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Marion Collier Miller

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CORRELATION STUDIES OF SEVENTEEN VARIABLES
ASSUMED TO BE PREDICTIVE OF
SUCCESS IN FOREIGN LANGUAGE STUDY

A Thesis
Presented to
the Graduate Faculty of the
University of Richmond

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by
Marion Collier Miller

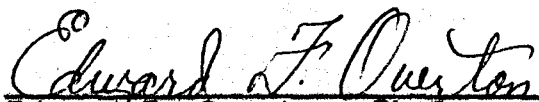
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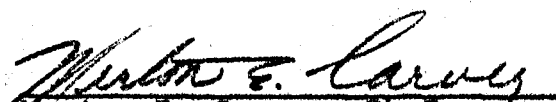
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candidate for the degree of Master of Science in Education,
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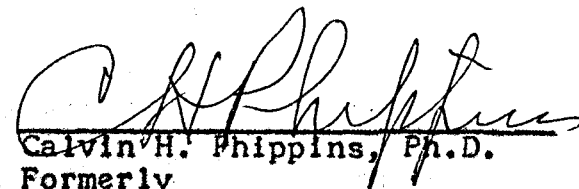
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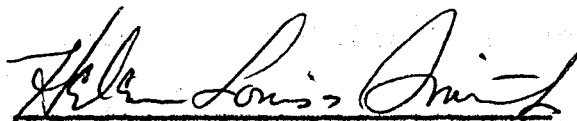
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CHAPTER I

THE PROBLEM

To what extent can certain data in a student's cumulative folder be relied upon to predict success in the study of a foreign language?

I. DEFINING THE PROBLEM

The placement of students in foreign language classes is a source of concern for educators, students, and parents. This concern stems from the high percentage of failure in first year language courses. Administrators, teachers, guidance counselors, students, and parents have raised provocative questions. The number and variety of their questions indicate the extensive research needed in the area of foreign language study.

Administrators have asked:

1. At what grade level should foreign language study begin?
2. Should foreign language classes be open to all students or only to a selected number of students?
3. Should the approach to modern foreign language be traditionally oriented or aural-oral? (reading and writing skills or audio-lingual proficiency?)
4. To what extent is it possible to secure teachers

with the competencies needed to effect the desired program?

5. Is it reasonable to expect or allow the percentage of failures to be higher in foreign language courses than in other academic areas?

Is there justification for lower pupil-teacher ratio in foreign language classes than in other teaching areas? (an urgent problem beyond language I and II and in schools where less popular languages like German, Russian, et cetera are taught)

Language teachers have asked:

1. Should the level of instruction be modified to reduce the number of student failures? (Should goals of speaking and comprehending modern foreign languages be sacrificed to attain a lower percentage of failure?)

2. Should the rate of instruction be geared to the rate of student learning at the expense of textbook coverage? If so, what adjustments should be assumed in the following year by the succeeding teacher to compensate for such variances?

3. Is it reasonable to assume that measurement of foreign language proficiency by the classroom teacher should take the form of a bell curve?

Guidance counselors need to know:

1. Are there particular traits, aptitudes, and characteristics which would predict success or failure in

the study of a foreign language?

2. Are there significant correlations between certain learning factors such as readiness, achievement in designated areas, and success in foreign language study? If so, what information is available for use in the counseling situation for this purpose and how reliable are these data?

The student himself and his parents also raise vital questions:

1. At what age should one begin the study of a foreign language?

2. Is there evidence to support the superiority of any particular language over others for beginning language study?

3. Does the study of Latin improve English proficiency?

4. Should verbal fluency be considered in language selection?

5. Do languages vary in degree of difficulty?

6. When is it advisable to begin the study of a second foreign language?

7. Is it possible to predict one's chances for success?

A number of factors lead the high school student to contemplate the study of one or more foreign languages. The dominant influences reflect certain values inherent in

American education, such as competition for college admission and the resulting parental pressures; the stress on academics by middle-class society. The high school guidance counselor must cope with these kinds of urgencies and pressures in working out the best academic program for each student.

The problems involved in foreign language selection at the high school level are extensive. During the period in which students select subjects for a succeeding year, the guidance counselor is confronted with a variety of questions, similar to the ones cited. Objective data tested for reliability would facilitate the process of decision-making in the area of foreign language selection. It was realized that any information obtained by individual research efforts would be limited in respect to answering such questions. It was obvious that the extent of the problem would preclude investigating all the facets of the situation. In this effort the immediate problem was that of helping the student weigh his chances of success in the study of a foreign language by evaluating data in the cumulative folder. It was assumed that the cumulative folder contained a wealth of unused information which would enable the counselor and the student to ascertain the chances for success in studying foreign languages.

II. URGENCY OF THE PROBLEM

Whereas foreign language study fulfills an immediate need for the college-bound student, other long-range benefits should be anticipated from foreign language curricula. The need for mutual understanding and knowledge of other peoples becomes increasingly urgent. The nations of the world are unquestionably involved with one another in quest of peaceful coexistence. Travel, for pleasure or business, is the privilege of a vast number of Americans. Concomitant with this privilege should be the responsibility of creating a favorable image of the United States. How can this be accomplished without an understanding of the culture and language of a people? Foreign diplomats, tourists, and servicemen travel abroad with little or no knowledge of the language or customs of a country.

Some Americans have only recently begun to contemplate the consequences of traveling or working in a country, while at the same time lacking knowledge of the most cherished possession of a country--its language. In 1960 it was estimated that 102,000 Americans were living abroad, representing business, religious, and international organizations; approximately 734,000 members of the Armed Forces were stationed outside the continental United States; hundreds of thousands of tourists traveled abroad. The

United States should be concerned with the impression each citizen conveys in every part of the world.¹

The United States Foreign Service corps, renowned for being highly selective in employing personnel, has had to relax its language requirements. Since so few applicants have bilingual ability following college graduation, the Service has been forced to employ emergency language programs designed to teach rudimentary speaking-comprehension skills. It is reported in a recent survey that 42.7 per cent of our Foreign Service corps lack adequate knowledge of any foreign language.²

French, for several generations, has been the language of diplomats. (Whether the situation should have remained unchanged is a controversial issue today.) At the present time, the language spoken by world dignitaries is English. The reasons for this evolvement are varied; however, the American diplomatic corps is not renowned for adequacy in foreign language skills.

Whether incompetence in the mastery of foreign language is due to an unwillingness to learn a second language or to an egotistical attitude, such a situation

¹M. C. Johnston, Modern Foreign Languages in the High School, United States Department of Health, Education, and Welfare, Bulletin 1958, No. 16 (Washington: Government Printing Office, 1960), p. 13.

²Ibid., p. 6.

does little to promote international good will. The President of Mills College, Lynn White, has expressed it this way:

To expect the educated citizens of other lands to learn English without our troubling to acquaint ourselves with some foreign tongue is the sort of effrontery which is ruining America's reputation and influence abroad.³

Howard Sollenberger, Dean of the School of Languages in The Foreign Service Institute, has written: "Foreign languages are a subtle and basic instrument in the cold war. . ."⁴

More important, the position of the United States could be jeopardized by inadequate foreign language comprehension. Leaders, communicating solely through interpreters, are distinctly handicapped. It is difficult to conceive of mutual understanding evolving from international conferences where communication is dependent upon translators and interpreters.

The urgent need for linguistically trained personnel in the Foreign Service, in the intelligence agencies, and in the armed forces, is an additional motivation for the study of foreign languages in our schools and colleges.⁵

³W. R. Parker, The National Interest and Foreign Languages, The United States National Commission for the United Nations Educational, Scientific and Cultural Organization, Department of State Publication 7324 (Washington: Government Printing Office, 1961), p. 102.

⁴Johnston, op. cit., p. 5.

⁵Theodore Huebener, Why Johnny Should Learn Foreign Languages (New York: Chilton Company, 1961), p. 58.

How does the American foreign language scene compare with educational practice in other leading countries?

Parker has stated:

. . . language study abroad begins earlier (normally between the ages of ten and twelve), extends over many more years, involves a much larger proportion of the children attending school, and not surprisingly therefore, achieves more conspicuous results than it does in the United States. (It is, incidentally, a myth that foreigners study only the languages of next-door neighbors for practical reasons not relevant for Americans; they study the languages they think they will most need in a contracting world.)⁶

Surveys of the foreign language programs in secondary schools in Germany, Italy, France, Russia, Japan, and the Scandinavian countries reveal that the average student receives from six to ten years of foreign language study. English is the language either required or elected for study.

Parker has also pointed out: "In Sweden, where education is compulsory through grade nine, those who complete grades twelve or thirteen have eight years of English, six of German, five of French. . ."⁷ In West Germany education is compulsory through age fourteen. Twenty to thirty per cent of these students go on to university work and are required to study one foreign language for nine years and a second, six years. Sixty per cent of those who do not study beyond secondary school elect foreign

⁶Parker, op. cit., p. 96. ⁷Ibid., p. 97.

language study. For both groups the language selected is usually English. French youngsters are compelled to attend school until age sixteen, although only eight per cent graduate; the study of English or German begins at age eleven. In Japan English is studied by more than three-fourths of the secondary school population and by almost a hundred per cent of the university students. A concern of educators for several decades has been a comparison of American school curricula with that of Soviet Russia. Whereas, admittedly, the overall attendance figures for youngsters from six to seventeen are higher in America, the Soviet figure of 45 per cent for those studying English finds little comparison with American students studying the Russian language.⁸

For those concerned about the situation, these facts lend a sense of urgency to the need for the evaluation and improvement of secondary school foreign language curricula.

III. DEFINITIONS OF TERMS

Cumulative folder (sometimes referred to as a permanent record or a cumulative record). In this study the cumulative folder is the accumulated data compiled on an individual student from first grade to the present time.

⁸Ibid., pp. 97-98.

Since most of the students have attended Henrico County schools, their folders are standard County forms. A small percentage of the student records studied consists of transfer students.

Information in cumulative folders includes: scholastic achievement; standardized test scores (intelligence, aptitude, achievement); attendance; health data; information concerning the family; teacher comments on school and social adjustment.

Predictors. Predictors refer to cumulative record data which at the conclusion of the study may be considered reliable in counseling students in making decisions related to foreign language study.

Criterion. Throughout this report the criterion employed refers to a student's average grade earned in one or more foreign languages.

Prognosis. Prognosis is interpreted in this study as a student's expectations for success or failure in foreign language study as determined by teacher grades.

Recommendation. A recommendation refers to the approval a student at Tucker needs in order to elect to study foreign language. He needs the recommendation of his English teacher before being allowed to take the first year

of a language or of his foreign language teacher before attempting the next level or a second language.

CHAPTER 11

RELATED RESEARCH STUDIES

Leutenegger and Mueller noted that: "A considerable literature exists on attempts to predict success at foreign language acquisition."¹ A survey of the guidance, language, educational, and psychological periodicals corroborate the accuracy of this statement. However, the need for continued research and experimentation at the local level has by no means been minimized by the extensive research that has been done. The number and variety of studies indicate the widespread awareness of the multiple problems in the area of foreign language study. Several authors pointed to the fact that most research on this subject has been performed on the college level and that there should be more studies conducted on the high school and elementary levels. Moreover, "... the problems of elementary school and college students are in many ways not comparable to those of high school students."²

¹Ralph Leutenegger and Theodore Mueller, "Auditory Factors and the Acquisition of French Language Mastery," Modern Language Journal, Vol. XLVIII, March 1964, p. 142.

²Willga M. Rivers, The Psychologist and the Foreign Language Teacher (Chicago: The University of Chicago Press, 1964), p. 7.

I. GENERAL FACTOR STUDIES

Edward O. Hascall, in an attempt to improve the counseling and placement services in a White Plains, New York high school, approached the problem from nearly the same point of view as it had been visualized for the situation at J. R. Tucker High School.³ Mr. Hascall, for purposes of prediction, categorized certain variables into four areas: acquired skills, aptitudes, interests, and personal factors.

In assessing acquired skills, the following tests and measurements were employed: grades in English; scores obtained from Stanford Achievement Tests (reading, spelling, grammar, and arithmetic); Iowa Silent Reading scores; and grades obtained from Cooperative Foreign Language tests.

In assessing scholastic aptitudes the following tests and measurements were employed: Otis Quick-scoring Mental Ability Tests, Differential Aptitude Tests (Numerical, Verbal, Spelling, and Sentence scores), and the Iowa Foreign Language Aptitude test.

The Kuder Preference Record (Vocational section) was the standardized inventory used to evaluate interests.

Data concerning personality factors were accumulated

³Edward O. Hascall, "Predicting Success in High School Foreign Language Study," Personnel and Guidance Journal, Vol. 40, Dec. 1961, pp. 361-365.

by means of questionnaires devised to gain information on motives for studying a foreign language, languages spoken at home, education of parents, and educational plans.

The criterion was the degree of foreign language proficiency a student possessed as measured by scores on Cooperative Foreign Language tests. The coefficients of correlation for all of the stated criteria were all positive and statistically significant. The English grammar grade proved to be the best single predictor of success for both boys and girls in the study of a foreign language. The best standardized test predictor was the DAT Sentence score. In both the DAT and the Stanford Achievement tests, the numerical tests were more highly correlated with foreign language grades than were the verbal tests.

The author concluded that these factors seem more predictive of foreign language success in his school than do measures of intelligence or aptitude for foreign language as measured by prognostic tests. He suggests: ". . . another research worker might well examine those predictive measures which have proved most valid for White Plains to ascertain their relative validity in his situation."⁴

Pimsleur, Mosberg, and Morrison, in surveying the relevant literature, reported in the Modern Language Journal

⁴Ibid., p. 365.

the results of their findings. In an article entitled "Student Factors in Foreign Language Learning,"⁵ they brought together the results of a number of studies on the subject. The conclusions of these authors have been condensed in the following statements:

Intelligence is a significant factor with a $+0.21$ to $+0.65$ coefficient of correlation when compared with teacher grades in a language.

It is difficult to distinguish between general intelligence and verbal ability.

Certain aspects of intelligence -- ability to grasp instructions, common sense, work efficiency, rote memory, ability to concentrate -- influence success in foreign language study.

The verbal ability one possesses in his native tongue correlates positively with ability to learn a foreign language.

Certain languages and certain aspects of language learning (speaking, comprehension, writing, for example) require differing degrees of verbal ability.

The order in which languages are studied may influence achievement in a second foreign language.

⁵Paul Pimsleur, Ludwig Mosberg, and Andrew Morrison, "Student Factors in Foreign Language Learning," Modern Language Journal, Vol. XLVI, No. 4, April 1962, pp. 160-170.

The advantages of a bilingual home background do not necessarily outweigh the disadvantages of resulting scholastic and emotional difficulties.

Motivation, as evidenced by enthusiasm, cooperation, and attention, is most important.

Personal and emotional factors -- self-confidence, thoroughness, level of anxiety, initiative -- are related to level of achievement.

Measurement of foreign language achievement is in need of much research. Whereas teacher tests are unreliable, the objective-type tests are in many instances, not commensurate with conflicting foreign language goals.

Pimsleur, Mosberg, and Morrison concluded: "Clearly, the greater part of variance in foreign language achievement remains to be investigated."⁶

Attempts to determine factors involved in learning French were made by Paul Pimsleur, in cooperation with Robert Stockwell and Andrew Comrey.⁷ For the purpose of contributing to the psychology of learning, the researchers reported on two studies which aimed to isolate some of the

⁶Ibid., p. 169.

⁷Paul Pimsleur, Robert Stockwell, and Andrew Comrey, "Foreign Language Learning Ability", Journal of Educational Psychology, Vol. LIII, No. 1, Feb. 1962, pp. 15-26.

components affecting foreign language learning. Their findings are based on twenty-three tests administered to two-hundred and eight students in college French and twenty-two tests, to two-hundred and two students a year later. Some of the factors were hypothetical ones based upon suppositions derived from teaching experience. Where tests did not exist to measure certain factors, they were constructed for that purpose.

The following variables were studied: verbal intelligence; associative memory; analytic reasoning; reasoning by analogy; verbal reasoning; physical dexterity in articulation; ability to change linguistic set; auditory discrimination; and interest in foreign languages.

The studies emphasize the importance of motivation where average intelligence is present. The results indicate that learning to speak French involves primarily verbal intelligence and interest combined with the ability to reason analytically and by analogy. Ease of articulation was found to be a significant factor in foreign language fluency. In addition to verbal and reasoning ability and a high degree of motivation, they found that listening comprehension requires pitch and timbre discrimination.

The primary conclusion of the Pimsleur, Stockwell, and Comrey study was that the need for talent or special skills in order to learn a foreign language should be

deemphasized and that the stress should be placed on motivation.

John B. Carroll made a factor analysis of items in two foreign language aptitude test batteries.⁸ In this study he listed the factors which research revealed to be dominant. The first three he considered the most weighted factors: linguistic interest; associative memory; inductive language learning ability (the ability to induce grammatical rules and language properties from given materials); verbal knowledge (of one's own language); sound-symbol association or word fluency; and grammatical sensitivity. Carroll⁹ indicated that prognostic foreign language aptitude tests hold promise of potential value to those concerned with student educational planning.

II. SPECIFIC FACTOR STUDIES

Motivation. The success of almost any endeavor could be attributed to strong motivation. Several studies have

⁸John B. Carroll, "A Factor Analysis of Two Foreign Language Aptitude Batteries," Journal of General Psychology, Vol. LIX, 1958, pp. 3-19.

⁹J. B. Carroll's studies were frequently referred to in the related research in the field. Wilga Rivers referred to the thorough account J. B. Carroll had prepared concerning research up to November of 1960 on the teaching of foreign languages. She stated that Carroll had discussed "all the experiments relevant to specific areas of foreign-language study." Rivers, op. cit., p. 5.

pointed to motivation as a vital factor in foreign language learning: Pimsleur, Mosberg and Morrison (see p. 14) stressed the importance of motivation; Pimsleur, Stockwell, and Comrey (see p. 16) gave more weight to motivation than to intelligence, where average intelligence was present. J. B. Carroll (see p. 18) placed linguistic interest at the top of a list of six factors. Wilga Rivers quoted W. Lambert on the role of motivation:

Two independent factors underlie the development of skill in learning a second language: an intellectual capacity and an appropriate attitudinal orientation toward the other language group coupled with a determined motivation to learn the language.¹⁰

An article from Changing Times contained the following statement: "The most important factor of all is interest or motivation. Actually, anyone can learn another tongue if he wishes, and every student should be given the opportunity to try."¹¹

Mr. Charles F. Berlitz, vice-president of The Berlitz Language Schools, was asked in a letter to reply to the following question, "What factors have you found to be significantly related to second language acquisition?" His answer was: "In my opinion, motivation is as important as

¹⁰Rivers, op. cit., footnote 14, p. 81.

¹¹"Which Language For Your Child?," Changing Times: The Kiplinger Magazine, Vol. XVIII, June 1964, p. 13.

latent ability."¹²

Age. Most language authorities have agreed that there are definite advantages in beginning foreign language study at an early age. There would be little need to consider intelligence, since such an approach would more nearly resemble the patterns followed in first language learning.

Louis Gray wrote:

For the most part, facility in learning either a single language or several languages simultaneously is greatest in the formative stages of the individual, when a language extremely difficult for an adult to acquire is mastered without apparent effort by the child. . .¹³

Huebener gave four reasons for this facility in foreign language learning by young children:

A young child is without the inhibitions of the older student; his speech organs are still flexible, and he will have no difficulty in learning foreign sounds; since he is a child he learns the foreign language like his own mother tongue; and an early start is absolutely necessary for language mastery, since acquiring facility in a language requires years of practice.¹⁴

Entwistle remarked: "No doubt, for a child all speech sounds are equally easy, since he produces many more than are required when simply exercising his vocal muscles. . ."¹⁵

¹²Letter dated April 15, 1965.

¹³Louis H. Gray, Foundations of Language (New York: the MacMillan Company), p. 13.

¹⁴Theodore Huebener, Why Johnny Should Learn Foreign Languages (New York: Chilton Company, 1961), p. 19.

¹⁵William J. Entwistle, Aspects of Language (London: Faber and Faber, 1953), p. 138.

Authorities who advocate beginning foreign languages in the elementary grades have based their proposals on several assumptions: (1) foreign language programs would continue throughout the elementary grades; (2) articulation between elementary instruction and high school language teaching would be a continuous process; (3) the foreign languages taught would be the modern spoken languages; (4) and methods of instruction would be primarily audio-lingual in the elementary grades, since analysis and analogy of grammatical structures and aiming for literary skills would be premature.

James C. Bostain, a scientific linguist at the Foreign Service Institute, asked to comment on predictive factors, mentioned the age of the student as being especially significant. Students selected to attend language classes at the Institute range from age twenty-five and upward. However, he noted that a slackening of language ability comes at about the time of puberty.¹⁶ (The fact that only persons of above average ability are selected at the Institute would explain the high degree of success reported there.) He went on to say: "Once you begin intellectualizing about a language, you're in trouble. You are less

¹⁶Opinions expressed by Dr. James C. Bostain at a meeting of Henrico County school personnel, June 28, 1966.

likely to rationalize when you're younger."¹⁷

Nelson Brooks explained that older persons are more conditioned to seeing something written. This set which they bring into the learning situation is difficult to break. There is an urge to relate the new language system word by word to the mother tongue. Learning by analysis is more characteristic of adult learning than that of children.¹⁸

Personality. Dorothy Spoerl proposed other factors which she believed were significantly related to foreign language study. She titled them "ascendance-submission" factors based upon the supposition that a "submissive person who is willing to accept suggestions and orders will be able to learn more adequately in the foreign language situation."¹⁹ The thirty-eight students involved in this study were given tests to measure general ability, ascendance-submission, and a Cooperative Foreign Language test in German.

The results of these tests led Spoerl to conclude that there is no relationship between "ascendance-submission" as a personality trait and foreign language achievement. Other factors were submitted for investigation: (1) there is

¹⁷Ibid.

¹⁸Nelson Brooks, Language and Language Learning (New York: Harcourt, Brace, and Co., Inc., 1960), pp. 113-115.

¹⁹Dorothy Spoerl, "A Study of Some of the Possible Factors Involved in Foreign Language Learning", Modern Language Journal, Vol. XXIII, 1939, pp. 428-431.

a definite sex difference in language learning ability; (2) interest is a significant factor for women but not for men; (3) and success in language learning is related to success in other school learning.

The study suggested several additional factors which might be worthy of investigation: auditory discrimination, memory, abstract and concrete thinking, and linguistic ability.

A review of the literature in the field has pointed to general agreement on the part of authorities as to the involvement of personality factors in language learning. Wilga Rivers has compared the stage of beginning language study to the stage of infancy.²⁰ A teen-ager must make emotional adjustments when he is asked to behave again as if he were a baby. The practicing of unintelligible sounds, the unwelcome attention that comes from making ridiculous mistakes, the reading of materials that resemble primary reading books are only a few sources of embarrassment. How an individual reacts to such situations is determined by his personality.

Auditory discrimination. Mueller and Leutenegger published the results of several college-level studies which contribute additional data to the controversial question:

²⁰Rivers, op. cit., pp. 91-92.

Are modern languages taught more effectively by the aural-oral approach or by the traditional (book oriented) method?²¹

One of the authors, Mueller, conducted his classroom in accordance with his belief that a textbook may be a crutch, a hindrance in the study of a spoken language. Homework and classwork were designed to provoke linguistic proficiency. Repetitious drill, television, and other visual and aural aids were used to attain this goal.

In contrast, Kurth made extensive use of a text, required little oral response from the students, and stressed the reading-writing skills rather than speaking skills.

The Seashore Measures of Musical Talents were administered to the students in both groups at the beginning of the year. A comparison was made of the scores of those students who continued with the class and of the students who dropped out. Forty per cent of Mueller's class (aural-oral) dropped the course, whereas thirty per cent withdrew from Kurth's class (traditionally oriented). Table 1 reveals that the differences in scores on sub-tests of Pitch, Time, Tonal Memory, and Timbre are noteworthy.

²¹Theodore H. Mueller and Ralph R. Leutenegger, "Some Inferences About an Intensified Oral Approach to the Teaching of French Based On a Study of Course Drop-outs," Modern Language Journal, Vol. XLVIII, No. 3, Feb. 1964, pp. 91-94; "Auditory Factors and the Acquisition of French Language Mastery," Modern Language Journal, Vol. XLVIII, No. 3, March 1964, pp. 141-144.

TABLE I²²

GROUP MEANS OF SEASHORE SUB-TEST SCORES

	Pitch	Loudness	Rhythm	Time	Timbre	Tonal Memory
Mean of Drop-outs	39.0	44.8	26.7	37.7	42.5	20.1
Mean of Course Completers	41.9	44.9	26.9	41.9	44.7	25.4

Many of Mueller's drop-outs stated that they had experienced frustration in trying to comprehend and speak the language. Mueller and Leutenegger noted that the majority of the students had had language study previously in high school, and, in almost every case, the student had been taught the traditional way of deciphering and translating. The authors concluded that the preconditioning received in their high school language courses prejudiced many of them against an audio-lingual approach.

The second of these related studies by Mueller and Leutenegger is entitled: "Auditory Factors and the Acquisition of French Language Mastery"²³. The results of this

²²Mueller and Leutenegger, op. cit., "Some Inferences About an Intensified Oral Approach to the Teaching of French Based on a Study of Course Drop-outs," p. 92.

²³Mueller and Leutenegger, op. cit., pp. 141-142.

study contribute significantly to the research on the audio-lingual approach. The linguistic differences between French and English were defined. The variance in syllable length and stress, they stated, create totally different rhythmic patterns in the two languages. The tendency in French is for syllables to end in vowel sounds, in contrast to the closed consonant syllable in English. "Factors of pitch, loudness, and duration contribute to the rhythm of a language."²⁴ Ability to concentrate aurally is more important in language study than in any other subject area. The use of The Seashore Measures of Musical Talents would be useful to the counselor in helping a student make a choice between a language that will require audio-lingual proficiency and Latin, which is rarely spoken. The language laboratory is another means of alleviating aural-oral problems.

Mueller and Leutenegger cited a study by E. S. Dexter²⁵ in which an attempt was made to determine whether intelligence or pitch discrimination was more important in learning a foreign language. Thirty college students, matched for intelligence, were divided into two groups. Group I were seniors who as freshmen had failed French after

²⁴Ibid., p. 141.

²⁵E. S. Dexter, "Pitch Discrimination and French Accent on the High School Level", Journal of Applied Psychology, Vol. XVIII, 1934, p. 720.

one year or less. Group II, also seniors, had successfully completed two years of French.

If Dexter's assumption were correct Group II should score higher than Group I on the Pitch sub-test of the Seashore Measures of Musical Talents. The results supported his hypothesis: Group II surpassed the median score of Group I by fourteen points. Dexter's research also pointed out that low I. Q. "accompanied by good pitch discrimination seems to result in reasonably successful work in French."²⁶ In conclusion Mueller and Leutenegger quoted the Seashore contention that "ear-mindedness has much the same function in speech that it has in music."²⁷

Characteristics of the teacher. Pimsleur, Stockwell, and Comrey pointed to the need for studying certain teacher-related factors about which little research has been done. They indicated that "characteristics of the teacher" is such a factor.²⁸

Wilga Rivers²⁹ described an experiment conducted by C. A. Curran which aimed to study the effects of the relationship between language teacher and students.

²⁶Ibid.

²⁷Mueller and Leutenegger, op. cit., "Auditory Factors and the Acquisition of French Language Mastery," p. 144.

²⁸Pimsleur, Stockwell, and Comrey, op. cit., p. 26.

²⁹Rivers, op. cit., pp. 96-97.

The experiment showed clearly that the students began the experience with a sense of threat. . . . Their growth toward confidence and independence in foreign language activity was found to depend on the degree of warmth, acceptance, and empathy that the counselor-instructor was able to convey.³⁰

III. LANGUAGE SELECTION

The order in which languages are studied was the subject of a research project by Gilbert C. Kettelkamp.³¹ The emphasis on Latin as the preferred beginning language, a foundation for future foreign language study, may have arisen when the primary goals for Latin and the modern languages were translation and grammatical skills. Kettelkamp analyzed the language grades of high school students taking Latin, French, and German to determine whether there were marked differences in second language grades.

His findings led him to conclude that (1) there is little advantage, and possibly a disadvantage, in taking Latin first (applicable when the second language is taught by audio-visual methods); (2) when Latin preceded a modern foreign language, there was a negligible decrease in the

³⁰Rivers, op. cit., p. 97, citing C. A. Curran, "Counseling Skills Adapted to the Learning of Foreign Languages," Bulletin of the Menninger Clinic, Vol. XXV, No. 2, March, 1961, pp. 78-93.

³¹Gilbert C. Kettelkamp, "Student Achievement in Two or more Foreign Languages As Related to Order of Study," School Review, Vol. LIII, 1945, pp. 610-614.

average modern language grade; (3) where Latin was studied following the study of French, the average mark in Latin was half a letter higher than the grade in French; and (4) studying German after French resulted in a higher grade in German by almost a full letter.

By way of summary, Kettelkamp stated:

Latin has many contributions to make to the education of high school pupils, but it may not be as significant as a prerequisite to modern languages today as is frequently supposed. Possibly certain habits acquired in the study of Latin are not those most valuable in the study of a modern language where conversational skills are a dominant factor.³²

Kettelkamp advised that a foreign language should be selected for its own value rather than for its value as a preparation for another language.

The problem of language selection was reviewed in the Kiplinger Magazine Changing Times.³³ The article was written for the purpose of informing parents of some of the popular issues in the rapidly expanding field of foreign language study.

Contrary to Kettelkamp, the editors cited Latin as offering significant advantages: (1) Latin, as the parent of most western European languages, reveals the basic structure of language; (2) the study of Latin will enable students to understand English better, due to the fact that forty to

³²ibid., p. 614.

³³Kiplinger, op. cit., pp. 13-14.

fifty per cent of English vocabulary is derived from Latin; (3) the basic aesthetic, political, and intellectual concepts Americans cherish were inherited from Rome and Greece; (4) for college admission purposes, Latin is enjoying renewed popularity.

The authors advised that whenever a student plans to study more than one language, Latin should be definitely considered. Parents were reminded of some of the pitfalls to be avoided: lack of continuity in language study, especially in elementary programs; ineffective guidance in language selection and in checking college requirements (senior high school); inadequate teacher preparation (need for intensive audio-visual training).

The need for high academic ability as a prerequisite for foreign language study was minimized in this article, while emphasis was placed on the increasing need for proficiency in one or more foreign languages. Which language to take was not important, it was concluded, since the study of any language is beneficial in learning a second.

IV. INSTRUCTIONAL APPROACHES

The approach to language learning and the anticipated outcomes would determine the factors involved in the acquisition of a second language. For example, if the stress is placed on aural-oral skills, according to James C. Bostain,

then average verbal intelligence is sufficient.³⁴ Bilingualism, he said, is attainable by anyone with a keen memory, good auditory discrimination, and a desire to learn the language. However, the more highly developed the linguistic areas of the brain are, the more favorable the outcomes that can be expected.

A. H. Sayce set objectives for language learning which are almost unattainable within the framework of a high school program: to obtain an art of speaking and writing modern language; to gain insight into the nature of speech itself; to develop language instincts that will facilitate the acquisition of other languages; and to detect differences in pronunciation.³⁵

Until the need arose during World War II days for persons with bilingual ability, most public schools utilized the literary approach to teaching foreign languages. Little emphasis was placed on speaking a language. Reading, writing, and analyzing of grammatical forms were the objectives. These aims were educational and cultural. The linguistic scientists exerted tremendous influence to effect instructional programs geared more to their views of what language is. "It is the living expression of the mind and

³⁴See footnote 16, p. 21.

³⁵A. H. Sayce, Introduction to the Science of Language (London: C. Kegan Paul and Co., 1880), p. 339.

spirit of a people, ever changing and shifting, whose sole standard of correctness is custom and the common usage of the community."³⁶ "Language does not consist of letters, but of sounds."³⁷ According to one linguist,

. . . the intensive Army Program did more to shake language learning out of its traditional habits and complacency than any of the unpublicized evolutionary innovations that had silently crept in during the years between the two wars.³⁸

The Army Specialized Training Program was considered highly successful in foreign language instruction. The program stressed the practical application of foreign language, and yet it has often been held up as an example for public school language instruction. A consideration of the conditions under which the program functioned has disclosed almost no bases for comparison. The factors which lay at the heart of the program were: small classes (twelve or fewer students per class); motivation strengthened by rewards (week-end passes) and punishments (no passes); intensive periods of study (seventeen hours per week); unlimited use of audio-visual aids; daily exposure to native instruction; and concentration on only one subject.³⁹

" . . . only carefully screened students with a previous

³⁶Ibid., p. 333. ³⁷Ibid., p. 339.

³⁸Mario Pei, The Story of Language (New York: J. B. Lippincott Co., 1949), p. 415.

³⁹Huebener, op. cit., p. 15.

linguistic background and a high level of intelligence were accepted for enrollment in Army language courses. . .⁴⁰

Another example of successful utilization of the audio-lingual approach has been the Foreign Service Institute language program in Washington, D. C. Dr. Bostain, a teacher there, has said that the degree of accomplishment experienced by students receiving foreign language instruction at the Institute has been related more to age (twenty-five years and up), above-average ability, and the degree of motivation than to the instructional approach.⁴¹

The Berlitz Language Schools have also offered a challenge to the public schools. However, the success these specialized schools have experienced has been due to conditions which are totally unlike those prevailing in the public high school.

Research has indicated the prevalence today of a modified approach to foreign language instruction. Nelson Brooks has been described as the ". . . leading exponent of the audio-lingual method. . ."⁴², but he has stated ". . . no single method is preferred."⁴³ The proponents of this modified approach have pointed out problems which have accompanied the strictly audio-lingual methods. Wilga

⁴⁰Pet, op. cit., p. 412. ⁴¹See footnote 16, p. 21.

⁴²Rivers, op. cit., p. 11. ⁴³Ibid.

Rivers has emphasized:

. . . making the student depend on aural signs alone in the early stages of learning a foreign language puts a much greater strain on the student than is generally realized. . . . This period of purely aural-oral work is particularly trying for students with poor auditory discrimination or a nervous or anxious temperament, who feel insecure when forced to depend on the ear alone.⁴⁴

The emotional anxiety which may accompany the student's efforts to speak a foreign language may cause feelings of hopelessness and inadequacy.⁴⁵ ". . . there is a type of mind which is visual rather than auditory, and for this type of mind the oral-aural technique is the hard way to go about it."⁴⁶

Because proficiency in bilingualism has been almost unattainable in the limited set-up of the average high school, Huebener may have rationalized when he made this statement:

Most of our graduates will have no need for speaking ability. Reading and comprehension, on the whole, will be far more useful to them. . . . Speaking ability is the most difficult phase of a foreign language to teach and to acquire. . . . This ability is least likely to be retained, for it depends on constant practice.⁴⁷

Wilga M. Rivers made a valuable contribution to the

⁴⁴Ibid., pp. 159-160. ⁴⁵Ibid., p. 93.

⁴⁶Mario Pei, Language For Everybody (New York: The Devin-Adair Co., 1961), p. 310.

⁴⁷Theodore Huebener, How To Teach Foreign Languages Effectively (New York: University Press, 1959), p. 8.

teaching of high-school foreign language in her book, The Psychologist and the Foreign Language Teacher.⁴⁸ She described in detail the popular, but controversial, audio-lingual method of teaching foreign language. Rivers clearly defined the basic assumptions of this aural-oral approach:

Foreign-language learning is basically a mechanical process of habit formation. . . . Language skills are learned more effectively if items of the foreign language are presented in spoken form before written form. . . . Analogy provides a better foundation for Foreign-language learning than analysis. . . . The meanings which the words of a language have for the native speaker can be learned only in a matrix of allusions to the culture of the people who speak that language.⁴⁹

These assumptions founded on psychological theories of learning were critically examined by Rivers in the light of the theories involved. (Sixteen learning theories were set forth in the Appendix.)

As a language teacher, Rivers has written with the teacher in mind. The last chapter might well be considered a practical guidebook for the foreign language teacher. By merely reading this chapter a teacher should be stimulated to make a critical appraisal of her teaching methods and philosophy of foreign-language teaching. Rivers was unwilling to accept one method of foreign-language teaching as being singularly superior to others. She suggested that

⁴⁸Rivers, op. cit.

⁴⁹Ibid., Chapter III, pp. 19-22.

the approaches to language instruction should vary according to the situation, the student, and the teacher.

. . . The general thesis of this book (is) that language communication involves a relationship between individuals and not merely the memorization and repetition of phrases and the practicing of structures.⁵⁰

V. SUMMARY

Extensive research on the subject of second language acquisition indicates that proficiency in foreign language study is positively related to certain factors:

Intelligence. Aspects of intelligence, such as verbal, analytic, and analogous reasoning; associative and rote memory; and general ability are significant.

Aptitudes. Verbal ability, numerical skills, auditory discrimination, and ease of articulation are among the aptitudes considered important.

Achievement. Knowledge of one's own language seems to be a necessary factor in bilingualism. Achievement in other academic areas, as well, seems to be related.

Personality. Motivation is stressed as the primary factor upon which foreign language success is dependent. Study habits, linguistic interest, degree of self-confidence, and age at which foreign language study is begun are personality-related.

⁵⁰Ibid., p. 163.

Research points to factors other than those related to the individual himself as being significant in the study of foreign language: The instructional approach may determine individual achievement. Characteristics of the teacher may influence language learning. The inadequacy of measuring devices hinders accurate appraisal of foreign language achievement. The sequence of foreign languages studied may be related to success in second language acquisition.

CHAPTER III

INTRODUCTION TO THE STUDY

John Randolph Tucker High School is a junior-senior high school located on Parham Road near the western boundary of Henrico County. At the time the research data were being gathered (September 1964-June 1965) Tucker was in its third year, having opened in September 1962. Its rapid growth has made it the largest school in Henrico County with an anticipated student population for the 1966-1967 year of two thousand.

I. EVALUATION OF THE NEEDS FOR THE STUDY

As is characteristic of new schools, Tucker is in a period of organization, policy-making, and continuous evaluation. The problems pertaining to language instruction at Tucker are not distinctive ones.¹ Research revealed that they are microcosmic reflections of national issues which confront administrators, linguists, teachers, and guidance counselors throughout the United States.

The routine for scheduling students for foreign language classes at Tucker has been considered inadequate. The policy is as follows: a student denotes the desired

¹Supra, pp. 1-3: Defining the Problem.

language on a scheduling form; his English teacher (for first year language) evaluates his grades in English grammar in her class and on this basis recommends or declines to recommend; for an advanced language class or a second language, the foreign language teacher follows this same procedure; a non-recommendation may be by-passed, if the parent elects to sign a form on which he assumes responsibility for his child taking this course.

At Tucker students are free to take courses for which they are not recommended. It is hoped that the number of "unrecommended" students may be kept at a minimum. This might be accomplished if those involved in the scheduling procedure would become more aware of individual inventories. However, those involved in the process of recommendation are not availing themselves of valuable resources. It has been assumed that predictors, other than English grammar and language grades, exist in the cumulative folder.

Furthermore, it is believed that recommendation for foreign language (or other subjects) should not depend upon one person's evaluation. This procedure denies the guidance counselor his responsibilities toward his counselee in areas of decision-making. The existing policy negates the value of face-to-face counseling. It places little importance on the need for parent interest and participation. It is believed that an evaluation of the cumulative folder and

other data would reveal additional predictors which would be of value in the scheduling process and in improving the total language program.

II. PROPOSED RESEARCH PLAN

It was assumed that proficiency in a foreign language is related to many factors: intelligence, verbal ability, linguistic aptitude, analytical reasoning, academic achievement, motivation, among others. These factors seemed to fall into three general classifications: (1) aptitudes, (2) achievement, and (3) personality.

Standardized test results² and other data related to aptitude and achievement are recorded in student records. Information pertaining to personality may be ascertained from subjective statements by teachers, attendance figures, notations on strengths and weaknesses, and grades.

The plan was to select from the cumulative folder those data that one may assume to have predictive potential. Coefficients of correlation would then be computed to determine which, if any, of the chosen possible predictor variables would be significantly related to the criterion.

A survey of the cumulative folder resulted in the selection of the seventeen variables listed in Table II.

²See Appendix, p. 80, for publishers of standardized tests.

TABLE II
FACTORS TO BE TESTED FOR PREDICTIVE POTENTIAL

Variables		
<u>Aptitude</u>	<u>Achievement</u>	<u>Personality</u>
CTMM*	English grammar grade	(Grade point average)
Total	Grade-point average	
Language	Iowa Silent Reading	
Non-language	STEP*	
DAT*	Reading	
Verbal	Listening	
Language Usage:		
Grammar		
Language Usage:		
Spelling		
Abstract Reasoning		
Numerical Ability		
SCAT*	(Experimental English	
Verbal	Grammar Test) ¹	
Quantitative		
Total		
Experimental Verbal		
Test		

*California Test of Mental Maturity

*Differential Aptitude Tests

*School and College Ability Tests

*Sequential Tests of Educational Progress

¹to test validity of English grammar grade

Further investigation of student records revealed pertinent information concerning the proposed factor classifications:

Aptitudes

Intelligence

Group Measurements of intelligence are recorded in Henrico County cumulative folders beginning in the fourth grade. The Lorge-Thorndike Intelligence Test results are recorded at the fourth, fifth, and sixth grade levels; in grade seven The California Short-Form Test of Mental Maturity is administered and the results included.

Since it has been observed that the results of the CTMM are more frequently referred to by teachers than those recorded on the fourth, fifth, and sixth grade levels, it was decided that scores on CTMM should be correlated with the criterion of average grade in foreign language study and that coefficients of correlation should be determined. The CTMM subdivides intelligence into three parts: language, non-language, and total. The score on the language section is thought to be more predictive of foreign language success than the non-language score. A determination of the coefficients of correlation for each of these three scores would be necessary.

Differential Aptitudes

In the eighth grade Henrico County students take the

Differential Aptitude Tests which propose to identify seven specific aptitudes: Verbal Reasoning, Numerical Ability, VR+NR: Scholastic Aptitude, Abstract Reasoning, Clerical Speed and Accuracy, Mechanical Reasoning, Space Relations, Language Usage: Spelling, Language Usage: Grammar. For the proposed study, it was hypothesized that success in foreign language might be significantly correlated with five of these aptitudes: Verbal Reasoning, Language Usage: Grammar (or DAT Sentence), Language Usage: Spelling (or DAT Spelling), Abstract Reasoning, and Numerical Ability. (These variables have been listed according to assumed predictive potentiality.)

Aptitudes for Academic Progress

School and College Aptitude Tests (referred to as SCAT) are administered in the fall of the ninth and eleventh grades. SCAT purports to measure aptitude in three areas: Verbal, Quantitative and Total scholastic ability. These tests are believed to have met "The requirements of a good test under the headings of validity, reliability, and practicality."³ They have demonstrated validity in measuring verbal, quantitative, and total aptitude for future school or college study. The publishers of SCAT

³Robert L. Thorndike and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education (New York: John Wiley and Sons, Inc., Second Edition, 1962), p. 202.

reported:

. . . The Verbal and Quantitative Scores show a substantial correlation (typically between .50 and .60) with English and mathematics grades, respectively, and the Total Score consistently yields high correlation with course grades, grade-point average, and similar measures of academic achievement. . . . The reliability of SCAT (estimated by Kuder-Richardson Formula 20) is .95 or higher for the Total Score and around .90 for the Verbal and Quantitative Scores.⁴

If it might be assumed that foreign language study is academic and that foreign languages are part of the academic curriculum, then it might be reasonable to expect a positive correlation between average language grade and scores obtained on the three sub-tests of SCAT.

Prognostic Tests as Measures of Verbal Aptitude

The need for a reliable standardized measure of foreign language aptitude is an accepted fact. Such an instrument would eliminate most of the problems that exist in the study of foreign languages. Tests of this nature have been devised and are being used.⁵ Evidence of their ability to predict grades in foreign language has not been established to the complete satisfaction of language authorities. Henrico County does not include an instrument of this nature in its testing program.

The possibility of devising an experimental measure

⁴"SCAT . . . in brief" (Princeton, N. J.: Educational Testing Service, 1963), p. 5.

⁵See Appendix, p. 81.

of foreign language aptitude was considered in the initial planning of the proposed study. Research in the field of linguistics was examined at length, and ideas and facts which might be used in building a prognostic instrument were recorded. When the scope of such an undertaking was realized, it was decided that only a brief experiment would be possible. The result⁶ is obviously a simple experiment, an attempt to arrive at some slight degree of predictive prognosis. If the coefficient of correlation between the score obtained by the subject and the stated criterion should be significant, then it would seem worthwhile to devise a better instrument or to investigate the use of standardized tests.

Achievement

Measurement of achievement is recorded in the Henrico cumulative folder. Achievement (or progress) is specified by two means: teacher judgments and standardized tests.

Teacher judgments. From grades one through six (and sometimes seven) achievement is recorded on the folder itself as "Satisfactory" or "Unsatisfactory" with further notations recorded according to individual teachers. (The record of seventh grade subject achievement has been noted

⁶See Appendix, p. 82, for Experimental Verbal Ability Test.

on a separate form, included in the folder.) Areas of weaknesses and strengths are cited. Promotion or retention is specified. High school achievement, beginning with the eighth grade, is recorded on the Scholastic Record Card.

English grammar achievement. Even though there are data recorded on achievement as early as the first grade, it is judged for the purpose of this study that achievement in high school is more indicative of future academic progress. English grammar achievement was selected as a variable to be correlated with the criterion. This selection was made for two reasons: research indicated, almost without exception, that knowledge of one's own native language, its construction, usages, et cetera was a prerequisite for second language learning; the scheduling of students into foreign language classes at Tucker is based almost entirely upon English teachers' estimates of the students' knowledge of English grammar.

Assuming that the lack of standardization in assessing a student's knowledge of English grammar is a weakness in the scheduling process, the need for a standardized measure was considered. A standardized English grammar achievement test, it was judged, would eliminate some of the weaknesses inherent in using English grammar grades as a basis upon which to recommend or not recommend foreign language study. Since such an instrument has not been

included in the County's testing program, a simple test⁷ was devised. Again, the objective was experimental, and the resulting test was only an example of what research and experimentation might accomplish. In the proposed study, the results of this creative endeavor would be correlated with English grammar grades to determine the extent to which grades earned in English grammar classes measure proficiency in the English language. If a significant correlation should be found, then continued use of this grade as a means of recommendation would be advised.

Correlating achievement in other areas with foreign-language success was not attempted, because of the enormity of such a project. Average grades earned in math courses and other academic areas, such as social studies and science, might theoretically produce significant correlations.

Grade-point average. An average of grades earned for each subject studied yields a grade-point average (G. P. A.).⁸ This value was selected as one of the eighteen variables for which correlation coefficients would be determined. G. P. A. is indicative of overall scholastic achievement. A student's G. P. A. was interpreted as

⁷See Appendix, p. 84, for Experimental English Grammar Test.

⁸See Appendix, p. 89.

reflecting meaningful information: academic interest, motivation, effectiveness of study-habits, competitive nature, need for acceptance, to mention the most obvious. This symbol of achievement, it was theorized, should bear a positive relationship to grades in foreign language achievement.

Standardized data. Of the standardized achievement test data in the cumulative folder, the Iowa Silent Reading Test and the Reading and Listening sub-tests of the Sequential Tests of Educational Progress (STEP) battery were selected for investigation.

Reading achievement. It was assumed that academic success is concomitant with proficiency in reading. Language study, as an accepted part of the academic curricula, should then be positively related to reading skills. The two measures of reading skills available in the cumulative folder above the elementary level are the Iowa Silent Reading Test and the Reading sub-test of STEP.

The Iowa Test yields nine scores, eight of which purport to measure special aspects of reading; the ninth is a total score. A study of the scores of any group usually reveals that total scores have been raised by high scores on two of the tests, alphabetizing and use of index. This has been considered a weakness of the Iowa Test, and would be noted when the coefficient of correlation between the

Iowa and foreign language grade was computed.

The STEP achievement battery is made up of seven tests, one of which is reading. This sub-test is a seventy minute timed reading test designed to measure comprehension and vocabulary.

Listening. The STEP Listening sub-test is designed to measure those acquired skills which are assumed to be basic to success in academic subjects: accuracy in following directions, and recognition of main idea, inferences, and details. Although STEP Listening is intended to measure achievement, there is involvement in areas of ability: associative memory, ability to concentrate, and the ability to draw conclusions.

Personality

It was decided that only one of the proposed variables might be considered under the classification of personality. Grade-point average might be interpreted to reflect aspects of behavior and distinguishing personality characteristics. To have included other data from this category in the proposed correlation studies would have been a tedious and extended undertaking. Subjective data related to personal, social, and academic progress would have required expert processing skills in order to make the information adaptable for statistical use. Such information

is readily adaptable to the counseling situation. It has proved to be invaluable in this respect.

CHAPTER IV

THE STUDY

I. OBJECTIVES OF THE STUDY

The purposes of this study are:

- (1) To determine the validity of certain variables theorized to be significantly correlated with average grades earned in foreign language.
- (2) To identify for prognostic purposes some reliable language predictors which may be practically applicable in counseling situations.
- (3) To evaluate the present techniques used in selecting and advising prospective language students.
- (4) To offer suggestions for the possible improvement of the existing language program, specifically in areas of recommendation.

II. PROCEDURE

Beginning in the fall of 1964, the office record¹ of every high school student at Tucker, starting with senior home room sections, was scanned for the purpose of locating the records of all students who had taken or were taking

¹note: Filed by homeroom sections the office record is the most complete record available of numerical grades, including 6 weeks' and exam grades.

Latin and/or French. The cumulative folder was pulled for each of these students. A form was developed for collecting the data.²

The process of recording the data was accomplished over a period of months. The following facts should be noted concerning the recording of the data:

1. The criterion or average grade in foreign language was obtained by averaging the yearly grade for each year of foreign language study. For example, the average foreign language grade for a student who obtained grades of 95 in Latin I, 90 in Latin II, and 97 in French I would be 94.
2. Any grade on foreign language for less than one year of study was not used.
3. Figures recorded for certain variables have specific meaning:

CTMM figures refer to I.Q.; DAT and Iowa figures have percentile meaning; STEP and SCAT figures correspond to the mid-point of a percentile band; average grades in foreign language and in English grammar are based upon per cent of achievement; Experimental English grammar and verbal test figures denote number of correct responses out of a possible one hundred; and grade point average

²See Appendix, p. 90.

figures are explained in the Appendix.

In the spring of 1965 the Experimental English grammar and verbal tests were administered, scored, and the results recorded. (These tests were administered only through the cooperation of English and foreign language teachers.) At the close of the 1964-1965 session averages in foreign language and English grammar were computed and recorded. Grade-point averages were determined for achievement through that date.

The next step was to compute the coefficients of correlation for the stated criterion of average grade in foreign language and the selected variables. This was accomplished by means of a product-moment correlation formula. Each of the proposed factors was correlated with the success criterion. In addition, the Experimental English grammar test and English grammar average were compared to find the degree of correlation.

In computing a coefficient of correlation for the criterion and each of the seventeen variables, any "Form for Collecting Data" which lacked the information related to the variable being tested was excluded from that particular study. Transfer student records, for example, contained data which varied according to the system from which they came. A record which had a Stanford reading score rather than an Iowa score would not be included in

determining the predictive value of the Iowa Silent Reading Test. The record would be included on the next computation, if it contained the correct information. Variation in data in cumulative folders accounts for the difference in N (See Table III) on the tabulations.

III. LIMITATIONS OF THE STUDY

As the proposed project proceeded in the fall of 1964, certain facts were noted, considered, and accepted as limitations of the study:

1. The number of students who had taken or were currently taking foreign language courses at Tucker was too large to be used in the proposed study. A representative group would have to be selected. The records of Latin students were selected to represent achievement in a non-spoken classical language and the records of French students were selected to represent achievement in modern spoken language.

2. The criterion of average grade in foreign language study would have some inherent weaknesses:

- a. Average foreign language grades based upon two or more years of language study would have given a more accurate appraisal of foreign language achievement than averages based on one year of study.

- b. The criterion was based upon subjective teacher

Judgments and might, therefore, be unreliable.

3. The grade level at which the study of a foreign language was begun was not one of the proposed variables.
4. The number of students taking the Experimental Verbal Aptitude and Experimental English Grammar tests was limited by lack of time in the high school daily schedule for such experimental efforts.
5. No attempt was made to relate personality factors to success in foreign language study.

IV. FINDINGS AND SUMMARY

The results of the statistical computations are compiled in Table III. Each of the tested variables correlate positively with the criterion. Eleven of the seventeen variables are significantly related to the criterion.

English grammar grade. The high correlation of English grammar average grade and average grade in foreign language was the most noteworthy finding of the study. The study had been based upon the assumption that basing recommendation or non-recommendation for foreign language study on this single variable was a real weakness in the scheduling process at Tucker High School. (It is still held that this procedure is most inadequate.) The results proved that if one single variable were capable of predicting success in foreign language, it would be grade in English grammar.

TABLE III
CORRELATION OF PREDICTOR VARIABLES
WITH
SUCCESS CRITERION¹

<u>Variable</u>	<u>r</u>	<u>N</u>
English grammar grade . . . . .	.73*	437
Experimental verbal aptitude . . . . .	.59*	41
DAT Numerical . . . . .	.48*	408
CTMM language . . . . .	.44*	387
Iowa Silent Reading . . . . .	.38*	353
DAT Verbal . . . . .	.36*	408
CTMM total . . . . .	.35*	387
DAT Sentence . . . . .	.34*	408
DAT Abstract . . . . .	.34*	408
DAT Spelling . . . . .	.26*	408
Grade-point average . . . . .	.26*	433
SCAT Total . . . . .	.18	433
SCAT Quantitative . . . . .	.12	433
STEP Listening . . . . .	.11	433
SCAT Verbal . . . . .	.09	433
STEP Reading . . . . .	.08	433
CTMM non-language . . . . .	.08	387

N = number of cases

¹listed according to predictive ability

*significant at .05 level

Table IV indicates a significant correlation between average grades earned in English grammar classes and success in foreign language study. It also reveals that at the present time subjective teacher grades on English grammar achievement are satisfactory measures of proficiency in English usage for the purpose of foreign language prognosis.

TABLE IV
ENGLISH GRAMMAR GRADE AS A PREDICTOR
OF
FOREIGN LANGUAGE SUCCESS

Correlation Coefficient for English Grammar Grade and Criterion	+.73
Rank among Seventeen Variables	one
Correlation Coefficient for English Grammar Grade and Experimental Grammar Achievement Test	+.43

A report of the College Entrance Examination Board's commission on English noted: "Grammar study is necessary as preparation for the study of foreign languages. . . . a knowledge of English grammar provides a base from which to move. . . ."²

²Harold C. Martin, "Freedom and Discipline in

The student who has mastered English, his native tongue, is well along the way toward second language mastery. The English language . . .

has borrowed from practically every language on the globe. Its vocabulary is the richest linguistic treasure house, for it contains words and concepts from all the important languages.³

Mr. Bostain described the English language as one of the more difficult languages to learn, partly because of the complexities of grammatical structure.⁴ Carroll listed as two of the six factors most often found in research studies: verbal knowledge (of one's own language) and grammatical sensitivity.⁵ Most authorities whose research studies on foreign language predictive factors were reviewed tested English grammar achievement as a variable. Others assumed that the significance existed and therefore did not include it in their studies.⁶

In reply to an inquiry, Harry U. Felton of ETS noted:

Also, you will want to know that verbal scores on scholastic aptitude, intelligence, or general ability tests, in combination with previous grades in English

English," College Entrance Examination Board, p. 40, cited in "Language," Education Digest, Vol. XXXI, Jan. 1966, pp. 39-42.

³Theodore Huebener, Why Johnny Should Learn Foreign Languages (New York: Chilton Co., 1961), p. 84.

⁴See footnote 16, p. 21. ⁵Supra, p. 18.

⁶See Chapter II.

courses, are useful in predicting success in foreign language study.⁷

Prognostic Tests as Measures of Verbal Aptitude. The small number of subjects who took the Experimental Verbal test and the lack of skill involved in creating such an instrument would lead to inconclusive evidence as to the validity of the test. It was interesting that, in spite of such weaknesses, the coefficient of correlation for the test and the criterion was +.59 or second in order of tested predictability. This finding would suggest the conclusion that the use of a standardized prognostic test might be highly profitable and might contribute to a more efficient method for scheduling foreign language students.

Language authorities seem to agree that a positive relationship exists between verbal ability and foreign language success. Aptitude for a second language seems to bear the same relationship. The recognized problem is that no one instrument has demonstrated significantly to the public the characteristics of a good test. Attempts to measure this specific aptitude have not been generally accepted. Educational Testing Service, one of the better known publishers of educational tests, does not offer any instrument designed for this purpose. ETS publishes proficiency tests (Cooperative Foreign Language Tests) which are

⁷Quotation from letter, dated April 27, 1965.

referred to often in research studies; this would seem to indicate the lack of demand for prognostic instruments.

Nelson Brooks stated:

The lack of such a test is linked to the fact that there is no general agreement as to the learnings that a language course should contain, and without such agreement the construction of the test remains virtually an impossibility.⁸

Whereas the use of prognostic tests in military schools and at the Foreign Language Institute, has proved effective, Pimsleur, Stockwell, and Comrey pointed out that their use in high school has been less successful. They suggested:

The attempt to isolate and describe as many as possible of the components effecting foreign language learning should lead to improved understanding of the learning processes involved.⁹

Differential Aptitudes. The DAT battery was found to hold some predictive power for foreign language prognosis. A chart in the Appendix (p. 91) compares findings of the present study with those of Edward O. Hascall¹⁰ and DAT publishers.¹¹

⁸Nelson Brooks, Language and Language Learning (New York: Harcourt, Brace, and Co., Inc., 1960), p. 67.

⁹Paul Pimsleur, Robert Stockwell, and Andrew Comrey, "Foreign Language Learning Ability," Journal of Educational Psychology, Vol. LIII, No. 1, Feb. 1962, p. 15.

¹⁰Edward O. Hascall, "Predicting Success in High School Foreign Language Study," Personnel and Guidance Journal, Vol. XL, Dec. 1961, p. 365.

¹¹George K. Bennett, Harold G. Seashore, and Alexander G. Wesmar, A Manual for the Differential Aptitude

DAT:Numerical. It had been assumed that Verbal Reasoning would produce the highest value for r . Instead, it ranked second among the variables, surpassed by DAT:Numerical. The test publishers further state:

. . . Scores on this test predict, to some extent, success in nearly all high school and college courses. Numerical ability is one element of all-around ability to master academic work.¹²

Numerical ability has been associated with logical thinking, diverse types of reasoning, and effective use of the powers of memory. Success in language learning has also been attributed to certain, if not all, of these factors.

Hascall reported that both the DAT and the Stanford Achievement numerical scores proved to be better predictors of foreign language grades than verbal scores on both tests.¹³

DAT:Verbal. Although VR ranked second among the DAT variables ($r=+.36$) tested, it was felt that an examination of the test items might reveal the reason for the lesser value of r for DAT:Verbal ($+.36$) than of r for DAT:Numerical ($+.48$). A review of the DAT Verbal Reasoning test items revealed that each of the fifty items was an analogy. One of the

Tests (New York: Psychological Corporation, 1952).

¹²Leaflet on Differential Aptitude Tests, Forms L and M (New York: The Psychological Corporation, 1961, 1963).

¹³See p. 14.

examples under the section on directions was as follows:

"_____ is to night as breakfast is to _____."

The examinee has five answers from which to choose:

- a. supper - corner b. gentle - morning c. door-
corner d. flow - enjoy e. supper - morning

Reasoning by analogy is only one component of verbal reasoning. Therefore, it has been judged that DAT:Verbal measures only one aspect of the field of verbal reasoning. Test items for the purpose of evaluating inductive, deductive, and reasoning by analogy have not been included.

Since the coefficient of correlation for DAT:Verbal and the criterion was significant to the +.36 level and since the test measures only a part of the total area, DAT:Verbal might be more highly predictive of foreign language success than r would indicate.

In defining the relationship between Verbal Reasoning and achievement in high school DAT publishers stated:

Verbal Reasoning is important in all academic and most non-academic subjects in high school. If you were to take only one test, VR would be the best all-around predictor of how well you can do in school, especially in the academic subjects.¹⁴

Hascall's findings placed the DAT:Verbal Reasoning score ahead of measures of intelligence in predicting

¹⁴op. cit., DAT leaflet, Psychological Corporation.

foreign language success.¹⁵ (It should be noted, however, that of eleven other variables Hascall tested, including DAT:Numerical, DAT:Verbal ranked in tenth place.)

Pimsleur, Stockwell, and Comrey¹⁶ distinguished between verbal reasoning (which they concluded was necessary to foreign language learning) and reasoning by analysis and by analogy. These last two factors were among the top four of the nine factors they studied.

DAT:Sentence and DAT:Abstract yielded identical values for r (+.34) when compared with the criterion. DAT: Sentence (also called DAT:Grammar) yielded a correlation coefficient of +.34, whereas the relationship between English grammar average grade and the criterion was outstandingly significant to the +.73 degree. A review of the test items showed that the examinee was judged only by his skill in identifying grammatical errors, whereas in the classroom situation a more thorough understanding of grammatical structure would be necessary. It could be understood, then, why a lesser correlation would exist between average grades earned in foreign language study and the DAT:Sentence score.

The DAT publishers referred to Grammar sub-test as "... among the best predictors of ability to earn good

¹⁵Supra, p. 14.

¹⁶Supra, p. 17.

grades generally in high school and college."¹⁷

Hascall found that the DAT: Sentence score was the best standardized test predictor for both boys and girls. For boys it ranked in first place; for girls, in second place. It ranked second ($r=0.47$) among the four variables Hascall tested in predicting foreign language prognostic test scores.¹⁸

DAT: Abstract Reasoning. It had been observed that students who scored above average on standardized tests of ability frequently scored in the highest quartile on DAT: Abstract Reasoning and, therefore, should make above-average grades in foreign language. The degree of correlation for Abstract Reasoning and the criterion should, then, be highly significant. Although the research which was reviewed did not verify this assumption, it was decided that the Abstract Reasoning variable would be included in the study. The resulting coefficient of correlation was significant to the $+ .34$ degree, but not outstandingly so. DAT publishers emphasize the significance of the Abstract Reasoning sub-test:

Students standing high on Verbal Reasoning and Numerical Ability have added confirmation of their college ability if they are also above average on

¹⁷op. cit., DAT leaflet, Psychological Corporation.

¹⁸Supra, p. 14.

Abstract Reasoning.¹⁹

It was judged that success in studying Latin and/or German would depend upon aptitudes measured by Abstract Reasoning more than success in studying modern Romance languages. (The testing of this assumption was not undertaken. However, it was noted that such an investigation might prove interesting in the future.)

DAT: Spelling. DAT:Spelling had been proposed as one of the more highly related factors. It ranked fifth ($r=+.26$) among the DAT variables, and bears a significant positive relationship with the criterion. Counseling high school students in an attempt to seek causes for poor performance in foreign language classes led to the assumption that spelling difficulties might bear investigation. Frequently, an analysis of spelling skills had been undertaken, when an evaluation of other hypothesized predictors had yielded no clues. In most cases the student agreed that spelling presented recognized difficulties, that he had little concept of phonetics, and that he felt handicapped by this lack of ability to spell.

Hascall reported that the coefficient of correlation of the Stanford Spelling score and foreign language grade was 0.495 for both boys and girls. For the girls it ranked

¹⁹op. cit., DAT leaflet, Psychological Corporation.

fourth (in eleven variables) in ability to predict language marks; for the boys, seventh. The DAT:Spelling score, as a predictor for boys, correlated to a greater extent with a 0.541 coefficient of correlation, ranking in fourth place. As a predictor for girls, it ranked sixth with r being 0.476.²⁰

Carroll found that studies had proved that a relationship exists between success in foreign language study and spelling: He defined spelling as "sound-symbol association", one of the six dominant factors.²¹ An interesting study might be that of correlating Spelling scores with grades in individual languages. (For example, the relationship between spelling aptitude and French proficiency should be greater than that of spelling and Spanish, since mastery of Spanish requires fewer spelling skills than does French.)

California Tests of Mental Maturity. The three variables related to intelligence yielded correlation coefficients which differ in value to a significant degree. The language sub-test relates to the criterion to the extent of +.44. The sub-test which ranks second in ability to predict success in foreign language is CTMM total(+.35). CTMM non-language(+.08) did not prove to be significantly related to the criterion. With the scores of three-hundred

²⁰Hascall, op. cit., p. 364.

²¹Supra, p. 18.

and eighty-seven subjects included in the statistical computation, it seemed reasonable to assume that the results would have some degree of accuracy. It was interesting to note that the total CTMM IQ score related to the criterion only to a $+ .35$ degree.

Since only two of these IQ scores were found to be significantly related to the criterion and since the degree of correlation was not impressive, it has been concluded that CTMM results should be evaluated for prognostic purposes only in conjunction with every other measure of intelligence recorded in the cumulative folder. The fact that the study did not establish the positive degree of relationship anticipated between intelligence factors and the criterion does not alter the original assumption that the level of intelligence determines the degree of success experienced in the study of foreign languages at J. R. Tucker High School. It is maintained that the degree of language proficiency an individual achieves is limited by the development of his thought processes. In some persons the language development process is terminated earlier than in others. The earliest stage of language is an attempt to satisfy personal needs. This highly self-centered aspect of language development expands as an awareness of others increases. It is understandable, therefore, that language development would cease in certain individuals at an early

stage. The physiological and psychological determinants of intelligence may similarly promote or retard language development.

Reading achievement. The relationship between reading proficiency as measured by a standardized instrument and foreign language achievement was not found to be outstanding. It might be well to evaluate the effectiveness of the Iowa Reading Test. The findings of this study ranked the Iowa as fifth in ability to predict foreign language success, but the degree of correlation was only $+0.38$. Iowa scores should be used as only one indicator of reading achievement.

The STEP Reading sub-test proved to be the least predictive of the factors tested. It yielded a positive coefficient of correlation ($+0.08$), but since it was below the $.05$ level, it is judged to be insignificant. It was interesting to find that the two STEP categories tested for predictive value ranked among the lowest three variables. STEP Listening yielded a positive, but insignificant coefficient of correlation ($.11$). Efficiency in aural areas is still considered important in second language acquisition. It has been concluded that listening skills assumed to be necessary in the foreign language classroom are not measured effectively by STEP Listening; that the sub-test stresses reading skills, rather than listening skills.²²

²²Supra, p. 49, for purposes of STEP Listening.

Reading proficiency, it is held, is a key factor in academic success and, as such, is highly related to the academic approach to foreign language study. The relationship may be less outstanding when the aural-oral methods are stressed. Donald L. Barnes, a reading authority, said that reading is misrepresented when referred to as a skill.

"Reading is a form of thinking, with words being triggers for thought."²³ If logic were applied in analyzing this statement and statements in this study concerning intelligence, it could be concluded that a positive relationship exists between ability to read and to learn a foreign language.

Barnes wrote:

. . . the complexity of the task is often overwhelming. The simpler aspects of the reading task alone require a host of skills involving visual and auditory discrimination, articulation and concepts of direction, sequence and size.²⁴

These reading skills are similar to those outlined by many language authorities.

Grade-point average. An average of high school achievement was considered one of the factors more highly related to academic success. College admissions officers are often asked: "What is the most important thing in a

²³Opinion expressed by Donald L. Barnes at a meeting of Henrico County school personnel, June 29, 1966.

²⁴Donald L. Barnes, "The Poor Reader". (Unpublished mimeographed material.)

student's record as far as college admission is concerned?" Though stated in various ways, the answer, in most cases, points to student achievement in high school. It is recognized that habits established over a twelve year period have strong carry-over value. Unless there should be a vast change of circumstances, it would be safe to assume that progress would continue in a similar pattern. The findings of Spoerl's study supported this theory: she related success in language learning to success in other areas of subject achievement.²⁵

The correlation coefficient (+.26) that was found in the present study pointed out that significant relationship does exist, although other factors were found to be more predictive. The proposed predictive value of grade-point average and the importance placed upon this indicator of achievement by some authorities have not been sustained by the findings of the present study. An explanation for this discrepancy might be found in an evaluation of the subjects included in grade-point average. It is suggested that averaging grades in only academic subjects would be more indicative of expectations for foreign language achievement.

Aptitudes for Academic Progress. SCAT Verbal (+.09), Quantitative (+.12), and Total (+.18) sub-tests showed

²⁵Supra, p. 23.

positive but insignificant correlation with the criterion, indicating limited predictive power. It was interesting to find that SCAT (and STEP) variables showed less predictive potentiality than all other variables tested, except CTMM non-language. The three SCAT, two STEP, and CTMM non-language variables ranked lowest in degree of relationship with the criterion.

The following explanation might be worth noting: it has been observed that an appreciable number of ninth grade students apparently put forth little effort on standardized tests. By the eleventh grade when SCAT (and STEP) are again administered, they seem to take such tests in a more serious manner. In the process of collecting the data, the most recent test results were selected. For ninth and tenth grade students, this meant using those results which, if the above conjecture is valid, would have only slight reliability. This observation might prove noteworthy for the purposes of evaluating and improving the program of standardized testing.

V. BRIEF SUMMARY OF FINDINGS

Findings of the present study indicate that certain information in student records may be useful in scheduling students for foreign language classes at Tucker High School. The degree of positive relationship between the criterion of

average grades in foreign language and the following variables proved to be significant: achievement in English grammar and total achievement represented by grade-point average; scores on the Differential Aptitude Tests (Numerical, Verbal, Sentence, Abstract, and Spelling); the California language and total intelligence scores; reading competence as measured by the Iowa Silent Reading Test.

Evaluations of student records in view of these findings and other data should result in more accurate appraisals of chances for success in foreign language study. The fact that ten factors other than the single determinant used at the present time (English grammar achievement) were found to be significant indicates the need for evaluating cumulative folder data in face-to-face counseling situations.

VI. RECOMMENDATIONS

1. Concerning scheduling: Selectivity of students for foreign language classes should continue at Tucker High School. Students should be encouraged to select subjects on the basis of an evaluation of data related to aptitudes, achievement, and goals. Particular emphasis should be placed upon the need for face-to-face counseling.
2. Concerning instruction: Evaluation of individual instructional techniques in the teaching of foreign languages and teacher characteristics should be undertaken at

J. R. Tucker. Attempts should be made toward unifying individual instructional approaches and toward establishing policy in areas of foreign language curriculum. Facilitating student adjustment from one teacher to another and articulation of foreign language curricula should be the goals.

3.- Concerning future goals: The use of prognostic foreign language ability tests at Tucker should be considered. An evaluation of research on the subject of "general language" should be undertaken, for the purpose of offering an introductory language course.

4. Concerning further studies: Language teachers and guidance counselors at Tucker should be continuously informed concerning current research and should be alert to language situations within the school which indicate needs for investigative studies.

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APPENDIX

PUBLISHERS OF STANDARDIZED MEASURES
OF
APTITUDE AND ACHIEVEMENT

Aptitude Tests:

California Test Bureau
Monterey, California
California Short-Form Test of Mental Maturity

Psychological Corporation
New York, New York
Differential Aptitude Tests

Educational Testing Service
Princeton, New Jersey
School and College Ability Tests

Achievement Tests:

Harcourt, Brace, and World Inc.
New York, New York
Iowa Silent Reading Tests

Educational Testing Service
Princeton, New Jersey
Sequential Tests of Educational Progress

STANDARDIZED FOREIGN LANGUAGE APTITUDE TESTS
AND PUBLISHERS

Foreign Language Prognosis Test:
Bureau of Publications, Teachers College,
Columbia University

Iowa Placement Examinations:
Foreign Language Aptitude:
Bureau of Educational Research and Service

Luria-Orleans Modern Language Prognosis Test:
Harcourt, Brace and World, Inc.

Modern Language Aptitude Test:
The Psychological Corporation

EXPERIMENTAL VERBAL ABILITY TEST

Name _____ Homeroom Teacher _____

INTERLINGUA is an experiment in an international language. See how well you can translate the following paragraph:

Es tanto essential in le presente era que un lingua international existe. Communication mundi es tanto necessari. Interlingua offere un dictionario del vocabulos commun e international, como nunquam avante. Le idea fundamental es que un lingua international existe potentialmente in le linguas national.

The words below have about the same meaning. Guess what each says:

English Derivative	Latin	French	Italian	German	Greek	Spanish	English ?
monetary	moneta	monnaie	-	-	-	-	
chamber	camera	chambre	-	-	-	-	
hour	hora	heure	-	-	-	-	
very	verus	vrai	-	-	-	-	
fragile	fragilis	frele	-	-	-	-	
ignition	ignis	-	-	-	-	-	
amble	ambulo	aller	-	-	-	-	
beverage	bibo	boire	-	-	-	-	
candle	candeo	chandeller	-	-	-	-	
audition	audio	ouir	-	-	-	-	
innocent	nocéo	nuire	-	-	-	-	
famine	fames	fatiguer	-	-	-	-	
linguist	lingua	langue	-	-	-	-	
educate	duco	conduit	-	-	-	-	
pasture	panis	patisserie	pasta	-	-	-	
studious	studium	etude	studio	-	-	-	
temporal	tempus	temps	tempo	-	-	-	
monster	mons	mont	monte	-	-	monte	
village	villa	villanelle	villanella	-	-	-	

virile	vir	-	virtuoso	-	-	-
lather	lavo	louer	lavatrina	-	-	-
cantata	canto	chanter	cantata	-	-	-
cardiac	cord	-	-	herz	-	-
ignorant	gnosco	-	-	kennen	-	-
juvenile	juvenis	-	-	jung	-	-
plenty	plenus	-	-	voll	pleres	-
fraternity	frater	-	-	bruder	phrater	-
thermos	-	-	-	(v)warm	thermal	-
wit	video	-	-	wissen	oida	-
sextet	sex	six	-	sichs	hex	-
scholar	schola	ecole	-	schole	-	-
buttery	butyrum	buerre	-	-	boutyron	-
government	gubernare	gouverner	-	-	kybernan	-
concoct	coqueo	cuisine	-	coc (Anglo)	-	-
isle	insula	isle	-	igland (")	-	-
nominal	nomen	nom	-	-	onoma	-
plane	platea	place	piazza	-	plateia	plaza
payable	pacare	payer	pagare	-	-	pagar
a.m.	mane	demain	domani	-	-	manana
trio	tres	trois	trio	-	treis	tres
bonus	bonus	bon	ben	-	-	bonito
pedal	pes	pled	pie	-	pod	pecco
nocturnal	nox	nuit	niht (Anglo)	nykt	-	noches
marine	mare	mer	mor (Anglo)	-	-	-
sir	senex	monsieur	signor	-	-	senor

EXPERIMENTAL ENGLISH GRAMMAR TEST

Name _____ Age _____ Homeroom Teacher _____

VERB FORMS: Most, but not all, of the following sentences contain incorrect VERB FORMS. Cross out the incorrect form, and write the correct form of the verb in the blank. If the form is missing, tell what it is.

Ex. Mary and John hAs measles. have

1. Each of the cheerleaders have abundant energy. _____
2. By Easter all the freshman classes taking English have finished "Great Expectations." _____
3. The class have agreed to give a dramatic presentation. _____
4. If there were a student with experience in directing plays, it would be helpful. _____
5. Neither the teacher nor the students has had such experience. _____
6. Joe's book had laid hidden on the top shelf for two weeks. _____
7. By the time it was found, Joe missed six written assignments. _____
8. Swimming, as well as tennis, demand good coordination. _____
9. Chicken and dumplings are a southern specialty. _____
10. There are many such dishes found on menus throughout the South. _____
11. Knowing there were only fifteen minutes before his event in the track meet, Jim should not have drank the soda pop. _____
12. He was the man who has the key position on the relay team. _____
13. None of the other fellows motivate the team so well. _____
14. Strangely enough, measles have forced three fellows to miss the meet. _____
15. There are one senior boy and one senior girl who usually captures most of the honors. _____
16. The awards the students most treasure is the athletic trophies. _____
17. She bought the bike into the basement. _____
18. Because of a headache, she decided to lay down for a nap. _____

WORD USAGE: Most, but not all, of the following sentences contain WORDS USED INCORRECTLY. Cross out the incorrect word, and write the correct word in the blank.

Ex. He and ~~me~~ will attend the game. I

1. Each of the team captains was aware of their opponent's desire to win. _____
2. Their fervor for winning was well known. _____
3. The team members were boys which were known for good sportsmanship. _____
4. The strongest of the two teams had an outstanding coaching staff. _____
5. Their school had done alright in athletics the year before. _____
6. A lot of last year's players had returned. _____
7. The captain of the football team was a boy who's academic success was above average. _____
8. Most athletes engage in a healthy program of nutrition, rest, and exercise. _____
9. The basketball top-scorer was the taller boy on the team. _____
10. He was the player who the team counted on for the majority of the baskets. _____
11. Hardly never will the fans let a good player have a bad night. _____
12. Fans become restlessly when the team is not performing well. _____
13. Often they razz the player who they shortly before cheered. _____
14. To be in the limelight is at times strenuous. _____
15. The athlete who enjoys praise must also be ones who can handle criticism. _____

PUNCTUATION: Most, but not all, of the following sentences have ONE error in PUNCTUATION. Circle the word and rewrite the word correctly punctuated OR put in the necessary punctuation marks.

Ex. Tucker is proud of (it's) students. its

1. Tucker students refer to themselves as Tigers.
2. Who's the best? they cheer.
3. Tucker students ask themselves what the community thinks of their school?
4. Not only must they be leaders in athletics but they must be academic leaders.
5. They must have school spirit, intellectual curiosity and high ethics.
6. Tucker needs to send out students who will succeed in college it must supply business with capable leaders it must train young people to assume the responsibilities of homemakers.
7. Isn't it a question of individual honor.

8. Academic honesty is each students responsibility.
9. What each student does reflects on J R Tucker.
10. Like every new school, Tuckers building a reputation.
11. The privilege of establishing a code of honor is our's.
12. Dishonesty in any form must not be condoned; cheating
lying stealing vandalism, to mention a few.
13. Yes a new school must establish a code of behavior.
14. The need for such a code must be however a result of
student thought.
15. How proud we are to be called "Tucker Tigers."
16. They visited Quebec Canada.
17. In the 1960s the question has been whether or not to
seek independence from England.
18. The King and Queen of England received a cold welcome
in the city of Quebec.
19. In fact they were discourteously treated in some
instances.
20. One newspaper headline read "Crowd boos Elizabeth and
Philip."
21. Canadians are recalling the American colonists struggle
for freedom from the Crown.
22. Sir Johnny MacDonald is to Canadians what George Wash-
ington is to Americans.
23. He, like Washington, was not only a great soldier, but
a famous statesman.
24. It will be interesting to watch the future of Canada
our neighbor to the north.

CAPITALIZATION: In EACH of the following sentences there is ONE error of CAPITALIZATION. Correct the error by writing the correct form of the letter over the incorrect one.

Ex. Mr. Smith lives in Peoria, Illinois.

1. Resolved: that Tucker High School will strive for
excellence in every school activity.
2. Mr. doyle is our principal.
3. In New York city Forty-second Street is an east-west
thoroughfare.
4. Missouri is the home of Ex-President Truman.
5. Many of our Presidents have been former Senators.
6. Patrick Henry argued, "give me liberty or give me
death!"
7. He closed the letter, "Yours Truly."
8. He is reporting on Fenimore's Drums Along the mohawk.
9. During the Easter holidays, thousands of citizens from
west Germany will visit relatives behind the Iron
Curtain.
10. Easter is filled with religious meaning for christians.

11. In the United States, the fourth of July takes on almost religious significance.
12. Jim is scheduled to take English, Biology, speech, algebra, and Spanish.
13. As a way of personally greeting his congregation each Sunday, the Minister begins: "My Dear Friends."
14. Our school is referred to as: J. R. Tucker High school.
15. The address is: 2910 Parham road.
16. Mr. B. T. Doyle, Jr. is our principal.
17. The public affectionately refers to ex-President Eisenhower as the general.
18. February twelfth, Lincoln's birthday, is a national holiday.
19. In Virginia most state employees have the day off.
20. Public Schools, however, do not observe the Presidents' birthdays.

GRAMMAR:

- A. The eight PARTS OF SPEECH are: noun, pronoun, verb, adverb, adjective, preposition, conjunction, and interjection. Indicate the part of speech for each underlined word (according to its usage in the sentence).
1. The Lincoln Memorial stands as a tribute to a great leader. _____
 2. Its marble construction is a masterpiece of architecture. _____
 3. Americans hold Lincoln in high esteem. _____
 4. His life is an example of self-discipline and perseverance. _____
 5. He exemplifies the pioneer spirit of America. _____
 6. He characterizes the restless spirit of that day and the hard life of the pioneer. _____
 7. Oh, that Americans might retain his spirit! _____
 8. His Gettysburg Address is a dramatically, eloquent example of his sensitivity. _____
- B. The following sentences contain 11 PARTS OF THE SENTENCE: subject, predicate (verb), direct object, indirect object, object of a preposition, predicate nominative, predicate adjective, appositive, clause, phrase, object complement. Using these identify the underlined words.
1. A study of nature is stimulating to one's intellect. _____
 2. In anticipating spring, we find the backyard a source of interest. _____
 3. Warm weather induces the plants to stir. _____
 4. Sunshine gives flowers their varied colors. _____
 5. Grassroots beneath the soil reach upward for moisture. _____

6. By excited chirping, birds draw attention from hidden nests.
 7. Skillfully, nature has camouflaged the mother bird.
 8. Mother blue jay appoints her mate guardian of the fledglings.
 9. His scream is a warning to curious intruders.
 10. Although the blue jay is not the most pleasant of the backyard birds, his paternal instinct is strong.
 11. As soon as these young ones are on their own, the couple have another task, a second brood.
- C. Identify the following sentences as to whether they are simple, compound, complex, or compound-complex.
1. The U. S. Government has a system of checks and balances which insure representative government.
 2. The government is divided into three parts: the legislative, judicial, and administrative.
 3. The President heads the administrative branch, and the Vice-President presides over the Senate.
 4. Although the President has more authority than other individuals, his power is limited by Congress, and the U. S. has little fear of dictatorship.

GRADE-POINT AVERAGE

Scholastic achievement at J. R. Tucker High School is evaluated in terms of a student's grade-point average. This grade-point average is figured with the use of the following tables:

Numerical Values of Letter Grades	Quality Points	Weighted Credit for Honor (superior) Groups
95-100=A	A=4	A=5.2
88-94=B	B=3	B=3.9
81-87=C	C=2	C=2.6
75-80=D	D=1	D=1.3
0-74=F	F=0	F=0

Computing student grade-point averages requires the following steps:

1. Achievement is recorded numerically.
2. Number grades are converted to letter grades.
3. Quality points are assigned for letter grades
(honors classes receive weighted credit).
4. An average of quality points is determined for
each student at the end of each school year.

(Rank in class is assigned according to grade-point average.)

DIFFERENTIAL APTITUDE TESTS AS PREDICTORS OF GRADES IN FOREIGN LANGUAGE

Present Study:

Listed in order of Tested Predictability:		Listed in order of Assumed Predictability:
	r	
DAT Numerical	(.48)	DAT Verbal
DAT Verbal	(.36)	DAT Sentence
DAT Sentence	(.34)	DAT Spelling
DAT Abstract	(.34)	DAT Abstract
DAT Spelling	(.26)	DAT Numerical

DAT Predictability Compared with Findings of Edward O. Hascall:*

J. R. Tucker High School

White Plains New York

		Girls	Boys
DAT Numerical	.48		
DAT Verbal	.36	DAT Sentence	0.509 0.579
DAT Sentence	.34	DAT Numerical	0.483 0.574
DAT Abstract	.34	DAT Spelling	0.476 0.541
DAT Spelling	.26	DAT Verbal	0.421 0.525

Predictability as Determined by DAT Publishers:

Boys		Girls	
Sentences	0.51	Numerical	0.42
Spelling	0.40	Verbal	0.30
Numerical	0.34	Spelling	0.24
Verbal	0.30	Sentences	0.21
Abstract	0.27	Abstract	0.20

*op. cit. Hascall p. 365.

VITA

Marion Collier Miller, daughter of Marcus Waverly Collier and Ruth Adkins Collier, was born in Richmond, Virginia, April 26, 1926. She was educated in the public schools of Richmond. She entered Westhampton College in September, 1943 and was graduated with the degree of Bachelor of Arts in Latin in June, 1947.

In July, 1947, she married John Broughton Miller, and they have two sons, John Edward Miller and Mark Randolph Miller.

She taught from the fall of 1953 until June of 1964 at the Tuckahoe Elementary School in Henrico County. At this time, she accepted the position of guidance counselor at John Randolph Tucker High School in Henrico County, where she is serving at the present time.

She is a member of Eta Sigma Phi, national undergraduate classical fraternity and was initiated in the fall of 1964 into Kappa Delta Pi, national honor society in education. She is a member of River Road Baptist Church.