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The Effects of Cultural Influences on Achievement in Language Usage

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THE EFFECTS OF CULTURAL INFLUENCES ON
ACHIEVEMENT IN LANGUAGE USAGE

A Thesis
Presented to
the Graduate Faculty
Central Washington State College

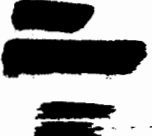
In Partial Fulfillment
of the Requirements of the Degree
Master of Education

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

The nebulous quality of public education casts a frustrating pall over its end results and educators have long sought more efficient ways to evaluate the fruits of their labor. Since the rise of standardized testing in the early part of this century, educators have placed an increasing reliance on the use of standardized achievement tests to determine the strengths and weaknesses of individuals as well as to evaluate the growth of the populations of entire school systems.

While standardized achievement tests are considered one of the most efficient methods of determining the academic growth of individuals and groups of individuals, little is to be gained if the results of these tests are not scrutinized and evaluated in the light of local conditions. If the results of these tests are left to gather dust on a shelf, the time and the money that it took to administer them could have been spent in some more worthwhile endeavor.

I. THE PROBLEM

Statement of the problem. It is the purpose of this study (1) to evaluate the results of certain standardized

achievement tests given in the Selah, Washington school system; and (2) to attempt to explain why this school district consistently produced a pattern of relatively low achievement in the area of language usage.

Background. For the past five years the Selah, Washington public schools have conducted a program of standardized achievement testing using the Iowa Test of Basic Skills in grades four through eight and the Iowa Test of Educational Development in grades nine through eleven.

Each year, as the test results became known, certain strengths and weaknesses were noted. It will serve no real purpose to record herein the actual scores from year to year but it was discovered that the scores in language usage generally fell below the scores in the other subject matter fields. While the language usage scores generally placed the Selah students in the upper half, the results caused some concern for they clearly demonstrated that the area of language usage was without question the weakest portion of the instructional program of this school district.

After noting this persistent situation for two years, the administration gave searching attention to the teaching of language usage. The complete evaluation of this situation resulted in wide-spread changes in the teaching of English at all levels in the Selah public schools. Additional English teachers were hired, curriculum committees evaluated teaching

practices, and even the testing instrument itself was scrutinized.

Some minor gains were realized but generally the results were unchanged.

Purpose and justification of the study. In attempting to analyze the basic elements of any problem, a clear and complete history of the elements of the problem is mandatory. A medical diagnostician needs voluminous historical notes before he will venture a diagnosis. So, too, in education a complete background study on the "patient" is needed before a hypothesis can be formulated and a remedy can be suggested.

This study generally involves the background and environment of a group of sixth grade Selah students. It was felt that possibly a searching evaluation and examination of the sociological and anthropological forces operating on this group might in some manner shed light on the problem under consideration and suggest its eventual solution.

Scope of the problem. The Selah school district is located in the northern part of the Yakima Valley and is basically an agricultural community. The area was largely an uninhabited desert until the early 1900's when the various irrigation projects brought water to the rich volcanic soil-- a combination that resulted in a fruit economy that places the Selah area among the leading producers of fruit in the United States.

The fruit economy demanded a large supply of agrarian workers and, as the orchards began to mature in the years from 1920 to 1930, a large influx of people moved into the Selah area. A great many of these people came from the south central states (Missouri, Oklahoma, Arkansas, and Kansas) where a combination of mechanization and over-supply had left the area with a surplus of farm labor. Few of these migrant workers brought a great deal with them in the way of material property, but they did bring the traditions and the culture of the region from which they came. The language patterns of the middle south are still apparent to some degree in the Selah area for the speech habits of a people are slow to fade.

In evaluating the results of the standardized tests given in the Selah public schools, mention was made of the cultural heritage of many of these students, but it was impossible to assess the importance of this factor as there were no statistics existing to determine what portion of the student body had cultural connections with this particular group.

It will be within the scope of this paper to examine in depth the sociological origins of the sixth grade of the Selah public schools to determine whether or not there is any significant difference between the children who had their roots in the agricultural rural areas of the middle south and those children who had their roots in other regions of the United States.

II. DEFINITIONS OF TERMS USED

Achievement. In this study all references to achievement will indicate the percentile rank achieved by the individual on that portion of a standardized achievement test that pertains to language usage.

Language usage. All references to language usage will refer to those particular communication skills covered in Test Language Four (L4) of the Iowa Test of Basic Skills and in Test Three, Correctness and Appropriateness of Expression, in the Iowa Test of Educational Development.

CHAPTER II

ESTABLISHING THE HYPOTHESIS

In attempting to solve any type of problem, it is logical that all factors be isolated and the relationship of each factor to the entire problem be considered. When the Selah instructional and administrative staff undertook the task of finding a solution to the problem of low achievement in language usage, an attempt was made to consider all factors that could directly influence the overall achievement of the group.

The instructional staff. The first, and probably the most natural, starting place seemed to be an evaluation of the instructional staff involved in the teaching of English. It was felt that the instructional staff was probably the most vital factor influencing language usage in the school system. This evaluation was basically an administrative function and, as a result of this initial evaluation, certain personnel changes were made. Those teachers who were involved in the teaching of English on the secondary level, but who did not have an English major, were not given further assignments in the English department. To strengthen the department and to make inter-department articulation more expeditious, an outstanding teacher of English was appointed chairman of the English department. New teaching positions were established

and all new teachers hired to teach English were required to have extensive training in this particular field. The English department was also given the service of a lay-reader and each English teacher was given an additional conference period each day.

The teachers on the elementary level were encouraged to do further advanced study in the area of English language instruction. A merit pay type of salary schedule was instituted to encourage teachers to obtain further training and to encourage the recruitment of outstanding teachers from other districts.

The program. Following closely on the heels of these staff changes, a curriculum study was begun which encompassed every level of English instruction in the school district. The test scores were carefully studied by the committee using item analysis studies furnished by the test publishers. These analyses gave the instructional staff a better idea of exactly where the Selah students were performing poorly on the achievement tests. As a result of these studies, all curriculum guides were revised and many new methods of instruction were introduced in both the elementary schools and at the high school.

The students. The final factor to come under study in this evaluation program was the nature of the students

themselves. Inasmuch as Selah was largely an agricultural community, the usual situations and conditions which seem to walk hand in hand with school achievement difficulties such as (1) excessive dropout rates, (2) racial tensions, (3) extreme poverty, and (4) a high juvenile delinquency rate were strangely missing.

Finally, the only factor not yet evaluated seemed to be the cultural and environmental background of the student body. It was generally conceded that there may be problems in the area of language usage caused by the speech patterns of the home. While there were no records available to substantiate this concept, it was generally believed that many of the students had their cultural development influenced by the fact that many of the parents and grandparents came from the middle southern states, a region noted for its unusual language patterns.

The question was now raised as to how much and to what degree the social and cultural background of these students could affect their achievement in language usage.

The hypothesis. To determine whether or not the birth-place of the parents and grandparents of this group could directly affect the achievement scores in language usage of the student body of the Selah public schools, this study was undertaken and the following hypotheses were formulated:

1. It is hypothesized that there will be a significant difference in the achievement levels in language usage between those students whose parents were raised in the urban centers of the United States and those students whose parents were raised in the rural communities of the United States.

2. It is hypothesized that there will be a significant difference in the achievement levels in language usage between those students whose parents and grandparents were born in the south central states (Missouri, Arkansas, Oklahoma, and Kansas) and those students whose parents and grandparents were born in other sections of the United States.

CHAPTER III

REVIEW OF THE LITERATURE

A survey of the literature relating to the proper use of the English language has revealed surprisingly little in regard to the social and cultural background of the student. Apparently public education in this country consists of taking the child as he is and educating him in such a manner that he rises as far as he can above the limitations of his environment. No complaint can be found for this attitude, however, for generally the public school has little time for research into the child's cultural background to better understand his needs.

Ranous discusses the manner in which children develop their language patterns and this may be a clue to the problem (5:49). He states:

As our child lives his babyhood in his own home, his father, his mother - the other people in the house - speak where he can hear, all in the accumulated words, phrasal patterns, and intonations of their own experience. What language does the child first have? Obviously, from hearing and imitating, a composite of the family's oral language. But our child soon moves out from the linguistic environment of his home and mingles with neighborhood playmates of language background slightly different from his own. Again, by the simple means of hearing and imitating, he influences their speech and gesture behavior and in turn modifies his own. Considerable group uniformity results and our little group has the rudiments of a dialect.

Quite obviously a child that has been raised in an atmosphere where certain language patterns exist is going to develop his own language largely from these patterns himself. If these language patterns consist of poor grammar and dialects which are not generally considered as correct in comparison with the national usage, then the child is going to develop language forms which will not be compatible with the norms established by the testing services.

If an attempt is to be made to compare language usage practices probably it would be well to investigate the types of schools and the educational standards in general of the groups under scrutiny. If the educational climate of the middle southern states is investigated, it might possibly shed some light on the reasons for language difficulties emanating from this area.

A rather standard practice in the evaluation of schools consists of evaluation of (1) the competency of the teachers, (2) per capita cost of each pupil, (3) number of students that complete school, (4) number of illiterates in the community, (5) and the number of children that receive an education.

Patterson, Choate, and Brunner discuss the general education picture in the rural areas of our nation by painting this rather dismal picture (4:172):

The result is that the general picture of educational facilities, elementary and secondary, available

to children in rural communities of the United States presented is one of a multiplicity of small, relatively ineffective schools, inequitably distributed, and still more inequitably supported. Teachers are itinerant, undertrained, and underpaid when compared with the state standards and particularly when compared with standards prevailing in cities.

While the above was written in 1936 and referred to conditions in 1930, this is the period that saw the education of many of the parents of the children who are the subjects of this study. Brunner and Hallenbeck (1:409) discuss the program of the rural schools and point out that due to low real estate tax valuations many of the specialized services that are normally taken for granted are impossible in rural schools because of the prohibitive price. They cite figures to show that as late as 1949-1950 the teachers in predominately rural areas received salaries one third lower than their urban colleagues. Poorly trained and underpaid teachers presenting a limited program certainly are not likely to graduate students with superior performance ratings.

Brunner and Hallenbeck (1:409) discuss the cost-per-pupil ratio in city and rural districts by citing figures which show that the urban school in 1949-1950 spent a national average of \$199 per student while the country schools spent only \$128. The same source (1:400) presented statistics which showed that the average median grade of school completed for people in the 20-24 age group in 1940 was 12.0 for the urban dweller while it was only 8.8 for the rural inhabitant.

The educational differential between the southern states and the northern states is well established in the literature of the sociologist pedagogues although not too many figures are available to compare the south central states with the rest of the country. Table I, a regional comparison of rejection rate of white Selective Service registrants by Ginzberg and Bray, gives startling evidence that mental deficiency, usually considered a by-product of poor educational standards, is much more prevalent in the south than in the north (3:50).

In discussing the amounts spent per classroom unit, Brunner and Hallenbeck quoted statistics from the United States Department of Health, Education, and Welfare which show that Arkansas is in the lowest quartile of all states and Missouri, Kansas, and Oklahoma are all in the lower half (1:412). The same authorities cite a graphical example by comparing cost per pupil in Arkansas and New York (1:411). In 1946-1947 ninety-nine per cent of all of the children in Arkansas had less than \$100 per pupil spent on their education per year, while in New York only 5% of the children in the public schools had so small a sum spent on their education per year.

In Table II, Brunner and Kolb make an interesting comparison on the amounts of money spent per pupil in village high schools, village grade schools, and country grade

TABLE I

NUMBER OF WHITE SELECTIVE SERVICE REGISTRANTS
REJECTED FOR MENTAL DEFICIENCY AND
RATE OF REJECTION PER ONE
THOUSAND EXAMINED

Area	Total number rejected	Rate per thousand rejected
New England States	19,800	16
Middle Atlantic States	49,700	11
Central States	57,300	12
North Western States	12,500	13
Far Western States	13,700	9
Arkansas	14,300	59
Missouri	10,300	20
Kansas	3,000	14
Oklahoma	9,000	29

TABLE II

A COMPARISON OF PER PUPIL COSTS IN
 VILLAGE HIGH SCHOOLS, VILLAGE
 GRADE SCHOOLS AND COUNTRY
 GRADE SCHOOLS IN 1930

	Village high school	Village grade school	Country grade school
All regions	\$81.96	\$33.22	\$39.23
South	64.53	19.30	24.53

schools both in the south and in all other areas of the United States in 1930. The preceding table shows a startling variance between the south and all other regions (2:181).

Ginzberg and Bray demonstrate the wide gulf between the educational standards of the south and the rest of the United States by making these statistical comparisons. In 1890 the south had two thirds of all the illiterate workers in the United States. At this time, the national illiteracy rate was 14 per cent while the south had a rate of 32 per cent (3:37). In 1950 twenty per cent of the southern people had completed less than five years of school as compared to a national average of twelve (3:37).

Ginzberg and Bray presented Table III which illustrates that at no time did the southern states ever equal the national average as far as the school enrollment of the white children was concerned (3:23).

It has been relatively easy to demonstrate that the state of education in the south is generally inferior to that of the north when judged by the more objective criteria often used. It will serve little purpose in this paper to go into this matter in greater depth. From figures presented earlier it is very clear that educational standards in the cities are usually superior to educational standards in most rural areas.

TABLE III

SCHOOL ENROLLMENT PER ONE THOUSAND
WHITE CHILDREN

	1890	1910	1930	1940
Southeast	714	833	940	892
Southwest	766	872	939	944
All U.S.	846	910	970	953

The purpose of this paper is to determine whether or not the apparent difference in the abilities of children of various cultural backgrounds to achieve in the area of language usage has affected the overall scores of the student body of the Selah school system. As there is apparently little information available on this matter, the research project in the following chapter was proposed.

CHAPTER IV

THE RESEARCH SETTING

The population to be tested. An inquiry into the background of a large group of people can best be done by soliciting information from a sub-group that will cooperate and that will probably give honest and complete answers. For this reason it was decided to use the entire sixth grade of the Selah school system as the subject of this inquiry. Generally speaking, the parents of elementary level children will cooperate more readily than will the parents of older children. Also, the sixth grade is the median grade in a K-12 school system and it is only reasonable to surmise that they represent a fairly good cross section of the students of the entire school system as far as origin of parents and grandparents are concerned. The Iowa Test of Basic Skills is given to all sixth grade children in the Selah school system and therefore current and complete achievement records would be available for use in the study.

Intelligence of sampling of population. As a comparison is to be made between those children whose grandparents were born in regions other than the middle south and those children who had one or more grandparents born in the middle south and also between those children whose parents were raised on farms

or raised in cities, probably some inquiry should be made into the other variables which might affect the results of this comparison.

A major consideration that could affect the validity of a comparison would be the intelligence of each group. If either group had a significantly higher or lower intelligence quotient than the other group, it is obvious that the results of the comparison could be questioned. In examining this condition, it was found that the mean I.Q. of that group of children whose grandparents were born in regions other than the middle south was 108, while the other group (those children who had one or more grandparents born in the south central states had a mean I.Q. of 104). This difference of only four points can hardly be called significant as it is well within one standard deviation of the distribution. The fact that the testing device used to determine I.Q. on this group was the verbal portion of the Lorge-Thorndike gives further evidence that these groups are very close together. As language ability plays a large part in this test, any language usage difficulty (which might be present in the group whose roots are in the middle south) could very probably account for a few points.

In a comparison of the I.Q. scores of those children whose parents were both raised in cities and those children whose parents were both raised on farms it was found that the former group had a mean I.Q. score of 105 as compared to the

latter group that had a mean I.Q. score of 107. Quite obviously the difference in intelligence in these groups will not materially or significantly affect the outcome of this study.

The survey instrument. In designing the surveying instrument it was decided to mail a questionnaire to the parents of all students in the sixth grade. After some study it was decided that the evaluation instrument would contain the following items:

1. Child's birthplace
2. Father's birthplace
3. Mother's birthplace
4. Paternal Grandfather's birthplace
5. Paternal Grandmother's birthplace
6. Maternal Grandfather's birthplace
7. Maternal Grandmother's birthplace
8. Father's occupation
9. Father's education
10. Mother's education
11. Father's early environment (city, town, or rural)
12. Mother's early environment (city, town, or rural)

While items eight, nine and ten may not be germane to the subject it was felt that some further comparisons might be made regarding the education and occupation of parents.

A questionnaire (see Appendix A) was prepared for transmittal to the parents and a covering letter was composed (see Appendix B). As the questions directed at the parents were of a somewhat personal nature a great deal of care was taken to assure the parents that all replies would be confidential and would be treated in a professional manner.

As the study was closely related to the Selah school system, the Board of Directors of Selah School District Number 119 were apprised of the study and permission to conduct the study was requested prior to the mailing of the questionnaire. The Board gave permission for the study to be undertaken and directed the examiner to use his official capacity in the school system, Supervisor of Instruction, to give further weight to the importance of the study. For this reason it will be noted that the letters and questionnaire are signed by the examiner in his official capacity of Supervisor of Instruction rather than in his role of independent educational researcher. All expenses relative to the study were borne by the examiner.

The survey procedure. The questionnaire was mailed to the parents of all students in the sixth grade during the month of January 1964. Approximately one month later a second letter was sent to those parents from whom no replies had been received (See Appendix C). The total replies received in both mailings total 128. As there were 150 students in the class, this represented an eighty-five per cent reply and can be considered an adequate sampling. Eight of the replies were incomplete and were not used in the study. A total of 120 students were now available as subjects of the study, sixty boys and sixty girls.

· Compilation of the data. To facilitate the handling of this large mass of factual material, all replies were coded and the information was placed on Unisort Analysis Cards (See Appendix D). The unique qualities of these cards make it possible to select sub-groups very rapidly and efficiently.

Pertinent statistical material about each child such as chronological age, years in the Selah schools, intelligence quotient, and achievement in the language usage tests were secured from the permanent records of each child. This information was also placed on the Unisort Analysis Cards.

With this material now organized into a workable set of facts, many meaningful comparisons were possible and the hypotheses previously stated could be tested.

CHAPTER V

PRESENTATION OF EVIDENCE

In determining the relative achievement of the group under study so that comparisons can be made when comparing the entire group to its own sub-groups, some type of standard level of achievement must be found. The figure relative to language usage that is most readily available is the percentile score made by each member of the group on the Iowa Test of Basic Skills. This figure, while possibly not the most exact measurement of achievement, certainly is valid enough to be used in a general comparison.

The mean of the group percentile score on the Iowa Test of Basic Skills was found to be 59 (58.89). This figure will be used in many of the comparisons and will serve as a measure of the achievement of the group.

The first portion of this chapter will deal with the first hypothesis and an attempt will be made to compare the achievement of those children whose parents were raised on farms, were raised in small towns or were raised in larger cities. While Selah is largely an agrarian community, the large percentage of parents that were raised on farms was very revealing (See TableIV).

The number of parents born on farms is of little consequence, however, unless some findings are presented that

indicate the achievement of the children of these parents as compared with the entire group. Table V shows the achievement level of the groups when they are grouped as to the early environmental situation of the parents.

The second section of our hypothesis wherein it is desired to compare the achievements of those children who had one or more grandparents come from the south central states with those children whose grandparents were all born in other regions of the United States gives a great deal more material to consider. The very fact that twenty-five per cent of all the grandparents to be considered in the examination of this group came from the south central states makes this portion of the study extremely important. In attempting to discover any thread of a pattern in this problem, it was decided that an initial comparison should be made that would compare the language usage scores of those students whose parents, either one or both, were born in the south central states.

Table VI shows a wide variance in achievement skills between those students whose parents were both born in the south central states and the mean achievement score for our entire sampling of 120 students. The difference noted, 23.67 percentile points, would seem to indicate that there is a very significant difference between these two groups. However, it will be noted that those children whose mothers (only) were born in the south central states actually did better than the

TABLE IV

NUMBER AND PERCENTAGE OF PARENTS OF THE CHILDREN
 IN EXPERIMENTAL GROUP WHO WERE RAISED ON
 FARMS, IN SMALL TOWNS, AND IN
 CITIES

	Raised on farms	Raised in small towns	Raised in cities
Fathers	80 (67%)	18 (15%)	22 (18%)
Mothers	62 (52%)	26 (22%)	32 (26%)

TABLE V

AVERAGE ACHIEVEMENT PERCENTILES OF STUDENTS COMPARING
RESULTS WHEN ONE OR BOTH PARENTS WERE
RAISED ON FARMS, IN SMALL TOWNS,
OR IN CITIES

	Achievement average when parent rais- ed on farm	Achievement average when parent rais- ed in small town	Achievement average when parent rais- ed in city
Father (only)	57.63	61.05	61.27
Mother (only)	57.54	62.61	58.15
Father and Mother	57.65	61.11	59.20

TABLE VI

AVERAGE ACHIEVEMENT PERCENTILES OF CHILDREN
WHOSE PARENTS WERE BORN IN DIFFERENT
REGIONS OF THE U.S.

	Number of cases	Average achievement percentile
All children in this study	120	58.89
Children whose parents were born in south central states	18	35.22
Children whose fathers (only) were born in south central states	6	47.66
Children whose mothers (only) were born in south central states	10	62.90

entire sampling. This paradox would cast some doubt on the validity of the finding. Another factor that would render this finding invalid is the small number of cases considered. It would not be valid to generalize on a situation when such an extremely small percent of the total population is used as a sampling.

A close examination of Table VII would seem to indicate that here a significant difference between these two groups of children begins to become apparent. The mean achievement percentile difference of 11.55 between those children whose grandparents were born in the south central states and those children whose grandparents were born in other regions would seem to be highly significant. When it is noted that the children who had two, three, or four grandparents born in the south central states were far below the achievement mean of the group who had no cultural ties with the south central states the statistics begin to assume some importance.

TABLE VII

AVERAGE ACHIEVEMENT PERCENTILES OF CHILDREN
WHOSE GRANDPARENTS WERE BORN IN
DIFFERENT REGIONS OF THE U.S.

	Number of cases	Mean achievement percentile
All children in this study	120	58.89
Children whose grand- parents were born in regions other than the south central states .	57	64.87
Children who had one or more grandparents born in the south central states	63	53.32
* * * * *		
Children who had one grand- parent born in south central states	28	61.78
Children who had two grand- parents born in south central states	19	53.42
Children who had three grandparents born in south central states . .	8	34.87
Children who had four grandparents born in south central states . .	8	41.87

CHAPTER VI

EVALUATION OF THE EVIDENCE

The problem that has been under consideration generally in this paper is (1) how those children who have close ties to the rural areas compare with those children whose parents come from urban centers, and (2) how those children whose grandparents come from the south central states compare with those children whose grandparents come from other regions of the United States.

In finding a solution to the first part of our problem, that of urban compared to rural, one factor inherent to this group makes a realistic comparison almost impossible. That factor is the large number of parents who were raised on farms. When we note that sixty-seven per cent of the fathers and fifty-two per cent of the mothers were raised on farms it is obvious that it will be difficult to get a statistical treatment that will be considered valid. For purposes of clarity, those parents who were born in small towns were not used in the comparison as it is impossible to determine whether they were more influenced by the mores and culture of the urban or the rural environment. By not considering the parents born in small towns, a small percentage remains that were raised in the city, eighteen per cent of the fathers and twenty-six per cent of the mothers.

Even if the sampling of the population had been more evenly distributed, it is unlikely that the slight difference in achievements noted for the children whose parents were raised in the rural areas as opposed to the achievements of those children whose parents were raised in the urban centers would have been found to be of any significance. It is felt that this portion of the hypothesis must be rejected for there is nothing of any significance to be noted that would indicate that the children of either group were superior to the other in matters of achievements in language usage.

In the latter part of the hypothesis, that part in which a comparison is made between those children who have their cultural roots in the south central states and those children who are representatives of the culture of other parts of the United States, the evidence appears strong enough to support the hypothesis. The original purpose of this study was to determine if there was any aspect in the background of these children that would make their achievements in language usage somewhat lower than that of their achievements in the other subject matter areas.

In looking at the figures presented in Table VII it can be noted that the group whose grandparents were born in the south central states had a mean achievement percentile of almost twelve points below the other group. In and of itself, this difference can be shown (and will be shown) to be signi-

ficant. If a closer examination of Table VII is made, it will be noted that when only one grandparent is from the south central states the mean achievement percentile difference is only 3.09, when two grandparents are from the south central states the mean difference has grown to 11.45, and when three grandparents are from the south central states a mean percentile difference of 30 points is noted. Apparently, the more cultural ties that a child has with the south central states, the less chance he has of having his achievement scores in language usage compare favorably with those of his classmates who have their cultural roots in other regions of the United States.

When a comparison is made between two groups which represent samples of a population, the question arises as to the statistical significance of the difference. A sample that was chosen could be so small that individual variations among the cases considered could render the apparent results of the comparison invalid. To determine if there is any significant difference between these two groups, it was decided that a t-test should be performed to see if the hypothesis could be rejected at a five per cent level of confidence.

Appendix E and F contain the statistical treatment of the data used to determine whether or not a significant difference existed. It will be noted that the results of

the calculations indicate that the t-test was 2.22. This figure would support the hypothesis as a real difference existed at the .05 level of confidence.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

Conclusions. In reviewing the evidence presented in the preceding chapter, it is apparent that the first part of the hypothesis can be accepted and the latter part rejected. While there may be a difference in the educational opportunity offered children in rural and urban schools, there is no evidence in this study to indicate that the results of the substandard education offered in the rural areas in any manner affects the children of those people so educated.

The latter part of the hypothesis, that which dealt with the effect of cultural backgrounds on the achievement in language usage of certain children can be accepted for a significant difference was shown. It is apparent from a study of the material presented in the preceding chapters that those children whose grandparents (one or more) come from the south central states of Missouri, Arkansas, Oklahoma, and Kansas show lower achievement scores in the area of language usage than those students whose grandparents were born in other regions of the United States.

Recommendations:

1. It would seem appropriate that some further study be made to determine what aspects of the culture of those

people coming from the south central states causes lower achievement in language usage.

2. If a school district is confronted with a specific problem in the language usage area such as this, it would seem that the school district should take immediate steps to enrich or augment the curriculum so that those children who are achieving at a relatively low level because of these cultural influences will be given a better chance of success in the language area. Possibly the key word should be EQUAL OPPORTUNITY to succeed rather than EQUAL EDUCATION.

3. Inasmuch as many school districts have large groups of people with similar cultural backgrounds, it may be appropriate to suggest that school systems attempt to keep more detailed records on the cultural backgrounds of the students so that their peculiar needs may be studied more closely.

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BIBLIOGRAPHY

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APPENDIX

122540

Q U E S T I O N N A I R E

This questionnaire is being sent to the parents of all children attending the Sixth Grade in the Selah School District. Will you please answer the following questions as they relate to your child in the SIXTH GRADE.

1. In what state was this child born? _____
2. FATHER, in what state (or foreign country) were you born? _____
3. FATHER, were you raised
on a farm _____? in a town of less in a city of more
than 2,500 people _____? than 2,500 people _____?
4. FATHER, in what state (or foreign country) was your father born? _____
5. FATHER, in what state (or foreign country) was your mother born? _____
6. FATHER, please circle the highest grade that you attended in school.
1 2 3 4 5 6 7 8 9 10 11 12 Years of college 1 2 3 4 5 6
7. FATHER, what do you consider your main occupation to be?
agriculture _____ lumbering _____ service work _____
manufacturing _____ professional man _____ other _____
(please specify)
8. MOTHER, in what state (or foreign country) were you born? _____
9. MOTHER, were you raised
on a farm _____? in a town of less in a city of more
than 2,500 people _____? than 2,500 people _____?
10. MOTHER, in what state (or foreign country) was your father born? _____
11. MOTHER, in what state (or foreign country) was your mother born? _____
12. MOTHER, please circle the highest grade that you attended in school.
1 2 3 4 5 6 7 8 9 10 11 12 Years of college 1 2 3 4 5 6

THANK YOU FOR YOUR COOPERATION! Please mail this completed form in the enclosed envelope to Robert A. Kellman, Supervisor of Instruction, Selah School System Number 119, Selah, Washington.

SELAH SCHOOL DISTRICT NO.119

Selah, Washington

Dear Parents:

The Selah Public Schools make an effort to continually evaluate teaching trends and the nature of the students coming to the local schools for instruction. Only by better understanding our students can we properly evaluate our instructional program.

We are enclosing herewith a questionnaire that we hope you can find time to complete and return. It will only take a few minutes of your time but will greatly aid us in determining the problems and needs of the student body as a whole. You will note that there is no need to sign this questionnaire. While several questions are of a rather personal nature, I assure you that your reply will be held in the strictest confidence.

The replies to this questionnaire will be made a part of a study to determine the needs of the students of this school district. This study is being made by the undersigned.

Your prompt cooperation will be greatly appreciated. A stamped return envelope is enclosed for your convenience.

Sincerely,

Robert A. Kellman
Supervisor of Instruction

Please note:

The signature has been redacted due to security reasons

SELAH SCHOOL DISTRICT NO.119

Selah, Washington

Dear Parents:

About six weeks ago you received a letter and a questionnaire from the Selah Schools. The letter explained the purpose of the questionnaire and requested that you fill it out and return it at your convenience. To date your questionnaire has not been returned.

If you have decided that you do not wish to participate in this study, please disregard this reminder as you are well within your rights in not choosing to return the questionnaire. This material is of a somewhat confidential nature and no one has the right to question you concerning it if you consider it your personal business.

However, if you have failed to return it merely because you have misplaced the questionnaire or if you have put it off until "later", may we urge you to act on this matter at an early date. While we have received a vast majority of the questionnaires from the parents, the greater the return of the questionnaires - the more accurate the findings of our study.

Again may I say that the information on the questionnaire is held to be strictly confidential. At no time will anything of a personal nature be published nor will any school district employee have any occasion to match the questionnaires with any name. All replies are coded and it is impossible to tell whence the information has come.

The material gathered will be made part of a study to determine the background of the students of the Selah Schools and this in turn will have a very important place in the planning of certain curriculum changes. Your cooperation will make it possible for us to better determine the current and future needs of the students of the Selah school system. Your cooperation will be greatly appreciated.

Sincerely,

Please note:

The signature has been redacted due to security reasons

Robert A. Kellman
Supervisor Of Instruction

APPENDIX E

Frequency distribution
of Group A (All grand-
parents born in regions
of the U.S. other than
middle south.

Frequency distribution
of Group B. (All, one,
two, or three grand-
parents born in the
middle south.

90 - 99	13	9
80 - 89	8	5
70 - 79	10	8
60 - 69	7	8
50 - 59	5	4
40 - 49	5	8
30 - 39	0	7
20 - 29	3	3
10 - 19	3	10
0 - 9	3	1
	<hr/>	<hr/>
	57	63

SUPPORTING DATA SHOWING COMPUTATION INVOLVED IN DETERMINATION
OF T-TEST USED TO INVESTIGATE THE SIGNIFICANCE OF
THE DIFFERENCE

Group A	Group B
$\sigma \text{ dist}_A = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum fd}{N}\right)^2} \times I$ $= \sqrt{\frac{482}{57} - \left(\frac{62}{57}\right)^2} \times 10$ $= \sqrt{8.45 - 1.18} \times 10$ $= \sqrt{7.27} \times 10$ $= 2.692 \times 10$ $\sigma \text{ dist}_A = 26.92$	$\sigma \text{ dist}_B = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum fd}{N}\right)^2} \times I$ $= \sqrt{\frac{477}{63} - (.016)^2} \times 10$ $= \sqrt{7.57 - .000256} \times 10$ $= \sqrt{7.569744} \times 10$ $= 2.751 \times 10$ $\sigma \text{ dist}_B = 27.51$
$\sigma \text{ mean}_A = \frac{\sigma \text{ dist}_A}{\sqrt{N}}$ $= \frac{26.92}{\sqrt{57}}$ $= \frac{26.92}{7.55}$ $\sigma \text{ mean}_A = 3.565$	$\sigma \text{ mean}_B = \frac{\sigma \text{ dist}_B}{\sqrt{N}}$ $= \frac{27.51}{\sqrt{63}}$ $= \frac{27.51}{7.937}$ $\sigma \text{ mean}_B = 3.467$

$$\begin{aligned}\sigma_{\text{diff}} &= \sigma(m_A - m_B) = \sqrt{m_A^2 + m_B^2} \\ &= \sqrt{(3.565)^2 + (3.467)^2} \\ &= \sqrt{12.71 + 12.02} \\ &= \sqrt{24.73}\end{aligned}$$

$$\sigma_{\text{diff}} = 4.97$$

$$\begin{aligned}t_{\text{test}} &= \frac{m_A - m_B}{\sigma_{\text{diff}}} \\ &= \frac{65.38 - 54.34}{4.97} \\ &= \frac{11.04}{4.97}\end{aligned}$$

$$t_{\text{test}} = 2.22$$