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#### CAN SHORTHAND SUCCESS BE ACCURATELY PREDICTED

#### BY ANY AVAILABLE CRITERIA?

(TITLE)

BY

#### JUDITH ANN BAKER SNYDER

#### PLAN B PAPER

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF SCIENCE IN EDUCATION AND PREPARED IN COURSE

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1968

I HEREBY RECOMMEND THIS PLAN B PAPER BE ACCEPTED AS FULFILLING THIS PART OF THE DEGREE, M.S. IN ED.

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This paper will investigate the problem of determining accurate criteria for predicting success in shorthand. Shorthand is a complicated skill made up of many factors, and it is extremely difficult to devise a prognostic instrument that can accurately measure ability in all these factors necessary for shorthand success. Noted authorities opinions and current writings in the field concerning shorthand prognosis will be investigated to determine if there are reliable criteria available for prognosis.

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# Can Shorthand Success Be Accurately Predicted by Any Available Criteria?

#### Introduction

#### Reason for Investigation

There are several major reasons that prompt an investigation of criteria for shorthand prognosis. First, shorthand unlike many of the courses in the high school curriculum is studied for vocational purposes. It is the goal of the shorthand student to obtain secretarial employment in the business world, and there is no room for failure if this vocational purpose is to be obtained. Students who attempt to take shorthand and fail waste a great deal of valuable educational time. The decision arrived at in choosing a career is a decision that will affect a person's entire life. If a student enters a career in which she cannot attain a high level of proficiency, she is greatly hindering her chances of a happy, successful, and productive working life.

Second, business students who go out on the job reflect back on their high school departments. If a marginal student gains employment, her inferior capabilities may reflect negatively on the entire department, causing the reputation of the quality of graduates to suffer. Therefore, shorthand teachers have a responsibility to their successful students to maintain an atmosphere of respect among employers for the stenographic abilities of their students.

Third, if there is a wide range of abilities in the class, it becomes extremely difficult for an instructor to maintain vocational standards. If the teacher teaches to all levels, it must be realized that the lower levels may never reach vocational standards. How then can we justify giving them a passing grade when it is known that they cannot perform in the office? A wide range also becomes a hinderance to the entire class. The teacher's time is so divided among the various levels that it becomes impossible for her to do an effective job at any level.

Fourth, as a concern for effective teaching, it is imperative to establish if criteria for enrollment do exist and to determine those criteria which should be used for this purpose. The answers to these questions can have a great effect on a student's future life. If a student is denied enrollment, the decision must be based on definite fact, for it prevents a student who may be quite successful from entering the career of his choice. On the other hand, if all students who wish to do so are allowed to take shorthand, some will be wasting valuable time that could be better spent in other areas of study and preparation.

#### Definitions

Aptitude tests will be referred to throughout this paper. are tests that measure a student's ability and predict his achievement at some future time. The aptitude tests discussed in the paper are the E.R.C. Stenographic Aptitude Test, Shepherd English Placement Test, the Hoke Shorthand Vocabulary Test, and the Turse Aptitude Test. is specifically designed to determine shorthand aptitude of an individual. The Shepherd English Placement Test was originally a placement test for college freshmen. However, Leslie found it to be very successful in predicting ability in shorthand transcription. 1 It was designed to test skill in the conventions of written English under timed conditions. It was developed by J. W. Shepherd and published by the Houghton Mifflin Company in 1931; however, it is presently out of print. The Hoke Shorthand Vocabulary Test was also designed to determine the shorthand aptitude of an individual. Elvin S. Eyster had great success with this test in the Fort Wayne, Indiana, schools in the late 1930's. The Turse Aptitude Test, also a shorthand prognostic test, is composed of seven subtests. Three of the subtests are concerned with mechanics of shorthand, and four of the subtests are concerned with verbal ability. It was first published by World Book Company of New York and Chicago in 1937.

Coefficient of correlation refers to a relationship between two

<sup>&</sup>lt;sup>1</sup>Louis A. Leslie, <u>Methods of Teaching Gregg Shorthand and Trans-</u> <u>cription</u> (2nd ed.; Cincinnati, Ohio, South-Western Publishing Co., 1961), 297.

or more sets of data where variables range from 1.00 to .00. In this paper coefficient of correlations will be discussed concerning established relationships between shorthand success and various measures available in the public schools. The following scale indicates the range of correlations:

.90 - 1.00 Very dependable

.70 - .90 Marked relationship

.40 - .70 Substantial

.20 - .40 Low

.00 - .20 Definite but small<sup>2</sup>

Exploratory program refers to an academic learning experience in which an investigation is made of the many areas of study within a larger framework of subject matter. For example, in a general business class an investigation could be made into bookkeeping, typing, or shorthand.

Grouping refers to arranging students according to their abilities in a specific subject. For example, instead of having all levels within one shorthand class, separate shorthand classes would be set up for the low ability student, the average ability student, and the high ability student. Each group would then be able to advance at their own rate without being hindered by other levels in the class.

I. Q. or intelligence quotient is a number denoting the intelligence of a person. The number is determined by multiplying a person's mental age by 100 and dividing by the chronological age.

Interest inventories are tests composed of direct questions or lists of activities to which the student responds by indicating his likes

<sup>&</sup>lt;sup>2</sup>Lucille J. DiBona, "Predicting Success in Shorthand," <u>Journal of</u> Business Education, XXXV (February, 1960), 213.

and dislikes. In this way, the interests of the student are determined. Interest inventories are used in shorthand prognosis to determine if a potential student has real interest in stenographic and clerical work.

Personality tests are tests which attempt to determine personality traits present in an individual. Questions are so worded that in answering the questions students reveal their own personality traits.

Prognosis is the capability of predicting the future. In this paper the term prognosis is concerned with predicting how a student will do in shorthand and transcription.

Prognosis of shorthand success is a term that will be referred to often in this paper. Prognosis of shorthand success is concerned with the student's ability to actually learn beginning shorthand. Prognosis of transcription success will also be referred to frequently. Prognosis of transcription success refers to the student's ability to reproduce shorthand notes in correct longhand or typewritten form. The two terms cannot be used interchangeably. Prognostic instruments that do predict success in one area will not necessarily predict success in the other area. In fact, prognostic tests that do predict success in shorthand usually do not have any relationship with transcription success. As will be discussed later in the paper, accurate prognosis of transcription success is felt to be the more important factor in selecting shorthand students.

Tryout is a term closely related to exploratory. Tryout refers to a learning experience in which an individual actually practices a special skill. In the exploratory approach an investigation is made only of a subject area.

#### Readings and Findings

#### Aptitude Tests

There are numerous aptitude tests that have been devised for shorthand prognosis. One of the most common is the Turse Shorthand Aptitude
Test which was first published in 1937 by the World Book Company of New
York and Chicago. The Turse Shorthand Aptitude Test is composed of
seven subtests, four of which are verbal tests and three of which are
mechanical tests. More specifically the test determines manual dexterity
(ability to write, carry matter in the mind, and listen for new matter
simultaneously), ability to learn and combine abstract symbols, ability
to associate the correct spelling of a word with its phonetic form,
ability to discriminate between words having similar or identical shorthand outlines, ability to spell, and ability to construct entire words
from incomplete shorthand outlines. The E.R.C. Stenographic Aptitude
Test is a similar aptitude test that has found frequent use in shorthand
prognosis.

Studies have been made comparing the effectiveness of these two aptitude tests. Lucille J. DiBona of Steinmetz High School in Chicago, Illinois, conducted a two year study from September 1954 through June 1956 in which the accuracy of the two tests was measured. The study involved 687 students from five Chicago public high schools. The results show a correlation of .52 between the Turse test and shorthand success, and a

<sup>&</sup>lt;sup>3</sup>Lucille J. DiBona, "Predicting Success in Shorthand," <u>Journal of Business Education</u>, XXXV (February, 1960), 213-14.

correlation of .47 between the E.R.C. and shorthand success, thus suggesting that the Turse instrument may be the better indicator. However, a study At Chadron State College in Chadron, Nebraska, by Joyce J. Heemstra concluded that the E.R.C. was better than the Turse, and that both were better predictors at the high school level than the collage level. 4

More research has been done into the effectiveness of the Turse Shorthand Aptitude Test by Walter Pauk, Director of Reading-Study Center at Cornell University, Ithaca, New York. 5 The amount of time needed to administer the test is one of its major problems. Sixty minutes are required to give the test, and fifteen minutes are required to hand score each test. Pauk investigated the entire test to see if parts of the test could predict success as well as the entire test. As a result of his study, he found that the four verbal subtests were just as effective measures as the entire test. The four verbal subtests are concerned with spelling, phonetic association where words are spelled in phonics and students must pronounce them correctly, word discrimination where correct words are selected by context, and word sense where context words are spelled phonetically or with letters that represent shorthand characters. Also, of the four Turse subtests the word sense part is a better predictor than the combined four. The study also indicated that the A.C.E. language scores were just as accurate as the Turse word sense subtest. The researchers concluded that the aptitude test was not being used with maximum effectiveness

<sup>&</sup>lt;sup>4</sup>Joyce J. Heemstra, "Can We Be Sure," <u>Business Education Forum</u>, XX (February, 1966), 21-26.

Walter Pauk, "What's the Best Way to Predict Success in Shorthand," Business Education World, XLIII (April, 1963), 7-8, 34.

and recommended that only the verbal word sense subtests be given or that the A.C.E. language scores, which are widely available in most schools, be used in its place. A similar study was conducted by Rose Anne Davis of Roxana High School, Roxana, Illinois. The results of her study agreed with the results of Pauk's study.

#### School Grades

The scholastic average of high school grades has also been used as a prognostic instrument. In the study made by DiBoan, discussed in the previous section, school averages were found to be of use only as a supplement to the aptitude tests. Similar results were found in a study be Marie Whittle at the University of Texas in the fall semester of 1958. Results indicate that scholastic averages coupled with the student's rank in his class did have some meaning as a prognostic instrument, but not in sufficient quantity to justify their use as a sole or best criterion. A very thorough study was made by Elise D. Palmer and Sally Bulkley Pancrazio at Southern Illinois University, Edwardsville, Illinois. Coefficients of correlation were established between several factors and shorthand success. The results of their study did indicate a relationship between scholastic grade point averages and shorthand success. They also indicated that scholastic grade point averages can be used to predict success in any subject area, and that the relationship between scholastic grade point averages and shorthand success is no

Rose Anne Davis, "Will Half a Turse Do Just as Well?," <u>Business</u> <u>Education World</u>, XLVI (February, 1966), 11-12.

DiBona, "Predicting Success," 214.

<sup>&</sup>lt;sup>8</sup>Marie Whittle, \*Do We Have Criteria for Predicting Shorthand Success, \*Business Education Forum, XVI (March, 1962), 25-26.

greater than the relationship between scholastic grade point averages and success in other subject areas.

English grades are frequently used as a prognostic instrument for shorthand success. The results of studies made range all the way from concluding that English grades are the most effective predictor to concluding that they are of no use. The study conducted by Heemstra at Chadron Saint College concluded that English grades were the most effective predictor at the college level. But, in the study by Palmer and Pancrazio made at Southern Illinois University English grades were shown to have a poor relationship. A possible reason for the vast difference in the results of the two studies is that while English grades have no reflection on success in beginning shorthand, they have a great deal of reflection on transcription success. This is a point well worth noting, and it will be discussed in greater detail later in this paper.

#### Intelligence Quotient Levels

Another criterion frequently suggested for predication of success in shorthand is the I. Q. score. Studies show that there is a relation-ship between I. Q. and shorthand success. A typical example is the study conducted by DiBona in 1954 in which I. Q. had a correlation of .40. <sup>12</sup> The study recommended that no student with an I. Q. below 90 be allowed to enter a shorthand class. A very interesting fact was brought out by

<sup>&</sup>lt;sup>9</sup>Elise D. Palmer and Sally Bulkley Pancrazio, "Shorthand Selection Procedures: Are They Justifiable?," <u>Business Education Forum</u>, XXII (October, 1967), 12-14.

<sup>10</sup> Heemstra. "Can We Be Sure," 25.

<sup>11</sup> Palmer and Pancrazio, "Shorthand Selection," 13.

<sup>12</sup> DiBona, "Predicting Success," 214.

this study, that higher I. Q. levels do not necessarily result in higher achievements in shorthand. Thus, although Anderson in the text <u>Teaching</u>

<u>Business Subjects</u> suggests an average mental ability as an appropriate criterion for prognosis, <sup>13</sup> studies such as that conducted by DiBona indicate that low I. Q. students may do well while high I. Q. students may do poorly. Interest and motivational factors, which will be discussed later, may be the key to this contradiction.

#### Foreign Language Grades

A thorough study was conducted by Mary Jane Lang of the University of Missouri from 1958 through 1963 to determine the relationship between foreign language ability and shorthand success. <sup>14</sup> The results reported a correlation of .60 between scores on the foreign language aptitude test and shorthand success. The test used was the Iowa Placement Examination—Foreign Language Aptitude Form M. The study by Palmer and Pancrazio, however, disputed the worth of foreign language grades as an accurate predictor of shorthand success at the secondary level. <sup>15</sup>

#### Interest and Personality Tests

Authorities agree on the importance of interest and motivational factors as criteria for shorthand success. Anderson in <u>Teaching Business</u>

<sup>13</sup>Lloyd V. Douglas, James T. Blanford and Ruth I. Anderson, <u>Teaching Business Subjects</u> (2nd ed.; Englewood Cliffs, New Jersey, Prentice-Hall, <u>Inc.</u>, 1965). 190-91.

Mary Jane Lang, "Predicting Elementary Shorthand Achievement," Balance Sheet, XLV (March, 1964), 300-302.

<sup>15</sup> Palmer and Pancrazio, "Shorthand Selection," 13.

Subjects states that a keen interest in learning shorthand is a prime qualification in a potential shorthand student. Motivational factors have a great deal to do with a student's achievement rate. A highly motivated and interested low mental ability student will often work very hard to overcome any weaknesses or deficiencies he may have to develop into a successful stenographer, while a less motivated and interested student possessing average or high mental abilities may not develop into a successful stenographer.

Personality tests, however, have not been found to be valid in prediction of shorthand success; for as pointed out by Palmer and Pancrazio in their study, the basic personality traits of a successful stenographer are not known. Therefore, the validity of any personality test as a limiting factor in enrollment in shorthand must be questioned.

#### Exploratory Programs

An exploratory program is an academic learning experience in which an investigation is made of the many areas of study within a larger framework of subject matter. Business education exploratory programs usually investigate the shorthand, bookkeeping, and selling areas. The usual plan is to offer a four to six week tryout course in one of the above mentioned areas during the second semester of a beginning business class such as general business. Exploratory programs usually begin in the ninth grade where a four to six week tryout in typing and bookkeeping

<sup>16</sup> Douglas, Blanford and Anderson, <u>Teaching Business Subjects</u>, 190.

<sup>17</sup> Palmer and Pancrazio, "Shorthand Selection," 13.

is offered. If the student is successful and interested, he may then take these courses during the next school year. The usual exploratory program does not end with the completion of the ninth grade. During the tenth grade in the first few weeks of the skill class, the students are carefully watched to determine if they will be able to meet the goal of the class. If they cannot, it is recommended that they be transferred to other subject areas early in the year. Also, sometime during the year a brief tryout period for shorthand and advanced typing should be included in the present skill class to indicate if students should continue in business. In the usual exploratory program even in the twelfth grade, the students are carefully checked to insure their ability to meet high standards. If a student does not measure up to the standards of the department, he will not be able to measure up to the standards of the better stenographic and secretarial positions. Consequently, a marginal student could only be given limited job recommendations. The best answer is to guide the less able student into modified business courses of more general clerical work. Although Dame and Brinkman point out that the exploratory program like all prognostic devices has received much criticism in professional textbooks and articles, they believe individual school situations should be considered and those measures that seem best in a particular situation be used. 18 Dr. George K. Coopen Head of the Business Education Department at Eastern Illinois University states that he personally observed a very successful exploratory program in Portage Community High School at Portage, Michigan, under the direction of Mrs. Eleanor Smith. Guy N. Harriger, in his article "A Survey Course, for

<sup>18</sup> J. Frank Dame and Albert R. Brinkman, <u>Guidance in Business</u> <u>Education</u> (3rd ed.; Cincinnati, Ohio, South-Western Publishing Co., 1961), 268-292.

#### Recommendations

As a result of the preceding discussion, the following recommendations are suggested as guides and activities to be undertaken in setting up a program of prognostic criteria for shorthand and transcription success.

First, teachers are justified in using prognostic instruments to advise and counsel potential shorthand students. Weak students should be guided into areas where they will do better.

Second, no one criterion should be used as the sole determining factor in allowing a student to take shorthand.

Third, a combination of English grades, typing grades, mental ratings, scholastic averages, aptitude scores, and interest may be used to predict shorthand success.

Fourth, prognostic tests concerned with success in beginning shorthand should be used as remedial diagnostic tests.

Fifth, it is advisable to group students, directing weaker students into alphabetic shorthand systems, such as Notehand or Forkner Alphabetic Shorthand, to prepare them for jobs requiring slower shorthand speed. Extensive use should be made of the multi-channel tape laboratories to provide for the needs of the different groups.

Sixth, a great deal of importance should be placed on the interest and motivational factors involved. No eager, cooperative, and enthusiastic student should be prevented from taking shorthand.

Seventh, further research is needed to devise an accurate prognostic test for transcription success.

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