directs.

DIRECTIONS FOR RECORDING SCORES ON THE
INDIVIDUAL PROGRESS RECORD

Record the results of the first test in the column under "1st" in the table on the first page. Enter the form of the test — whether A, B, C, D, or E; the date of the test; the number of months of instruction completed; the number of strokes per minute; the number of errors; and the score.

Next, plot a point in the graph below as follows:

1. Find the point on the scale at the bottom of the graph representing the number of strokes per minute which is entered in the table.

2. Move the pencil vertically from this point until it reaches the slanting line representing the number of errors made.

3. Make a dot at this point and write a small figure 1 above it. The height of this dot, as measured by the scale at the left of the graph, should correspond with the score as entered in the table. (If more than 12 errors are made, determine the height of the dot by the amount of the score as calculated.)

4. When the second test is taken, the same data should be entered in the table, a new point plotted in the graph, and a small figure 2 placed above it.

5. Join points 1 and 2 by a straight line. This will help to make the gain in score more vivid.

6. When subsequent tests are taken, these should be recorded in the same way and the new points joined to the former ones to make a continuous line showing the progress that has been made from test to test.

Mr. Retailer:

Why is it that you--the retailer--are compelled to lose
more good hard currency through bad accounts than any other man in
business?

Every month you have to charge up to bad debts a score of
accounts that dead-beats refuse to pay. Mrs. Johnson puts you off;
Mrs. Thompson tells you to wait, and so it goes on--season
following season. You could almost furnish a new store with the
money lost by local retailers through bad debts in a year.

Now suppose we should tell you how to stop this; suppose we
should tell you of a simple collection scheme used by one retailer
down in Illinois by which he was able to make no less than thirty
of the hardest, and slowest of his customers pay up, cent for cent,
all of the hundreds and hundreds of dollars they owed him. Wouldn't
you jump at the chance to get it?

Now, then, in the book described by the circular inclosed, you
can get this very collection system; the simplest, most successful
assistance of an old experienced collector; a system that you can
operate without help.

Yours very truly,

Form E	Strokes per minute.....	Errors.....	Score.....
Name		Age	
Grade	Teacher	Date	
School		City	

Mr. Retailer:

Why is it that you--the retailer--are compelled to lose more good hard currency through bad accounts than any other man in business?

Every month you have to charge up to bad debts a score of accounts that dead-beats refuse to pay. Mrs. Johnson puts you off; Mrs. Thompson tells you to wait, and so it goes on--season following season. You could almost furnish a new store with the money lost by local retailers through bad debts in a year.

Now suppose we should tell you how to stop this; suppose we should tell you of a simple collection scheme used by one retailer down in Illinois by which he was able to make no less than thirty of the hardest and slowest of his customers pay up, cent for cent, all of the hundreds and hundreds of dollars they owed him. Wouldn't you jump at the chance to get it?

Now, then, in the book described by the circular inclosed, you can get this very collection system; the simplest, most successful assistance of an old experienced collector; a system that you can operate without help.

Yours very truly,

3. Kauzer Typewriting Test*

The Kauzer Typewriting Test is listed as a survey test. It is the result of more than ten years of experimentation in test construction in connection with the Kansas State Scholarship Contests and the Nation-Wide Every Pupil Scholarship Tests.³³

The test is a battery of tests intended for use as follows: Test I, Form A, is to be given at the end of one-half year's instruction; Test I, Form B, is to be given at the end of one year's instruction; and Test II, is to be given at the end of two year's instruction. However, Part I of Form A and Part I of Form B, Test I, may be used interchangeably, as they are equated in difficulty.

The tests are designed to test the student's ability for speed and accuracy in typing; ability to follow instructions, and placement and tabulation ability.

The tests are constructed and furnished with tables of percentile norms so that it is possible to note the student's improvement on each part and on the whole test.

For Form A, which is to be given at mid-term of the first year, the norms are based on 3,548 cases. The norms are based on 3,386 cases for Form B, which is to be given at

*Kauzer Typewriting Test, by Adelaide Kauzer and H. E. Schrammel. Published by the Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kansas, (1934).

33. Kauzer, Adelaide and H. E. Schrammel, Kauzer Typewriting Test Manual, (1934)

the end of the first year. Form A of Test II, which is to be given at the end of the second year has 1,045 cases for the basis of it's norms. The reliability and validity are not indicated.³⁴

Test I, Form A, consists of two parts, Part I and Part II. Part I is a straight-copy timed test, (ten minutes). It is to be graded for accuracy and speed, in accordance with the International Typewriting Contest Rules.

For the accuracy grade, all the errors on the copy written in ten minutes are to be multiplied by three and subtracted from 100. Example: Errors 8. Multiply: $8 \times 3 = 24$. $100 - 24 = 76$ or Accuracy Grade. No credit is given for accuracy grade unless 12 net words per minute has been attained by the student.³⁵

For the speed grade, fifty strokes for each error are deducted from the total strokes and the remainder is divided by 10, (10 min.). The result is compared with a stroke chart printed on the last page of the test blank, for determining the grade. The accuracy and speed grade are added together to get the score on Part I. The possible score is 200.³⁶

Part II of Form A is a paragraph writing test. The testee is to produce as many accurate copies, or copies with not more than one error, as he can in the time given. The time for this part is also 10 minutes. No erasures are allowed, and only complete copies are graded.

34. Kauzer, Adelaide, H. E. Schrammel, Kauzer Typewriting Test Manual, (1934)

35. Ibid.

36. Ibid.

The test is graded strictly in accordance with International Contest Rules. The possible score is 100. When the paragraph is written twice without error, it merits the possible score of 100. The paragraph written once without error rates a score of 85; written with one error, 80. When a second complete copy is written with one error, five points are added to the score.³⁷

The final possible score on the complete test is 100. This is determined by adding the totals for Parts I and II and dividing by 3.

Test I, Form B, consists of two parts, Part I and Part II. Part I is a straight-copy 15 minute timed test. The same method is used for scoring and computing the accuracy score as was used for Part I of Form A of Test I, except that no credit is given for the accuracy grade unless 20 net words per minute has been attained by the student.

The same method is used for scoring and computing the speed score as was used for Part I of Form A of Test I, except that the total net strokes are divided by 15 (15 min.).

Part II of Test I, Form B, is a paragraph writing test. It is to be centered on a full-sized sheet of paper, and is to be double-spaced. The right- and left-hand margins and top and bottom margins are to be even. The margins are to be considered correct if they do not miss being even by more than three single spaces. The paragraph should be as long as it is wide or a little (not over $1\frac{1}{2}$ ") longer than it is wide.

37. Kauzer, op. cit.

It must not be wider than it is long. The testee is to turn in one of two attempts. The time allowed is fifteen minutes.

In computing the score for Part II, Test I, Form B, 50 points are allowed for correct placement; if the top and bottom margins are not even, 20 points are deducted; if the right and left-hand margins are not even, 20 points are to be deducted. Fifty points are allowed if the paragraph is accurately written--twenty points are to be deducted for each typewriting error up to and including two (2). The total possible score is 100 points.³⁸

For the score on the complete test, the totals for Parts I and II are added and divided by 3. Final possible score is 100.

Test II, Form A, consists of two parts. Part I being the straight-copy 15 minute timed test. Part II is a problem in tabulation. The same method is used for scoring and computing the speed and accuracy score as is used in the previous straight-copying tests, except no credit is given for accuracy grade unless 35 net words per minute has been attained by the student. It being a fifteen minute test, the total net strokes are divided by fifteen in order to determine the speed grade.

Part II, the tabulation problem is to be arranged in columns. There is no set spacing between the columns as long as margins of at least one inch on the right and left are maintained. Variations of more than one-half inch on the right and left, and over one inch on the top and bottom margins are

38. Kauzer, op. cit.

to be considered as one error each. No credit is given for incomplete copies. If the title misses being centered on the page more than 5 spaces, it is to be counted as an error. Fifteen points are to be deducted for each error, whether it be placing or typewriting. For the copy accurately placed and written a score of 100 is given.

For the score on the complete test, the totals for Parts I and II are added and divided by three. The final possible score is 100 on the complete test.

Directions for Giving and Scoring the Test

All necessary directions for giving the tests are printed on the test blanks.

The class should be allowed about five to ten minutes for warming up on other material before distributing the test blanks. After the test blanks have been distributed, the students are directed to read the instructions carefully. When this has been accomplished, the signal is given to begin. The amount of time specified for each part is to be allowed exactly. All papers are to be collected promptly at the close of the time for the last part.³⁹

The directions for scoring and computing the scores are on the last page of the test blank. All material should be graded according to the International Contest Rules. The percentile norms are furnished in table form in the manual which accompanies the tests, so that the student and class percentile scores may be interpreted by use of the tables.⁴⁰

39. Ibid.

40. Ibid.

Cost

The Kauzer Typewriting Tests, in small quantities sell at 2½¢ per copy, or two dollars (\$2.00) per hundred copies.⁴¹

41. Schrammel, H. E., Prices quoted in letter, March 1942.

TEST I
FORM A

Published by
Bureau of Educational Measurements
Kansas State Teachers College, Emporia

KAUZER TYPEWRITING TEST

By Adelaide Kauzer, Kansas State Teachers College
Emporia, Kansas

DIRECTIONS: All material in this test will be graded according to International Contest Rules. Five (5) minutes are allowed at the beginning of the test for warming up on some practice material. Write as accurately as you can; erasures will count as errors.

PART I

DIRECTIONS: Write from the following copy for exactly ten (10) minutes. Return to the beginning if you complete the copy in less than ten minutes.

There is no part of farming which I can think of that 54
the boy enjoys more than the making of maple sugar; it 109
is better than riding and nearly as good as fishing. One 167
reason why he likes this work is that somebody else does 224
the most of it. It is the kind of work in which he can 280
appear to be very helpful and yet not do much. 326
In my day, sugar-making used to be something half- 375
way between picnicking and being ship-wrecked on an 427
island, where one had saved from the wreck several tubs 483
and augers, and great kettles, and pork, and eggs, and 538
good home-made bread, and could begin at once to lead 592
the most pleasing life in the world. 628
I am told that it is somewhat different now—that there is 687
more desire to collect the sap and make good sugar, and to 746
hold it for a high price than there used to be, and that 803
the old fun and pleasure of the business are almost gone. 862
I am informed that now the people carefully collect the 918
sap and take it to the house where there are arches over 975
which it is evaporated in large pans, and that care is 1030
taken to keep the leaves and foreign matter out of it, and 1089
that the sugar is made clean; in short, that it is a money- 1148
making business in which there is much work and very 1201
little fun. I am also told that the boy is not so important 1262
any more and that he is not allowed the pleasure of put- 1317
ting his paddle into the boiling sugar and licking off the 1376
syrup. This may improve the sugar, but it is very hard on 1435
the boy. 1443

As I remember the Vermont boy, and I knew him very well, he used to be on the lookout every spring for the sap to begin running, and I think that he found it as soon as it began. Perhaps he knew it by a feeling of some kind starting in his own body—a kind of feeling in his legs and arms which made him want to stand on his head or do a handspring, if he could find a place on the ground where the snow had gone. Spring appears early in the legs of a country boy and shows itself in an uneasiness in the toes, which get tired of boots and want to come out and touch the ground just as soon as the sun has warmed it a little. The country boy goes bare-foot just as naturally as the buds, which were varnished over in the fall to keep the water out, come out on the trees. Perhaps the boy has been out digging into the trees with his knife, but at any rate, he is pretty sure to tell of his find when he comes running into the house in a great state of excitement with "Sap's running."

And then, indeed, the good time begins. The buckets which had been put into the garret over the house, and which the boy had climbed up to look at now and then with another boy, for they were full of sweet remains of the annual spring event, are brought down and set out on the south side of the house to be scalded. The snow is still a foot or two deep in the woods, and the sled is brought out to make the road to the camp where the work begins. The boy is ever present, helping with everything, asking questions, and is filled with a desire to help keep up the excitement.

At last the great day comes when the cart and the boy and the other workers start into the woods. The sun shines into the trees, for there are no leaves to keep it out; the snow is soft and is beginning to settle down, leaving the young bushes sticking up everywhere. It is spring and the boy is happy that his out-door life is about to begin once more. In the first place, the men go about

1494
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1990
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2389
2430
2483
2538
2591
2645
2698
2753
2802
2863
2919
2980
3008
3062
3115
3173
3228
3284
3344
3402

tapping the trees, driving in the spouts, and putting the buckets under. The boy watches all this with the greatest interest. He wishes that some time when a hole is made in a tree the sap would flow out, but it never does. If the weather is warm, it may drop rapidly; but sometimes it is so cold that very little runs for two or three days at a time. The boy learns that the really good things of the world have to be waited for. Sap runs best during the day and the men are very busy emptying the buckets into barrels on sleds and taking the sap to the camp or place where it is to be boiled down.

The camp has been cleared of snow and the one little house has been recovered with boughs. In front of it two great logs have been placed nearly together and a fire is made between them. Two forked sticks are set at each end and a long pole is laid on them. On this are hung the kettles which have been turned right side up and cleaned out to receive the sap that is gathered. And now if the run has been good, the people are prepared to go to work. To watch the big fires gives the boy much pleasure. He is always ready to bring more fuel.

PART II

DIRECTIONS: Produce as many accurate copies, or copies with not more than one error, as you can in the time given. Only complete copies will be graded. No erasures are allowed. You will have ten (10) minutes for this part.

There is an honor in business that is the fine gold of it; that reckons with every man justly; that loves light; that regards kindness and fairness more highly than goods or prices or profits. It becomes a man more than his furnishings or his house. It speaks for him in the heart of everyone. His friendships are serene and secure. His strength is like a young tree by a river.

DIRECTIONS FOR SCORING

Grade all copy written by the student strictly in accordance with International Typewriting Contest Rules. It is suggested that the examiner first grade Part I for all the tests and then Part II.

PART I

Possible score 200

For accuracy grade, multiply the errors on the copy written in ten minutes by three (3) and subtract from 100. Example: Errors 8. Multiply: $8 \times 3 = 24$. $100 - 24 = 76$ or Accuracy Grade. No credit given for accuracy grade unless 12 net words per minute has been attained by the student.

For speed grade, deduct from the total strokes written, fifty (50) strokes for each error, divide by 10, and then grade as follows:

Strokes	Grade	Strokes	Grade
225 or more	100	155	86
220	99	150	85
215	98	145	84
210	97	140	83
205	96	135	82
200	95	130	81
195	94	125	80
190	93	115	79
185	92	105	78
180	91	95	77
175	90	85	76
170	89	75	75
165	88	Below 75	0
160	87		

Example: Total strokes written 1,450. Errors 5.

1450
— 250

1200 Divided by 10 equals 120, or a grade of 79.

Add Accuracy Grade to Speed Grade to get score on Part I.

PART II

Paragraph Writing.

Possible score 100

Grade only complete copies of the paragraph. No credit is to be given for an incomplete paragraph. Grade strictly in accordance with International Contest Rules.

Written twice without error—100. Written once without error—85. Written with one error—80. No credit for more than one error. Add 5 to the score for a second complete copy with 1 error.

FINAL SCORE

Final Possible Score 100

For the score on the complete test, add the totals for Parts I and II and divide by 3.

Example:

Score for Part I 167
Score for Part II .. 80
Total 247
 $247 \div 3 = 82$ final score.

**TEST II
FORM A**

Published by
Bureau of Educational Measurements
Kansas State Teachers College, Emporia

KAUZER TYPEWRITING TEST

By Adelaide Kauzer, Kansas State Teachers College
Emporia, Kansas

DIRECTIONS: All material in this test will be graded according to International Contest Rules. Five (5) minutes are allowed at the beginning of the test for warming up on some practice material. Write as accurately as you can. No erasures are allowed.

PART I

DIRECTIONS: Write from the following copy for exactly fifteen (15) minutes. Return to the beginning if completed in less than fifteen minutes.

Besides the various kinds of bread, there are many other
preparations of corn which are nutritious and pleasing to
the taste. Hominy is made by placing the corn in a com-
mon stone mill and cracking the kernel into a few coarse
pieces. When thoroughly cooked, and served with milk
or butter and sugar, this is a very palatable dish. This was
the Indians' method of preparing corn, and was un-
doubtedly learned from them. Hasty pudding, or mush,
is made by stirring corn meal into boiling water until the
mixture is of the proper thickness, and then letting it
thoroughly cook. Mush and milk was a staple article of
food with the early settlers, as it was cheap, easily pre-
pared and very nutritive. Hulled corn is prepared by soak-
ing the kernel in strong lye, which loosens the outside
skin, or hull, and enables it to be removed. The corn is
then cleansed of the lye and cooked whole.

Besides these older and more common preparations of
corn, there are many others of more recent date, and the
results of patent processes of manufacture. Corn starch is
the most important of these preparations. The starch is
made by soaking the corn in weak lye, then crushing the
kernel and washing the mass freely with cold water. The
starch is washed out from the other substances. The liquid
is then run to large tanks, where it is allowed to settle and
the starch finds its way to the bottom. After repeated
washings to remove all impurities, the starch is taken from
the tanks and dried. When dry it is of a pure white color
and resembles wheat flour quite closely in appearance.

Corn starch is used in the arts for stiffening and finish-

ing cloth, and sizing paper, and for laundry purposes; it also is an important article of food, and enters largely into the preparations of puddings and many other similar dishes. It is exported in large quantities to the countries of Europe, and its manufacture forms a profitable and important industry.

Glucose, or corn syrup, is another article of commerce whose manufacture consumes a large quantity of corn each year. Glucose is made by boiling the starch in water which contains one per cent of sulphuric acid. By this process the starch is changed to sugar and the syrup, or glucose, is recovered in much the same manner as in the manufacture of sugar from other sources. It is sometimes flavored with a low grade of cane molasses and sold as an inferior syrup. It is extensively used in canning fruits, making fruit syrups and frequently to increase the amount of alcohol in wines. As it is cheaper than any usable grade of molasses that can be made at a sugar factory, it finds a ready sale for many purposes for which sugar would otherwise become necessary.

In addition to the common corn of commerce, which is put to such a variety of uses, there are a few special varieties which have become important factors in the food supply of the country. Chief among these are the many varieties of sweet corn, so extensively raised to eat green. Canning of this corn has become an important business, and through this process the people of the entire country may be served with green corn the year around if they wish to buy it. Pop corn is considered a luxury, but enough of it is sold every year to make several large fortunes, and it yields the best profit to the farmer of any crop he can raise, if he is successful. There are so many liabilities to failure, however, that but few make a business of growing it.

In many localities where other fuel is scarce, cobs are used for this purpose, and where dairying is carried on to any extent large crops of forage corn are raised for the stock. This crop is planted late in the season and reaches the best stage for fodder just when the dry weather causes the grass in the pastures to become short. Corn stalks are

now becoming quite valuable in the manufacture of cellulose, a substance used largely in the manufacture of paper, and in some localities in Iowa and Illinois the farmers are deriving a good revenue from the sale of corn stalks for this purpose.

A few years ago our Ambassador to Germany tried a novel experiment which had for its purpose the extending the use of corn as an article of food in that and other European countries. He sent to the United States and secured several of the most skillful cooks. Then he gave a great dinner, to which he invited the leading statesmen, diplomats and nobility. At this dinner corn was served in all the different ways which the skill of the cooks could devise. As a social event, the dinner was a great success, but statistics do not show that it succeeded in increasing the use of corn as an article of food in the German Empire. Still, foreign demands for American corn are gradually on the increase. The kernel contains nearly all the elements most essential in building up animal tissue; it is therefore well adapted to sustain life and produce growth.

PART II

DIRECTIONS: Under the title "Colleges of Kansas and Their Location," type the following in tabulated form, well arranged with even margins at the right and left and at the top and bottom of the page. There must be no erasures. You are allowed fifteen minutes.

State University, Lawrence; State Teachers College, Emporia; State Teachers College, Pittsburg; Fort Hays Kansas State College, Hays; Kansas State College of Agriculture and Applied Science, Manhattan; Baker University, Baldwin; Bethany College, Lindsborg; Bethel College, Newton; College of Emporia, Emporia; Friends University, Wichita; Kansas Wesleyan University, Salina; Marymount College, Salina; McPherson College, McPherson; Ottawa University, Ottawa; Southwestern College, Winfield; Sterling College, Sterling; St. Benedict's College, Atchison; The Municipal University of Wichita, Wichita; Washburn College, Topeka.

Note—When one name is unusually long, rather than spoil the appearance of the whole page, type it on two lines.

DIRECTIONS FOR SCORING

Grade all copy written by the student strictly in accordance with International Typewriting Contest Rules. It is suggested that the examiner grade Part I for all the tests and then Part II.

PART I

Possible score 200

For accuracy grade, multiply the errors on the copy written in fifteen minutes by three (3) and subtract from 100. Example: Errors 7. $7 \times 3 = 21$. $100 - 21 = 79$ or Accuracy Grade. No credit given for accuracy grade unless 35 net words per minute has been attained by the student.

For speed grade, deduct from the total strokes written, fifty (50) strokes for each error, divide by 15, and then grade as follows:

Strokes	Grade	Strokes	Grade
325 or more	100	245	84
320	99	240	83
315	98	235	82
310	97	230	81
305	96	225	80
300	95	220	79
295	94	215	78
290	93	210	77
285	92	205	76
280	91	200	75
275	90	195	74
270	89	190	73
265	88	185	72
260	87	180	71
255	86	175	70
250	85	Below 175	0

Add Accuracy Grade to Speed Grade to get score on Part I.

PART II

This is a simple problem in tabulation; therefore, the material should be arranged in columns. There need be no set spacing between columns as long as margins of at least one inch on the right and left are maintained. Variations of more than one-half inch on the right and left, and over one inch on the top and bottom margins are to be considered as one error each.

Allow no credit for incomplete copies. If the title misses being centered on the page more than 5 spaces, count an error.

For copy accurately placed and written 100.

Deduct 15 for each error, whether it be placing or typewriting.

FINAL SCORE

Final Possible Score 100

For the score on the complete test, add the totals for Parts I and II and divide by 3.

Example:

Score on Part I 155

Score on Part II .. 80

3)235

78½ or 78

TEST I
FORM B

Published by
Bureau of Educational Measurements
Kansas State Teachers College, Emporia

KAUZER TYPEWRITING TEST

By Adelaide Kauzer, Kansas State Teachers College
Emporia, Kansas

DIRECTIONS: Five (5) minutes are allowed at the beginning of the test for warming up on some practice material. Write as accurately as you can. No erasures are to be made on any part of this test.

PART I

DIRECTIONS: Write from the following copy for exactly fifteen (15) minutes. Return to the beginning if completed in less than fifteen minutes.

Many of the older roads in the country followed paths 54
through the woods or fields which served some need of 108
the people of a former day, just as the streets in some of 167
our large cities are said to have been laid out, and now 224
are by no means in the best positions for the conditions 281
of the present day. Even when they have been laid out 336
without any such reason for poor locations, the road 389
makers often tried to keep from running the line through 446
the center of some field and have taken land that would 502
be of small value for any other use. In these times, how- 560
ever, not so much care is taken with regard to property 616
and trees, fields and even homes give up to the increas- 672
ing demands of the motor car. 703

A road should be laid out with the same care that is 756
given to planning a railroad. The first step is to explore 816
the country and decide just where it is to run. From a 872
map one can often mark out two or three places for roads, 930
and then by looking over the country can choose among 984
them. The road maker must then prepare another map 1036
showing the cuts and fills, the character of the ground, 1093
the width and kind of rivers. He tries to make the road 1150
as short as he can, but it should not rise or fall more 1206
than one foot in twenty if it can be helped. If a hill stands 1269
in the way, he must remember that it is often no farther 1326
around it than over it and much less difficult for a load. 1386
He must also do away with sharp turns, cross rivers at 1441
right angles, if possible, and must select good places for 1500

bridges. If he is to take it along the side of a hill, it should be on the south or the west, if at all possible, because storms are not so severe there and the road will dry sooner. Where travel is heavy, as on state highways, it should miss the villages. There was a time when small cities wanted to be placed on the highways for the business they expected it would bring, but they have found that motorists driving at high speeds do not like to be delayed by them and only a service station receives any of the business.

When the course of the road has been decided upon, the next thing of greatest importance is the kind of material to use. Hard surfaces are most desirable, because, as a general rule, a horse or truck can draw two or three times as great a load on them as on the average country road. But they are very expensive, and other kinds may take their place, at least for a time. Other things to be taken into consideration are, the kind and the amount of traffic, how much money may be spent and the ease or difficulty with which material can be obtained locally.

Once the grade has been decided upon, cuts and ditches are made and the low places are filled in. This may be all that is to be done in most cases, but if conditions are such that the ground is still very wet, it may be necessary to provide culverts and other means of drainage. To make sure that the water will not remain on the surface, the center must be made higher than the sides, and then, if the ground is soft, a top of small gravel or sand should be put on and tamped down.

A very annoying kind of road is one of deep sand, where the wheels of automobiles and the feet of horses sink in so far that they are not traveling on the road, but in it. Such a road is at its best when wet, and there is little danger of having too much water on it. To help keep the water, and also to keep the material from blowing about too much, it should have a level surface and trees and grass should be planted at the sides and even in the

road itself. It would be still better if only half of it were in use at one time.

The great objection to using sand alone is that every little piece stands by itself and has no wish to adhere to any other, while clay, on the other hand, clings to whatever is next to it. But not all kinds of clay can be used in road building, for some fall apart when they are wet and cannot be used. But those which can be worked are good, because they stick closely to the sand, and when they are mixed in just the right proportions a rather good result is seen. In places where this road is used, a man with a machine goes over it after each rain in order to distribute the sand and to keep the clay from working through as the cars go by. The cost of maintenance is quite high.

Where travel is light, gravel may also be used. It is good if it is hard and not more than two inches in size. If rock is too soft, it breaks easily and the road becomes dusty. To overcome this a binder, such as tar or oil, may be put on the top.

PART II

DIRECTIONS: The following paragraph is to be centered on a full-sized sheet of paper. Use double-spacing. Right- and left-hand margins and top and bottom margins are to be even. Your paragraph should be as long as it is wide or a little (not over $1\frac{1}{2}$ ") longer than it is wide. It must not be wider than it is long. You are to turn in one of two attempts. The time is fifteen minutes.

A piece of work turned out by a true craftsman has in it something of the artist, for it is a reflection of the philosophy of the man who did the work. A genuine craftsman would no more pass on a piece of work that he did not consider good than would an honest writer sign his name to an article which did not reflect his convictions, or a painter display a canvas which did not seem to him at the time the best work of which he was capable. To make a distinction between the artist and the craftsman is difficult. The artist, to begin with, must be a craftsman; must be skilled in his trade. But in addition to expertness, he must have originality, that certain something which enables him to present an idea in a new light.

DIRECTIONS FOR SCORING

Grade all copy written by the student strictly in accordance with International Typewriting Contest Rules. It is suggested that the examiner grade Part I for all the tests and then Part II.

PART I

Possible score 200

For accuracy grade, multiply the errors on the copy written in fifteen minutes by three (3) and subtract from 100. Example: Errors 8. $8 \times 3 = 24$. $100 - 24 = 76$ or Accuracy Grade. No credit given for accuracy grade unless 20 net words per minutes has been attained by the student.

For speed grade, deduct from the total strokes written, fifty (50) strokes for each error, divide by 15, and then grade as follows:

Strokes	Grade	Strokes	Grade
275 or more	100	195	84
270	99	190	83
265	98	185	82
260	97	180	81
255	96	175	80
250	95	170	79
245	94	165	78
240	93	160	77
235	92	155	76
230	91	150	75
225	90	145	74
220	89	140	73
215	88	135	72
210	87	130	71
205	86	125	70
200	85	Below 125	0

Add Accuracy Grade to Speed Grade to get score on Part I.

PART II

Possible score 100

Be sure that you have the student's first or second attempt only. Paragraphs must conform to the directions given for Part II. Margins are to be considered correct if they do not miss being even by more than 3 single spaces.

For correct placement 50 points

If top and bottom margins are not even, deduct 20 points

If right- and left-hand margins are not even, deduct 20 points

If the paragraph is accurately written 50 points

Deduct twenty points for each typewriting error up to and including two (2)

Total possible score 100 points

FINAL SCORE

Final Possible Score 100

For the score on the complete test, add the totals for Parts I and II and divide by 3.

Example:

Score on Part I 167

Score on Part II .. 90

3)257

85 or 86

4. Commercial Education Survey Tests

Junior and Senior Typewriting*

This is a diagnostic test, consisting of two batteries: one for Junior or first year typewriting, and one for Senior or second year typewriting. There are five Junior Typewriting tests bound together, and five Senior Typewriting tests, also bound together--of five types each.

In junior typewriting the set of tests consists of a stroking test; a test on the mechanics of the business letter; a test on placement of straight matter; and a test to determine the student's knowledge of the machine, points of form and simple machine mechanics. By the stroking test is meant a short test to determine the stroking rate the student has developed. This is not the regular fifteen minute speed test.

In senior typewriting the test consists of a stroking test; a test of twenty-five questions for the same purpose as that for junior typewriting and covering similar but more advanced points of knowledge; a test on the mechanics of the business letter; and a test on simple tabulation work. The stroking test is the same as that for junior typewriting.⁴²

*Junior and Senior Typewriting Tests, by Jane E. Clem. Published by the Public School Publishing Company, Bloomington, Illinois. (Originally published by State Teachers College, Whitewater, Wisconsin. Copyrighted, 1930.)

42. Report of Wisconsin State-Wide Commercial Education Survey, Bulletin # 158, Whitewater State Teachers College, Whitewater, Wisconsin, (January 1931) p 3.

Each test within the two battery of tests will be presented below in chronological order with the specific directions for giving and scoring the test immediately following, since they vary with each test.

Test 1, Junior and Senior Typewriting

Standard Stroking Test

Test 1 of the Junior and Senior Typewriting Test consists of two stroking tests, Part A and Part B. The stroking test is a short copying test to determine the rate of stroking developed by the student. The time of writing is five minutes, which Miss Clem says, "is short enough to eliminate the element of fatigue and long enough to prevent a high record from a burst of speed."⁴³

The first article of Test 1--Part A, consists of 415 words of which 73% were taken from the Horne list of 1,000 Commonest Words. The second article--Part B, consists of 407 words of which 70% were taken from the Horne list of 1,000 Commonest Words. Part B appears to be the more difficult because it contains figures and longer words. Part A contains 479 words by stroke count while Part B contains 481 words by stroke count. However, in the Wisconsin State-Wide Commercial Education Survey in Typewriting, where this test was used, the results showed that on the whole the better records were made on Part B of Test 1. This was accounted for in two ways. First, the subject was one about which the

43. Report of Wisconsin State-Wide Commercial Education Survey, Bulletin # 158, Whitewater State Teachers College, Whitewater, Wisconsin, (January 1931) p 3.

students had written and talked a great deal--speed and accuracy. Second, the newness of the type of test made the first test more difficult.⁴⁴

Directions and Scoring

Directions:

The teacher should read the directions carefully before the class hour so there will be no difficulty in correctly administering the tests. These tests should not be written on the same day but should be given a day or two apart. Part A should be given first.

Scoring:

Teachers should read the tests through, and carefully check the errors. Each incorrect letter or stroke constitutes an error; that is, any stroke which is not like the copy is incorrect. There may be as many errors as there are strokes in the word. If the same number of words has not been written to the line as in the copy, this is not to be charged as an error.

The number of strokes per minute are determined from the copy of the tests contained in the teacher's key. The strokes per minute are given under each word. The number under the last complete word written by the student is the number of strokes per minute he has written. If any words or letters were repeated, or inserted, the number of strokes per minute are corrected by adding 1 stroke per minute for each 5 strokes repeated in the five minutes; that is, if a

⁴⁴. Bulletin of the Whitewater State Teachers College, op. cit.

word of five letters were repeated, then the strokes per minute would be corrected 1 stroke. If any words or letters were omitted, the number of strokes per minute are corrected by subtracting 1 stroke per minute for each 5 strokes omitted. If less than 5 strokes are inserted, omitted, or repeated, each stroke is charged as an error and the total strokes per minute are not changed.⁴⁵

For each incorrect stroke or error, 10 is subtracted from the total strokes per minute.⁴⁶

In formula form: Strokes per Minute minus (Errors x 10)
equals Stroking Rate.

Test 2, Junior and Senior Typewriting

Business Letter Tests

Test 2 of the Junior and Senior Typewriting Test consists of a business letter for each test. The purpose of these tests is two-fold: first, to test the students' ability to follow instruction; and second, to be of instructional value to the students in their business letter work. The letters are much alike for both tests. In each test, the letter is in a solid paragraph, but in the Senior test it has to be punctuated and capitalized. The letter of the Senior test is a little longer and more difficult.⁴⁷

45. Clem, Jane E., "Commercial Education Survey Tests, Junior and Senior Typewriting," Teacher's Manual, Public School Publishing Company, p 1.

46. Ibid.

47. Report of Wisconsin State-Wide Commercial Education Survey, Bulletin of the Whitewater State Teachers College, #158, (January 1931)

Directions and Scoring

Directions:

The teacher should read through the entire set of instructions with the students but should not read the letter.

Any questions regarding a misunderstanding of the instructions should be answered, but no attempt to supply further information should be given.

The teacher should have the students insert in their machines a sheet of regular $8\frac{1}{2}$ x 11 inch paper.

The signal to begin is given and time is counted from then. Time is called at the end of 25 minutes for the Juniors and 30 minutes for the Seniors, whether they have finished or not.⁴⁸

Scoring:

All errors made in the letter are to be carefully checked, using the model letters given in the key.

The following scheme for scoring the tests of both the Junior and Senior typists is to be used, excepting for Test 1 and Test 3.

The errors made are classified as correctable and uncorrectable. The perfect score should be 25. From this score of 25, 1 is deducted for each correctable error, 2 for each uncorrectable error, and 3 for each line left off in an uncompleted letter. A correctable error is any error that could have been easily corrected by a neat erasure.

⁴⁸. Clem, op. cit., p 1.

For example, any incorrectly written letter or character. An uncorrectable error is an error that could not have been easily corrected by a neat erasure. For example, if words be inserted, repeated, or omitted, if lines are indented that should not be, if incorrect indentations are made, if the letter is too high or low on the page, or if the right and left margins are unequal; each of these would charge one uncorrectable error and should make it easy to detect all other errors of this kind. Letters of a word may be neatly changed but a whole word would be difficult to change. If a letter has but one error and that be a wrong letter struck in a word, the letter would score 24; while if the letter were without error except that it was too high on the page, the score would be 23, because placement would be uncorrectable.⁴⁹

Test 3, Junior Typewriting

Completion Test

Test 3 for the Junior Typewriting is a Completion Test based on machine mechanics. It consists of a list of thirty machine parts and twenty-five questions containing twenty-five blanks to be filled in from the list of parts.

Directions and Scoring

The instructions for the completion test are made very clear in the test directions.

The score for the test should be the number right. The correct answers are given in tabular form in the key. A perfect score would be 25.⁵⁰

49. Clem, op. cit.

50. Ibid.

Test 3, Senior Typewriting

Multiple-Choice Test

Test 3 for the Senior Typewriting is a test of twenty-five questions, which are designed to test the student's knowledge of the machine, points of form and simple machine mechanics. It is a Multiple-Choice Test with two or three statements from which to choose to make a correct statement.

Directions and Scoring

The instructions for the multiple-choice test are also made very clear in the test directions.

The correct word or group of words is to be selected and it's number written on the blank line. The score on the test would be the number right, as checked against the correct answers in the key.⁵¹

Test 4, Junior Typewriting

Placement Test

Test 4 for the Junior Typewriting is called a Placement Test. It is instructional in type and designed to test the student's ability to follow instructions.

Directions and Scoring

Directions:

This test is to be written on regular 8½ x 11 inch paper. The instructions for this test should be followed as suggested for Test 2--The Business Letter Tests.

51. Clem, op.cit.

Scoring:

The scoring plan used is the one suggested for the Business Letter Tests. From the perfect score of 25, 1 for each correctable error is deducted, 2 for each uncorrectable error, and 3 for each line left off in an uncompleted copy. It should be remembered that this is a Placement Test and if written too high or too low or too far to the right or left, each is counted as an uncorrectable error. Since the article, "My Symphoney," is to be written line for line as in the test, there is not given a model of it for correction work in the key.⁵²

Test 4, Senior Typewriting

Tabulation Test

Test 4 for the Senior Typewriting is a Tabulation Test. It is instructional in type and simple in form.

Directions and Scoring

Directions:

The instructions accompanying this test are very complete. All instructions for spacing are based on the standard pica type machine. There should be no questions after the work on the test is begun. Thirty-five minutes are allowed to do the work.

Scoring:

The test is scored by the plan suggested with Test--The Business Letter Tests. From the perfect score of 25, 1 is deducted for each correctable error, 2 for each uncorrectable error, and 3 for each line left off in an uncompleted copy.

52. Clem, op. cit. p 7.

The model on page 8 of the key is used for checking this test.

Test 5, Junior Typewriting

Centering Test

Test 5 for the Junior Typewriting is a Centering Test. It is designed to test the students' judgment and ability to follow instructions.

Directions and Scoring

Directions:

Teachers should be sure they understand the instructions before beginning the work of administering the test. The entire set of instructions should be read with the students, but the methods of centering headlines should not be discussed. Any questions regarding a misunderstanding of the instructions should be answered, but no attempt to supply further information should be made.

After students have inserted in their machines a sheet of regular 8½ x 11 inch typewriting paper, the signal to begin should be given and time counted from then. Time should be called at the end of 20 minutes, whether the students have finished or not.

Scoring:

All errors made in the exercise are to be carefully checked, using the model in the key. The same plan for scoring as used in Test 2 is used. The errors made are classified as correctable and uncorrectable. The perfect score being 25, et cetera. The placement and centering of the headlines are very important in this test and each

count as uncorrectable errors. Incorrect spacing between lines would also be an uncorrectable error.⁵³

Test 5, Senior Typewriting

The Rough Draft Test

Test 5 for the Senior Test is a rough draft test. Like the centering test for Juniors, it is designed to test the student's judgment and ability to follow instructions.

Directions and Scoring

Directions:

The entire set of instructions should be read through with the students but not the rough draft. Any questions regarding a misunderstanding of the instructions are answered, but no attempt to supply further information or answer questions on the reading of the draft are given.

Regular 8½ x 11 inch typewriting paper is used. The signal to begin is given and time counted as in the other tests. Time is called at the end of 30 minutes, whether the students have finished or not.

Scoring:

All errors made in the letter are checked carefully, using the model letter given in the key. The same scoring plan as used in Test 2 is used, classifying the errors made as correctable and uncorrectable. The perfect score will be 25. From this score, 1 is deducted for each correctable error, 2 for each uncorrectable error, and 3 for each line left off in an uncompleted letter.⁵⁴

53. Clem, op. cit., p 11.

54. Ibid., p 9.

The data on standardization of the Junior and Senior Typewriting Tests are as follows:⁵⁵

The final medians are given for Test 1--Stroking Rate--Parts A and B. The median for the Junior Test--Part A, being 155.65, and for Part B, being 159.84.

The median for the Senior Test--Part A, being 214.94 and for Part B, being 219.56.

The tentative medians are given for the other tests except for Test 5. The Tentative Median for Test 2 is 20.1, for Test 3, 20.3 and for Test 4, 23.1.

The standards are based upon testing near the end of the school year. The medians for the stroking tests (Part A and Part B) of Test I were based on one period per day for one year for the juniors and one period per day for two years for the seniors. The length of the period varied from 45 to 60 minutes.

Cost of the tests:

The price of either the Junior or the Senior Test is \$1.00 for 25 copies of the test, or 5¢ a copy in smaller quantities, plus postage; complete sample set (including Junior and Senior Test, one Teacher's manual, and one Record Sheet), 40¢ postpaid.

The Teacher's Manual and Key must be ordered as a separate item at 25¢ a copy, except when ordering a sample set. The same manual serves for both the junior and senior typewriting tests.⁵⁶

55. Class Record Sheet for Junior and Senior Typewriting,

p 1.

56. Haynes, op. cit., p. 274.

COMMERCIAL EDUCATION SURVEY TESTS

JUNIOR TYPEWRITING

Prepared by

JANE E. CLEM

State Teachers College

Whitewater, Wisconsin

Name..... School.....
Date..... City.....
Age: Years..... Months..... State.....
High School Year..... Semester of Typing..... Teacher.....
Weeks of Typing..... Machine Used.....

GENERAL INSTRUCTIONS

1. Do not open this booklet until you are told to do so.
2. Be sure that your name and any other data asked for is written plainly on each test paper.
3. You will be tested in five different kinds of typewriting work. Do not inspect the tests until you are ready to write them.
4. Accuracy will count as much as speed.
5. Do not hurry to finish the tests. Work carefully and thoughtfully through them.

	Strokes per min.	Errors	Stroking Rate	Score
Test 1—Standard Stroking Test—Part A				_____
Test 1—Standard Stroking Test—Part B				_____
Test 2—Business Letter Test	_____		_____	
Test 3—Completion Test	_____		_____	
Test 4—Placement Test	_____		_____	
Test 5—Centering Test	_____		_____	

DO NOT OPEN THIS BOOKLET UNTIL TOLD TO DO SO

TEST 1—STANDARD STROKING TEST—PART A

DIRECTIONS: Write the test on regular 8½ x 11 inch paper.

Set the machine as for a speed test: Margins for a 70-space writing line; tabulator to indent paragraphs five spaces; and line space regulator for DOUBLE SPACING.

DO NOT PRACTICE ON THE TEST BEFORE WRITING. Erasures or corrections are not allowed.

Upon the signal to begin, type the article as given, line for line, writing no faster than you can write accurately. Do not try to finish the whole article. Accuracy will count as much as speed.

STOP INSTANTLY WHEN THE SIGNAL IS GIVEN at the end of the time—5 minutes.

One of the first things a young man or woman should do is to develop a strong, pleasing personality. This can be done by building up the positive qualities of mind and character and eliminating the negative ones. It will require the study and growth of self—the education of all the finer impulses implanted within the soul. Personality is so intangible that it is difficult to define, but generally it is defined thus: Personality is that magnetic outward expression of one's inner life which radiates likeable, pleasing qualities. The young man or woman who would be successful in life must look to his personality as the source of his influence and the measure of his power.

The building of personality is largely in one's own hands. What today we build into thought and action, tomorrow becomes character and personality. Health, initiative, tact, kindness, sense of humor, integrity, morality, open-mindedness, cheerfulness, loyalty, neatness, courtesy, sympathy, courage are all elements of personality that may be built into ourselves, if we so desire. "A man creates himself by his own activity," which means that each individual is a candidate for personality.

The quality of the work one does will have a great deal to do with the quality of his life. If one's work quality is low, his character will be low, his standards low, and his ideals low. Form early the habit of insisting upon the best of which you are capable, demanding the highest, never accepting the lowest, and it will make all the difference between mediocrity or failure and a successful career. Much depends upon the spirit you bring to the task. When you put joy, energy, enthusiasm, and zeal into your work, you really grow and you lose the sense of hardness of the task. It is not necessary that one love his work to succeed at it, but there is no doubt that love applied to labor dignifies it, even may glorify it. It is said that love lubricates the whole human machine with the oil of cheerfulness, and is one of the influential factors of success in any calling, from bootblackening to railroad president. Whatever your work, be it high or low, learn to love it with all your might, for it will be a stepping-stone to something higher, if you are ambitious enough to make it so. Love of work robs it of most of its terrors and makes it a pleasure instead of a labor.

(Begin again at the beginning if time has not been called.)

TEST 1—STANDARD STROKING TEST—PART B

DIRECTIONS: Write the test on regular 8½ x 11 inch paper.

Set the machine as for a speed test: Margins for a 70-space writing line; tabulator to indent paragraphs five spaces; and line space regulator for DOUBLE SPACING.

DO NOT PRACTICE ON THE TEST BEFORE WRITING. Erasures or corrections are not allowed.

Upon the signal to begin, type the article as given, line for line, writing no faster than you can write accurately. Do not try to finish the whole article. Accuracy will count as much as speed.

STOP INSTANTLY WHEN THE SIGNAL IS GIVEN at the end of the time—5 minutes.

The quest of speed and accuracy must be pursued by both teacher and student working together intelligently with a steady, definite purpose as well as a knowledge of the necessary steps in the process. Accuracy is control, both mental and physical. Speed is power, flowing evenly and constantly through the fingers of the typist. Each aids the other. In the beginning of the learning, most of the effort of the learner should be given to getting control, for control gives poise. As control is gained, add power. Never sacrifice an ounce of control for a pound of power. Write as fast as you can accurately but never faster. It is better to write 40 perfect words in one minute than to write 50 words with one error.

Inaccuracy is costly of time, money, effort, and perhaps your position. The typist, therefore, should acquire accuracy, no matter what the cost, for he has a responsibility that is far from trivial. The training in accuracy should start at the beginning of the learning but not with perfect work required. Perfect technique and absolute mental control positively insure accurate work. These should be stressed with the keyboard learning and developed as the learner proceeds. They cannot be acquired if perfect writing is demanded. What is the secret of the skill of the professional golfer? Perfect technique which produces perfect drives. Perfect technique was not a factor of his early training. It had to be acquired by practice. So it should be with the typist.

Every gain in either control (accuracy) or power (speed) must be paid for in the most faithful kind of practice. If you are practicing for accuracy, use a great deal of new matter. When practicing to increase speed, use much repeated matter. Striving for great speed and making many errors is building up a set of responses in the mental, nervous, and muscular equipment that will play you false when you are in a critical place. When you find you are making errors, you should slow up, get your control back, and then continue. Trying to make up lost ground by speeding up beyond your normal ability to write accurately is as unwise as it is for the autoist to exceed the speed limit. Careless practice will reduce one's skill to write well. Be consistent in your practice. It is more productive of results to practice 15 minutes every day than an hour twice a week.

(Begin again at the beginning if time has not been called.)

TEST 2

BUSINESS LETTER TEST

DIRECTIONS: Write the following letter on regular 8½ x 11 inch paper, placing it evenly (top and bottom right and left) on the page. You will be given 25 minutes to write the letter and you are to make but one attempt—NO STARTS AND STOPS, AND STARTING OVER AGAIN. Do not ask questions of your neighbor.

FOLLOW CAREFULLY THE INSTRUCTIONS THAT ARE GIVEN BELOW.

Use a 50-space line. Write the letter single-spaced, double spacing between paragraphs. Use open punctuation in the Heading and Address.

For the Heading use Chicago, Illinois, and the current date. Write the Heading with the city and state on the same line, beginning at 40 on the scale. Write the current date a single space below these, beginning at 45 on the scale. Space down six single line spaces and write the first line of the Address. A single space below and five spaces from the margin, write the second line of the Address. A single space below and ten spaces from the margin, write the third line of the Address, which is Madison, Wisconsin. A double space below the Address, write the Salutation on the margin; a double space below the Salutation begin the body of the letter, indenting the paragraphs five spaces; and use single-spacing for the body and double spacing between paragraphs. At the conclusion of the body of the letter, write the Complimentary Close a double space below and at 35 on the scale. A double space below the Complimentary Close and at 40 on the scale, write the company name in capitals. Four spaces below this and at 45 write Service Department. A single space below and on the left margin write in capitals the initials of the dictator and the stenographer, separating them with a colon.

No erasures or corrections are to be made and but one attempt.

¶ Mr. Sidney L. Greeley, 223 Clifford Court, Madison, Wisconsin. Dear Mr. Greeley: We take pleasure in announcing the appointment of Mr. R. M. Bartelt, of Chicago, as manager of our Madison office. ¶ Mr. Bartelt is undoubtedly well known to you, as for nearly ten years he has been associated with the management of the Wisconsin activities of our company. ¶ Bloom-Greenbaugh Company appreciates your past patronage and solicits a continuance of your business. We are constantly alert to ways and means of giving our customers the best possible service and are always broadening our activities to meet their needs. ¶ Through Mr. Bartelt we offer you the entire investment facilities of our house, both in advising you and in handling the sale of your securities advantageously if a trade would prove profitable. He will be glad to cooperate with you in every way possible in the handling of your investment requirements. ¶ We hope that we may have the pleasure of serving you. Yours very truly, BLOOM-GREENBAUGH COMPANY, Service Department. (170 words)

The dictator of the letter is Mr. A. T. Bloom, and his stenographer is Ethel Waters.

TEST 3

COMPLETION TEST

DIRECTIONS: In the column at the right are 30 names of parts of the typewriter listed alphabetically. In the blank space in each statement at the left, place the number that appears before the part of the typewriter which you would use. Thus "7" has been placed in the sample exercise below, as the right cylinder knob is used to insert paper, and as "7" is the number appearing before "Cylinder knob."

SAMPLE: The right 7 is used to insert the paper.

You will be given 15 minutes to complete this test.

-
- | | |
|---|--------------------------|
| 1. The hold the paper firmly against the cylinder. | 1. Back spacer |
| 2. The paper lies against the while in the machine. | 2. Bell |
| 3. The indicates that a line is nearly completed. | 3. Card holder |
| 4. Paper will not feed into the machine if the is depressed. | 4. Carriage |
| 5. In placing paper in the machine for writing, the is twirled away from the operator. | 5. Carriage release |
| 6. The is used to throw the carriage at the end of each line. | 6. Cylinder |
| 7. The regulates the spacing between lines. | 7. Cylinder knob |
| 8. The is used to space between words. | 8. Finger keys |
| 9. The are used to regulate the length of lines. | 9. Front scale |
| 10. The is used to indent paragraphs. | 10. Keyboard |
| 11. The is always thrown, never pulled back, at the end of each line. | 11. Line space gauge |
| 12. The consists of 42 keys. | 12. Line space lever |
| 13. The directs the paper into the machine. | 13. Margin stops |
| 14. The are used to capitalize. | 14. Margin stop release |
| 15. The disengages the line space gauge to write on ruled paper or between lines. | 15. Paper clamps |
| 16. The is used to write a line of capitals. | 16. Paper-edge guide |
| 17. The permits writing outside the margins without changing or readjusting the margin stops. | 17. Paper release |
| 18. The is used for measuring the length of typewritten lines, for setting margin stops, and for setting the carriage at any given point. | 18. Paper rest |
| 19. The is used to bring the carriage back a few spaces. | 19. Ribbon |
| 20. The is used to move the carriage back many spaces. | 20. Ribbon key |
| 21. The is used to remove the paper from the machine. | 21. Ribbon spools |
| 22. The paper is rolled around the while in the machine. | 22. Shift keys |
| 23. The is used to change from the upper to the lower edge of the ribbon. | 23. Shift lock |
| 24. The will firmly hold stiff paper or cards in place for writing. | 24. Space bar |
| 25. The are in the type basket. | 25. Stencil lever |
| | 26. Tabulator key |
| | 27. Tabulator rack |
| | 28. Type bars |
| | 29. Type guide |
| | 30. Variable line spacer |

TEST 4

A PLACEMENT TEST

DIRECTIONS: Write the following article on regular $8\frac{1}{2} \times 11$ inch paper, following the directions specifically to insure correct placement and form. You will be given 25 minutes to write the article. You are to make but one attempt—NO STARTS AND STOPS, AND STARTING OVER AGAIN. Do not ask questions of your neighbor.

FOLLOW CAREFULLY THE INSTRUCTIONS GIVEN BELOW.

Use a 40-space line. Write the article double spaced with four spaces between the title and the article. Write the title in all capitals.

Use the following plan to place the article correctly up and down on the sheet: Count the number of lines the article contains. Add to this the title. Add to this one less than the number of lines for the space required by the double space between lines. Add three for the space between the title and the article. You should have as a result one of the following numbers—28, 29, 30, 31. There are 6 single line spaces to an inch, and since your paper is 11 inches long, it contains 66 line spaces. Subtract this number—28, 29, 30, or 31—from 66 and you have the number of blank spaces for the top and bottom. Divide this number by two and you will have the number of line spaces to make at the top before writing the title. If this be an odd number, like 27, put the extra line space at the top of the article, as 14 top and 13 below. Space down from the top margin of the paper and write the title, then continue with the article. Write it line for line as given below.

MY SYMPHONY

To live content with small means;
to seek elegance rather than luxury,
and refinement rather than fashion; to
be worthy, not respectable and wealthy,
not rich; to study hard, think quietly,
talk gently, act frankly; to listen to
stars and birds, to babes and sages,
with open heart; to bear all cheerfully,
do all bravely, await occasions, hurry
never; in a word, to let the spiritual,
unbidden, and unconscious grow up through
the common; this is my symphony.

—Channing.

TEST 5

CENTERING TEST

DIRECTIONS: Write the following Shakespearian titles on regular 8½ x 11 inch paper. Write each title in all capitals. Center each title in the line. Separate them by four single line spaces. Start the first title 17 single line spaces from the top. This should equalize the space top and bottom.

You will be given 20 minutes to write the exercise. You are to make but one attempt. DO NOT STOP AND START AGAIN. Do not ask questions of your teacher or neighbors.

Macbeth

Julius Caesar

Romeo and Juliet

The Merchant of Venice

A Midsummer Night's Dream

Much Ado About Nothing

King Henry VIII

Twelfth Night

Hamlet

COMMERCIAL EDUCATION SURVEY TESTS

SENIOR TYPEWRITING

Prepared by

JANE E. CLEM

State Teachers College

Whitewater, Wisconsin

Name..... School.....
Date..... City.....
Age: Years..... Months..... State.....
High School Year..... Semester of Typing..... Teacher.....
Weeks of Typing..... Machine Used.....

GENERAL INSTRUCTIONS

1. Do not open this booklet until you are told to do so.
2. Be sure that your name and any other data asked for is written plainly on each test paper.
3. You will be tested in five different kinds of typewriting work. Do not inspect the tests until you are ready to write them.
4. Accuracy will count as much as speed.
5. Do not hurry to finish the tests. Work carefully and thoughtfully through them.

	Strokes per min.	Errors	Stroking Rate	Score
Test 1—Standard Stroking Test—Part A				
Test 1—Standard Stroking Test—Part B				
Test 2—Business Letter Test				
Test 3—Multiple-Choice Test				
Test 4—Tabulation Test				
Test 5—Rough Draft Test				

DO NOT OPEN THIS BOOKLET UNTIL TOLD TO DO SO

TEST 1—STANDARD STROKING TEST—PART A

DIRECTIONS FOR THE TEST: Write the test on regular $8\frac{1}{2} \times 11$ inch paper.

Set the machine as for a speed test: Margins for a 70-space writing line; tabulator to indent paragraphs five spaces; and line space regulator for DOUBLE SPACING.

DO NOT PRACTICE ON THE TEST BEFORE WRITING. Erasures or corrections are not allowed.

Upon the signal to begin, type the article as given, line for line, writing no faster than you can write accurately. Do not try to finish the whole article. Accuracy will count as much as speed.

STOP INSTANTLY WHEN THE SIGNAL IS GIVEN at the end of the time—5 minutes.

One of the first things a young man or woman should do is to develop a strong, pleasing personality. This can be done by building up the positive qualities of mind and character and eliminating the negative ones. It will require the study and growth of self—the education of all the finer impulses implanted within the soul. Personality is so intangible that it is difficult to define, but generally it is defined thus: Personality is that magnetic outward expression of one's inner life which radiates likeable, pleasing qualities. The young man or woman who would be successful in life must look to his personality as the source of his influence and the measure of his power.

The building of personality is largely in one's own hands. What today we build into thought and action, tomorrow becomes character and personality. Health, initiative, tact, kindness, sense of humor, integrity, morality, open-mindedness, cheerfulness, loyalty, neatness, courtesy, sympathy, courage are all elements of personality that may be built into ourselves, if we so desire. "A man creates himself by his own activity," which means that each individual is a candidate for personality.

The quality of the work one does will have a great deal to do with the quality of his life. If one's work quality is low, his character will be low, his standards low, and his ideals low. Form early the habit of insisting upon the best of which you are capable, demanding the highest, never accepting the lowest, and it will make all the difference between mediocrity or failure and a successful career. Much depends upon the spirit you bring to the task. When you put joy, energy, enthusiasm, and zeal into your work, you really grow and you lose the sense of hardness of the task. It is not necessary that one love his work to succeed at it, but there is no doubt that love applied to labor dignifies it, even may glorify it. It is said that love lubricates the whole human machine with the oil of cheerfulness, and is one of the influential factors of success in any calling, from bootblackening to railroad president. Whatever your work, be it high or low, learn to love it with all your might, for it will be a stepping-stone to something higher, if you are ambitious enough to make it so. Love of work robs it of most of its terrors and makes it a pleasure instead of a labor.

(Begin again at the beginning if time has not been called.)

TEST 1—STANDARD STROKING TEST—PART B

DIRECTIONS FOR THE TEST: Write the test on regular 8½ x 11 inch paper.

Set the machine as for a speed test: Margins for a 70-space writing line; tabulator to indent paragraphs five spaces; and line space regulator for DOUBLE SPACING.

DO NOT PRACTICE ON THE TEST BEFORE WRITING. Erasures or corrections are not allowed.

Upon the signal to begin, type the article as given, line for line, writing no faster than you can write accurately. Do not try to finish the whole article. Accuracy will count as much as speed.

STOP INSTANTLY WHEN THE SIGNAL IS GIVEN at the end of the time—5 minutes.

The quest of speed and accuracy must be pursued by both teacher and student working together intelligently with a steady, definite purpose as well as a knowledge of the necessary steps in the process. Accuracy is control, both mental and physical. Speed is power, flowing evenly and constantly through the fingers of the typist. Each aids the other. In the beginning of the learning, most of the effort of the learner should be given to getting control, for control gives poise. As control is gained, add power. Never sacrifice an ounce of control for a pound of power. Write as fast as you can accurately but never faster. It is better to write 40 perfect words in one minute than to write 50 words with one error.

Inaccuracy is costly of time, money, effort, and perhaps your position. The typist, therefore, should acquire accuracy, no matter what the cost, for he has a responsibility that is far from trivial. The training in accuracy should start at the beginning of the learning but not with perfect work required. Perfect technique and absolute mental control positively insure accurate work. These should be stressed with the keyboard learning and developed as the learner proceeds. They cannot be acquired if perfect writing is demanded. What is the secret of the skill of the professional golfer? Perfect technique which produces perfect drives. Perfect technique was not a factor of his early training. It had to be acquired by practice. So it should be with the typist.

Every gain in either control (accuracy) or power (speed) must be paid for in the most faithful kind of practice. If you are practicing for accuracy, use a great deal of new matter. When practicing to increase speed, use much repeated matter. Striving for great speed and making many errors is building up a set of responses in the mental, nervous, and muscular equipment that will play you false when you are in a critical place. When you find you are making errors, you should slow up, get your control back, and then continue. Trying to make up lost ground by speeding up beyond your normal ability to write accurately is as unwise as it is for the autoist to exceed the speed limit. Careless practice will reduce one's skill to write well. Be consistent in your practice. It is more productive of results to practice 15 minutes every day than an hour twice a week.

(Begin again at the beginning if time has not been called.)

TEST 2

BUSINESS LETTER TEST

Write the following letter on regular 8½ x 11 inch paper, placing it evenly (top and bottom, right and left) on the page. You will be given 30 minutes to write the letter and you are to make but ONE ATTEMPT. Do not ask questions of your neighbor. YOU ARE NOT TO STOP AND START OVER AGAIN.

FOLLOW CAREFULLY THE INSTRUCTIONS THAT ARE GIVEN BELOW.

Use a 65-space line. Write the letter single-spaced, double spacing between paragraphs. Use closed punctuation. The letter is given below without capital letters or sentences indicated, except where new paragraphs are to be begun. All commas have been supplied in the body of the letter.

As a Heading use only the current date, starting this at 50 on the scale. Use the semi-block letter form. Therefore, the lines of the Address should be blocked and the paragraphs indented 5 spaces. The Complimentary Close is blocked at 35 with the company signature and Department. Write the company name in capital letters and leave four spaces between it and the Department. Dictator initials will not be used, but use your own initials on the left margin for the stenographer.

Erasures or corrections are not to be made and but ONE ATTEMPT.

mr john e mckeever 108 esterley avenue whitewater wisconsin dear sir the buick motor company takes great pride in inviting you to inspect the new marquette—a new six built by buick already the new marquette has made a magnificent showing in this vicinity. The experience of twenty-five years of fine motor car manufacture has gone into the marquette all the evidences of buick manufacture are present in this fine car—the excellence of its materials—the precision of its workmanship—the inventiveness of buick engineers. The new marquette is a brilliant response to an obvious need the many millions of buick friends are certain to sound words of praise for the marquette they know that in the marquette, buick has built a car which stands alone as a performer in its price class many buick owners have decided that the happiest combination possible is a buick and a marquette side by side in their garages others who have always wanted a car of buick manufacture, at a lower price than buick, have found the marquette to be just what they desire. The new marquette is comfortable it is safe and powerful, easy to drive, nimble in traffic, and covers long distances with dispatch and finish it is the fastest, the most powerful, the most luxurious, and, in our opinion, the most beautiful car ever sold at a price so low. Try the marquette remember that it is backed by the same authorized service that has added to the pleasure of buick ownership for years. very truly yours, buick sales & service company, sales department

TEST 3

MULTIPLE-CHOICE TEST

DIRECTIONS: Read each statement and select the word or group of words which makes a correct statement. Write the number of the correct word or group of words with pen or pencil on the blank line. Time: 15 minutes.

EXAMPLE: A solid line is made by the use of b

- a. the hyphen
- b. the underscore
- c. the period

-
1. The Standard keyboard has
 - a. 42 character keys.
 - b. 38 character keys.
 - c. 44 character keys.
 2. The home position is on the
 - a. Third row of keys.
 - b. Second row of keys.
 - c. First row of keys.
 3. The space bar should be operated by
 - a. Alternate thumbs.
 - b. The first finger.
 - c. The right thumb.
 4. The carriage should be returned by
 - a. Drawing it across.
 - b. Throwing it with the carriage lever.
 - c. Pushing it across and then spacing.
 5. At the ends of sentences there should be
 - a. One space.
 - b. Two spaces.
 - c. Three spaces.
 6. The back spacer should be operated with
 - a. The fourth finger.
 - b. The second finger.
 - c. The first finger.
 7. Paragraphs should be indented
 - a. Five spaces.
 - b. Three spaces.
 - c. Ten spaces.
 8. The letter b is struck with
 - a. The first finger of the left hand.
 - b. The first finger of the right hand.
 - c. The second finger of the left hand.
 9. The apostrophe is used
 - a. For quotation marks.
 - b. To denote possession.
 - c. To indicate seconds.
 10. The typist should sit
 - a. With one foot in advance of the other.
 - b. With the feet together.
 - c. With the feet resting on a round of the table.
 11. The back spacer should be used
 - a. To strike one letter over another and correct an error.
 - b. To restrike a letter that failed to print.
 - c. To return the carriage to the beginning of the line.

TEST 3 (CONTINUED)

12. If the bell rings on the first letter of the word *extreme*, it should be divided
 - a. Ex-treme.
 - b. Ext-reme.
 - c. Extr-eme.
13. The carriage scale of the pica-type machine has
 - a. Ten spaces to an inch.
 - b. Twelve spaces to an inch.
 - c. Fifteen spaces to an inch.
14. There are
 - a. Five single line spaces to an inch.
 - b. Six single line spaces to an inch.
 - c. Eight single line spaces to an inch.
15. To write the "@"
 - a. Use the right shift key.
 - b. Use the left shift key.
 - c. Shifting is not necessary.
16. When writing the Roman numeral one, use
 - a. Small "l".
 - b. Capital "I".
17. The colon is followed by
 - a. One space.
 - b. Two spaces.
18. If six words are omitted in a speed test, the writer should be charged
 - a. With one error.
 - b. With six errors.
19. When writing tabulated matter, it is best
 - a. To write across columns by using the tabulator.
 - b. To write a column at a time.
20. If five words are repeated in a speed test, the writer should be charged
 - a. With one error.
 - b. With five errors.
21. The semicolon is always followed by
 - a. One space.
 - b. Two spaces.
22. Figures are counted as words
 - a. By groups of three.
 - b. Regardless of the number of digits they contain.
23. The lines of a speed test can be no longer
 - a. Than 76 spaces.
 - b. Than 77 spaces.
24. The lines of a speed test can be no shorter
 - a. Than 60 spaces.
 - b. Than 61 spaces.
25. A shift character charges as an error if
 - a. The letter is raised but all of it is clear.
 - b. The letter is raised and the top is indistinct.

TEST 4

THE TABULATION TEST

Write the following data in tabulated form. You will be given 35 minutes to do the work and you are to make but ONE ATTEMPT. Do not stop and start over again. You are not to make erasures or corrections.

Read all the instructions given below before you begin the test.

Use regular 8½ x 11 inch paper. Set the left margin stop at 8.

Center the first headline on the 18th single line space from the top of the page. Write it in capitals and underscore. Center the second headline a double space below the first heading and write it in capitals. Center the third headline a double space below the second heading and begin the first word with a capital letter.

Make the first line of horizontal ruling on the third single line space below the third headline. All horizontal lines may be ruled with the underscore on the shift of figure-6 key. The first vertical ruling should be one space to the left of the first column and the last vertical ruling should be at 73 on the scale. The other vertical rulings may be determined from the points of tabulation.

Allow a double space between the items and between the items and rulings with the following exceptions: (1) allow a single space between "Games" and "Won-Lost;" (2) allow a single space between "Won-Lost" and the second line of horizontal ruling; (3) allow a single space between the last line of tabulations and the bottom horizontal rule.

Set the tabulator stops for the columns of figures at the following points: 25, 34, 43, 54, and 66. Center the column heads in the spaces provided. Rule like the copy. The vertical lines should be ruled with pen or pencil.

MIDWEST COLLEGE CONFERENCE

BASKETBALL STANDINGS

Season 1929-1930

Colleges	Games		Per-centage	Total Points	Opponents' Points
	Won	Lost			
Carleton	7	0	1.000	260	141
Monmouth	5	1	.833	144	111
Beloit	5	2	.714	172	178
Knox	4	3	.571	170	194
Lawrence	3	3	.500	175	147
Ripon	4	4	.500	233	218
Coe	2	5	.286	191	205
Cornell	1	6	.143	149	191
Hamline	0	7	.000	183	302

TEST 5
ROUGH DRAFT TEST

Write the following letter on regular 8½ x 11 inch paper, placing it evenly (top and bottom, right and left) on the page. You will be given 30 minutes to write the letter. You are to work it out as you write, making but one copy—NO STARTS AND STOPS. Think, as you work. Do not ask questions of your neighbor or your teacher. Erasures or corrections are not to be made.

FOLLOW CAREFULLY THE INSTRUCTIONS AS GIVEN BELOW.

Use a 50-space line. Write the letter SINGLE-SPACED, double spacing between paragraphs. Use closed punctuation in the Heading and Address.

Make all corrections indicated. Begin the street address at 35. Write the city and state on a separate line, beginning at 40 on the scale. Write the date a single space below, beginning at 45 on the scale. Make six single line spaces and write the first line of the Address. Indent each line of the Address five spaces beyond the preceding one and single space them. Write the Complimentary Close a double space below the last line of the body of the letter and at 35 on the scale. A double space below it and at 40 on the scale, write the company name in all capitals. Four spaces below this and at 45 on the scale, write Manager. A single space below and on the left margin, write in capitals the initials of the dictator and stenographer, separating them with a colon.

1320 E. 57th Street
Chicago, Ill.

July 2, 1930.

Miss Margaret M. Walters,

The Gladstone Hotel,

6200 Kenwood Avenue,

Chicago, Ill.

Dear Miss Walters:

A specialist was required in the subject matter to write your thesis. A specialist is required in the form for the typing.

The Department of Education of the University of Chicago is particular about the most minute details of form. It specifies the capitalization, punctuation, and spacing of every part of a thesis from the indices to the bibliography and appendices. We are familiar with these requirements, as well as with those of the university and library.

This special knowledge is particularly valuable in putting your manuscript in correct typewritten form.

Whether on a first draft or on the final library copies, you may be sure that the work turned out by this office will be neatly and accurately typed, with clear carbons and in full conformance with all university requirements.

We hope that we may be of service to you in any Theme, Thesis, or Manuscript work of any kind. Our prices are standard. You may call at your convenience, day or evening.

Yours very truly,

STUDENTS' TYPING SERVICE

Manager.

vec-em

5. Examination in Typing: Form A*
of the
Thurstone Employment Tests

This test, which was originally published under the title "Proficiency Test for Typists," is one of the earliest standardized stenographic tests.⁵⁷ It is designed for use as an employment test. The interviewer when hiring a typist is often uncertain as to the ability of the applicant as a typist. To assist in judging ability in typing, this examination has been arranged containing samples of the kind of work that a typist is called upon to do, including his ability to spell. This test has been standardized for determining five different levels of proficiency, so that with the help of the rating made on the test in accuracy and speed, or in these two qualities combined, the employment department will be able to ascertain with considerable reliability whether a given applicant is qualified for the position he has to fill, without hiring the person or actually trying him out. Also, with the help of the information given by such measurements, a person when hired may be placed in the position for which he is best qualified by previous training.⁵⁸

*Examination in Typing: Form A, of the Thurstone Employment Tests, by L. L. Thurstone. Published by the World Book Company, Yonkers-on-Hudson, New York. Copyright, 1922.

57. Odell, C. W., Educational Measurement in High School, The Century Company: New York, (1930)

58. Book, W. F., "How Progress in Learning to Typewrite Should be Measured and Why," Business Education World, (October 1934) p 101.

The test consists of three parts. The first part is a two-hundred-word typed copy, revised and corrected in longhand, which is to be typed in correct form. The second part consists of ten items each containing the name of a state, an amount of money, a statement as to means of shipping and a date. These are to be tabulated and typed. In the third part are forty-eight words of which twelve misspelled ones are to be crossed out.

No time limit is set, but the time consumed by an individual taking the test is recorded. Few persons require more than thirty minutes and many less than that.

For the types of work covered in the test, it possesses satisfactory validity.⁵⁹

Directions for Giving and Scoring the Test

Giving:

The test should be given where the applicant may work without being disturbed. He is given a copy of the Examination in Typing and asked to fill out the blanks on the first page. When the applicant has filled the blanks properly, the "Starting Time" is recorded in the space provided in the upper left-hand corner of the first page. The applicant is told to proceed with the examination, following the directions on each page, and to return the booklet to the administrator when he has finished. When the applicant returns the booklet, the "Finishing Time" is recorded.⁶⁰

59. Odell, op. cit.

60. L. L. Thurstone, Examination in Typing Manual, p 1.

Scoring:

The score in each test is expressed in terms of errors. The Error Score in Test 1 is found by giving one point for each erasure or corrected error and two points for each uncorrected error. Errors include the following: striking the wrong letter, improper spacing, omission of a word, transposition of words or letters, piling letters at end of line or elsewhere, failure to start line at starting point, deviation from copy in punctuation, paragraphing, capitalization et cetera, faulty use of shift key, use of single spacing, and lack of uniformity in paragraphing. Only one error in any one word is counted.⁶¹

The Error Score in Test 2 is found by giving one point for each corrected error and two points for each uncorrected error. Errors include the following in addition to those mentioned in Test 1: (a) Any failure to align the initial letters of the items in Columns 1, 2, and 4, or the decimal points in Column 2. (b) The following arrangements are considered correct; any other arrangement is an error: the items may be arranged as they occur in the original copy, in chronological order, in order of amount, beginning either with largest or smallest, in alphabetical order by states, or in classes according to manner of shipment.

The Error Score in Test 3 is found by giving one point for each error. Errors include failure to mark misspelled words and marking correctly spelled words.

61. Thurstone, L. L., Examination in Typing: Form A Manual, p 1-2.

Two scores are provided for, one for errors and the other for speed, and also a combined score. They are interpreted as follows:⁶²

Error Score	Total Time	Combined Error-and-Time Scores	Rating	Interpretation
0 - 10	14 or less	30 or less	A	Very Superior
11 - 20	15 - 24	31 - 50	B	Superior
21 - 30	25 - 29	51 - 70	C	Average
31 - 50	30 - 34	71 - 80	D	Inferior
51 or more	35 or more	81 or more	E	Very Inferior

Cost of the test:

Each test, of eight pages, is put up in packages of 25 tests with manual and key. The price per package is \$1.50 net, transportation additional.

A specimen set is priced at 15¢ each.

62. Thurstone, op. cit., p 2.

Finishing Time	
Starting Time	
Total Time	
Total Error Score	
Combined Score	
Speed Rating	
Accuracy Rating	
Combined Rating	

Test	Error Score
1	
3	
Total	

EXAMINATION IN TYPING: FORM A

Fill the following blanks, giving your name, age, etc. Do not open or turn over the booklet until you are told to do so.

Name..... Age.....
First name Initial or middle name Last name

Address.....
..... Phone

Date.....19..... Nationality..... Church.....

For what position are you applying?.....

Education

What grade did you reach in public school?..... How old were you when you left public school?.....

What courses have you had in business school?

Courses

Time spent

.....
.....
.....

How old were you when you left business school?.....

Employment

Are you now employed?..... If not, how long is it since you have worked?

Name of firm where last (or now) employed..... Line of business

Address of firm..... Phone.....

Kind of work done..... How long employed?

Why did you leave?.....

Name of firm where employed just previously..... Line of business

Address of firm..... Phone.....

Kind of work done..... How long employed?.....

Why did you leave?.....

Experience

How long have you worked at:

Stenography?..... Dictaphone?..... Typing?.....

Filing?..... Bookkeeping?..... Mimeographing?.....

Multigraphing?..... Other machines?.....

References

Give the names and addresses of two or more persons who know you well.

.....
.....

When you have finished filling the blanks on this page, show your paper to the examiner. Do not begin the examination until you are told to do so.

Both speed and accuracy are important in this examination. In general, each error counts the same as one minute of time. Gauge your speed accordingly.

Test 1

Have you written your name on the first page? If not, do so.

The following is some typewritten copy which has been corrected by the author after its first writing. You are to typewrite this in its proper form. Make all the changes as indicated so that your own typewritten copy will be clean. Both speed and accuracy are important. Tear off page 3 for this test. Use double spacing. Correct any errors you have made which will not take more than 1 minute each.

The typical business man is an optimist. For him, the future is full of possibilities that have never been realized in the past. He is not, however, a ^{day-}dreamer, but ^{who uses his} one ~~whose~~ ¹ imagination is ~~used~~ ^{formulating} in ~~setting up~~ purposes which lead to immediate action. His powers of execution ~~and planning~~ ^{as} often surpass that of his imagination, and he is ~~often~~ ^{frequently} surprised to ~~have~~ ^{see} realized ¹ his vision in less time than he had even dared ^{to} hope.

~~In truth,~~ The advertisers [#] may well be regarded as typical of the class ~~class~~ of American business men. At a time when many ~~advertisements~~ ^{constructed} were poorly ~~made up~~ and ~~were~~ given only limited circulation, certain enterprising men saw the possibilities of advertising and began systematically to improve the profession of advertising as a ~~whole~~ ^{to construct}. Artists were employed ~~in order that~~ appropriate illustrations ~~might be made~~, and skilled ~~skilled~~ typographers vied with each other in ~~presenting~~ ^{setting up} the text in the most artistic and legible manner possible. ————— No P —————

No P Business system was used in ascertaining the amounts of circulation of various publications as well as ^{The} kinds ^{of circulation}. Advertisements were keyed, and many other means were employed to ~~determine~~ ^{discover} ~~what~~ ^{each} was the exact value of ~~certain~~ ^{each} styles of advertisements and ~~what~~ ^{of each} was the best medium in which ~~to insert~~ ^{were} ~~them~~ ^{ed.}.

advertisements

Tear off this page and use it for typewriting Test 1.

Typewrite your name here: _____

First name

Initial or middle name

Last name

Do not write here

Errors Corrected ()

Er. Uncor. () $\times 2 =$ ()

Error Score (Sum) ()

Test 2

When you have finished Test 1 you will tear off this page and see page 7 for further instructions.

Do not write here

Typewrite your full name here:

First name

Initial or middle name

Last name

Errors Corrected.....()

Er. Uncor. () $\times 2 =$ ()

Error Score (Sum).....()

STATE	AMOUNT OF PURCHASE	HOW SHIPPED	DATE

The following paragraph contains a number of items which are to be typewritten and tabulated in the blank you have just torn off. Be sure to enter the items under the proper headings. Make your lines double spaced. Any error you can correct in less than 1 minute is worth correcting.

New York, \$24.40, Parcel Post, Jan. 22, 1917; —
 Pennsylvania, \$441.16, Express, May 17, 1915; —
 Massachusetts, \$616.42, Freight,
 Feb. 12, 1916; — Connecticut, \$22.60, Express,
 Dec. 13, 1916; — Ohio, \$817.48, Freight,
 Jan. 16, 1917; — Massachusetts, \$436.14,
 Freight, July 16, 1916; — New York, \$48.92,
 Parcel Post, June 29, 1917; — New York,
 \$317.89, Freight, Nov. 10, 1915; — Connecticut,
 \$9.17, Parcel Post, Apr. 14, 1916; — Penn-
 sylvania, \$416.40, Express, Oct. 18, 1915.

Test 3

The following list contains a number of words, some of which are misspelled. Cross out the misspelled words. Do not mark the correct words.

address	superintendent	bulletin	ascertain
referred	essential	supersede	advertise
bookkeeping	privilege	agreeable	guarantee
changeable	systematize	indebtedness	ninteenth
miscellaneous	alright	ommitted	serviceable
preferable	seperate	occasionally	secretary
corroborate	procede	goverment	dependent
committee	awkward	advisable	already
compeling	accommodate	dissatisfaction	withold
comparative	noticeable	appreciate	fullfill
maintenance	seize	accessable	beginning
transferred	recurrence	column	disappoint

Error Score.....

CHAPTER V

CONCLUSIONS

Summary

The need of adequate ways and means of testing instruction in typewriting has been felt for several years.

In a manipulative-skill subject such as typewriting, teachers favor a testing program which enables them to check their results with the requirements of the business office, and which is based on adequate research and experimentation.

Typewriting tests of the past have too often failed to cover the field adequately. The early copying tests used to measure speed and accuracy have aided much in the attainment of typing skill and should not be omitted from the testing program. The problem is to supplement them with tests which will measure the ability of each individual student to do those things which he will be called upon to do in the business office.

The main criticism of the present method of preparing typists and office workers for the initial job is that classroom procedure is entirely different from actual office conditions.

The recent trend to measure more than speed and accuracy of copying in typing is indicative that testing in typewriting is well started on its way to reaching the final objective of all such courses, that is, occupational competency up to the minimal employment standards of offices.

A definite need for uniformity and standardization of teaching results is more important now than ever before. If, due to the present war emergency, the typing and occupational standards are lowered, the current trends and improvements in the training program will be lost.

Teachers of business education are being reminded constantly by leading business educators to remember the reconstruction period that is to come, and that only the fittest will be able to hold their own then.

This challenge demands not the lowering of standards of achievement in business training, but better and more effective teaching, which in turn demands more efficient measuring of teaching results.

Proper testing involves the careful selection of scientific measuring instruments, the correct use of the tests, and competent evaluation of test results.

The number of available standardized tests in typewriting is quite small. An investigation as to the number available revealed only five listed: Typewriting Ability Test, prepared under the direction of the Joint Committee on Testing, Representing the National Office Management Association and The National Council of Business Education; Kauzer Typewriting Tests prepared by Adelaide Kauzer and H. E. Schrammel; The Blackstone Stenographic Proficiency Tests, Typewriting Test, Forms B, C, D, E, by E. G. Blackstone; the Commercial Education Survey Tests, Junior Typewriting; Senior Typewriting, by Jane E. Clem; and the Examination in Typing: Form A, by L. L. Thurstone. The first three tests are listed

as survey tests; the latter two are listed as diagnostic tests.

It is important that one, who is selecting a test, know the distinctive qualities of a good test. A satisfactory test should possess to a high degree validity, reliability, objectivity, ease of administration, and should be reasonably priced.

The attempt has been made to present the information concerning tests and measurements in typewriting that will aid in producing better testing programs.

In so far as possible, the study represents an unbiased analytical description of the five standardized typewriting tests found.

Recommendations

From an analysis of the available tests in typewriting and related literature it is recommended that more use be made of those standardized tests that are available, since apparently there is a definite need for more uniform and scientific measuring.

There is a general agreement that the straight-copy speed test does not measure achievement in terms of occupational requirements; therefore it is recommended that less use of such tests be made, and that the production tests which measure samplings of actual office work be utilized more fully.

It is further recommended that the need for substitution of office standards for the classroom standards in appraising typewriting work be recognized by business educators; that

they be more realistic in their vocational typewriting work and cease to adhere to the more or less traditional and artificial standards, thereby bringing the goal they have set for themselves--preparation of their typewriting students for the jobs that will be open to them--one step nearer.

It is also recommended that teachers of business education assume leadership in promoting construction of more standardized tests, particularly in typewriting, since the need for such tests is substantiated by their very scarcity. Much remains to be done in this field.

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D. AGENCIES SUPPLYING TESTS

- Joint Committee on Tests, Representing National Office Management Association and National Council of Business Education--Lawrence Hall, Cambridge, Massachusetts.
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- World Book Company, Yonkers-on-Hudson, New York.

E. MISCELLANEOUS

- Dr. Paul A. Carlson, "Tests and Measurements in Business Education," Lecture delivered at Oklahoma A. and M. College, Sixth Annual Summer Conference on Business Education, June 12, 1942.

Typist: Vivian Phillips