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A comparison of Gregg and Forkner shorthand in the public schools

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Abstract

Business education was born as the result of office technology developed at the beginning of the century. It was business education that advanced typewriting beyond the hunt-and-peck level of skill. It was business education that elevated records and management from the realm of the simple alphabetic file, and it was business education that transformed shorthand from the pasttime of a few intellectuals into a key vocational skill for millions. (6:14)

A COMPARISON OF GREGG AND FORKNER SHORTHAND IN THE PUBLIC SCHOOLS

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INTRODUCTION

Business education was born as the result of office technology developed at the beginning of the century. It was business education that advanced typewriting beyond the hunt-and-peck level of skill. It was business education that elevated records and management from the realm of the simple alphabetic file, and it was business education that transformed shorthand from the pasttime of a few intellectuals into a key vocational skill for millions. (6:14)

Since writing was first invented, man has attempted to develop systems of taking down the words of others as rapidly as they were spoken. The development of systems such as Gregg shorthand and Forkner shorthand have provided the basis for significant progress in the field of rapid writing.

With the development of modern recording devices, which not only reporduces the speaker's voice but also points of emphasis, the need for thousands of hours of study to become a verbatim reporter noticeably diminished. However, the need still existed for someone in the office to take care of callers, file the correspondence, keep the calendar of appointments, answer the telephone, etc. If a stenographer could be employed to do all of these things and also take and transcribe letters, the person often would use some form of speed writing in preference to other methods.

Ever present changes in technology and in its application--the rapid growth of word processing systems, for instance--has created

new demands and requirements for employment in office occupations, and may appear to reduce the value and the need for older, traditional competencies. (3:7) Analysts of the job market have been nearly unanimous in forecasting an undiminished demand for stenographers and secretaries who are proficient in the use of shorthand. (3:7)

Those who question the future of shorthand in the automated office need to be aware of realities such as the aspects of shorthand that cannot be replaced by machinery, the compatibility of shorthand with automated equipment, and the development of competent office personnel through shorthand skills. With such an awareness, business educators can respond more affirmatively to the continuing need for shorthand expertise in the business offices of the future.

PROBLEM AND PROCEDURE

The most popular current approach to shorthand instruction in the secondary schools is the Gregg system. It is a system that was fully developed at an earlier date than other systems, thus adopted for instructional use in more schools. While other systems have been created and developed in more recent years, such factors as the cost of purchasing new materials and the appropriate preparation of teachers have served as deterrents to effecting curricular change.

It was the problem of this paper to review the current related literature regarding the historical development of speed writing systems, to identify the advantages of one system over the other, and to establish a rationale for a position defending the selection of one specific system for inclusion in the curricular offerings of the secondary schools.

LIMITATION

Because of their extremely wide usage in the secondary school curriculum, this research is limited to a comparison of Gregg and Forkner shorthand. Other systems have been developed and are available but were not included because of their limited application at the present time.

DEFINITION OF TERMS

1) Achievement--refers to the number of standard words correctly transcribed for each letter.

2) Briefhand--alphabetic system deemphasizing the use of vowels in written words.

3) Forkner (word abbreviations)--refers to words which are not written in full according to principle by using alphabetic (longhand) abbreviations.

4) Gregg (brief form)--refers to words which are not written in full according to principle by using symbolic strokes.

5) Gregg Shorthand-Diamond Jubilee--basic Gregg characteristics with some modification in terms of brief forms.

6) Level of dictation speed--refers to the number of words dictated in one minute by the dictator

7) Rapid Writing--phonetic system of shorthand

8) Script--longhand style of writing shorthand.

9) Speedwriting--non-symbol shorthand system.

10) Standard word--word with 1.4 syllables.

11) Steno-Skill--initial system (along with Script) as an abbreviated longhand style of writing shorthand; sometimes referred to as Stenograph.

12) Thomas Natural Shorthand--another alternative using an alphabetic rather than symbolic notation.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Data pertaining to evaluation of shorthand systems consists largely of statements by authors and publishers, results of national speed contests, and results of comparative studies made in an attempt to prove the superiority of one shorthand system over another. All of the last mentioned type of studies have utilized the group-comparison method of research and therefore are related to this study in that they were attempting to evaluate shorthand systems.

It is vital to make administrators aware of the basic differences between systems, and the advantages and disadvantages of each, so that when the time comes to make the switch of systems and to order books, materials, and guides for the future, the best possible choice can be made. When any items are purchased for use in the curriculum today, maximum use will need to be obtained before any replacements are purchased. The initial investment will need to be made very carefully so that the best possible use for the learning process can be attained.

Shorthand dropout rates have increased in recent years. Because of this condition in the business education departments at the high school level. teachers are searching for methods, techniques, and other shorthand systems that will encourage a course enrollment necessary to meet the job demands of the business world.

In evaluating shorthand systems, a few issues are apparent. Many shorthand systems have fallen into disuse while others have proven

their efficacy through continued usage over periods of time. The Gregg symbol shorthand system has become the most widely used system in the United States since it was introduced in 1893.

Because the supply of high school graduates with shorthand training has not met job market demands, educators have been searching for alternatives to the existing programs. Enrollments in shorthand classes are down from previous years and the dropout rate of those who start shorthand is rather high. Serious questions have been raised relative to the appropriateness of the various shorthand systems used and these questions have led to a number of comparative studies of the effectiveness of one system over others. (19:5)

Recent studies completed by Delta Pi Epsilon and Datapro (5:10) have shown that language arts skills are of utmost importance to business employees. Regardless of the shorthand system used, first year students should learn or re-learn the elementary rudiments of language arts such as punctuation, styling, and basic grammar. In the second year of instruction, close scrutiny would be given to the application of these skills on the job and to the demonstration of high level mastery in job-related situations. Yet, in the process of selecting a specific system for curricular use, the cost factor too often takes precedence over the instructional character and quality of the material. (5:10)

Countless shorthand systems have been developed in ancient and modern times, and they have been known variously as phonography (voice or sound writing), stenography (narrow or close writing), brachygraphy (short writing), tachygraphy (rapid writing), and speedwriting, but the term shorthand is most familiar. Shorthand systems may be divided into three basic groups: (1) the hieroglyphic, the most ancient style

of shorthand in which whole words or even phrases are represented by arbitrary or hieroglyphic signs; (2) the orthographic, in which an abbreviated form of ordinary spelling is used, omitting all letters not essential to the meaning and often employing only abbreviations of the regular alphabet but requiring a large number of arbitrary symbols for the sake of brevity; and (3) the phonetic, in which the alphabet and spelling are ignored and the words are written according to sound. The last of these, being conducive to greater brevity and placing the least strain on memory, has proven itself the most practical for speed, legibility, and simplicity. (7:703)

The Industrial Revolution brought a demand for stenographers in business. Because the stenographic systems then in use required a high standard of education and long training in the system, a need existed for a method that would be easier to learn. Franz Xaver Gabelsberger (7:704) turned away from geometric methods and developed a simple cursive system. (7:704) In many ways this effort provided the foundation for the development of a variety of alternatives in speed writing.

Sir Isaac Pittman (1813-1897), an educator who advocated spelling reform, was knighted by Queen Victoria for his contributions to shorthand. Pittman had learned from previous shorthand authors and eventually designed his own system to incorporate writing by sound, the same principle he advocated in phonetic longhand spelling. The Pittman system, which in turn was modified and further refined by John Robert Gregg (1867-1948), has been by far the most popular shorthand system in England and America. (7:704)

The many shorthand systems that had roots in our history led to debate over which system was most effective in our educational

system. Even as early as the 1940's, the Shorthand Study of the Educational Researvh Corporation (25:5) searched intensely for an answer to a growing concern for alternative programs. This organization conducted its work over a period of two years and concluded that more students dropped out of the Gregg shorthand program than those that were trained through the Script shorthand system. Reasoning by the Corporation for this fact was that the symbolic system of Gregg was more difficult for the students to master than that of the Script system, which was an alphabetic system, and an early predecessor of Forkner shorthand. The authors of the Shorthand Study of the Educational Research Corporation (25:5) thought, ironically, that Gregg would appear more apt to retain students because of the deep history of the program, but in reality Gregg students were dropping out more readily than were those in the newer-formulated system of Script.

This reverse finding could have indicated that the Script system was less discouraging or seemed less difficult to the pupils during the first year of instruction. This has been a claim by many teachers using the Forkner system today. (25)

In a study of the speed and accuracy of transcription of notes taken at 80 words per minute or less, Smith (20) found that among students who wrote their transcripts in longhand, the Script users excelled their Gregg contemporaries consistently and significantly in accuracy of transcription and consistency in speed of transcription. When students typewrote their transcripts, no uniform differences were found between Script users and Gregg users in accuracy of transcription. In speed of transcription, the Scripts users excelled the Gregg shorthand users consistently and significantly.

When the speed was increased to 90 words per minute or more the results provided evidence that among students who wrote their transcripts in longhand, the Script users excelled the Gregg users greatly, but not consistently in accuracy of transcription, and excelled consistently in speed of transcription. For those individuals who typewrote their transcripts, the Gregg users excelled the Script users significantly and consistently in speed of transcription.

A further control in this study was the time span between dictation and transcription. After a lapse of two weeks, among students who wrote their transcripts in longhand, the Script users excelled the Gregg users significantly and consistently in both accuracy of transcription and speed of transcription. Among students who typewrote their transcripts, the Script users excelled the Gregg users in accuracy of transcripts. In speed of transcription, the results were conflicting--among one group of students, the Script users significantly excelled the Gregg, but with those students who started their study of shorthand a year later, the Gregg users significantly excelled the Script users.

The objectives of shorthand, regardless of which system is used, are to teach knowledge of fundamentals, to develop ability to produce transcripts, to make students aware of the "business world's" judgment of acceptable and mailable copy and work, to show the interdependence of excellence in the areas of typing, shorthand, and English, and finally to produce an independent, responsible, dependable and efficient worker.

In a study by Novak (17:80) it was found that approximately one-fifth of the business education teachers justified the offering of

one year of shorthand for strictly a personal-use objective. The majority of these teachers stressed the ability to use shorthand in note-taking as their primary personal-use objective. Further justification for their position was the value to students in taking class notes in post secondary/college classes in which they would subsequently enroll.

The purpose of the Harper (11) study was to compare student achievement in a one semester Briefhand course and a one semester Gregg Shorthand, Simplified course. At the end of the semester, twelve three-minute letters, taken from the Pitmanite, were dictated two at each of the speed levels of 50, 60, 70, 80, 90, and 100 words a minute. The major findings showed that the difference between Gregg Simplified and Briefhand was significant at 50, 60, and 70 words a minute in favor of Briefhand. The difference between Gregg Simplified and Briefhand was not significant at 80, 90, and 100 words a minute.

Briefhand is a nonsymbol style of shorthand. Other similar systems to Briefhand revealed characteristics regarding the structure of the nonsymbol or alphabetic system that were the same: omission of silent letters, use of memory forms, use of signs to represent sounds, and omission of strong vowels. (9:80) These similarities are found in systems such as Forkner, Rapid Writing, Speedwriting, and Stenograph.

Follow-up studies of 226 graduates of Speedwriting revealed that a considerable number (102 of 226) were utilizing their shorthand in their work. Speed of dictation demonstrated on pre-employment tests required by those firms using such tests ranged from 60 to 120 words a minute, with a median of 93.4 words a minute. Ninety-six

per cent of the employers of these graduates reported their work satisfactory. (9:80)

Reported achievement of students of a nonsymbol shorthand, like Forkner, revealed that after approximately 57 hours of instruction, 14 college students took dictation at 40, 50, and 60 words a minute with a median of 99 per cent accuracy and at 70 words a minute with a median of 92 per cent accuracy on letters ranging from 106 to 174 words. (9:80)

In reference to the Gregg system, research studies, public opinions, and teacher estimates have indicated that some pupils can achieve skill in a one year course to take some office dictation. However, there are strong indications that only a few pupils can transcribe their notes into mailable copy after only one year of shorthand training. Transcription into mailable copy, in the classroom or the office, is the ultimate indicator of the success and value in studying shorthand.

With many programs in Iowa offering only one year of shorthand in the curriculum, probably because of budget and enrollment limitations, Forkner shorthand is more likely to prepare a student for broader personal use, and Forkner shorthand might be readily adaptable to an on the job setting. The bottom line for success is student performance on the job. (23)

In review, there is a need for a shorthand system(s) which can be learned in less time than symbol systems for both personal and certain kinds of vocational use. It is believed that some of the nonsymbol systems can be learned in less time than the traditional systems, some even in one semester, and that a knowledge of a nonsymbol

system is adequate for the ordinary needs of business.

Because the time required to learn Gregg Shorthand may be too great to justifyits personal use for many job situations where very high speeds are unnecessary, some business educators have concluded that a need exists for nonsymbol shorthand systems. Limited research has provided evidence that such a system is easier to learn and can be learned in less time than traditional systems, but that it should be used as a supplement to, rather than a replacement for, traditional shorthand. (9:208-209)

As one illustration of a nonsymbol system, Forkner shorthand has much potential for personal use. Those who have pursued some form of higher education have found practical application in class note-taking. Others have found Forkner an effective stepping stone to the acquisition of skill in other shorthand systems. Finally, there are some who have used this system as a supplementary tool in situations in which particularly rapid performance was not required.

Inasmuch as dictation speeds of from 60 to 80 words a minute are satisfactory for the ordinary needs of business, nonsymbol shorthand has a potential for stenographic employees. This tends to be substantiated by employer ratings of over 200 stenographic secretarial employees who use nonsymbol shorthand. (9:208)

A forerunner of the Forkner system was Thomas Natural Shorthand. In a study by Stewart (22) an attempt was made to compare the achievement of the students in Thomas Natural and Gregg Simplified shorthand systems at the end of one year of high school study. In testing for analysis, a 100-word theory test and four three-minute dictations were used. The four three-minute dictations were at the speeds of 60,

80, 100, and 120 words a minute. Gregg Simplified Manual was the source of the theory test and the Christian Science Monitor was the source of material for dictation purposes.

Six hundred four students representing twenty-one different schools were involved. Points were awarded as a grading tool for the transcripts submitted, and the arithmetic mean and standard deviation were used for treatment of the data. Stewart found that the difference in the mean scores for the two groups on the theory test was 13.66 points, which was statistically significant in favor of the Thomas Natural shorthand students. The Gregg students had a 7.68 higher mean score on the intelligence quotient than the Thomas students, which was statistically significant. On all speeds (60, 80, 100, and 120), Thomas Natural shorthand students' mean scores were significantly higher than those for the Gregg students. From her findings, Stewart concluded that Thomas writers of shorthand had a better performance than Gregg writers in achievement in the first year of shorthand at all speed levels.

In looking at another alternative, similar to the Forkner system, the purpose of the Stoddard study (23) was to compare the achievement of University-level students in Gregg Simplified Shorthand and the Steno Skill Shorthand in terms of writing speed. The study was based on an analysis of the transcripts of tests given to a total of 139 college students after one semester of study at Brigham Young University during the mid-1960's. Seventy-six students in the Gregg system and 63 students in Steno Skill took part in the study. Dictation tests were given at 50, 60, and 80 words a minute at the end of one semester of instruction. Students' transcripts were corrected on the basis of standard words correctly transcribed divided by three for a per-minute

score. Major findings here were that at 50 words per minute, the Gregg group scored at a 45.6 word a minute rate, while the Steno Skill group scored at 49.8. On the test at 60 words a minute, the Gregg group scored at 46.5 and the Steno Skill showed an improvement up to 56.65. Finally, at the 80 words a minute level, Gregg scored 56.7 and the Steno Skill group jumped to 73.15. There was a significant difference between the means in favor of the Steno Skill group for each of the letters dictated at 50, 60, and 80 words a minute.

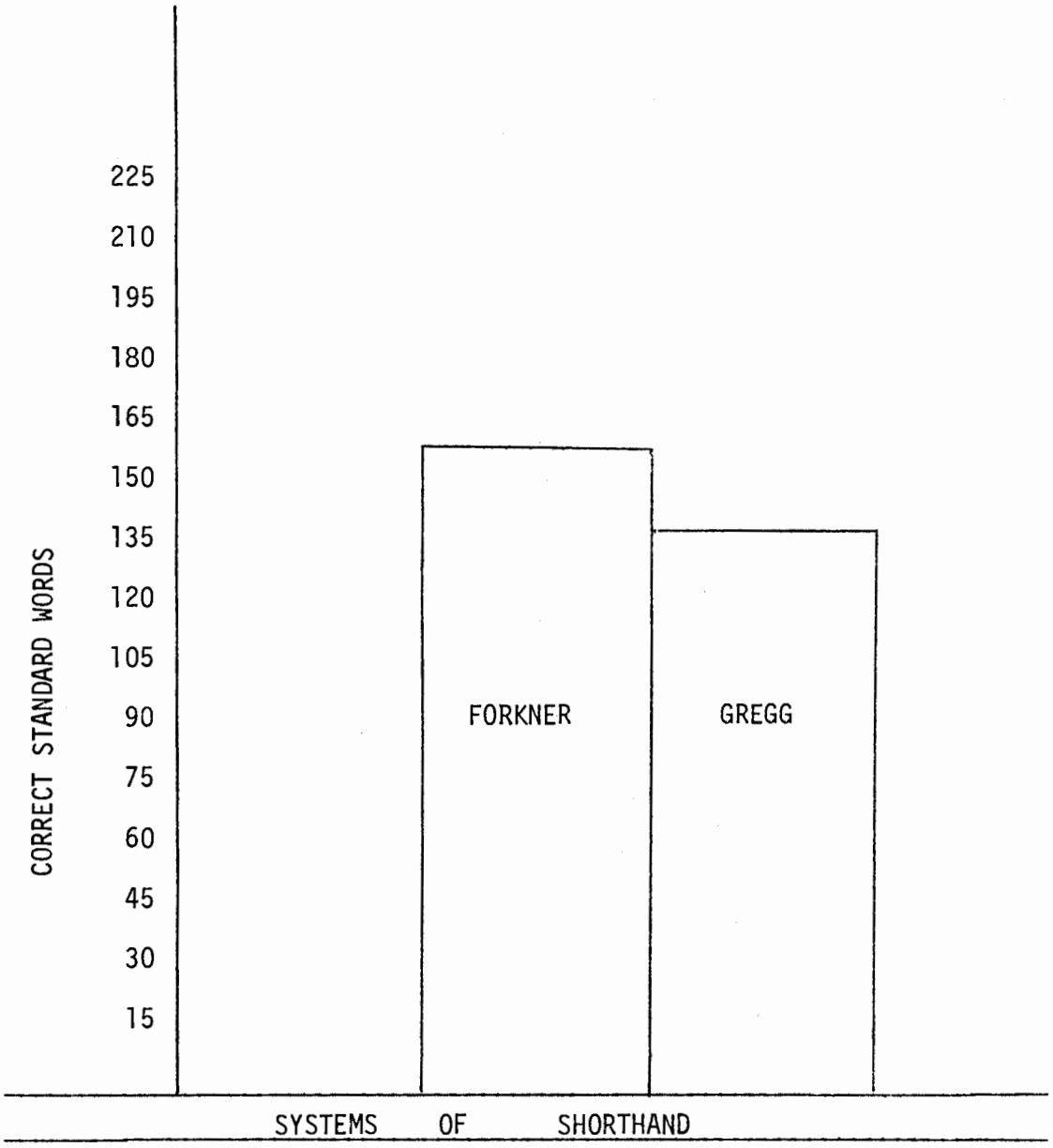
Pullis (18) conducted a study comparing the Script shorthand system and the Gregg shorthand system. His study was aimed at the accuracy rate of transcribing "new" words that did not appear in the textbooks. Among students who wrote their transcripts in longhand, the Script users consistently excelled the Gregg users. For the students who typewrote their transcripts, the Script users noticeably, but not consistently excelled the Gregg system.

Three diagrams follow from research by Smith (20:63, 65, 69) in a doctoral dissertation that compared the efficiency of two systems (Gregg and Forkner). The comparison between Gregg and Forkner was in terms of mean score of correct standard words, the mean score achievement of Forkner and Gregg at each speed level of 50, 60, 70, 80, 90, and 100 words a minute, and the mean achievement of Forkner and Gregg groups by the sets of dictation that were given.

Figure 1 (p. 14) shows the mean achievement of Forkner and Gregg users when an average of all scores at all of the speeds (50, 60, 70, 80, 90, and 100) were computed. Smith was able to demonstrate the superiority in speed of accuracy of transcription of the Forkner system over the Gregg system.

FIGURE 1

MEAN ACHIEVEMENT OF FORKNER AND GREGG GROUPS



Source: Edgar R. Smith, A comparison of the learning difficulty of Forkner alphabetic shorthand and Gregg shorthand, doctoral dissertation, Ohio State University, 1966.

Figure 2 (p. 16) presents a graphic picture of the achievement of the Forkner and Gregg goups at each speed. The Forkner group achieved higher than the Gregg group at each level of speed. At the speed of 70 and higher, both groups decreased in the number of standard words correctly transcribed. The Forkner group, however, did not decrease as rapidly between the speeds of 60 and 70 as the Gregg group. The Gregg group achieved the same at the speeds of 70 and 80.

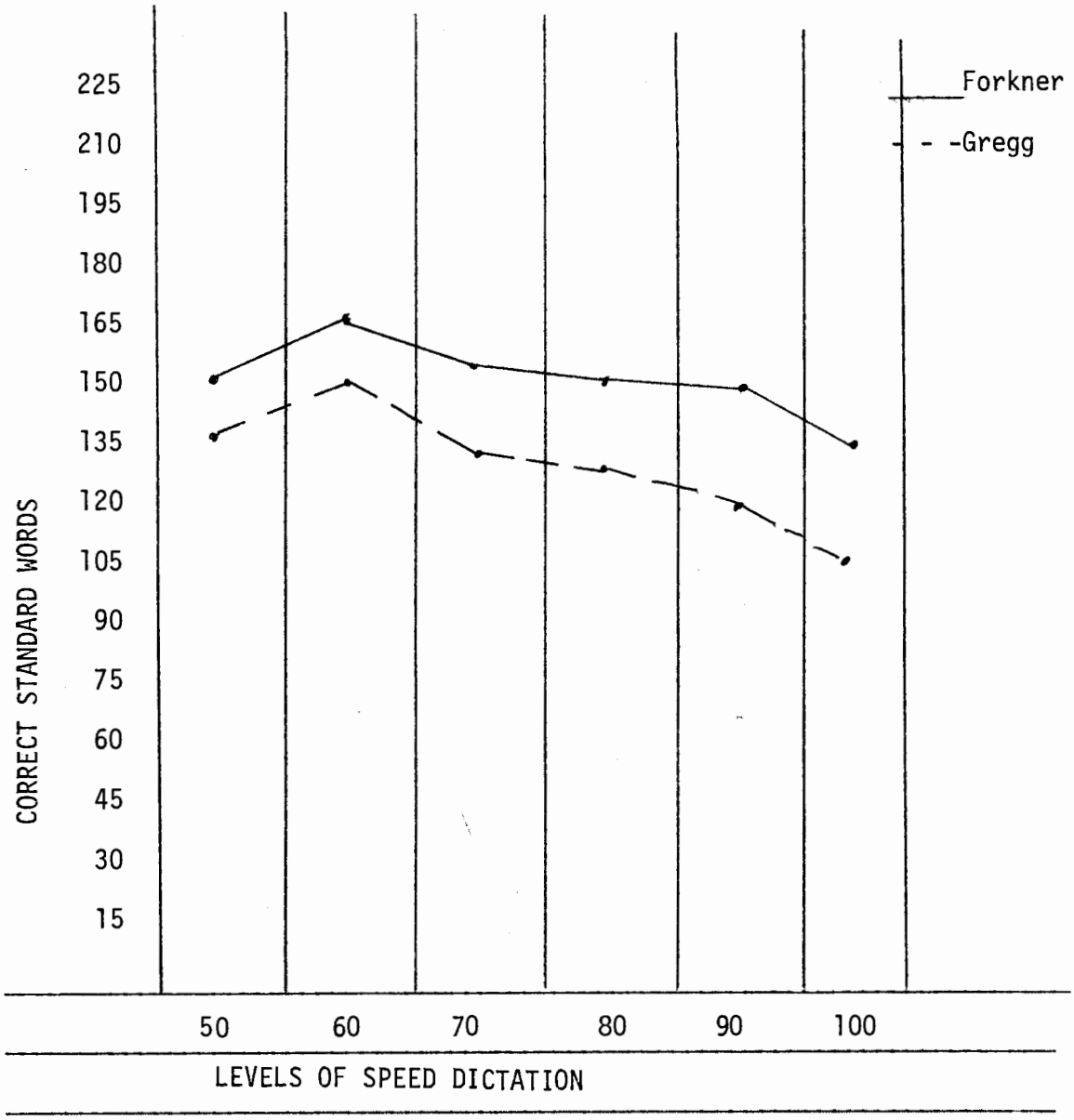
In Figure 3 (p. 17) a graphic picture is presented of the achievement of the Forkner and Gregg groups in each set of dictation that was administered. In each of the three sets of dictation, the Forkner group achieved higher than the Gregg group. The Gregg group increased more rapidly than the Forkner group from Set I to Set II. However, the Forkner group showed a sharper insrease than the Gregg group from Set II to Set III.

Comparative research completed to date comparing Forkner Alphabet Shorthand and a symbol system such as Gregg has demonstrated that in regard to speed test results, accuracy of transcription, history of alphabetic shorthand system successes, and experimentation at both the high school and college level, the Forkner Alphabetic Shorthand System can reduce the learning time and at the same time develop at least the same level of proficiency on the part of the shorthand writers. The limit of research on this subject, however, suggests a need for further efforts to provide a more sound basis for conclusions relative to the most appropriate system to employ.

Shorthand in many schools is offered only one year, and because enrollment dwindles substantially after a year, it is important to see if it is possible to develop a marketable skill after only one year of

FIGURE 2

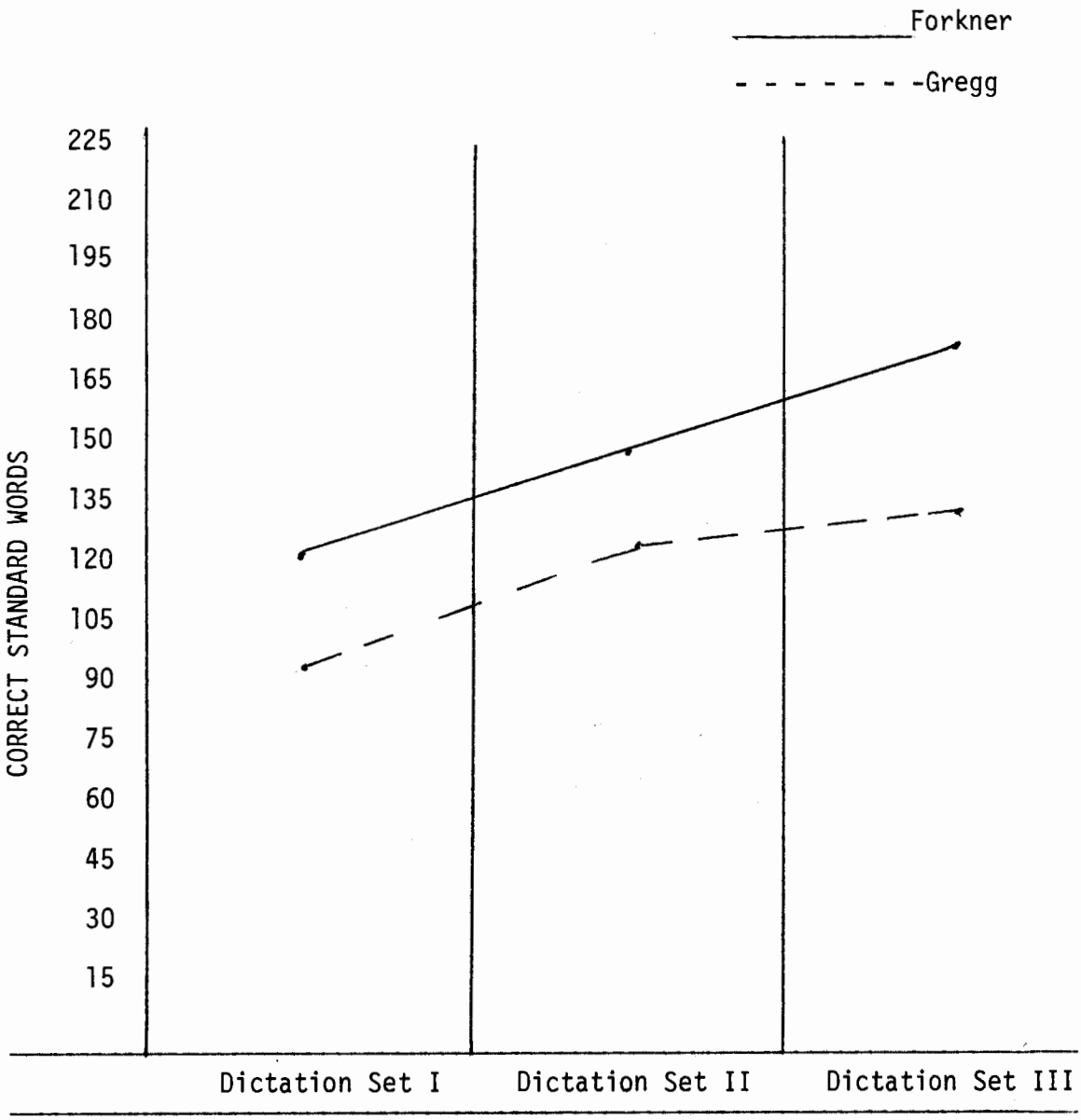
MEAN ACHIEVEMENT OF FORKNER AND GREGG GROUPS AT EACH SPEED LEVEL



Source: Edgar R. Smith, A comparison of the learning difficulty of Forkner alphabetic shorthand and Gregg shorthand, doctoral dissertation, Ohio State University, 1966.

FIGURE 3

MEAN ACHIEVEMENT OF FORKNER AND GREGG GROUPS BY SETS OF DICTATION



Source: Edgar R. Smith, A comparison of the learning difficulty of Forkner alphabetic shorthand and Gregg shorthand, doctoral dissertation, Ohio State University, 1966.

training. Forkner shorthand is a combination of longhand letters and few symbols which tends to speed up the learning process. (8:1)

Smith (20) summarized the following conclusions based on his study:

(1) The Forkner Alphabet Shorthand System is easier to learn than the Gregg Shorthand System. This conclusion is based on the fact that when comparing systems and achievement, Forkner achieved significantly higher than Gregg.

(2) The learning progress of first year Forkner Alphabet Shorthand students is greater than the learning progress of Gregg students.

(3) The Forkner Alphabet Shorthand System is better adapted than the Gregg Shorthand System to the above average, average, and below average student.

(4) In one year of shorthand, Forkner excels in superiority over the Gregg system. Three sets of dictation were used and the findings were compared not only between systems, but also with comparison to grade point average of similar nature in both groups.

In a study concentrating on students identified as gifted and talented, Lambrecht (14) concluded that the top one or two per cent did as well stenographically in Gregg as in Forkner. Although questionnaires do not make for the optimum basis, he further concluded that users will tend to respond more quickly and return the questionnaires, which may show a more pleasant work experience. However, Gregg users held their jobs for a longer period of time which might have been an indicator of job success or job satisfaction for those individuals.

There is a need for a nonsymbol system(s) of shorthand which can be learned in less time than symbol systems for both personal and certain types of vocational use and perhaps for the ordinary needs of business also. It is believed that a nonsymbol system can be learned

in one semester. (20:6) Follow-up studies of graduates of a nonsymbol system tend to substantiate its adequacy for the secretarial needs of today's job market.

CHAPTER 3

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The ever present phenomena of change has placed educators in a position of continuing assessment of curricular content so that the demands of the present can be more efficiently and effectively met. Within the realm of this global responsibility resides a concern by business educators in the secondary schools that their efforts are producing a product that can be successful in the world of work. Though all facets of the school organization share this responsibility, the business educators must have a unique concern for those specific technical competencies so necessary for effective performance in the wide range of secretarial/clerical positions.

The specific problem of this paper was to develop a sound rationale for the selection and implementation of a shorthand system for inclusion in the secondary school curriculum. The procedure employed required a review of recent research related to shorthand, with particular emphasis on that research that concentrated on a comparison of various shorthand systems. Although the literature reviewed was not restricted to any geographic area, it was the intent of the author to apply the conclusions to a specific school system in Iowa.

At present, there is no absolute agreement among business educators concerning the choice of Forkner shorthand over Gregg shorthand as to which should be taught in the public schools. The weight

of the argument resides primarily in the preference perceptions of these educators and their administrators, and to some degree influenced by ever present fiscal constraints.

Research reviewed indicated learning time was saved in the use of Forkner shorthand, a drop in failures and drop-outs was noted in an alphabetic system and that the system was ideal for personal use, college note-taking, and has been approved in business. Advantageous points found in the research for Forkner needs to be emphasized by the business educator to the administration so that the implementation of the Forkner system can be implemented when new materials need to be ordered or replaced.

Regardless of the system used, first year students in shorthand must have greater opportunity to re-learn or be further exposed to language arts skills. Greater concentration in these areas can be realized through the implementation of an alphabetic shorthand system. Symbolic shorthand has proven to be more difficult and has caused the student to not sense the progress in transcription rate that is evident with the alphabetic systems throughout history.

Near the middle of the 20th Century, the Educational Research Corporation noted an increase in enrollment in shorthand programs and attributed this characteristic to the Script system of writing. This forerunner of Forkner increased the probability of success of this program over a symbolic system such as Gregg.

Findings also showed that the alphabetic system could be used to meet both a personal-use objective and on the job tasks in which speed-writing skill was required. This was further supported by the

realization that in a variety of situations a significant percentage of students used their shorthand after completion of secondary education.

Shorthand remains a vital skill for use in the office, on campus, or simply around the home; no machine or electronic wizardry yet developed can satisfactorily and completely do all that a secretary with a command of shorthand can do in today's world. (3:8) This is evident by the reason that many firms offer a beginning secretary a salary as much as 25 per cent higher if he or she has shorthand skills. In other instances, that skill opens the door to a job that could otherwise be closed. In a society that is becoming increasingly aware of the cost-effectiveness ratio, the advantages that shorthand skills can produce are noteworthy. (3:8)

CONCLUSION

Based on the evidence produced in this research it is concluded that Forkner shorthand is the most viable alternative for inclusion into the curriculum of the secondary schools. Though is must be recognized that available research was limited, the review did strongly support (1) the necessity of a shorter period of time to achieve minimal competence, and (2) the ability of Forkner trained students to perform on jobs at a level of proficiency equal to or above those trained in other shorthand systems.

Forkner shorthand, through its rapid learning opportunities for students, can be a vital subject to master for future gains and opportunities. With the pressure for shortening the learning time and at the same time meeting the needs of offices, a system of shorthand which could reduce the learning time would be of great value in the secondary schools.

RECOMMENDATIONS

Further studies need to be undertaken to ascertain the level of shorthand skill needed by beginning office workers as automation gains a foothold. Also, analyzing other systems of shorthand besides Gregg and Forkner could be handled in more depth. Machine writing is becoming more prevalent and it has been viewed as a potential alternative to manual shorthand. Recognizing increasing technological developments in the area of machine writing, the paucity of current research suggests a need for increased attention to evaluation of this approach.

As a final recommendation, there is a definite need for an evaluation procedure which can be universally applied to all shorthand systems and the results of which can be recorded in numerical values. This evaluation should deal with the specific tool (in this case, shorthand) itself rather than its effects upon individuals or end results as exemplified by achievement. Determining the efficiency of the structural characteristics of shorthand would make it possible to discover coefficients of efficiency not affected by variables, and evaluation of the fundamental principles upon which each system was constructed. At the present time, there are hundreds of shorthand systems in existence, about twenty-five of which are promoted for current use. While Gregg and Forkner are the most widely used systems in the schools of Iowa, increased comparative studies might provide evidence to support wider usage of one or more alternatives from among this vast array of options.

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