

A COMPARATIVE STUDY OF SCHOOL SUCCESS OF MIGRANT  
AND RESIDENT SECONDARY SCHOOL STUDENTS  
AT MYRTLE CREEK, OREGON

by

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CHAPTER I

INTRODUCTION

"There have been too many Okies running loose with knives in Douglas County and if they'd all go home I'd be better satisfied."

(13) These words represent part of the opinion expressed by a circuit judge in Douglas County Court when a jury returned a "not guilty" verdict in a second-degree murder trial.

Admonishing another Oklahoman just sentenced to the penitentiary, the judge suggested to the man that when he got out of jail five years hence, he should shake the dust of Oregon off his feet and the sentencing of others to five years in jail or a return to Oklahoma before sunrise, are further instances of furore-raising incidents paralleling the incentive for this study.

The statement quoted above precipitated a flood of mail to the daily newspaper serving the Roseburg area during January and February, 1953. The "Reader Opinion" section carried pro and con arguments about what appeared to be an overt expression of prejudice upon the part of a government officer.

There were two editorials upon the "Okie" problem. Under the subject, "The Case for the Judge", the editor (14) wrote about the judge's remarks:

Use of the word "Okie" was perhaps ill-advised, but we will presume the word was intended in a generic sense to denote a class of people, rather than specifically people from the state of Oklahoma; the word having in recent years assumed, through common usage, the definition of a particular type of person without regard to place of birth or residence.  
(17, p. 4)

This emergence of one of the problems of migration brought into county-wide focus by the newspaper had its beginnings long before January, 1953. In the school where this study was begun in 1948, junior and senior boys during the noon hour occasionally locked arms and strolled down the crowded hall of the high school singing one of their own songs, the chorus of which was "Let's send the Okies back to Oklahoma, we don't want them here in Oregon".

At other times the hall-duty teacher would notice an "Okie Flats" boy being tripped deliberately in the hall. This tripping and the singing were some of the more overt types of expression against students from out of state.

The victims of this anti-social behavior constitute cases of those to whom educators and sociologists interested in problems of migration have referred in popular literature as "Gasoline Gypsies", "Floaters" or "Asphalt Arabs".

During the routine of the school day in the early stages of rapid school growth, teachers had many opportunities to encounter expressions or effects of prejudice. In treating disciplinary matters such as skipping classes, fighting and cheating, many of the faculty may not have realized the effects upon the phenomenal self

of an individual being branded as an "Okie", whether that person is from Oklahoma, Texas, California or Washington.

Why is it that a community which had a school census of only 237 as late as 1942 should be concerned with a problem of this sort? A history of the mobility of the population of the United States within recent years will give an understanding of some of the origins of the social problems arising in a growing area as a result of migration.

#### A Brief History of Migration Involving Oregon

Following the release of 1940 United States census data, statistics pertaining to migration became available to the Pacific Coast educator to substantiate that which he already knew, that the most recent of the modern western migrations had seriously affected the school system.

During the period from 1935 to 1940, according to Wattenberg (21, p. 337), some 1,052,291 children of elementary school age, 5 to 13, in 1940 were involved in migration and another 437,681 of high school age, 14 to 17, had migrated.

It has been estimated as late as June, 1954, that since 1940 the population of Oregon has increased by 49.6 per cent. During wartime rationing the government kept track of ration books and observed that over 5,000,000 persons changed states in the period from 1941 to 1944. Oregon and California received many of these people. It was estimated that California became the home of 1,500,000 of these 5,000,000. As

will be shown later in the study, Oregon became a later place of residence for many of the migrants.

The crowding of the schools was foreseen as far back as 1933, when the 1930 census data were published. Punke (15), concluded at that time that the population of the United States was more mobile than that of any other people. It appears most certainly to be true that the typical United States resident is considered to be less apt to live in the community of his birth than the typical individual of any country. Reference to Table I, page 6, will illustrate this point as it applies to the individuals of this study.

The Select Committee of the House of Representatives, appointed in Washington, D. C., in May, 1940, to investigate the problem of the migration of workers, found that migration was out of proportion to the needs of the defence industries, creating overloading of educational facilities and sending migrants to other areas.

Oregon became one of those "other areas". Some residents of the community where this study was made know this to be true and use the letters "C. I. O." to refer to certain newcomers. The connotation refers to the "California Imported Okies."

One of the points of discussion during a typical counseling session with one of the youths from out of state centers around the thoughts: "Why did these new Oregonians leave their old homes? What did they hope to find here in Oregon?"

Among the factors influencing population movements, according to Gist and Clark (6, p. 37), are: natural resources, demographic traits,

climatic conditions, cultural patterns and economic organization.

These children and their parents forsook homelands because the physical forces of nature and man's social forces were defeating their efforts to profit from tilling the soil or serving economically those who were the tillers.

The fear of destruction of life by tornado sent them on their ways. One can find in the community of this study survivors of death-dealing winds in Ada, Oklahoma, for instance. Such students in science classes testify as to the effects, both physical and mental, of such violences of nature.

The World War II with its persistent aftermath of fear of war with one of our ex-allies has drawn people to the expanding industrial West Coast is well known. These folks come for reasons of economy as well as those of patriotism. What was found after the first world war is again true, that at least one-half of the war workers stay instead of going back across state lines to their former homes. Or, if they do go back, they are dissatisfied and come again to the Far West. Evidence of such mobility is found by reviewing the cumulative folders where the educational histories of students in this study are recorded.

The United States was founded by individuals who had the same ambitions, energy and zeal of these newcomers to Oregon. They have hoped, and in many cases succeeded, in finding economic and emotional stability in Oregon.



Table I

## Birthplaces of 649 Myrtle Creek High School Students

	Number of Students	Per cent of Total
Oregon	214	32.97
California	85	13.10
Washington	72	11.01
Oklahoma	50	7.70
Missouri	25	3.85
Idaho	22	3.39
Arkansas	20	3.08
Texas	19	2.93
Kansas	17	2.74
Colorado	15	2.31
Montana	14	2.31
New Mexico	11	1.69
Illinois	8	1.23
Minnesota	8	1.23
West Virginia	8	1.23
Arizona	7	1.08
Indiana	6	.93
North Carolina	6	.93
Wisconsin	6	.93
Wyoming	6	.93
Iowa	5	.77
Nebraska	5	.77
All others .. 12 states and two countries ..	20	2.89
Total	649	100.00

### Purpose of the Study

An earlier study, according to a magazine article given a frightening title, "The In-Migrant Menace", by its author, Bryan, (2, p.6) states in part:

The study also revealed a notable disagreement between the average person and the informed observer about the characteristics of these newcomers--what sort of people they are, their assets and liabilities as residents of our city. The man in the street is apt to regard them--particularly those he has never met--with the **distrust** and suspicion he reserves for all foreigners and other strangers. He had a mind-set which tends to regard the least desirable elements as typical.

Bryan's observations match the editor's comments concerning the work "Okie" and how, through common usage, it has come to designate a particular type of person regardless of where he was born or has lived.

From the school concerned in this study come some facts about reading problems which might be traced to sources within this new-comer group by those with mind-sets similar to those mentioned above.

Over a four year period beginning in 1951, identical Iowa Silent Reading tests were taken by ninth graders during their eighth month of school. Each of the four classes, 1950-1951 through 1953-1954, was broken into three groups, consisting first of those receiving test grade placement scores from the fourth to the seventh grade level inclusive, second from the eighth to tenth inclusive and last from the eleventh through the thirteenth grade.

In 1951, 22 per cent of the 50 tested fell in the group with grade placements from four to seven, inclusive. Without improving, each succeeding class, taking the same test as the original one, earned lower grade placement averages. The fourth class (1953-1954) placed 44 per cent of its 93 who took the test in the four to seven group. The percentage of those falling within the eleven to thirteen group diminished from twenty-nine in 1951 to fifteen in 1954.

According to these figures, the most recent freshman class in the high school had twice as many poor readers as compared with the first class tested.

The prejudiced person could very easily attribute this abrupt decline in reading skills to the newcomer group in our public school.

It is the purpose of this study to determine by careful and thorough standardized testing the facts about the native and acquired abilities of contrasting groups, those who have known no schooling other than that offered in Myrtle Creek, and those who have received all or some of their elementary education elsewhere.

Once established, the facts can be used primarily within the school involved to assist the staff in appreciating and treating the wide range and variety of individual differences present in the student body.

A wider application of the purpose is to develop a general understanding of the educational problems resulting from migration and to eliminate as much prejudice as possible.

### Location of the Study

A typical logging and lumber mill town similar to some of those south of Eugene along U. S. Highway 99, Myrtle Creek, Oregon has the highway for its main street. The city is located near Roseburg in the southwestern part of the state.

The geographic area is that of the Umpqua region, the south fork of the Umpqua River forming the western limits of the city. Drawing logs from the forests of the Cascades, Siskiyou and Coast Range mountains, the city is reportedly in the richest area of standing timber in Oregon. Climatically, the region is within the upper areas of the humid transition zone of the state.

### Type of Community

Embracing an area wherein approximately 4500 persons are estimated to reside, School District 19-C of Douglas County, Oregon has its public schools in Myrtle Creek.

While the State of Oregon was showing an approximate 50 per cent population increase from 1940 to 1954, the city of Myrtle Creek grew 552 per cent. The great increase was made even more obvious in the city by the fact that from 1940 until 1946 the census changed from 441 to only 714. With completion of the two large mills, one a sawmill and the other a plywood mill, in 1946, there was an accelerated population growth. From 1946 to June, 1954, the census shows a gain of 1,722 persons, making the latest population data for

Myrtle Creek read 2,436.

The tremendous growth of the school district since 1935 can be determined by reading the "assessed valuation" column of Table II, page 11. Moving from \$550,165 to \$5,323,847 during this period, the assessed valuation increase exceeds 900 per cent.

The same table presents the growth of the school and shows that grades one through eight also exceeded a 900 per cent increment in average daily membership. That the community's educational problems are not over is illustrated by the high school's growth just exceeding 400 per cent. The catching up on the missing 500 per cent begins with the 1954-55 school year, when the entering freshman class is expected to number near 150 individuals.

The community type is not unique. It resembles others in areas experiencing the development of the harvesting of the forests. The newcomers have generally settled in communities of their own, mainly beyond the limits of the city. The residential areas of the migrants have been given such printable names as "Okie Flats" and "Missouri Bottom".

As one would presume, problems of adequate housing, water supply and sanitation have arisen. The conditions have been damaging to the development of the optimum environment for school age children.

During the summer of 1949 the lumber industry fell into a slump. Those migrants loosely connected to the community left to find security elsewhere. Those who have remained, according to Neuberger

Table II

## Growth of School District 19, Myrtle Creek, Oregon

School Year	District Census	Elementary ADM	Secondary ADM	Assessed Valuation
1935-1936	212	125	76	550,165
1936-1937	187	117	85	526,405
1937-1938	184	121	77	536,415
1938-1939	253	153	74	534,235
1939-1940	255	170	85	538,480
1940-1941	264	165	71	556,190
1941-1942	243	161	75	570,855
1942-1943	237	172	78	589,900
1943-1944	358	189	81	609,825
1944-1945	428	248	83	714,000
1945-1946	427	250	106	1,910,095
1946-1947	616	383	122	2,052,805
1947-1948	897	566	152	2,365,330
1948-1949	1160	668	173	3,301,755
1949-1950	1219	725	203	4,147,470
1950-1951	1429	853	206	4,187,613
1951-1952	1625	952	250	4,658,275
1952-1953	1778	1014	282	4,992,266
1953-1954	1974	1160	309	5,323,847

(12, p. 302), face the warning of Lyle F. Watts, then Chief of the Forest Service, that but eleven years of operation could be guaranteed for mills representing 60 per cent of the capacity in Oregon and Washington.

Where a community's existence is dependent mainly upon one large company with two mills such as Myrtle Creek has, and where injury and death at work logging are relatively common, a certain instability exists in the homes of families directly involved in lumber production.

The tensions of insecurity of employment because of possible mill shutdown, strikes, bad weather or a declining lumber market are carried into the school by students.

The employment insecurity on top of the cost of supporting the community growth finally expressed itself decisively in school matters when the 1954-1955 budget was defeated by the voters. Roseburg a nearby similar, but larger school district, had two 1954-1955 school budgets voted down.

#### Individuals in the Study

Having seen the volume of migration affecting Myrtle Creek, the next obvious question pursued was "Where did they come from?"

Beginning with the 1948-1949 school year and ending with that of 1953-1954, the educational backgrounds and personal data of 649 students in grades 9 through 12 were obtained and studied.

Two foreign countries and 32 of the 48 states were the birth-places of these 649 individuals. Table I, page 6, was prepared to

show the original homes of the students. As one studies the table, he should bear in mind that these people finally settled in Myrtle Creek, bringing to the high school a broad range of individual differences.

To show additional data concerning the course of the ninth grade students, Table III, page 14, was prepared. It was made from the educational histories of 513 Myrtle Creek secondary school students who took reading tests. Study of the table reveals that during the six-year period of research approximately five per cent more students reached the ninth grade in 1953 than in 1948 after having attended Myrtle Creek's first grade.

Reading the totals of this table progressively from the first through the eighth grade, one finds that the number of students receiving first grade training in Myrtle Creek was 460 per cent less than those receiving eighth grade training there.



Table III

## Education in Myrtle Creek Elementary Schools

School Year	Cases	Grades and Per Cent Attended							
		1st	2nd	3rd	4th	5th	6th	7th	8th
1948-1949	58	7	12	17	21	22	33	74	57
1949-1950	59	15	17	22	20	22	34	51	54
1950-1951	76	17	14	18	19	29	39	47	55
1951-1952	107	14	13	15	24	33	44	53	58
1952-1953	108	15	17	22	29	35	42	50	67
1953-1954	105	12	16	22	34	40	50	64	77
Totals	513	13.3	14.8	19.3	24.5	30.0	40.0	56.5	61.3

The table reads: of the 58 freshmen entering in 1948 7% had attended the first grade of the Myrtle Creek Schools, 12% the second grade and 57% the eighth grade.

During the six-year period discussed, only approximately sixteen per cent of the first, second and third-graders reaching the ninth grade had been taught their fundamental academic skills in accordance with the philosophy and practices of the Myrtle Creek elementary schools. The situation is then complicated for the ninth grade students and staff by the wide range of individuals differences in knowledge, skills and attitudes.

With this picture of the group composition of the student body, the next and most important step is to classify individuals into the best homogeneity possible upon the basis of educational histories. This gives definitions of the terms "Migrants" and "Residents" as used in the study.

"Migrant" was chosen to represent the student who had any part of his elementary training outside of Oregon. Such a student may have attended one-quarter of the first grade in California and the entire remainder of seven and three-quarters of his elementary training in Myrtle Creek. Attendance in Oregon but not in Myrtle Creek did not designate a migrant. Some education outside of Oregon was the basic criterion.

For the "Resident" classification, a student had to have attended all eight grades of his elementary school career right in the Myrtle Creek public school system. One hundred per cent Myrtle Creek education was the basis for this classification.

Because the two groupings above might not provide complete enough differentiation, other classifications of individuals were employed in this study.

Reference to the birthplace Table I, page 6, shows that California, Washington and Oklahoma combined were the origins of approximately 32 per cent of the students who entered the high school. Then, there were those students who came to Myrtle Creek from other Oregon schools only.

In order to eliminate conjecture as to the quality of students with a California, Oklahoma, Washington or Oregon background, groupings were made of students as described below.

Any migrant who had attended school for any period of time in the state of California was put into the "Californians" group.

Similar treatment was made of the Washingtonians and Oklahomans. Also, considered separately and in comparison with the residents were those who had attended no out of state school, but schools only in Oregon, including Myrtle Creek. These are the "Oregonians".

A further classification of high school students was made upon the basis of having received all education in grades one through eight outside of the state of Oregon. This group is identified as "No Oregon" in this study.

A summarized listing and identification of the groups compared in accordance with the thesis title is shown below.

Residents.....	elementary training only in Myrtle Creek
Oregonians.....	elementary training only in Oregon, including Myrtle Creek
Migrants.....	elementary training with some part outside of Oregon
Californians.....	those with a record of having had at least some elementary training involving California
Washingtonians.....	those whose records show at least some elementary training in Washington state.
Oklahomans.....	those with a record of having had at least some elementary training in the state of Oklahoma
No Oregon.....	the group which had no training at all in the state of Oregon

The per cent of elementary school experience matching the classification for each of the groups above is given in Chapter III, where testing and residence data are tabulated extensively.

In summation concerning the individuals of the study, it has been shown that broad opportunities exist for variations is acquired

abilities among this heterogeneous group of high school students. Homogeneous grouping has been made upon the basis of the educational histories of individuals in grades one through eight.

### Bases of Comparison

In order to meet the purpose of this study, standards of comparison were set to determine what, if any, differences existed between the groups in native as well as acquired abilities.

To measure the intelligence quotient, two standardized group tests were used. The Henmon-Nelson Test of Mental Ability, Form B, was administered by the school's special education director. The Otis Quick-Scoring Mental Ability Test, Gamma C, and other tests mentioned below were given by the writer.

A third gauge of native qualities was made by the use of the Science Research Associates' Primary Mental Abilities, Intermediate Battery. This provided seven separate scores for comparing the groups.

If migration were to have an influence upon learning, such matters as reading, language and arithmetic should be tested. Such measurement was made by means of the California Achievement Test Batteries, Form AA being used exclusively. This battery provided eleven different kinds of scores.

The Iowa Silent Reading Tests, New Edition, was administered in Form Am (Revised) to check reading differences on ten scales.

From the objective means of measurement, comparison was moved

to two more or less subjective classifications. If any prejudice existed upon the part of the teaching personnel or administration, or if previous training in elementary schools had any influence upon school grades, there would be differences in grade point averages among the various migrant and resident groups. The complete grade point averages for all high school students as of June 1, 1954 were computed and used as a standard of comparison.

The seventh and last basis for comparison, another subjective item, was the Kuder Preference Record, Vocational, Form C. This instrument would show whether or not differences existed in attitudes toward choice of vocation on a ten-scale basis.

In summary of the bases of comparison, forty-one standards were used with the seven groupings of students. The tests were administered, scored and recorded carefully. Scientific testing procedures were followed in order to assure reliability of results.

The testing accomplished was not for the specific purpose of studying the effects of migration upon school age children. While test data were being used for purposes of curriculum evaluation and student guidance, the study of the effects of migration was being conducted.

#### Limitations of the Study

Since the data for selection of the groups to be compared were based on attendance in grades one through eight, and since, in the cases of the achievement and reading tests, the tests were mostly

administered during the eighth month of the ninth grade, results may have been altered by the influence of ninth grade attendance in the high school.

Case numbers for the groups compared vary because of the impossibility of selection of large enough even-sized groups within a small high school. Total case numbers for any one particular test are not really large, those for the Oklahomans varying from 27 to 40 on the seven bases of comparison.

The vocational preference record used was found to produce about fifteen per cent unsatisfactory verification scores, thereby reducing the number of cases.

Each major basis of comparison does not present the complete number of cases for the whole school, since there were about fifty students who took at least one of the tests, but were lost to the study for a lack of educational background material.

The Oregonians, while actually migratory for about 66 per cent of their eight years of elementary education, were not classified as Migrants. The reason was that they had no educational experiences outside of Oregon.

It is recognized by the writer that educational differences among students are undoubtedly brought about by a complex of factors, rather than by such a single element as migration alone. This study has not taken into consideration the many economic, religious and family conditions which tend to darken or beautify a child's school

experiences.

### Summary of Chapter I

Beginning with an expression of public interest in some of the problems of migration in Douglas County, Oregon, the chapter has shown some of the causes of migration into Oregon.

With the problems of migration established in the state, the purpose of the study, for the school district concerned as well as for the state, is to eliminate speculation about the kinds and degrees of differences between the resident and migrant students. With the facts concerning the differences at hand, understanding and treatment of the problems should be easier to accomplish.

The nature of the community where the study was made is given in this introductory chapter. An important feature of this section is the history of the rate and extent of growth of the school district and the city of Myrtle Creek, Oregon.

After identifying the groups to be compared and presenting the bases of comparison, Chapter I reviewed the limitations peculiar to the study, stressing the difficulties of obtaining extensive and valid data for comparisons of individuals with extremely complex life histories.

## CHAPTER II

## LITERATURE ON THE SUBJECT

In searching the literature for useful information upon the problems of education induced by migration, the writer found satisfaction in not being located in the seasonal crop-producing valleys of California, where the problems of migration are the most serious.

The great portion of the educational, psychological and social studies completed in the field of migration have been upon the bases of rural-urban movements and the itinerant agricultural labor market.

It is not upon the cotton-picking, "apple-knocking" or dam-building concept of migration that the present study was made. From past efforts to determine the effects of migration upon public education, it was necessary to select those cases most closely paralleling studies made wherein the migrant group had become or was becoming well established in the communities where they were studied. The type of harvest for which Myrtle Creek's migrants are needed is a relatively continuous and lasting one, as long as the rate of timber harvest is not accelerated by another major war. This does not imply a permanent stability of residence, but one vastly different from spending a few weeks harvesting a crop in one area of the state, only to move away either to harvest or plant another.

In writing that conflicts are often expressions of deep-seated



personality maladjustments, Wattenberg (21, p. 335) stated:

"Reduction or prevention of prejudice was seen to be allied to general education for mental health". In further discussion of the effects of migration upon the school child, he stressed the insecurity felt by new students. His observation was matched elsewhere in the literature, with the presumption being that migrants would not perform as well academically or socially as other students.

Landin (9, p. 75) believed that mobility has an educative value of its own. In explaining his position he wrote:

The grasp of an individual on life, his consciousness of its possibilities, is measured in considerable part by his mobility. The happiness of the alert mind is determined by its territorial compasses both by vicarious means and overt action.

Many an individual has been first shaken from complacency by some experience of the road, some struggle in adapting to a new environment. Migration inevitably brings contact. Sometimes this contact leads to conflict, always to contrast. Mobility must therefore have an awakening effect upon the mind. Those who never move are like children in their comprehension of space.

In a study reported in 1941, Synnberg (19) told of 1,650 migrants in McKinley High School, Chicago, Illinois. These students had come from 38 states and 5 foreign lands. According to results from measurements, where the subject matter requires practice or drill, such as in English, foreign language and commercial studies, pupils who had changed schools frequently or who had moved from one type of community to another, were markedly inferior to those educated in local schools.

Walton (20, p. 34), studying migratory children, found that of 167 cases none were above normal age-grade placement, about 15 per cent were normal, and 85 per cent retarded at least one year.

Seventy many-time and recent movers studied by Beach and Beach (1, p. 515), were found to have an IQ average of 103.78, which the authors considered to indicate normality or slight superiority in intelligence. They found from 149 cases that scholarship was somewhat below normal, though the difference was reported as not great.

A group of pupils which had changed schools, attended crowded rooms and received schooling with limited instructional materials, was found by Harmon (7), to be above the national norms in nearly all subjects.

That natives are in general better off educationally than those who move was the conclusion of Crowell, according to Sackett (16). In a further discussion of the effects of migration in the Panama Canal Zone schools, Sackett (16, p. 517), quotes Joy as reporting that:

There is conclusive evidence pointing to the fact that, of the white junior high school pupils in the Canal Zone schools, the transient children are the superior group in all subjects with the one exception of arithmetic computation.

Using Joy's data, Sackett (16), extended the study to include 292 native and 225 migrant children. He found that uninterrupted schooling is an advantage in arithmetic computation. It was also found by him that arithmetic reasoning is not hampered by interrupted schooling.

Regarding the quality of the individual who migrates, Day and Landis (4), reported in 1945 that high school graduates were more likely than non-graduates to move away from the parental county. The poorly educated youth, they decided, had to remain at home because of lack of funds or knowledge of opportunity elsewhere. If such youth did leave, low financial and educational limits would restrict their scope of migration. They concluded that it is the average individual who remains at home.

Supported by Day and Landis' contention was Mauldin (10), who decided that the equality of internal migrants is a strongly debatable matter. It was his conclusions that the best youth are the more migratory in proportion to others.

As far back as 1934, Huntington was quoted (17), as having reported: "The long distance migrants, no matter where they were born, or where they now live, rank consistently above the non-migrants and the short distance migrants".

Ranking highest in reading achievement were migrants, according to data from Huus (8, p. 209), who compared the lowest with the highest one-third of the scores in a reading achievement study.

The importance of keeping well-trained and thoroughly qualified teachers in rural districts and small towns was stressed by Burger (3), who surveyed an area in Missouri. In the three communities involved, 39 of the 48 states were represented in public schools. The implication was that the migrant students needed better care than those reared in local communities.

"One of the most controversial and persistent problems in the field of sociology is that of rural-urban differences in intelligence and the effect of migration on such differences", wrote Smith (18, p. 657), in 1943. In his report, he concluded that immobile subjects have lower intelligence scores than mobile subjects and that there was a slight positive correlation between amount of mobility and intelligence scores. It was believed by Smith (18, p. 664), that "mobility increases knowledge, stimulates curiosity, tends to develop speed of response, encourages imagination and develops mental flexibility, all of which qualities help to improve intelligence test performance". The reason for the relatively low average intelligence of the non-migrant subjects was left as "obscure", according to the source cited.

In a study of migration and education in Oregon, Downie (5, p. 53) wrote: "It has been frequently suggested that moving about from one community to another is apt to have an adverse effect on a child's intelligence test scores and his social adjustment. The research in this area is quite limited".

The above-mentioned study, at Hermiston, Oregon was reported in 1953. It involved students in grades 5 through 8 who were given the Otis Self-Administering Test of Mental Ability. Downie found that the mobile children made intelligence test scores comparable to those who had been continuous residents of Hermiston.

According to data from the National Education Association (11), there definitely is a lack of equal educational opportunity among the

states. Its study of the per cent of failures on the Armed Forces Qualification Test during the period beginning in July, 1950 and ending in June, 1951 showed Oregon with the third lowest percentage of failures of all states. Ranking the states concentrated upon by the present study in order from smallest to greatest per cent of AFQ Test failures as reported by the NEA, Oregon was found to have the least (the best position), followed in order by Washington, California and Oklahoma. Oregon's per cent of failures was 2.2, while Oklahoma's was 17.2 per cent.

A summary of the data reviewed for this study reveals that some authors consider migration beneficial to school success, while others have found that immobility and higher scores are positively correlated. Others have recognized the existence of a complex problem to which the answers have thus far been obscure.

### CHAPTER III

#### THE STUDY

As indicated in Chapter I, seven major bases of comparison were used to determine whether or not migrant and resident secondary school students performed equally well upon standard measures of native and acquired abilities. In all, 41 mean scores were obtained for the resident and migrant groups.

During each of the school years beginning in 1948 and ending in 1954, data from the Myrtle Creek High School's testing program were compiled and classified, ready to be summarized during the summer of 1954 for the purpose of this study.

This chapter is organized around data in tables which give test results and residence data for the various groups studied. Each table, indicating the test and/or test subsection represented, is followed by a verbal summarization and comparison of data, with interpretations being given for differences or similarities noted.

The concluding pages of the chapter are comprised of six tables completely summarizing the test data on a basis where the Residents as a group are compared with the other six groups in the study. Each of these tables is accompanied by a summarization and interpretation.

Table IV

## Intelligence Quotient -- Otis

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	66	105.52	-----	- 1.61	100.00	-----	-----	-----	-----	-----
Oregonians	137	103.91	+ 1.61	-----	32.98	67.02	-----	-----	-----	-----
Migrants	322	103.15	+ 2.37	+ .76	24.27	13.19	14.33	18.65	3.65	25.91
Total School	525	104.19	-----	-----	36.06	25.58	8.79	11.44	2.24	15.89
Californians	138	103.40	+ 2.12	+ .51	22.51	12.59	4.17	43.52	2.22	14.99
Washingtonians	97	103.85	+ 1.67	+ .06	26.55	14.98	47.58	4.51	.90	5.48
Oklahomans	28	101.28	+ 4.24	+ 2.63	16.74	11.61	4.02	19.87	41.29	6.47
No Oregon	56	103.02	+ 2.50	+ .89	-----	-----	15.18	40.29	8.82	35.71

The Table reads: The 322 Migrants had a mean IQ of 103.15 and were surpassed by the Residents 2.37 IQ points and by the Oregonians .76 IQ points. The Migrants received 24.27 per cent of their elementary education in Myrtle Creek, 13.19 per cent in Oregon outside of Myrtle Creek, 14.33 per cent in Washington, 18.65 per cent in California, 3.65 per cent in Oklahoma and 25.91 per cent in states other than Oregon, Washington, California and Oklahoma.

## Intelligence Quotient - Otis

Comparison of the Residents with the Migrants shows that the Residents scored 2.37 IQ points higher than the migrants on the Otis test. Ranking the several groups shows a wider range of differences, however.

Group	IQ
Residents	105.92
Oregonians	103.91
Washingtonians	103.85
Californians	103.40
No Oregon	103.02
Oklahomans	101.28

Range: 4.24

The ranking shows the Residents' position in relation to the groups composing the migrant classification. The Oklahomans, who had 41.29 per cent of their elementary education in Oklahoma, are led by the Residents by 4.24 IQ points.

While the range of differences is not great, it appears that having attended only one school for all eight elementary years may result in a higher IQ score, which is influenced by education, than that earned by students with educational histories involving migration.



Table V  
Intelligence Quotient - Henmon-Nelson

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	105.34	-----	- 1.93	100.00	-----	-----	-----	-----	-----
Oregonians	123	103.41	+ 1.93	-----	32.93	67.07	-----	-----	-----	-----
Migrants	284	102.81	+ 2.53	+ .60	25.24	13.84	13.31	18.62	3.81	25.18
Total School	466	103.27	-----	-----	36.74	26.14	8.11	11.35	2.32	15.34
Californians	123	103.41	+ 1.93	even	24.03	11.94	4.47	42.99	2.44	14.13
Washingtonians	81	103.91	+ 1.43	- .50	27.00	16.98	46.68	3.63	1.08	4.63
Oklahomans	27	98.75	+ 6.49	+4.66	22.68	10.19	4.17	17.36	39.35	6.25
No Oregon	52	101.08	+ 4.26	+2.33	-----	-----	14.18	40.27	7.81	37.74

### Intelligence Quotient - Henmon-Nelson

The use of a second group intelligence test was made to obtain reliable IQ scores for the students for counselling purposes and for this study. It is interesting to note that the all-schol means for the two tests varied only .92 of an IQ point.

As was found on the Otis test, the Residents' IQ mean score was higher than the Migrants', in this case by 2.53 IQ points. A ranking of the groups shows the Oklahomans last and separated from the leaders by 6.59 IQ points.

Group	IQ
Residents	105.34
Washingtonians	103.91
Oregonians	103.41
Californians	103.41
No Oregon	101.08
Oklahoma	98.75

Range: 6.59

The Oklahomans, who averaged about forty per cent of elementary education in Oklahoma and thirty-three per cent in Oregon, spent not as much time in school in other states as did the Californians, who beat them by 4.66 IQ points.

This table shows the Oregonians, Californians and Washingtonians only .50 of an IQ score apart. The No Oregon group, with about thirty-eight per cent of its elementary education outside of Oregon, Washington, California and Oklahoma, rated second poorest in the IQ scoring.

Since both the Otis and Henmon-Nelson IQ test results show nearly

perfect agreement in rank of the compared group, it appears obvious that the group which had attended only the Myrtle Creek public schools in grades 1 through 8 had the superior intelligence. This brings up the question as to whether or not migration had any effect upon intelligence.

It is possible that the more intelligent group remained in the state from which the migrant students departed. If one accepts a differential of 5 IQ points as significant, it appears here that the migrants are lower in native intelligence than those in the community where they settled. If this hypothesis is accepted, the implication is not so pleasant for those who are descended from the pioneers who opened Oregon to civilization by the white man.

In postulating the reasons for intelligence differences such as shown to exist between the Oklahomans and the Residents, it is reasonable to consider that the instruments of measurement are not infallible. The Primary Mental Abilities - Verbal table, number VI, page 34, shows the Oklahomans to be inferior in native verbal ability. Their rank is slightly more than 10 percentile points below the Residents. The Reading Vocabulary table, number XIII, page 50, also shows that the Oklahomans rate well below the Residents in verbal ability. The difference here was a little more than eight percentile points. Another instance of word-meaning deficiency for the Oklahomans is illustrated by table number XXIX, page 82. Here the difference is slightly more than seven percentile points. It is to be concluded, therefore, that the Oklahomans, as migrants,

rated lowest of all groups in intelligence, in part because of their lack of ability to handle the verbal sections of the intelligence tests as well as other students.

Table VI  
Primary Mental Abilities - Verbal

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	39.33	-----	- 1.51	100.00	-----	-----	-----	-----	-----
Oregonians	168	37.82	+ 1.51	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	38.20	+ 1.13	- .38	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	38.24	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	123	37.09	+ 2.24	+ .73	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	40.26	- .93	- 2.44	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	29.26	+10.07	+ 8.56	13.21	13.39	3.39	11.79	46.07	11.61
No Oregon	76	39.45	- .12	- 1.63	-----	-----	15.87	33.63	9.79	40.71

The Table reads: The 359 Migrants' mean percentile rank was 38.20. This was exceeded by the Residents by 1.13 percentile points. The Oregonians' mean percentile rank was .38 percentile points below that of the Migrants. The residence data is read as in previous tables.

### Primary Mental Abilities - Verbal

In considering comparisons of the groups in their abilities to understand ideas expressed in words, it was found that the Migrants rated just 1.13 percentile points lower than the Residents. When the Migrants were broken into sections by states, however, it was found that the range of differences from the top to the bottom of the rank was 11.00 percentile points.

Group	Percentile
Washingtonians	40.26
No Oregon	39.45
Residents	39.33
Oregonians	37.82
Californians	37.09
Oklahomans	29.26

Range: 11.00

The only great difference in rank is between the Washingtonians and the Oklahomans. While the variation in residence between the Myrtle Creek group and the Washingtonians is about 77% in the Myrtle Creek schools, the difference in mean percentile scores on the verbal comprehension section is only .93. This indicates that migration has not affected the Washingtonians upon this mental ability. If this test does measure native ability, the Oklahomans rate significantly below all other groups. If the score is shaded by the instability of residence, the Oklahomans failed to adjust as well as the other groups.

Regardless of the cause of the deficiency in the verbal

comprehension ability of the Oklahomans, they have found adjustment to high school more difficult than other groups of migrants.

Table VII

## Primary Mental Abilities - Space

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC.	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	50.87	-----	- .18	100.00	-----	-----	-----	-----	-----
Oregonians	168	50.69	+ .18	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	47.60	+ 3.27	+3.09	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	48.88	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	47.94	+ 2.93	+1.81	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	47.95	+ 2.92	+2.74	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	39.31	+11.56	+11.38	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	52	46.96	+ 3.91	+ 3.73	-----	-----	15.87	33.64	9.79	40.71



### Primary Mental Abilities - Space

If one were to seek candidates for training as engineers, architects, machinists and carpenters, he would do well to consider as a group either the Residents or the Oregonians, according to the mean percentile scores for the space ability. The Residents led the entire Migrant classification by only 3.27 percentile points. The greatest range of difference existed between all groups and the 35 Oklahomans who took this test.

Group	Percentile
Residents	50.85
Oregonians	50.69
Washingtonians	47.95
Californians	47.94
No Oregon	46.96
Oklahomans	39.31

Range: 11.56

It is rather difficult to ascribe reasons for the group differentials on this ability to think about objects in two or three dimensions. The only reasonable conclusion is that migration has had no effect upon spatial thinking and that an actual difference exists between the Oklahomans and the other groups, regardless of educational histories involving change of elementary schools.

Table VIII

## Primary Mental Abilities - Reasoning

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	48.20	-----	+ 1.49	100.00	-----	-----	-----	-----	-----
Oregonians	168	49.69	- 1.49	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	51.80	- 3.60	- 2.11	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	50.75	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	51.88	- 3.68	- 2.19	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	54.43	- 6.23	- 4.74	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	43.43	+ 4.77	+ 6.26	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	52	52.16	- 3.96	- 2.47	-----	-----	15.87	33.64	9.79	40.71

### Primary Mental Abilities - Reasoning

In the series of comparison made thus far in the study, this is the first instance wherein the Residents have rated below the Migrants. A ranking of the six groups studied further emphasizes the breach between the Residents and the migrant groups.

Group	Percentile
Washingtonians	54.43
No Oregon	52.16
Californians	51.88
Oregonians	49.69
Residents	48.20
Oklahomans	43.43

Range: 11.00

It appears from this table that some relationship does exist between migration and reasoning ability as measured by the test. All groups involved in migration, except the Oklahomans, earned higher mean scores than those who had all elementary education in the same school system.

If practice of an ability sharpens that faculty, the migrant groups have an advantage over the Residents. Before leaving a place of residence to move to another state, a family must exercise a great a great quantity of reasoning. Children in the family are subjected to many of the causes of emotional stress, particularly those of adjustment to a new school and neighborhood and adolescent or pre-adolescent adjustment to new members of the opposite sex.

It is reasonable, then, to expect the migrant groups to be able

to solve logical problems by foresight and planning. A glance at the high school grade point averages, Table XLVII, page 127, will show that the groups have not become maladjusted as a result of migration as far as school marks are concerned.

The stability of one environment has not built into the Residents' frames of reference the need for making the major adjustments which the migrant groups have experienced.

Interpretations made above obviously do not apply to the Oklahomans, except for the grade point average section.

Table IX  
Primary Mental Abilities - Number

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	43.49	-----	- 1.26	100.00	-----	-----	-----	-----	-----
Oregonians	168	42.23	+ 1.26	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	43.25	+ .24	- 1.02	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	43.00	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	40.32	+ 3.17	+ 1.91	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	43.26	+ .23	- 1.03	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	43.94	- .45	- 1.71	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	52	40.32	+ 3.17	+ 1.91	-----	-----	15.87	33.64	9.79	40.71

### Primary Mental Abilities - Number

High number ability places the Oklahomans at the top of the ranking of all groups in this phase of the mental abilities test. Narrowness of range is also characteristic of the distribution of differences shown by this table.

Group	Percentile
Oklahomans	43.94
Residents	43.49
Washingtonians	43.26
Oregonians	42.23
Californians	40.32
No Oregon	40.32

Range: 3.62

The only conclusion of importance to draw from this table is that wide differences in degrees of migration have produced few real differences in the ability of students to handle simple quantitative problems rapidly and accurately.

Table X

## Primary Mental Abilities - Word Fluency

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	36.33	-----	- .59	100.00	-----	-----	-----	-----	-----
Oregonians	168	35.74	+ .59	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	35.48	+ .85	+ .26	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	35.66	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	35.66	+ .67	+ .08	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	35.76	+ .57	- .02	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	32.51	+ 3.82	+ 3.23	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	76	38.24	- 1.91	- 2.50	-----	-----	15.87	33.64	9.79	40.71

### Primary Mental Abilities - Word Fluency

A range of .85 percentile points in which the Residents led the Migrants is the characteristic of the Word Fluency table. A break down of the Migrants shows the Residents not superior to all groups and the Oklahomans inferior to all.

Group	Percentile
No Oregon	38.24
Residents	36.33
Washingtonians	35.76
Oregonians	35.74
Californians	35.66
Oklahomans	32.51

Range: 5.73

The position of the Residents surrounded by migrant groups and the narrow range of differences negates explanations for variations caused by migration upon the mental ability, word fluency. It is only to be noted that the Oklahomans have returned to the lowest ranking position, a fact which is building toward a generalization concerning these individuals.



Table XI  
Primary Mental Abilities - Total Test

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	40.54	-----	- .41	100.00	-----	-----	-----	-----	-----
Oregonians	168	40.13	+ .41	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	40.57	- .03	- .44	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	40.45	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	39.15	+ 1.39	+ .98	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	42.09	- 1.55	- 1.96	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	32.26	+ 8.28	+ 7.87	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	76	40.07	+ .47	+ .06	-----	-----	15.87	33.64	9.79	40.71

### Primary Mental Abilities - Total Test

The Total Test scores given here represent a general index of the individuals' abilities to deal with intellectual problems. The table shows that the Migrants led the Residents on the entire test by a mere .03 of a percentile point. Since the range of difference between the Residents and Migrants is so insignificant, the indication is that on the whole test migration, per se, does not affect mental abilities in general as measured by the SRA Primary Mental Abilities Test, Intermediate Battery. The composition of the Migrants' subdivisions with mean percentile scores earned and the relative position of the Residents are shown in the ranked list below.

Group	Percentile
Washingtonians	42.09
Residents	40.54
Oregonians	40.13
No Oregon	40.07
Californians	39.15
Oklahomans	32.26

Range: 9.83

Except for the Oklahomans, all groups fell within 2.94 percentile points of each other on Total Test. The Oklahomans, who scored 9.83 percentile points lower than any other group, migrant or resident, were either deficient in the measured mental abilities or were the only ones to exhibit deleterious effects of moving from school to school during the years of elementary education from grades 1 through 8.

Table XII

## Primary Mental Abilities - Quotient

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	93.43	-----	+ 1.14	100.00	-----	-----	-----	-----	-----
Oregonians	168	94.57	- 1.14	-----	32.71	67.29	-----	-----	-----	-----
Migrants	359	94.72	- 1.29	- .15	21.97	12.70	14.42	19.57	4.51	26.83
Total School	606	94.51	-----	-----	35.12	26.18	8.55	11.59	2.67	15.89
Californians	161	94.00	- .57	+ .57	20.15	12.65	4.81	43.68	2.95	15.76
Washingtonians	106	95.71	- 2.28	- 1.14	23.41	14.12	48.85	3.54	2.30	7.78
Oklahomans	35	89.77	+ 3.66	+ 4.80	13.21	13.39	3.93	11.79	46.07	11.61
No Oregon	76	94.68	- 1.25	- .11	-----	-----	15.87	33.64	9.79	40.71

### Primary Mental Abilities - Quotient

Since this table on quotients is derived from the Total Score table, interpretations of differences are similar to the one just covered.

A ranked list of quotients by group is presented for comparison with intelligence scores as measured by the two tests first discussed in the study.

Group	Quotient
Washingtonians	95.71
No Oregon	94.68
Oregonians	94.57
Californians	94.00
Residents	93.43
Oklahomans	89.77

Range: 5.94

All groups except the Oklahomans are within 2.28 quotient points of each other. The Oklahomans' quotient of 89.77 is 5.94 points below the leading Washingtonians.

In final summation of the Oklahomans' generally low position in comparison to the other groups, it is probable that motivation has not been high for improvement in the mental abilities areas tested. This should provide a clue for the Myrtle Creek public school officials in their effort to improve the secondary school curriculum.

Table XIII

## Achievement - Reading Vocabulary

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	43.35	-----	- 5.76	100.00	-----	-----	-----	-----	-----
Oregonians	133	37.59	+ 5.76	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	39.56	+ 3.79	- 1.97	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	39.52	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	44.03	- .68	- 6.44	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	38.51	+ 4.84	- .92	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	35.20	+ 8.15	+ 2.39	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	42.28	+ 1.07	- 4.69	-----	-----	17.21	28.62	10.97	43.20

## Achievement - Reading Vocabulary

In considering the first section of achievement, it was found that the Residents led the Migrants in Reading Vocabulary by 5.76 percentile points. Breaking down the Migrants resulted in the appearance of greater differences between migrants and the resident students.

Group	Percentile
Californians	44.03
Residents	43.35
No Oregon	42.28
Washingtonians	38.51
Oregonians	37.59
Oklahomans	35.20

Range: 8.83

The Californians scored .68 of a percentile point higher than the Residents, as shown in this table. With 80.30 per cent of their elementary education outside of Myrtle Creek, the Californians suffered no ill effects from migration. This is clear when the Myrtle Creek group, the Residents, is known to have had 100 per cent of its elementary training in one school system. That migration seemed to be harmless is further illustrated by the No Oregon group, which came within 1.07 points of equalling the Residents' score.

The Oregonians were inferior by as much as 5.76 points to all groups other than the Oklahomans. The Oklahomans' position 8.83 points below the leader indicates a significant difficulty for the group in competition with others in the same school.

Table XIV

## Achievement - Reading Comprehension

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	65	49.97	-----	- 8.75	100.00	-----	-----	-----	-----	-----
Oregonians	133	41.22	+ 8.75	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	45.52	+ 4.45	- 4.30	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	44.84	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	49.23	+ .74	- 8.01	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	44.96	+ 5.01	- 3.74	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	42.17	+ 7.80	- .95	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	44.98	+ 4.99	- 3.76	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Reading Comprehension

Behind the Residents 4.45 percentile points, the Migrants may show some effects of migration, according to this table. The usual ranking method finds a surprise, the Oregonians, those who had elementary education only in Myrtle Creek and Oregon, on the bottom of the list, next to the Oklahomans.

Group	Percentile
Residents	49.97
Californians	49.23
No Oregon	44.98
Washingtonians	44.96
Oklahomans	42.17
Oregonians	41.22

Range: 8.75

While the pattern of ranking, comparing the Residents with the Migrants, is the same for Comprehension as Vocabulary, only the Washingtonians and No Oregon group retain identical positions when all groups are ranked. The Californians, again a large migrant group, come within .74 of a percentile point of equalling the group which never migrated.

The fact that the Oregonians are excelled by all groups may indicate a weakness in education within Oregon but not in Myrtle Creek. The identical situation, whatever it may be, might explain the low position of the Oklahomans in both Vocabulary and Comprehension.



Table XV  
Achievement - Total Reading

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	44.35	-----	- 5.82	100.00	-----	-----	-----	-----	-----
Oregonians	133	38.53	+ 5.82	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	41.96	+ 2.39	- 3.43	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	41.53	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	46.10	- 1.75	- 7.57	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	41.84	+ 2.51	- 3.31	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	37.62	+ 6.73	+ .91	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	42.72	+ 1.63	- 4.19	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Total Reading

While the Residents are seen to lead the Migrants by 2.39 percentile points, they give way to a minor group of migrant students, the Californians, by 1.75 points for Total Reading.

The Oregonians, who had 65.88 per cent of their elementary education in the state and 34.12 per cent in Myrtle Creek, place next to the lowest of all, the Oklahomans. This means that those students whose majority of education was either in California or Washington have shown superiority over the Oregonians. The No Oregon group was led by the Residents by a mere 1.63 points.

These facts do not point to a real superiority of the Residents in reading abilities over the out-of-state groups other than the Oklahomans.

The ranking of the groups for Total Reading is given below.

Group	Percentile
Californians	46.10
Residents	44.35
No Oregon	42.72
Washingtonians	41.84
Oregonians	38.53
Oklahomans	37.62

Range: 8.48

Table XVI

## Achievement - Mathematics Reasoning

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	53.88	-----	- 2.66	100.00	-----	-----	-----	-----	-----
Oregonians	133	51.22	+ 2.66	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	53.47	+ .41	- 2.25	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	52.88	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	56.90	- 3.02	- 5.68	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	56.18	- 2.30	- 4.96	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	46.04	+ 7.84	+ 5.18	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	49.46	+ 4.42	+ 1.76	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Mathematics Reasoning

When considered as a group, the Migrants come within .41 of a percentile point of leading the Residents in Mathematics Reasoning. This virtual equality eliminates any difficulties from migration, when one considers the Migrants as a group. A break down of the Migrants shows a variation of 10.86 percentile points with the group itself.

Group	Percentile
Californians	56.90
Washingtonians	56.18
Residents	53.88
Oregonians	51.22
No Oregon	49.46
Oklahomans	46.04

Range: 10.86

This table reveals that California and Washington students show greater achievement in Mathematics Reasoning than the Residents, who had all of their elementary training in the Myrtle Creek schools. This agrees with the observation that the Resident group was surpassed in the reasoning section of the mental abilities test.

The Oklahomans' position, 10.86 points below the Californians, indicates a real difference, but one which cannot be attributed to migration alone.

Table XVII  
Achievement - Mathematics Fundamentals

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	49.38	-----	- 7.35	100.00	-----	-----	-----	-----	-----
Oregonians	133	42.03	+ 7.35	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	42.23	+ 7.15	- .20	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	43.19	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	44.57	+ 4.81	- 2.54	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	41.55	+ 7.83	+ .48	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	39.28	+10.10	+ 2.75	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	39.74	+ 9.64	+ 2.29	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Mathematics Fundamentals

In this area the Residents show a clear superiority over all groups. The range of differences varies from 4.81 to 10.10 percentile points. The lead over the Migrants amounts to 7.15 percentile points. Details of the differences may be seen by reference to the ranked list given below.

Group	Percentile
Residents	49.38
Californians	44.57
Oregonians	42.03
Washingtonians	41.55
No Oregon	39.74
Oklahomans	39.28

Range: 10.10

The Oregonians' only significant loss was to the Californians, who led them by 2.54 points. The Oklahomans still show general inferiority on a comparative basis in achievement, this time in the fundamentals of mathematics as measured by the California Achievement Test.

Table XVIII

## Achievement - Total Mathematics

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	49.94	-----	- 4.80	100.00	-----	-----	-----	-----	-----
Oregonians	133	45.14	+ 4.80	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	46.63	+ 3.31	- 1.49	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	46.67	-----	-----	36.29	26.62	8.63	10.93	2.81	15.12
Californians	119	49.60	+ .34	- 4.46	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	47.79	+ 2.15	- 2.65	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	42.68	+ 7.26	+ 2.46	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	42.88	+ 7.06	+ 2.26	-----	-----	17.21	28.62	10.97	43.20

**Achievement - Total Mathematics**

The Residents exceeded all other groups in Total Mathematics achievement, although the Californians came within .35 of a percentile point of leading. The Oklahomans, at the bottom of the ranked list, are 7.26 percentile points away.

Group	Percentile
Residents	49.94
Californians	49.60
Washingtonians	47.79
Oregonians	45.14
No Oregon	42.88
Oklahomans	42.68

Range: 7.26

The high positions of the Californians and Washingtonians in Total Mathematics, with but 2.15 points difference from the Residents, indicate that migration has had little, if any, effect upon the mathematics abilities of these groups. Migration, or some unknown factor, has caused the Oklahomans and the No Oregon group to rate about 7 points below the Residents.



Table XIX

## Achievement - Mechanics of English and Grammar

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	44.88	-----	- 2.67	100.00	-----	-----	-----	-----	-----
Oregonians	133	42.21	+ 2.67	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	43.11	+ 1.77	- .90	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	43.12	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	40.94	+ 3.94	+ 1.27	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	39.42	+ 5.46	+ 2.79	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	46.00	- 1.12	- 3.79	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	36.04	+ 8.84	+ 6.17	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Mechanics of English and Grammar

In fifteen previous comparisons, the Oklahomans have ranked last, except for Reading Comprehension, where they were next to last, and Number, where they led all groups. Reference to the list below will show a lead of 9.96 percentile points for the Oklahomans in this aspect of the language battery of the California Achievement Tests.

Group	Percentile
Oklahomans	46.00
Residents	44.88
Oregonians	42.21
Californians	40.94
Washingtonians	39.42
No Oregon	36.04

Range: 9.96

Except for the position of the Oklahomans, the Residents indicate the best ability over the migrant groups.

The small number of cases, 29, for the Oklahomans, may explain their aberration in this case. If that explanation is accepted, there remains the question as to whether or not the most consistently low-ranking positions of the Oklahomans can be caused by few cases. Apparently, in this case there was just the right combination of high percentile scores to raise the mean considerably.

Table XX  
Achievement - Spelling

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	42.05	-----	- 4.18	100.00	-----	-----	-----	-----	-----
Oregonians	133	37.87	+ 4.18	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	40.22	+ 1.83	- 2.35	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	39.84	-----	-----	36.29	26.22	8.63	10.93	2.81	15.21
Californians	119	36.58	+ 5.47	+ 1.29	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	40.06	+ 1.99	- 2.19	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	36.28	+ 5.77	+ 1.59	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	37.71	+ 4.34	+ .16	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Spelling

As it is beginning to appear from achievement results, because of their consistent lead over the Migrants, the Residents may have benefitted from not having changed schools during their eight elementary years.

The Migrants, who had 21.65 per cent of their training in Myrtle Creek, excel the Oregonians with their 34.12 per cent education in Myrtle Creek. This may be explained by the possibility that the members of the subdivisions of the migrant groups attended other schools with curricula better than those in Oregon or Myrtle Creek.

Spelling differences are shown in the ranked list below.

Group	Percentile
Residents	42.05
Washingtonians	40.06
Oregonians	37.87
No Oregon	37.71
Californians	36.58
Oklahomans	36.28

Range: 5.77

According to the above data, Myrtle Creek people need not think that their pupils are poorer in spelling than students from other schools. While there is a difference, it is not great. What is not so comforting is that the percentile rank is on the low side of middle average. Unknown, of course, is how students in schools in California or Washington have scored on the same test. If California's curriculum in general were progressive when the students tested at Myrtle Creek were in California, and if the progressive way

of teaching spelling is different from the traditional spelling curriculum at Myrtle Creek, the result has been that the Residents scored 5.47 percentile points higher in spelling than the Californians.

Since there is a difference between the means of the Resident and Migrant groups, the simplest explanation is that changing schools has affected the spelling ability of students involved in migration.

Table XXI

## Achievement - Total Language

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	45.75	-----	- 6.67	100.00	-----	-----	-----	-----	-----
Oregonians	133	39.08	+ 6.67	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	43.64	+ 2.11	- 4.56	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	42.62	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	44.41	+ 1.34	- 5.33	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	43.50	+ 2.25	- 4.42	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	41.07	+ 4.68	- 1.99	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	40.18	+ 5.57	- 1.10	-----	-----	17.21	28.62	10.97	43.20

**Achievement - Total Language**

A difference of 2.11 percentile points stands between the Residents and Migrants upon Total Language ability. The Residents' lead over the lowest-ranked group is 6.67 points.

Group	Percentile
Residents	45.75
Californians	44.11
Washingtonians	43.50
Oklahomans	41.07
No Oregon	40.18
Oregonians	39.08

Range: 6.67

The above list shows that migration effected by the Oregon, No Oregon and Oklahoma groups may have influenced language ability. The Washingtonians and Californians were not far different from the Residents, who led in language ability.

Table XXII

## Achievement - Total Test

Group	Test Data		Comparison Data		MG	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	46.92	-----	- 5.97	100.00	-----	-----	-----	-----	-----
Oregonians	133	40.95	+ 5.97	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	44.08	+ 2.84	- 3.13	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	43.57	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	47.14	- .22	- 6.19	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	44.21	+ 2.71	- 3.26	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	40.22	+ 6.70	+ .73	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	42.02	+ 4.90	- 1.07	-----	-----	17.21	28.62	10.97	43.20



### Achievement - Total Test

Neglecting one factor to be considered from the next table, the Total Test mean scores give the Residents a final lead of 2.84 percentile points over the Migrants in achievement. However, an analysis of the Migrants' subdivisions and their scores shows the Californians leading all, Residents included, by .22 percentile points. The Residents' lead of 2.71 points over the Washingtonians is slightly more real.

The Oregonians and Oklahomans are within .73 of a percentile point of a tie for the last-ranking position, indicating that schools of these two states may have some common characteristic unfavorable to the best performance in this achievement test area.

Ranking of the groups is given below.

Group	Percentile
Californians	47.14
Residents	46.92
Washingtonians	44.21
No Oregon	42.02
Oregonians	40.95
Oklahomans	40.22

Range: 6.70

Table XXIII  
Achievement - Educational Quotient

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	65	99.06	-----	- 4.14	100.00	-----	-----	-----	-----	-----
Oregonians	133	94.92	+ 4.14	-----	34.12	65.88	-----	-----	-----	-----
Migrants	263	96.54	+ 2.52	- 1.62	21.65	12.64	15.12	19.15	4.92	26.52
Total School	461	96.42	-----	-----	36.29	26.22	8.63	10.93	2.81	15.12
Californians	119	97.77	+ 1.29	- 2.85	19.70	15.18	5.67	42.33	3.36	13.76
Washingtonians	76	97.07	+ 1.99	- 2.15	22.12	11.10	52.30	4.36	3.21	6.91
Oklahomans	29	92.89	+ 6.17	+ 2.03	13.79	13.15	4.74	10.35	45.90	12.07
No Oregon	57	95.58	+ 3.48	- .66	-----	-----	17.21	28.62	10.97	43.20

### Achievement - Educational Quotient

This table considers achievement on a comparative basis where student chronological age is a factor. A ranking of the groups by quotient is shown below.

Group	Quotient
Residents	99.06
Californians	97.77
Washingtonians	97.07
No Oregon	95.58
Oregonians	94.92
Oklahomans	92.89

Range: 6.17

The possibility that migration tends to produce grade retardation may explain the dominance of the Resident group in educational quotient standings.

The lead of the Residents over the Migrants is 2.52 quotient points, according to this table. The Oregonians, who would be considered most similar to the Residents because of residence in Myrtle Creek about  $\frac{3}{4}$  per cent of the time and in Oregon about 66 per cent of the time, are 4.14 quotient points below the Residents. Because the Residents were stationary and the Oregonians actually migratory during their eight years of elementary education, it appears that the difference could be because of migration.

Assuming lowest positions in this final achievement test comparison are the Oregonians and Oklahomans, the latter being 6.17 quotient points below the Residents.

Table XXIV

Reading - Rate

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	52.39	-----	- 7.62	100.00	-----	-----	-----	-----	-----
Oregonians	164	44.77	+ 7.62	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	47.22	+ 5.17	- 2.45	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	47.23	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	47.42	+ 4.97	- 2.65	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	47.31	+ 5.08	- 2.54	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	46.26	+ 6.13	- 1.49	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	50.04	+ 2.35	- 5.27	-----	-----	16.10	29.11	11.30	43.49

## Reading - Rate

The high ranks of the Residents and No Oregon groups and the bottom position of the Oregonians indicate that education in Oregon but not in Myrtle Creek may have handicapped the Oregonians in reading rate.

The ranking of the groups is given below.

Group	Percentile
Residents	52.39
No Oregon	50.04
Californians	47.42
Washingtonians	47.31
Oklahomans	46.26
Oregonians	44.77

Range: 7.62

The position of the Residents, 5.17 points above the Migrants, is evidence of a difference between the group educated in one school and the other in several schools.

Table XXV  
Reading - Comprehension

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	44.84	-----	- 1.00	100.00	-----	-----	-----	-----	-----
Oregonians	164	43.84	+ 1.00	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	44.47	+ .37	- .63	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	44.34	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	43.22	+ 1.62	+ .62	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	48.54	- 3.70	+ 4.70	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	39.21	+ 5.63	+ 4.63	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	47.60	- 2.76	- 3.76	-----	-----	16.10	29.11	11.30	43.49

## Reading - Comprehension

This table shows the Residents leading the Migrants by only .37 of a percentile point in reading comprehension. Before other comparisons are made, the ranked list will be given.

Group	Percentile
Washingtonians	48.54
No Oregon	47.60
Residents	44.84
Oregonians	43.84
Californians	43.22
Oklahomans	39.21

Range: 9.33

While the Residents led the Migrants and the Oregonians in the comprehension sections of both the achievement and reading tests, the lead was reduced from 8.75 to 1.00 percentile point.

Further complicating interpretation is the difference in rank upon both tests. This is shown in Table XXVI below.

Table XXVI

## Differences in Rank in Reading Comprehension

Group	Achievement Test	Reading Test
Washingtonians	4	1
No Oregon	3	2
Residents	1	3
Oregonians	6	4
Californians	2	5
Oklahomans	5	6

It is apparent from this problem that any statement of differences

among the groups applies to the particular test used and not to the comprehension ability alone.

Table XXV shows that the Washingtonians, in spite of an approximate 51 per cent migratory history, scored 3.70 percentile points higher in Comprehension than the Residents with their 100 per cent stability of residence.

The Oklahomans, stable in Oklahoma for 47 per cent of the time, ranked lowest of the six groups compared. This is evidence that the school environment in Oklahoma was somewhat different from that in Washington; or, that the group of students who came to Myrtle Creek from Washington were, by chance, inherently better in this ability.



Table XXVII

## Reading - Directed Reading

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	45.13	-----	- 2.14	100.00	-----	-----	-----	-----	-----
Oregonians	164	42.99	+ 2.14	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	43.74	+ 1.39	- .75	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	43.72	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	43.21	+ 1.92	- .22	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	50.35	- 5.22	- 7.36	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	37.92	+ 7.21	+ 5.07	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	45.45	- .32	- 2.46	-----	-----	16.10	29.11	11.30	43.49

## Reading - Directed Reading

The ranking for this table is:

Washingtonians	50.35
No Oregon	45.45
Residents	45.13
Californians	43.21
Oregonians	42.99
Oklahomans	37.92

Range: 12.43

Though the Residents led the Migrants in rank, an analysis of positions when the Migrants are broken into groups shows the Washingtonians ahead of all other groups, Residents included.

The No Oregon group, which had instability of residence involving education outside of Washington, California and Oregon, has rated second three times consecutively in reading ability.

It is evident that the Oklahomans are lacking the composite of skills necessary for effective reading. If migration were the cause, it would seem as if other groups, just as migratory in nature, would jostle for last position with the Oklahomans more often.

This table indicates that differences between all groups exist and that there must be some factor other than the changing of schools to explain it.

Table XXVIII

## Reading - Poetry Comprehension

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	39.37	-----	- 6.75	100.00	-----	-----	-----	-----	-----
Oregonians	164	32.62	+ 6.75	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	38.69	+ .68	- 6.07	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	37.11	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	40.61	- 1.24	- 7.99	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	37.30	+ 2.07	- 4.68	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	39.84	- .47	- 7.22	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	44.48	- 5.11	-11.86	-----	-----	16.10	29.11	11.30	43.49

### Reading - Poetry Comprehension

This section of the Iowa Silent Reading Tests rated the lowest mean all-school score of all the test subdivisions. It has disturbed the more or less usual order of rank, placing the No Oregon group in the lead, moving the Oklahomans up, and placing the Washingtonians next to the last.

Group	Percentile
No Oregon	44.48
Californians	40.61
Oklahomans	39.84
Residents	39.37
Washingtonians	37.30
Oregonians	32.62

Range: 11.86

The Residents still lead the Migrants, however, as they have done throughout the reading test. In this case it was by a mere .68 percentile point, however.

Table XXIX  
Reading - Word Meaning

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	39.41	-----	- .62	100.00	-----	-----	-----	-----	-----
Oregonians	164	38.79	+ .62	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	39.31	+ .10	- .52	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	39.18	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	39.11	+ .30	- .32	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	44.36	- 4.95	- 5.57	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	31.79	+ 7.62	+ 7.00	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	38.96	+ .45	- .17	-----	-----	16.10	29.11	11.30	43.49

### Reading - Word Meaning

In word meaning, the range of difference between the Residents and Migrants is only .10 of a percentile points, with the Migrants having the advantage. It is the Oklahomans' low scoring which keeps the Migrants from attaining the lead more often. This is illustrated by the ranked list appearing below.

Group	Percentile
Washingtonians	44.36
Residents	39.41
Californians	39.11
No Oregon	38.96
Oregonians	38.79
Oklahomans	31.79

Range: 12.55

From the above list it is noticed that the Oregonians, No Oregon, Californians and Residents are very close together. Between the Washingtonians and the Oklahomans the range is very great.

A comparison of the verbal meaning section of the Primary Mental Abilities test with this reading test shows the Washingtonians leading and the Oklahomans trailing in both. This is a better matching of scores than found in comparing Comprehension. Table XXX, below, compares word meaning sections of three tests covered in this study in showing ranks of the various groups on the three tests.

Considering the achievement test section on Reading Vocabulary, Table XIII, page 50, two identical positions of rank are found, where the Oregonians and Oklahomans match next to last and last positions

respectively.

Table XXX  
Differences in Rank in Word Meaning

Group	Achievement Test	Primary Mental Abilities	Reading Test
Washingtonians	4	1	1
Residents	2	3	2
Californians	1	5	3
No Oregon	3	2	4
Oregonians	5	4	5
Oklahomans	6	6	6

The above table indicates clearly that when reference is made to word meaning on any of the above standardized tests, it most definitely matters which test one means. The Oklahomans are the only ones to whom which test doesn't make any difference, they rank last in any case.

This variation of differences makes counseling of any group, Resident or Migrant, a very difficult task, if test scores such as the above are to be used as criteria.

From the above comparison of rank, it appears that the Oregonians and Oklahomans might be the ones to rate lower because of migration.

Table XXXI

## Reading - Sentence Meaning

Group	Test Data		Comparison Data				Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	M	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	43.95	-----	- 6.46	100.00	-----	-----	-----	-----	-----	-----
Oregonians	164	37.49	+ 6.46	-----	33.96	66.04	-----	-----	-----	-----	-----
Migrants	355	43.88	+ .07	- 6.39	22.34	12.50	11.31	19.21	5.04	26.60	
Total School	598	42.14	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79	
Californians	159	45.87	- 1.92	- 8.38	20.17	13.13	4.99	42.96	3.15	15.60	
Washingtonians	104	45.43	- 1.48	- 7.94	24.22	12.98	48.74	5.23	2.34	6.49	
Oklahomans	38	42.05	+ 1.90	- 4.56	14.15	12.33	3.62	12.66	47.04	10.20	
No Oregon	73	46.55	- 2.60	- 9.06	-----	-----	16.10	29.11	11.30	43.49	



# Reading - Sentence Meaning

The Resident-Migrant difference in Sentence Meaning is only .07 of a percentile point in favor of the former, according to this table.

Having a record of elementary training outside of Oregon favored the leaders of the broken Migrant grouping for this test section. The 164 Oregonians, with 34 per cent Myrtle Creek and 66 per cent Oregon elementary education, fell 4.56 percentile points below the second lowest group, the Oklahomans.

The Washingtonians were excelled by the No Oregon group, but only by 1.12 percentile points.

The ranked list follows.

Group	Percentile
No Oregon	46.55
Californians	45.87
Washingtonians	45.43
Residents	43.95
Oklahomans	42.05
Oregonians	37.49

Range: 9.06

The factor which placed the Oregonians 9.06 percentile points below the leaders may be that the students attended small, inefficient school systems during internal migration in Oregon. This could be possible, since many of the paternal occupations are directly involved in logging.

Table XXXII

## Reading - Paragraph Comprehension

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	49.86	-----	- 4.49	100.00	-----	-----	-----	-----	-----
Oregonians	164	45.37	+ 4.49	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	45.34	+ 4.52	+ .03	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	45.94	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	43.09	+ 6.77	+ 2.28	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	49.64	+ .22	- 4.27	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	37.76	+12.10	+ 7.61	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	47.93	+ 1.93	+ 2.56	-----	-----	16.10	29.11	11.30	43.49

## Reading - Paragraph Comprehension

In this phase of reading, the Residents showed a 4.52 percentile point advantage over the Migrants. The Residents led all of the groups comprising the Migrants, moreover. The ranked list below shows the differences.

Group	Percentile
Residents	49.86
Washingtonians	49.64
No Oregon	47.93
Oregonians	45.37
Californians	43.09
Oklahomans	37.76

Range: 12.10

This is the second instance where the Residents have led all groups in one phase of general reading ability. Here, though, they surpass the Washingtonians by only .20 of a percentile point.

Whatever factor may explain the Oklahomans' difficulties is still at work, according to this section of the reading test.

Table XXXIII

## Reading - Use of Index

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	44.30	-----	- 5.57	100.00	-----	-----	-----	-----	-----
Oregonians	164	38.73	+ 5.57	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	40.80	+ 3.50	- 2.07	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	40.69	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	42.14	+ 2.16	- 3.41	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	43.61	+ .69	- 4.88	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	32.66	+11.64	+ 6.07	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	42.90	+ 1.40	- 4.17	-----	-----	16.10	29.11	11.30	43.49

## Reading - Use of the Index

With 3.50 percentile points separating them, the Residents again show a higher mean score than the Migrants. The total break down is shown in the ranked list below.

Group	Percentile
Residents	44.30
Washingtonians	43.61
No Oregon	42.90
Californians	42.14
Oregonians	38.73
Oklahomans	32.66

Range: 11.64

The Residents and Washingtonians dominate in highest ability on this test section. At the bottom are the Oregonians and the Oklahomans. Californians rank at their usual position in the approximate middle of the distribution.

Since the Washingtonians, No Oregon and Californians are considered migratory by this study, and since they rate within 2.16 percentile points of the Residents, it is not clear that they have been affected by Migration. The Oregonians and Oklahomans, well below the Residents, may have been influenced by changing schools during their years of elementary education. But, why they would have been retarded and the others not, is not easily understood.

Table XXXIV

## Reading - Selection of Key Words

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	49.67	-----	+ 1.89	100.00	-----	-----	-----	-----	-----
Oregonians	164	51.56	- 1.89	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	47.76	+ 1.91	+ 3.80	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	49.06	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	46.67	+ 3.00	+ 4.89	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	53.56	- 3.89	- 2.00	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	43.50	+ 6.17	+ 8.06	14.15	12.33	3.62	12.66	47.04	10.20
No Oregon	73	47.12	+ 2.55	+ 4.44	-----	-----	16.10	29.11	11.30	43.49

## Reading - Selection of Key Words

In this phase of measuring student ability to use skills required in locating information, the lead of the Residents over the Migrants was 1.91 percentile points. As the break down of the Migrants shows below, the Residents did not surpass all divisions of the Migrants in Selection of Key Words.

Group	Percentile
Washingtonians	53.56
Oregonians	51.56
Residents	49.67
No Oregon	47.12
Californians	46.67
Oklahomans	43.50

Range: 10.06

The unusual feature of this table is that for the first time in the entire reading test, the Oregonians departed from their usual next to last position and rose to second place in rank.

Scoring a mean percentile of 49.06, this is the highest of all test subsections for the total school in reading.

Table XXXV

## Reading - Total Test Percentile Rank

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	79	44.33	-----	- 4.02	100.00	-----	-----	-----	-----	-----
Oregonians	164	40.31	+ 4.02	-----	33.96	66.04	-----	-----	-----	-----
Migrants	355	41.65	+ 2.68	- 1.34	22.34	12.50	14.31	19.21	5.04	26.60
Total School	598	41.67	-----	-----	35.79	25.53	8.50	11.40	2.99	15.79
Californians	159	41.47	+ 2.86	- 1.16	20.17	13.13	4.99	42.96	3.15	15.60
Washingtonians	104	45.05	- .72	- 4.74	24.22	12.98	48.74	5.23	2.34	6.49
Oklahomans	38	34.33	+10.00	+ 5.98	14.15	12.34	3.62	12.66	47.04	10.20
No Oregon	73	43.62	+ .71	- 3.31	-----	-----	16.10	29.11	11.30	43.49



## Reading - Total Test

This is the table which represents a summation of all the subtest scores in reading. It shows the final positions of the Residents and Migrants in the comparative ranking system used in this study. Within the data given by this table is an answer to the decline in reading ability of Myrtle Creek High School's ninth grade students.

Group	Percentile
Washingtonians	45.05
Residents	44.33
No Oregon	43.62
Californians	41.47
Oregonians	40.31
Oklahomans	34.33

Range: 10.72

The 79 Myrtle Creek High School students (Residents), who had all eight grades of their elementary school training without a change of schools, averaged 2.68 percentile points better than the 355 students (Migrants) who had histories of elementary education in at least one state other than Oregon. While the difference is small, it does indicate that lack of migration may result in producing better readers.

With 73 members, the No Oregon group most closely approximates the Residents in number. Without elementary training in either Myrtle Creek or Oregon, but with 43.59 per cent of its education in the Other group, these No Oregon students came within .71 of a percentile point of equalling the Residents' mean score. This fact

has two implications. The first is that the slower students in reading do not necessarily have an educational background involving migration, because those who did migrate scored right up with those who never did change schools.

Because the Oregonians ranked next to the lowest, the second implication mentioned above is that the schools of Oregon outside of Myrtle Creek must have neglected those students who moved about in Oregon only. Migration alone did not cause the group to have a mean reading percentile of 40.31.

Intelligence Quotient was not a deterrent to reading for the Oregonians. Reference to Table IV will show that the Residents exceeded the Oregonians by only 1.61 I.Q. points. The best readers, according to this test, were the Washingtonians. The Oregonians were I.Q. equals of the Washingtonians, there being only .06 of an Otis I.Q. point difference between them. These Oregonians were only 1.61 I.Q. points inferior to the other leading group in reading, the Residents.

The hypothesis is presented by the writer that the Oregonians were so low on both the Iowa Silent Reading and California Reading Tests because of a high percentage of elementary school teachers who were teaching with less than four years of college preparation. For the 1953-1954 school year this percentage was only 43.

This study has shown that a difference does exist among the groups. A problem worthy of immediate investigation would be the checking of the above hypothesis or others which would determine

the reason for low reading ability among the Oregonians.

Why the Oklahomans ranked 10.72 percentile points behind the best readers is a difficult problem. As for the Oregonians, migration alone does not appear to be the answer, since the Washingtonians were quite migratory, too. The 2.57 I.Q. points difference could not alone explain the variation. There must be some factor within the environment of Oklahoma schools, where the group received 47 per cent of its elementary school training. The 38 Oklahomans may have been members of a few families with histories of poor reading ability.

It was found that six families with 13 members made up part of the 38-member Oklahoma group of students. Nine individuals earned reading grade percentile ranks below 25, the other 4 of the 13 scored better than the 35th percentile, the highest being 82.

A study of the distribution of the scores for the 38 Oklahomans found only 5 individuals above the 75th percentile; 17 scored below the 25th percentils. Thus 44 per cent of the Oklahomans had scores at the 25th percentile. The Residents placed only 33 per cent of its readers in the same lowest quartile. It must be concluded, therefore, that the Oklahomans tested placed disproportionately low because of a concentration of retarded readers. The effects of migration upon this group were particularly harmful, since they were not given a stable remedial program. They came to Myrtle Creek just when growth was most intense and when there was a school fire, causing double-shifting and attendance in churches, the grange and other places

off the school grounds.

Table XXXVI  
Vocational Preference - Outdoor

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	75.69	-----	- 9.36	100.00	-----	-----	-----	-----	-----
Oregonians	119	66.33	+ 9.36	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	65.38	+10.31	+ .95	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	66.93	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	65.16	+10.53	+ 1.17	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	68.28	+ 7.41	- 1.95	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	61.45	+14.24	+ 4.88	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	66.65	+ 9.04	- .32	-----	-----	16.13	33.58	9.01	41.28

The Table reads: The 287 Migrants who took the Kuder Preference Record-Vocational had a mean percentile rank of 65.38, which was 10.31 percentile points below the mean of the Residents and .95 point below the mean of the Oregonians. The residence data is read as in previous tables.

## Vocational Preference - Outdoor

Living in a community with no television, poor radio reception, little opportunity for indoor employment and recreation, the Residents lead all groups in vocational interest attitudes toward outdoor employment. Having the ocean about 100 miles west, year-around snow 100 miles east, rivers, creeks and lakes in the Umpqua Valley and Cascade Mountains, the Residents have been nurtured in outdoor interests. Their position with regard to migrant groups can be seen in the ranked list below.

Group	Percentile
Residents	75.69
Washingtonians	68.28
No Oregon	66.65
Oregonians	66.33
Californians	65.16
Oklahomans	61.45

Range: 14.24

In contrast to the Oklahomans, the Residents' environment has not been an enemy. It has brought generally pleasure and prosperity to the community. Poverty and the out-of-doors have gone hand in hand for many of the Oklahomans.

This table indicates that migration lessens vocational preference for outdoor activities. The group educated at home the most, the Residents, led in outdoor preferences. The Washingtonians, educated least in California and second highest of the non-Oregonians in home state residence, prefer outdoor employment above all groups other

than the Residents.

In previous test subdivisions there have been other instances where the Washingtonians most closely equalled the Residents. This is probably explained by the fact that both groups have lived within the Douglas Fir belts of the Pacific Coast states.

The Californians may have lived in communities with greater cultural attractions than Myrtle Creek. Their fathers have had employment in industries other than those associated with logging. This helps understand the 10 percentile point range of differences between the Residents and the Californians.

Table XXXVII

## Vocational Preference - Mechanical

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	63.86	-----	- 5.98	100.00	-----	-----	-----	-----	-----
Oregonians	119	57.88	+ 5.98	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	55.79	+ 8.07	+ 2.09	25.00	13.40	11.91	17.42	3.83	25.44
Total School	465	57.30	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	59.02	+ 4.84	- 1.14	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	55.56	+ 8.30	+ 2.32	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	58.82	+ 5.04	- .94	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	58.97	+ 4.89	- 1.09	-----	-----	16.13	33.58	9.01	41.28



### Vocational Preference - Mechanical

The high position of the Residents in mechanical interests has two explanations. The first is that the bulk of the farming group in the community is made up of Residents. They have their farm machinery to operate and maintain. Boys and girls learn early to "help" at home by driving the tractor in the fields. The Migrants have failed to have a stable environment and enough financial stability to have a farm and machinery. Residents own and operate logging machinery on their own or nearby property without fear of having to follow the timber harvest back and forth across Oregon, Washington and California.

The Residents' lead in mechanical interests was 8.07 percentile points higher than the Migrants. The ranked list for all groups is shown below.

Group	Percentile
Residents	63.86
Californians	59.02
No Oregon	58.97
Oklahomans	58.82
Oregonians	57.88
Washingtonians	55.56

Range: 8.30

If the range of difference were greater, the low-ranking position of the Washingtonians would be more difficult to interpret. However, the parental occupations of 10 per cent of the Washingtonians are not mechanical in nature. One set of relatives, accounting for

6.6 per cent of the 91 Washingtonians, is mainly concerned with religious activities rather than mechanical. This has limited mechanical experiences to the point where it may influence vocational preferences.

Table XXXVIII

## Vocational Preference - Computational

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	59	42.36	-----	+ 4.45	100.00	-----	-----	-----	-----	-----
Oregonians	119	46.81	- 4.45	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	47.75	- 5.39	- .94	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	46.82	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	47.53	- 5.17	- .72	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	48.93	- 6.57	- 2.12	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	47.93	- 5.57	- 1.12	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	49.11	- 6.75	- 2.30	-----	-----	16.13	33.58	9.01	41.28

# Vocational Preference - Computational

The ranking for differences in computational interests is shown below.

Group	Percentile
No Oregon	49.11
Washingtonians	48.93
Oklahomans	47.93
Californians	47.53
Oregonians	46.81
Residents	42.36

Range: 6.75

The data from the table of computational interests placed Oregon on the bottom as an agent in the awakening of interests essential to successful accounting and bookkeeping. The Migrants' lead over the Residents in Computational was 5.39 percentile points.

Myrtle Creek ranked lowest of all in computational interest preference. The reasons include little opportunity to observe vocations with computational backgrounds, the lack of an elementary curriculum including accounting experiences, and the downgrading of this kind of interest where the outdoor and mechanical subdivisions rated so high.

It is interesting, but not surprising, to note that the intensity of preference for computational vocations is far less than that for mechanical vocations. The difference amounted to 14.75 percentile points, considered from top to top of each group. The maximum intensity of interest for outdoor vocations was 75.69

percentile points, while the same kind of score for Computational was 49.11, making a difference of 26.58 percentile points.

Table XXXIX

## Vocational Preference - Scientific

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla	Other
Residents	59	58.31	-----	- 6.70	100.00	-----	-----	-----	-----	-----
Oregonians	119	51.61	+ 6.70	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	51.85	+ 6.46	- .24	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	52.60	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	54.95	+ 3.36	- 3.34	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	54.65	+ 3.66	- 3.04	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	46.59	+11.72	+ 5.02	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	46.79	+11.52	+ 4.82	-----	-----	16.13	33.58	9.01	41.28

### Vocational Preference - Scientific

Surrounded by outdoor kinds of science in work and play, the Residents led all groups in choosing employment with a scientific nature. The Residents' elementary school's science curriculum has been one to foster interest in the science of the earth and living things. A complete listing of the difference is shown by rank below.

Group	Percentile
Residents	58.31
Californians	54.95
Washingtonians	54.65
Oregonians	51.61
No Oregon	46.79
Oklahomans	46.59

Range: 11.72

The residence data for the No Oregon and Oklahoma groups shows that they each spent less combined residence time in Myrtle Creek and Oregon than the others. This has reduced their experiences in what has been shown to be an environment inducing scientific interests.

It is probable that California students have rated high because of the indoor kinds of scientific activities such as would be found associated with laboratories and industries. The high position of the Californians in mechanical interests may parallel scientific interests such as needed to build aircraft and automobiles.

Table XL

## Vocational Preference - Persuasive

Group	Test Data		Comparison Data		MC	Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.		Ore.	Wash.	Cal.	Okla.	Other
Residents	59	35.44	-----	+ 9.60	100.00	-----	-----	-----	-----	-----
Oregonians	119	45.04	- 9.60	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	44.11	- 8.67	+ .93	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	43.25	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	44.46	- 9.02	+ .58	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	44.95	- 9.51	+ .09	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	50.74	-15.30	- 5.70	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	45.60	-10.16	- .56	-----	-----	16.13	33.58	9.01	41.28



## Vocational Preference - Persuasive

The Residents rate 8.67 percentile points below the Migrants in persuasive interests, as measured by the test. The entire distribution of differences is shown in the ranked list below.

Group	Percentile
Oklahomans	50.74
No Oregon	45.60
Oregonians	45.04
Washingtonians	44.95
Californians	44.46
Residents	35.44

Range: 15.30

The ranking shows that those who moved the greatest distance to enroll in Myrtle Creek public schools prefer most of all those vocations which require meeting and dealing with people. The lead of the Oklahomans here is 15.30 percentile points over the Residents. The other four groups are not significantly different, being only 1.14 percentile points apart.

The Oklahomans have experienced many situations involving human relationships as they left their homes to travel to other states to seek employment and satisfactory homes. They are the ones who have learned persuasiveness by having to make new friends in school. The Residents all attended school together for eight years and established stable companionships during that time in one school. The Oklahomans' changing of associates and teachers at school is, of course, matched to some extent by the other groups which moved to Myrtle Creek.

Table XLI

## Vocational Preference - Artistic

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	43.10	-----	+ 9.51	100.00	-----	-----	-----	-----	-----
Oregonians	119	52.61	- 9.51	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	51.67	- 8.57	+ .94	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	50.82	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	51.77	- 8.67	+ .84	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	45.70	- 2.60	+ 6.91	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	55.67	-12.57	- 3.06	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	49.74	- 6.64	+ 2.87	-----	-----	16.13	33.58	9.01	41.28

### Vocational Preference - Artistic

Doing creative work with their hands is a much stronger interest for the Oklahomans than for the Residents. This and other comparisons are shown in the ranking of the groups below.

Group	Percentile
Oklahomans	55.67
Oregonians	52.61
Californians	51.77
No Oregon	49.74
Washingtonians	45.70
Residents	43.10

Range: 12.57

In searching for an interpretation for the 12.57 percentile points lead of the Oklahomans over the Residents, it was found that the 27 Oklahomans who earned satisfactory Verification scores, 19 were girls. The eight boys did not wish to be beauticians, clothes designers, dressmakers, fashion artists, floral designers, hair-dressers, hat designers, and so on with the list of generally feminine vocations. This does not mean that this subsection of the Kuder Vocational Preference Record fails to provide for masculine vocations under artistic.

Considering the relative academic inabilities of the Oklahomans as shown by previous tables in this study, it is not surprising that manual occupations would assume positions of priority for this group.

The Migrants' position was 8.57 percentile points higher than the Residents on this subsection. The Myrtle Creek community is not

one to provide artistic opportunities for those residing there. The out of state individuals have been exposed to more artistic environments.

Table XLII

## Vocational Preference - Literary

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	39.86	-----	+ 1.11	100.00	-----	-----	-----	-----	-----
Oregonians	119	40.97	- 1.11	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	47.60	- 7.74	- 6.63	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	44.92	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	46.34	- 6.48	- 5.37	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	48.67	- 8.81	- 7.70	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	52.74	-12.88	-11.77	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	50.42	-10.56	- 9.45	-----	-----	16.13	33.58	9.01	41.28

### Vocational Preference - Literary

Being actors, actresses, authors, gag writers, poets and language teachers were some of the many literary occupations turned down by the Residents, but sought by the predominantly female Oklahoma group. A ranked list of differences for all groups on literary interests is given below.

Group	Percentile
Oklahomans	52.74
No Oregon	50.42
Washingtonians	48.67
Californians	46.34
Oregonians	40.97
Residents	39.86

Range: 12.88

The table shows that the Migrants scored 7.74 percentile points higher than the Residents in Vocational Preference - Literary. Groups which had opportunities to experience literary matters in places other than Myrtle Creek scored higher than the Residents and Oregonians. There has been little outside of the school to foster literary interests for the children of the community. A good beginning has been made toward building a city library attractive to children as well as adults. At present, the community has no common meeting place for large groups, other than the inadequate school gymnasium.

Both the school and community need literary experiences, either by formal training or otherwise. The high school has no curriculum

involving speech and drama. During the six-year period of this study, journalism was offered only once, in the last year. Educational television, if ever achieved, would have to be brought to the community by cable.

Table XLIII  
Vocational Preference - Musical

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	53.51	-----	- 7.40	100.00	-----	-----	-----	-----	-----
Oregonians	119	46.11	+ 7.40	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	41.15	+12.36	+ 4.96	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	43.99	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	38.66	+14.85	+ 7.45	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	44.07	+ 9.44	+ 2.04	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	36.40	+17.11	+ 9.71	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	34.72	+18.79	+11.39	-----	-----	16.13	33.58	9.01	41.28



### Vocational Preference - Musical

As may be seen from the ranked list below, the Residents led all groups by real differences in percentile points in preference of vocations based on music.

Group	Percentile
Residents	53.51
Oregonians	46.11
Washingtonians	44.07
Californians	38.66
Oklahomans	36.40
No Oregon	34.72

Range: 18.79

The greatest range of all differences upon the ten scales of the Vocational Preference Record is shown in this musical interest subsection. The Residents led the lowest group by 18.79 percentile points.

Studying the Myrtle Creek residence data for all the groups shows that those with the highest per cent of elementary school training in Myrtle Creek choose musical vocations most often. The Residents' lead of 12.36 percentile points over the Migrant group further illustrates this situation.

An extensive and still growing music education program has been carried on in the Myrtle Creek public schools. The intense vocational interest in music and music teaching stems from the school program, it is quite certain.

Table XLIV

## Vocational Preference - Social Service

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	42.68	-----	+ 2.57	100.00	-----	-----	-----	-----	-----
Oregonians	119	45.25	- 2.57	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	46.68	- 4.00	- 1.43	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	45.80	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	45.89	- 3.21	- .64	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	46.90	- 4.22	- 1.65	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	38.19	+ 4.49	+ 7.06	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	51.53	- 8.85	- 6.28	-----	-----	16.13	33.58	9.01	41.28

### Vocational Preference - Social Service

Except for the Oklahomans, all migrant groups exceeded the Residents in preferring interests involving helping others. The only Migrant group with no elementary training in Oregon led all in choosing vocations such as counselors, welfare workers, teachers, psychiatrists and social workers. The differences which were found to exist between the groups are shown in the ranked list below.

Group	Percentile
No Oregon	51.53
Washingtonians	46.90
Californians	45.89
Oregonians	45.25
Residents	42.68
Oklahomans	38.19

Range: 13.34

The low position of the Residents, 8.85 percentile points below the high group, may be attributed to the fact that they do not know much about social work. The Residents' relative lack of interest in social service correlates exactly in rank with the previous subsection dealing with people, persuasiveness.

States other than California, Oregon and Washington where the No Oregon group spent 41.28 per cent of its elementary school residence may have less prosperity and a greater need for social work than Oregon.

In further explanation of the Residents' low rank, it may be said they have been discouraged with adult leadership in school,

at church or in youth organizations. The parents of the Residents may be well enough established in the community to sense a stability granting independence from reliance upon others. They may achieve personal satisfaction at home or in school without sponsoring activities for others.

The Oklahomans' position, 13.34 percentile points below the leader is difficult to interpret, especially since the group likes to work with people. Having access to cumulative folders and with the privilege of having had virtually each of the 27 Oklahomans in science classes, the writer found that a study of the individual personalities revealed a number of interesting details useful in understanding these Oklahomans.

Four of the nineteen Oklahoma girls married before graduation from high school. In the group of twenty-seven are four children from different homes where serious marital difficulties created conflict serious enough to disturb optimum school adjustment. An over-age-in-grade young man lived with his family in a chicken house with a stovepipe placed through a window. The group had an orphan being reared by a brother who left high school to support his younger siblings. One member had been committed to Hillcrest, the state school for girls. One young man dropped high school to enter military service, from which he was discharged within a few months. Another young chap moved from state to state to live with relatives. This resulted in three entries in the Myrtle Creek schools.

Personal difficulties other than those mentioned above can be found within this Oklahoma group. This gives the Oklahomans as grouped in this vocational interest record a concentration of individuals with unstable past and present conditions. No other of the migrant groups can match the Oklahomans in this study for barriers to education on a formal basis.

The position of the Oklahomans so far behind other migrant groups in this interest may be explained by one of a strong feeling of independence, of being proud to be making their own ways without free help from outside their families. If some of the members were involved in the really migratory labor situation in California, they may have been exposed to unhappy social welfare relationships, since that state has had a difficult time adjusting to balancing human resources and the planting and harvesting of natural resources.

Table XLV  
Vocational Preference - Clerical

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	59	43.64	-----	+ 5.14	100.00	-----	-----	-----	-----	-----
Oregonians	119	48.78	- 5.14	-----	32.51	67.49	-----	-----	-----	-----
Migrants	287	49.40	- 5.76	- .62	25.00	13.40	14.91	17.42	3.83	25.44
Total School	465	48.51	-----	-----	36.44	25.54	9.20	10.75	2.37	15.70
Californians	122	44.48	- .84	+ 4.30	23.67	12.81	5.12	40.42	1.84	16.14
Washingtonians	91	52.34	- 8.70	- 3.56	25.55	15.97	47.01	5.22	.96	5.29
Oklahomans	27	51.26	- 7.62	- 2.48	21.06	12.04	4.17	14.81	41.67	6.25
No Oregon	43	40.56	+ 3.08	+ 8.22	-----	-----	16.13	33.58	9.01	41.28

### Vocational Preference - Clerical

Filing, letter writing, shorthand, typing and library work are kinds of indoor clerical vocations preferred 5.76 percentile points more by the Migrants than the Residents. This indoor vocational preference differs from the order of Outdoor, the first subsection studied in the preference record. A listing of the differences is shown below.

Group	Percentile
Washingtonians	52.34
Oklahomans	51.26
Oregonians	48.78
Californians	44.48
Residents	43.64
No Oregon	40.56

Range: 11.78

The significant positive relationship between migration and choice of clerical occupations is probably explained by the fact that such types of employment are most commonly available for new or young workers who have received only a general education. Parents of children involved in migration have taken clerical positions while seeking work with higher pay or other advantages in their new communities. Many of the mothers in the community have regular, full-time clerical work in the city.

Why the Washingtonians, who have rated high in Outdoor, Mechanical and Scientific, should lead all groups in clerical preference is not clear, except that such work would be acceptable until their best preferences became available.

### Vocational Preference - Summary

Interest patterns for the various groups of students were found to be virtually identical in kind, but greatly different in degree. The preceding interpretations have stressed degrees of difference. The Table below summarizes the kinds of interests preferred by the Residents and Migrant groups.

Table XLVI

#### Interest Patterns for Resident and Migrant Groups

Group	1st choice	2nd choice	3rd choice
Residents	Outdoor	Mechanical	Scientific
Oregonians	Outdoor	Mechanical	Artistic
Migrants	Outdoor	Mechanical	Scientific
Total School	Outdoor	Mechanical	Scientific
Californians	Outdoor	Mechanical	Scientific
Washingtonians	Outdoor	Mechanical	Scientific
Oklahomans	Outdoor	Mechanical	Artistic
No Oregon	Outdoor	Mechanical	Social Service

The table shows that all prefer Outdoor-Mechanical employment. Only the No Oregon, Oklahomans and Oregonians prefer something other than scientific vocations for third choice.

This vocational preference summation shows a state of imbalance between interests and the curriculum of the high school where the study was made. All groups are fitted into a traditional curriculum, without benefit of Outdoor-Mechanical training. The science program



cares for its own interests and to some extent those pertaining to outdoor vocations.

Table XLVII

## Grade Point Average

Group	Test Data		Comparison Data			Residence Data in Per Cent				
	Cases	Mean	Res.	Ore.	MC	Ore.	Wash.	Cal.	Okla.	Other
Residents	79	2.48	—	—	.19	100.00	—	—	—	—
Oregonians	176	2.67	+	.19	—	31.68	68.32	—	—	—
Migrants	385	2.69	+	.21	+	.02	21.82	12.80	14.32	19.25
Total School	640	2.66	—	—	—	34.18	26.49	8.62	11.58	12.96
Californians	172	2.72	+	.24	+	.05	20.49	12.86	5.05	43.10
Washingtonians	113	2.63	+	.15	—	.04	22.73	13.75	48.81	5.25
Oklahomans	40	2.38	+	.40	+	.21	15.78	11.72	3.44	12.03
No Oregon	76	2.76	+	.28	+	.09	—	—	16.78	33.22
									9.54	40.46

The Table reads: The 385 Migrants earned a Grade Point Average of 2.66 (1.00 being perfect, 5.00 failing). They were surpassed by the Residents .21 of a grade point and by the Oregonians .02 grade point. The residence data is read as in the previous table.

### Grade Point Averages

The narrowest range of all comparisons is found in the study of grade point average differences between the Residents and Migrant groups. The ranked list below will show the differences.

Group	GPA
Residents	2.48
Washingtonians	2.63
Oregonians	2.67
Californians	2.72
No Oregon	2.76
Oklahomans	2.88

Range: .40

Correlation of rank in grade point averages and intelligence quotient as measured by the Henmon-Nelson test is 1.00. But for .04 in grade point average, the correlation would be 1.00 for the intelligence quotient as measured by the Otis test. On no other of the 41 scales of comparison has there been such high correlation.

This table illustrates perfectly the lack of prejudice upon the parts of the faculty of the high school where these averages were obtained. The range of difference includes only .40 of one grade point. When all the migrant groups are put into one, the Migrants, it is found that the Residents lead by only .21 of a grade point. If any mind-set against any particular group were existent, it would have appeared in this comparison.

The table implies that the Oklahomans, who were shown to be the poorest readers by 8.48 percentile points on the achievement test and

by 10.72 percentile points on the Iowa Silent Reading Tests, have succeeded remarkably well in earning satisfactory school marks. Another implication related to personality as a factor in the matter of school success. It appears that the Oklahomans have applied their persuasive interests to practical use in the high school, thus overcoming definite weaknesses in elementary training to attain a mean grade point average score only .40 of a point lower than the Residents.

Washingtonians have again shown that they most closely resemble the Residents.

The final conclusion regarding grade point averages is that the study has shown virtually no real relationship between school marks and migration, although those with educational histories involving no migration ranked highest.

Table XLVIII

Summary. Comparison of Residents' and Oregonians' Mean Scores.

IQ			Reading		
	Residents	Oregonians		Residents	Oregonians
Otis	1.61	-----	Rate	7.62	-----
Henmon-Nelson	1.93	-----	Comprehension	1.00	-----
Primary Mental Abilities			Directed Reading	2.14	-----
Verbal	1.51	-----	Poetry Comprehension	6.75	-----
Space	.18	-----	Word Meaning	.62	-----
Reasoning	-----	1.49	Sentence Meaning	6.46	-----
Number	1.26	-----	Paragraph Comprehension	4.49	-----
Word Fluency	.59	-----	Use of Index	5.57	-----
Total Test	.41	-----	Selection of Key Words	-----	1.89
Quotient	-----	1.14	Total Test	4.02	-----
Achievement Battery			Vocational Preference		
Reading Vocabulary	5.76	-----	Outdoor	9.36	-----
Reading Comprehension	8.75	-----	Mechanical	5.98	-----
Total Reading	5.82	-----	Computational	-----	4.45
Mathematics Reasoning	2.66	-----	Scientific	6.70	-----
Mathematics Fundamentals	7.35	-----	Persuasive	-----	9.60
Total Mathematics	4.80	-----	Artistic	-----	9.51
Mechanics Eng. & Grammar	2.67	-----	Literary	-----	1.11
Spelling	4.18	-----	Musical	7.40	-----
Total Language	6.67	-----	Social Service	-----	2.57
Total Test	5.97	-----	Clerical	-----	5.14
EQ	4.14	-----	School Marks		
			Grade Point Average	.19	-----

The Table reads: The Residents' Otis IQ mean score was 2.37 points higher than the Migrants'. All Scores are percentiles from test manuals except for quotients and grade point average.

### Summary. Residents - Oregonians

On the tests of mental ability, the Residents led the Oregonians in seven out of nine measures. The main significance of the mental ability comparisons is that the Residents seem to have been slightly better in all factors except reasoning. Since the range of differences is from .18 to only 1.93 percentile points, the difference is virtually negligible.

That immobility favored the Residents over the Oregonians was found in studying the comparisons of mean percentiles earned by both groups on the California Achievement Test battery and the Iowa Silent Reading Test. Leading by as much as 8.75 percentile points in one item, the Residents' general achievement was about 6.00 points higher than the Oregonians'. The reading test provided the Oregonians with their one item of superiority out of 21 achievement and reading items.

With about 34 per cent of their education in grades one through eight and the other 66 per cent in other states than Oregon, the Oregonians' failure to equal the Residents is quite perplexing.

Whether the difference may be attributed to poor schools in Oregon, to migration within the state, or to some other obscure factor, the fact stands that the Myrtle Creek schools have received students who have needed help and not received enough of it.

It is not to be concluded that the Oregonians do not need extra attention on the basis of a comparison with the Residents because the latter are so good that the former appear so poor. Inspection of

the achievement and reading tables will show that the Residents placed generally in the fourth decile on the standardized test norms.

This study has shown for the Residents-Oregonians comparison that pupils who had all eight elementary years in one school seemed to have slightly higher intelligence quotients than those with 66 per cent mobility. Continuous residence and higher mean scores on standardized achievement and reading tests were positively associated.

Significantly disliked by the Residents but important to the Oregonians were computational, persuasive, artistic and clerical vocational interests. Both chose outdoor and mechanical interests first of all, but the Residents' intensity was from six to nine percentile points higher.

The gap of differences between the two was nearly closed on grade point averages, there being only .19 of a grade point separating the Residents from the Migrants.

Table XLIX

## Summary. Comparison of Residents' and Migrants' Mean Scores

IQ			Reading		
	Residents	Migrants		Residents	Migrants
Otis	2.37	—	Rate	5.17	—
Henmon-Nelson	2.53	—	Comprehension	.37	—
Primary Mental Abilities			Directed Reading	1.39	—
			Poetry Comprehension	.68	—
Verbal	1.13	—	Word Meaning	.10	—
Space	3.27	—	Sentence Meaning	.07	—
Reasoning	—	3.60	Paragraph Comprehension	4.52	—
Number	.24	—	Use of Index	3.50	—
Word Fluency	.85	—	Selection of Key Words	1.91	—
Total Test	—	.03	Total Test	2.68	—
Quotient	—	1.29	Vocational Preference		
Achievement			Outdoor	10.31	—
			Mechanical	8.07	—
Reading Vocabulary	5.76	—	Computational	—	5.39
Reading Comprehension	4.45	—	Scientific	6.46	—
Total Reading	2.39	—	Persuasive	—	8.67
Mathematics Reasoning	.41	—	Artistic	—	8.57
Mathematics Fundamentals	7.15	—	Literary	—	7.74
Total Mathematics	3.31	—	Musical	12.36	—
Mechanics Eng. and Grammar	1.77	—	Social Service	—	4.00
Spelling	1.83	—	Clerical	—	5.76
Total Language	2.11	—	School Marks		
Total Test	2.84	—			
Educational Quotient	2.52	—	Grade Point Average	.21	—



### Summary. Residents - Migrants

A comparison of the Residents with the pupils who had approximately 22 per cent of their eight years of elementary schooling in Myrtle Creek, about 12 per cent somewhere else in Oregon, and 66 per cent outside of Oregon, shows that the immobile group had IQ scores about 2.5 points higher than those with educational histories involving migration.

A positive effect on reasoning ability seems to have resulted from migration, since the Residents were 3.60 percentile points below the Migrants.

On none of the eleven separate scores derived from the achievement test or on the ten from the reading test did the Migrants excel the Residents.

Mobility's effect upon achievement probably explains the fact that the Migrants received a mean grade point average .21 of a point below the Residents.

Vocations dealing with people and arts and letters meant more to the Migrants than to the Residents.

Superiority in intelligence, achievement in reading, mathematics and language was noted for the students who had never changed schools in progressing from the first to the ninth grade.

Table L

## Summary. Comparison of Residents' and Washingtonians' Mean Scores

IQ			Reading		
	Residents	Washingtonians		Residents	Washingtonians
Otis	1.67	----	Rate	5.08	----
Henmon-Nelson	1.43	----	Comprehension	----	3.70
Primary Mental Abilities			Directed Reading	----	5.22
Verbal	----	.93	Poetry Comprehension	2.07	----
Space	2.92	----	Word Meaning	----	4.95
Reasoning	----	6.23	Sentence Meaning	----	1.48
Number	.23	----	Paragraph Comprehension	.22	----
Word Fluency	.57	----	Use of Index	.69	----
Total Test	----	1.55	Selection of Key Words	----	3.89
Quotient	----	2.28	Total Test	----	.72
Achievement			Vocational Preference		
Reading Vocabulary	4.84	----	Outdoor	7.41	----
Reading Comprehension	5.01	----	Mechanical	8.30	----
Total Reading	2.51	----	Computational	----	6.57
Mathematics Reasoning	----	2.30	Scientific	3.66	----
Mathematics Fundamentals	7.83	----	Persuasive	----	9.51
Total Mathematics	2.15	----	Artistic	----	2.60
Mechanics Eng. & Grammar	5.46	----	Literary	----	8.81
Spelling	1.99	----	Musical	9.44	----
Total Language	2.25	----	Social Science	----	4.22
Total Test	2.71	----	Clerical	----	8.70
Educational Quotient	1.99	----	School Marks		
			Grade Point Average	.15	----

### Summary. Residents - Washingtonians

But 1.5 IQ points separated the Residents and Washingtonians. On the primary mental abilities test, the Washingtonians' score was 2.28 quotient points better than the Residents. As did the Oregonians, Migrants and Californians, the Washingtonians scored higher than the Residents in reasoning ability. In this case the difference between the means was 6.23 percentile points.

Only in mathematics reasoning did the Washingtonians show superiority over the Residents on the achievement test battery. The difference was 2.30 percentile points.

When compared on results from the Iowa Silent Reading Tests, the Washingtonians led the Residents by .72 of a percentile point.

Vocational interests differed in about the same manner as for groups previously compared with the Residents.

Above the Californians by .01 of a grade point, the Washingtonians came within .18 of equalling the 2.48 grade point average of the Residents.

Table LI

## Summary. Comparison of Residents' and Californians' Mean Scores

IQ			Reading		
	Residents	Californians		Residents	Californians
Otis	2.12	----	Rate	4.97	----
Henmon-Nelson	1.93	----	Comprehension	1.62	----
Primary Mental Abilities			Directed Reading	1.92	----
			Poetry Comprehension	----	1.24
Verbal	2.24	----	Word Meaning	.30	----
Space	2.93	----	Sentence Meaning	----	1.92
Reasoning	----	3.68	Paragraph Comprehension	6.77	----
Number	3.17	----	Use of Index	2.16	----
Word Fluency	.67	----	Selection of Key Words	3.00	----
Total Test	1.39	----	Total Test	2.86	----
Quotient	----	.57	Vocational Preference		
Achievement			Outdoor	10.53	----
			Mechanical	4.84	----
Reading Vocabulary	----	.68	Computational	----	5.17
Reading Comprehension	.74	----	Scientific	3.36	----
Total Reading	----	1.75	Persuasive	----	9.02
Mathematics Reasoning	----	3.02	Artistic	----	8.67
Mathematics Fundamentals	4.81	----	Literary	----	6.48
Total Mathematics	.34	----	Musical	14.85	----
Mechanics of Eng. & Grammar	3.94	----	Social Service	----	3.21
Spelling	5.47	----	Clerical	----	.84
Total Language	1.34	----	School Marks		
Total Test	----	.22			
Educational Quotient	1.29		Grade Point Average	.24	----

### Summary. Residents - Californians

In contrast to previous comparisons with the Oregonians and Migrants, it was found that one of the migrant groups, the Californians, had come closer than any other group to matching the Residents in achievement and reading.

An approximate two IQ points of difference favors the Residents over the Californians.

According to the reading section of the achievement battery, the Californians scored 1.75 percentile points better than the Residents. The reading test, which sampled a wider range of abilities, placed the Residents 2.86 percentile points better than the Californians.

Vocational interests with outdoor, mechanical, scientific and musical characteristics were favored more by the Residents, while the Californians chose those of a more social nature.

Table LII

## Summary. Comparison of Residents' and Oklahomans' Mean Scores

IQ	Residents	Oklahomans	Reading	Residents	Oklahomans
Otis	4.24	-----	Rate	6.13	-----
Henmon-Nelson	6.59	-----	Comprehension	5.63	-----
Primary Mental Abilities			Directed Reading	7.21	-----
			Poetry Comprehension	-----	.47
Verbal	10.07	-----	Word Meaning	7.62	-----
Space	11.56	-----	Sentence Meaning	1.90	-----
Reasoning	4.77	-----	Paragraph Comprehension	12.10	-----
Number	-----	.45	Use of Index	11.64	-----
Word Fluency	3.82	-----	Selection of Key Words	6.17	-----
Total Test	8.28	-----	Total Test	10.00	-----
Quotient	3.66	-----	Vocational Preference		
Achievement			Outdoor	14.24	-----
			Mechanical	5.04	-----
Reading Vocabulary	8.15	-----	Computational	-----	5.57
Reading Comprehension	7.80	-----	Scientific	11.72	-----
Total Reading	6.73	-----	Persuasive	-----	15.30
Mathematics Reasoning	7.84	-----	Artistic	-----	12.57
Mathematics Fundamentals	10.10	-----	Literary	-----	12.88
Total Mathematics	7.26	-----	Musical	17.11	-----
Mechanics Eng. & Grammar	-----	1.12	Social Service	4.49	-----
Spelling	5.77	-----	Clerical	-----	7.62
Total Language	4.68	-----			
Total Test	6.70	-----	School Marks		
Educational Quotient	6.17	-----	Grade Point Average	.40	-----

### Summary. Residents - Oklahomans

With the widest range of all IQ differences, the Oklahomans fell 4.24 and 6.59 IQ points below the Residents on the Otis and Henmon-Nelson intelligence tests. On the other mental abilities test, the SRA Primary Mental Abilities, Intermediate, the Oklahomans were a significant 8.28 quotient points inferior to the Residents.

On only two of the 21 scales measured by the achievement and reading tests were the Oklahomans higher in mean scores than the Residents. The reading test placed them 10.00 grade percentile points poorer than the Residents.

The range of preference for vocations narrowed for the Oklahomans, as compared to the groups previously covered in this summarization section of the study.

As to grade point averages, the Oklahomans were .40 of a point behind the Residents. This, as was true of mental abilities, reading and achievement, places the Oklahomans as the most different of all from the Residents.

Table LIII

## Summary. Comparison of Residents' and No Oregon's Mean Scores

IQ		Residents	No Oregon	Reading		Residents	No Oregon
Otis		2.50	----	Rate		2.35	----
Hemmon-Nelson		4.26	----	Comprehension		----	2.76
Primary Mental Abilities				Directed Reading		----	.32
Verbal		----	.12	Poetry Comprehension		----	5.11
Space		3.91	----	Word Meaning		.45	----
Reasoning		----	3.96	Sentence Meaning		----	2.60
Number		3.17	----	Paragraph Comprehension		1.93	----
Word Fluency		----	1.91	Use of Index		1.40	----
Total Test		.47	----	Selection of Key Words		2.55	----
Quotient		----	1.25	Total Test		.71	----
Achievement				Vocational Preference			
Reading Vocabulary		1.07	----	Outdoor		9.04	----
Reading Comprehension		4.99	----	Mechanical		4.89	----
Total Reading		1.63	----	Computational		----	6.75
Mathematics Reasoning		4.42	----	Scientific		11.52	----
Mathematics Fundamentals		9.64	----	Persuasive		----	10.16
Total Mathematics		7.06	----	Artistic		----	6.64
Mechanics Eng. & Grammar		8.84	----	Literary		----	10.56
Spelling		4.34	----	Musical		18.79	----
Total Language		5.57	----	Social Service		----	8.85
Total Test		4.90	----	Clerical		3.08	----
Educational Quotient		3.48	----	School Marks			
				Grade Point Average		.28	----



### Summary. Residents - No Oregon

In contrast to the groups previously compared with the Residents, this group of students had absolutely no elementary training in Oregon.

As was characteristic of the previous five comparisons, the Residents led the No Oregon students on IQ scores from the two group tests. Here the difference was 2.50 points in one case and 4.26 in the other.

Differences on the subsections of the primary mental abilities test were varied, resulting in but .47 of a percentile point of difference in the total test. Actually, when calculated on a quotient basis, the No Oregon group led the Residents by 1.25 quotient points.

With a lead of 4.90 percentile points on the achievement battery, the Residents were not equalled on any test subsection by the No Oregon classification.

Because of a seesawing in differences on the subsections of the reading test, the mean scores for the total test were only .71 of a percentile point apart, in favor of the No Oregon group.

Vocational interest sections show the No Oregon group preferring those kinds of employment involving social relationships to a greater degree than the Residents, who were chiefly in favor of outdoor, mechanical, scientific and musical interests.

The No Oregon group rated next to the poorest with its .28 of a grade point below that of the Residents in school marks.

This comparison has found the Residents superior to the No Oregon

group in intelligence, as measured by the Otis and Henmon-Nelson tests, and in achievement as measured by the California Achievement test battery. A slight lead was held by the Residents in reading, while the No Oregon students had an edge of 1.25 quotient points in the SRA Primary Mental Abilities test.

## CHAPTER IV

## SUMMARY

This study is based on objective measurements of the native and acquired abilities of high school students who had their eight years of elementary school education at different places of residence.

The problem of the study was to determine what differences, both as to kind and size, exist between students with histories of residential immobility as opposed to mobility, particularly between states.

Because of the many social problems arising from rapid community growth caused by migration, the need for this study arose to determine the innate abilities and attainments of those who were striving to become established as residents of School District 19-C, Myrtle Creek, Oregon.

In Chapter I the problems presented by migration for a community were introduced. The next chapter, dealing with similar problems in other areas of the United States, presented conflicting opinions and findings about the resident versus migrant controversy in the public schools. Because of the individual characteristics of the areas where studies of differences were made, conclusions concerning those differences were not always in agreement. A summation of results of this study is presented in the remainder of this chapter.

This study has shown that native and acquired academic and vocational interest differences actually exist between the resident

and migrant students at Myrtle Creek High School. In some cases, the differences are relatively high, in others slight.

Facts revealed by this comparative study point to a definite positive relationship between immobility during training in grades one through eight in higher school success than that attained by those who change schools.

In the 41 comparisons made, the Residents scored higher than the Migrants 32 times. Six of the Migrants' nine items of superiority were in vocational interests. This increases the importance of the differences because it means that the Residents actually were led by the Migrants on only one item involving academic knowledge and skills or native mental ability. The one item was reasoning.

For the Migrants, the reasoning mean score was high enough above that of the Residents to give the Migrants their other two items of superiority. These were totals derived for the test of which reasoning was a part.

The Residents led the Migrants in the areas listed and identified below.

1. Intelligence quotient, measured by two different tests.
2. Verbal meaning, the ability to understand ideas expressed in words, measured by three separate tests.
3. Space, the ability to think about objects in two or three dimensions.
4. Number, the ability to work with figures, to handle simple quantitative problems rapidly and accurately.

5. Word fluency, the ability to write and talk easily.
6. Reading vocabulary, based on words in mathematics, science, social science, general literature.
7. Reading comprehension, according to the results from two tests measuring ability to follow directions, reference skills and interpretations of meanings in reading.
8. Total reading ability, as measured by two separate tests.
9. Mathematics reasoning, indicating the level attained in essential functional ability in number concept, symbols and rules, numbers and equations and problems.
10. Mathematics fundamentals, as revealed by responses to problems based on essential functional elements in addition, subtraction, multiplication and division.
11. Total mathematics, a combination of 9 and 10 above.
12. Mechanics of English and grammar, wherein measurement was made of knowledge and the ability to apply that knowledge in capitalization, punctuation, words and sentences, parts of speech and syntax.
13. Spelling.
14. Total language, a combination of 12 and 13 above.
15. Total achievement on the battery administered.
16. Educational quotient, derived from results of the achievement battery used in the study.
17. Reading rate.
18. Directed reading, the ability to comprehend general and specific situations expressed in the content, measured without unduly stressing memory.

19. Poetry comprehension.
20. Sentence meaning, wherein the students were measured as to the meanings of sentences as whole units.
21. Paragraph comprehension, including the ability to select the central topic of a paragraph and to identify details essential to the meaning of a paragraph.
22. Use of index, the ability to locate information quickly and accurately to help solve a particular problem.
23. Selection of key words, the ability to choose words under which important information about a particular question might be found.
24. Outdoor interests, such as found in farming, forestry and meteorology.
25. Mechanical interests, where carpenters, factory workers, millwrights and truck drivers score high.
26. Scientific interests, such as needed in medicine, psychology and research.
27. Musical interests, necessary for success in orchestras, singing and dancing.
28. Grade point average while in high school.

The 359 Migrants who took the SRA Primary Mental Abilities, Intermediate Battery, scored higher than the 79 Residents in Reasoning. This enabled the Migrants to have a lead of .03 of a percentile point over the Residents on this test battery. Because the lead of the Residents was so low in Number and Word Fluency, the Migrants' mean quotient exceeded that of the Residents by 1.29 points. These cases comprise the only instances in which the

Residents were surpassed by the Migrants on all units of measurement in this study, exclusive of the vocational interest section.

Migrants earned higher mean interest scores than the Residents in the Vocational Preference Record items identified below.

1. Computational interests, such as required for optimum performance in arithmetic, bookkeeping and accounting.
2. Persuasive interests, the quality found in persons who like to promote projects and sell things.
3. Artistic interests, the enjoyment of doing creative work with the hands.
4. Literary interests, liking to read and write.
5. Social service interests, the helping of other people.
6. Clerical interests, such as needed for success in meeting the demands of precision and accuracy in office work.

Of the six groups of students compared, the Oklahomans rated the poorest of all. Considering that ten items of the Kuder Preference Record, Vocational, did not measure native ability or fundamental knowledge and skills, the Oklahomans scored lowest in the ranking of the groups 24 out of a possible 31 times. They scored next to last twice and first twice.

The status of the Oklahomans, then, in that the kind of migration which they experienced was more harmful to school success than was the migration of other groups. This is shown by the residence data, where, on all seven major bases of comparison, the

Oklahomans consistently had the lowest per cent of education in Myrtle Creek. This may indicate that having come to the Residents' school resulted in some improvement in academic attainments, since all groups exceeded the Oklahomans in per cent of Myrtle Creek elementary education.

While the Oklahomans were not last-ranked in seven of the 31 comparisons outside of the vocational interest set of ten items, the Oregonians were at the bottom five times. The No Oregon group rated last twice.

The Oregonians, educated about 34 per cent of the time in Myrtle Creek and 66 per cent in Oregon outside of Myrtle Creek, ranked last of the six groups five out of a possible seven opportunities. They were next to last eight times and never first. As brought out in the summary of Table XLVIII, page 130, the Oregonians' weaknesses developed not only because of migration in other states, but also because of some unknown factors characteristic of their migratory school attendance within the state of Oregon.

The final observation from the results of this study is that when the Migrants are broken down into component groups according to state of greatest per cent of education outside of Myrtle Creek, differences are found to vary more widely, both in favor of and against the migratory groups. This tends to reduce the importance of the lead of the Residents over the entire group classed as Migrants, because some kinds of Migrants were found to be better than others.



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