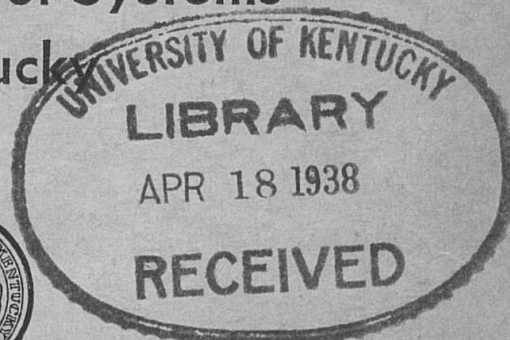


● Commonwealth of Kentucky ●
EDUCATIONAL BULLETIN

A Comparison of Resident and
Non-Resident Teachers in Village and
Small City School Systems
of Kentucky

Miss Elizabeth Hanson
Periodical Librarian
University of Kentucky
Lexington, Kentucky



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H. W. PETERS

Superintendent of Public Instruction

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FOREWORD

The information contained in this bulletin was submitted by Emmet Evert Bratcher as a dissertation to the faculty of the Division of Social Sciences, Department of Education, University of Chicago, in candidacy for the Degree of Doctor of Philosophy. This study has assembled information on comparison of resident and non-resident teachers in village and small city school systems of Kentucky. A careful examination of this study indicates that the information will be of value to the school officials of this Commonwealth. It is an outstanding piece of work on the training of resident and non-resident teachers. I recommend that it be studied by all officials who have authority to recommend the employment of teachers. I have secured the consent of the author to have it published as an official bulletin of this Department.

H. W. PETERS

Superintendent Public Instruction

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CHAPTER I

INTRODUCTION

In recent years numerous cases involving the employment of teachers have been brought before the courts of Kentucky. In the main these cases have originated in rural school districts, and the action is usually based on charges of nepotism.

Under the provisions of the law, the trustee of the rural sub-district nominates the teacher, whose formal election by the county board of education is thereby made mandatory. In consolidated districts which maintain high schools the county superintendent nominates the teacher for election by the board. In the independent graded-school districts and in cities of the first, second, third, and fourth classes, the independent boards of education usually select the teachers. In the more progressive of these independent districts, the local principal is permitted to nominate his faculty. In the better independent city systems, the superintendent likewise nominates his teachers, and the board approves or rejects the recommendation. Whenever a recommendation is not approved, the principal or superintendent may make other nominations. The courts have repeatedly ruled that in rural school sub-districts which do not maintain high schools the county board of education must elect the teacher recommended by the district trustee.

In independent graded school districts and in cities of the first four classes there are no sub-district trustees to make nominations to the independent graded and city boards of education. Unless the responsibility for the nomination of teachers is delegated to the county superintendent in the case of consolidated districts which maintain high schools, to the principal in the case of independent graded districts, and to the city superintendent in the case of the cities of the first four classes, the selection of teachers is wholly in the hands of the board of education. Since the boards either initiate the nominations or delegate the responsibility to principals or superintendents whom they have elected, cases involving objections to the employment of teachers are less frequently carried into the courts from these districts than from the rural districts.

Some of the boards have rules or agreements which favor the employment of local teachers. If a majority of the various

boards which legally control the nomination of teachers favors the election of local teachers only, court action arising from such discrimination is of rare occurrence. The matter in such school systems is entirely in the hands of the board. Nominations by principals or superintendents may be rejected until local teachers are nominated. Likewise, if all trustees of rural sub-districts favor the local applicants for the teaching positions, few cases will be carried to the courts. Probably hundreds of cases of discrimination in favor of local teachers exist for the one case that reaches the courts. Only the act of an occasional dissenting sub-district trustee becomes the basis of a case in court.

The Statement of the Problem

The educational implications of any such discriminatory practice on the part of boards of education are obvious. The number and character of cases actually tried in the courts of Kentucky indicate that the practice is sufficiently widespread in this state to warrant an inquiry concerning the effect of this practice on the recruiting of the teaching staff of the state school system. The present study is therefore based on a comparison of resident and non-resident teachers employed in representative districts throughout the state.

The problem of the study can best be stated in the form of a series of questions:

- (1) Are there more resident than non-resident teachers employed in elementary, secondary, and administrative positions?
- (2) Are there significant differences between the resident and non-resident teachers with respect to essential characteristics or criteria, such as amount of teaching experience, kind and amount of training, professional attitude, community activities, and economic conditions?
- (3) Are such qualitative differences as are found to exist between resident and non-resident teachers related to differences in the relative proportions of the two groups employed?
- (4) What general conclusions and educational implications are suggested by the evidence presented in the analysis of the data?

While the finding of satisfactory answers to the four comprehensive questions is set up as the purpose of the study, numerous other questions which have a bearing on the questions are considered.

The Data Used in the Analysis of the Problem

Source of data.- All data were collected in the state of Kentucky. Sixty-two school systems selected at random co-operated in the study. These co-operating school systems, a list of which is given in the appendix, are of several types: (1) county consolidated schools, (2) independent graded schools, (3) school systems of cities of the fourth class, and (4) school systems in cities of the third class. They vary in size from a consolidated school with six teachers to a city school system of sixty-nine teachers. The term 'teacher' throughout the study includes both classroom teachers and administrators, unless otherwise stated.

In the schools studied, forms were provided for the collection of the necessary data from the teachers themselves. In addition to these data, the administrative group also supplied certain other information needed. Of the sixty-five school systems invited to participate in the study, only three failed to respond. Among the sixty-two co-operating schools, the degree of co-operation varied. Twenty-two schools gave a 100 per cent response from their teachers. One principal of a twelve-teacher school returned his own personal data sheet only. Approximately 85 per cent of the entire group of teachers responded, that is, 1097 out of the 1283 teachers invited supplied the needed information.

Geographical distribution of the co-operating schools.-

The co-operating schools are widely distributed over the state as follows: (1) One group of schools is located within a radius of fifty miles from Shelbyville in the Louisville area; (2) another, along a line drawn from Erlanger in the extreme northern point to Burnside, south of Somerset; (3) another, along a line from Stanford in the central part of the state to Harlan and Middlesboro in the south eastern portion; (4) another, across western Kentucky from Madisonville to Hopkinsville; (5) another, along a line from Hopkinsville to Lexington by way of Central City, Leitchfield, Elizabethtown, and Frankfort; (6) another, along United States Highway Number 60 from Lexington to Ashland in the north eastern section; and (7) another, from Russell and Catlettsburg up the Big Sandy River to Pikeville, the capital of the most eastern county of the state. A map showing the location of all co-operating schools is included in the appendix.¹

Method of collecting the data.- The data used in the study

¹Map, p. 205. Appendix.

were collected during the closing weeks of the school year 1929-30 and during the month of September of the school year 1930-31.

All co-operating school systems were visited in person and the teacher-data sheet was explained to the superintendent or principal who, in most cases, filled out the form during the interview. In thirteen schools the data sheets of the entire teaching staff were filled out under personal supervision of the investigator on the occasion of the visits. In the remaining forty-nine schools, the co-operating administrator assumed responsibility for collecting the information from the rest of the faculty. Usually the teachers assembled in a single classroom at the end of the school day for the purpose of filling out the forms.

Nature of data.- Three types of information were collected on three different forms:

(1) Each of the 1097 persons co-operating in the study filled out a uniform data sheet which was adopted after experimental tests of the serviceability of preliminary drafts with two groups of subjects numbering fifty and one hundred twenty-five persons, respectively. A copy of this final form used in the collection of the major portion of the data is given in the appendix.¹ The form is divided into six major parts: training, experience and length of service, salary, professional attitude, community activities, and zone of residence.

(2) A second form² which was filled out by the investigator during the interview with the administrator of each co-operating school provides additional information. This form contains a list of the teachers who had dropped out of the schools within the past year or two. Such teachers were classified at the time of the interview on the basis of their zones of residence as reported by the administrators. The form also contains confidential information supplied by the administrators as to the real reason why such teachers are no longer members of the faculty.

(3) A third form³ filled out by a number of the administrators pertains to the quality of teaching service. A teacher rating sheet which was developed by classes in supervision at Washington State College in 1919-'20-'21 constituted this third form. Approximately the upper ten per cent and the lower ten per cent of the teachers of the school unit were selected separately by the administrator for each point on the score card.

¹See Form I, Pp. 199-202. Appendix.

²See Form II, p. 203. Appendix.

³See Form III, Pp. 203-204. Appendix.

A tabulation of these scores provides a means of determining how resident and non-resident classroom teachers compare with respect to "merits" and "demerits" given by administrators. The administrator's choice of his best and poorest teachers is apparently of more value in this study than his judgment in rating each teacher on each item of the score card. The information thus secured is probably a more objective type of evidence than is secured by the usual method of using rating schedules. The administrators supplied the information later in the year, in the case of the schools visited in September, as they were not familiar at that time with the qualities of teachers new to the system.

Classification of data.- In most of the tables and charts of the study, the data have been classified (1) on the basis of level of position held by the teacher, and (2) on the basis of the zone of residence of the teacher.

1. On the basis of level of position.- On the basis of the level of position held at the time these data were collected, the individual teachers are divided into three groups - elementary teachers, secondary teachers, and administrators. As a general rule, the training and salary of the elementary teachers are lower than for the secondary teachers; and in turn, the training and salary of the secondary teachers are usually lower than for the administrators. Thus on the basis of training and salary, the three kinds of positions are thought of as three levels, ranging from that of the elementary teacher to that of the administrator.

(a) The elementary group includes those who teach in grades one to eight inclusive and also those who devote a majority of their time to teaching in these grades. This group includes also kindergarten teachers.

(b) The secondary group includes those who teach in grades nine to twelve inclusive and also those who devote a majority of their time to teaching in these grades.

(c) The administrative group includes superintendents, elementary principals, secondary principals, and a few supervisors of public school music who are really supervisors and not teachers.

(d) The combination of the three groups just described is included in a fourth division designated as the entire group. The three groups of teachers differ so greatly in many respects that it appears even more necessary to study them separately than to study them as a single group.

2. On the basis of the zone of residence.- The principal basis of classification of the teachers included in this study is that of residence. On this basis they were divided first into

two groups, the resident and the non-resident. After a partial tabulation and analysis of the data had been made, it appeared advisable to make a further division of the resident group into two sub-groups, the district group and the commuting group. It is thus possible to make comparisons between the non-resident group and the total-resident, district, and commuting groups, and also between the district and commuting groups separately. An explanation of the basis of classification into these three residential groups is necessary for a clear understanding of these terms.

A. The district group.- This group includes all teachers and administrators who are actually identified in some significant way with the district in which they teach. They are teaching at home in the real sense of the word. This group includes the following teachers: (a) those who were born or reared within the district; (b) those who have lived within the district so long that they are no longer regarded as being identified with any other place of residence; (c) those who have married bona-fide residents of the community; (d) those who have received a major portion of their elementary and high-school training within the district; (e) those who would continue to regard the district in which they were teaching at the time this information was collected as their actual home even though they were to teach elsewhere later.

B. The commuting group.- This group includes all persons who, on the basis of the points mentioned under the "district group," were identified in a similar way with the commuting zone of the district in which they were teaching at the time these data were collected. The commuting zone is defined for the purposes of this study as that territory which lies outside of the boundary of the district in which an individual is teaching but which is within commuting distance of his school. It is sufficiently close, by reason of roads and available methods of transportation, to enable the teacher to be at home at night during the school term. The commuting teacher, however, may not actually commute daily between school and home. He may board within the district in which he teaches but it must be possible at least for him to commute daily.

C. The total resident group.- This group includes the district and commuting groups combined.

D. The non-resident group.- This group is composed of all not included in the resident group. The individuals are identified on the basis of points listed under the district group with neither the district in which they teach nor with its commuting zone. Their homes are somewhere beyond the outer

limits of the commuting zone of the district in which they were teaching at the time these data were collected. They may be able to spend week-ends at home, but on account of distance and inadequate means of transportation are required to board during the week within the district in which they teach.

Educational literature employs other terms interchangeably with those adopted for use in this study. For example, the literature refers to the "resident teacher" as the "home teacher," the "local talent," or the "local product"; the "non-resident," as "the outsider." These terms are used to some extent in this study for the purpose of avoiding monotony of expression.

A Summary of the Evidence from Current Educational Literature

A survey of current educational literature has failed to disclose any very significant objective evidence bearing on the problem of the resident and non-resident teacher. No evidence of an objective nature has been found with the exception of a few statements of the relative number of each type employed. A few treatments dealing with the problem have been almost wholly subjective. In reality, the discussions found have been little more than expressions of opinion on the subject.

Lewis¹ has summarized the arguments for and against the employment and retention of home talent as teachers. Most other writers² merely give their personal views on the subject. A summary of the prevailing ideas advanced by the writers may be of value in helping to provide the setting for this study.

A few writers offer some objective data in the form of the number of resident and non-resident teachers employed. Lewis³ states that:

"The number of home teachers in school systems is rather surprising. School systems in cities of 25,000 population and over, whose elementary schools do not contain approximately 75 per cent of home teachers, are the exception. The percentage is less in high schools, ranging between 40 and 55 per cent. In a survey of the schools of St. Louis, it was found that 78 per cent of the teachers had received their

¹E. E. Lewis, Personnel Problems of the Teaching Staff, New York: The Century Co., 1925. Pp. 160-72.

²A Complete list of articles, a summary of the views of which are here given, is found in the bibliography.

³Lewis, op. cit., p. 161.

high school work in St. Louis, and 61 per cent were born in that city. In the Cleveland survey it was found that 85 per cent of the grade school teachers, 35 per cent of the high school teachers, and 84 per cent of the elementary school principals were home products. There were no data available for the nation as a whole. Thus figures here given are a fair sampling of the situation existing in large cities."

Cubberley¹ found that 33 1/3 per cent of the elementary teachers in Portland were products of the Portland Schools alone. Ayres² found that most of the Springfield teachers were born and educated in Springfield, received their professional training in Springfield, and planned to continue living in that city. "Of every ten teachers in the elementary school, seven were graduates of the Springfield High School." But in the schools of Los Angeles³ it was found that 47.5 per cent of the teachers, supervisors, and administrators had previously been certificated to teach outside California. This percentage indicates a tendency toward the employment of more non-residents in Los Angeles than in the other cities mentioned.

A remarkably high degree of agreement has been found to exist in the current opinions of educators writing on the subject of the relative merits of resident and non-resident teachers. Most of them have discussed the subject from an educational point of view. On the other hand the layman is frequently not in sympathy with the educator's point of view. The educator is usually inclined to view the problem from the vantage point of the pupil who should always be taught by the most competent teacher available; the layman on the other hand very frequently sees the problem from the point of view of the home teacher and the "public bounty" theory. The school executive employed by a board which holds the former point of view is permitted to choose the teacher solely on the basis of merit and fitness for a particular position. The executive employed by a board committed to the latter theory must favor the home product who is permitted to draw from the

¹E. P. Cubberley, The Portland Survey, New York: World Book Co., 1915, p. 54.

²Leonard P. Ayres, The Public Schools of Springfield, Illinois, New York: Russell Sage Foundation, Division of Education, 1914, p.63.

³W. S. Field and O. T. Johnson, Teachers' Salaries in the Los Angeles City Elementary and High School Districts, Los Angeles: Los Angeles Board of Education, 1931, Table 10.

public treasury through a position which is both secured and held through local influence or politics. The latter method of selection disregards in many instances the training, experience, and personality of the teacher. Where the resident teacher's interests are the chief consideration in the minds of the selecting body, the real purpose of education - the interests of the children - is disregarded. Most of the objections to the local product from an educational point of view may be summed up in the term "inbreeding" which is thought by administrators to result in a uniformity that tends to lower the quality of work done in the school.

CHAPTER II

RELATION OF ZONE OF RESIDENCE AND LEVEL OF TEACHING POSITION

It is the purpose of this chapter to indicate the proportion of the teachers employed at each level of position from each zone of residence at the time these data were collected. An attempt is made to answer in part the first major question raised in the introduction: Are there more resident than non-resident teachers employed in elementary, secondary, and administrative positions in Kentucky? In the following chapter (III) comparisons are made on the basis of length of service in all school systems in which these individuals have been employed as teachers. The proportions of teachers employed from the various zones and at the various levels of positions are studied from several different angles.

Distribution of Teachers on the Bases of Level of Teaching Position and Zone of Residence

Numerical distribution of teachers according to position and residence.- The distribution of the 1097 teachers included in the study on the basis of the level of position held and zone of residence at the time these data were collected is shown in Table I. The data of this table constitute the basis for the computation of numerous later tables. The number of cases in the different classifications varies from 10 to 686. Early in the progress of the study, it was decided to omit most comparisons involving a classification of less than twenty-five cases. The number of commuting administrators (10) is, therefore, considered too small for comparison. Furthermore, incomplete responses to some of the questions of the data sheet tend in some instances to reduce the size of the samplings of other classifications. It would probably be necessary to secure data from the entire state of Kentucky in order to make comparisons involving the commuting administrators and one or two other classifications.

Percentage distribution of teachers according to position and residence.- By reducing the data of Table I to percentages with the 1097 cases as the base (100 per cent), Table II is secured. This table reveals some important aspects of the employ-

TABLE I

DISTRIBUTION OF THE 1097 TEACHERS ACCORDING TO TEACHING POSITION AND ZONE OF RESIDENCE

Level of Position	Resident Group			Non-Resident Group	Group Total
	Total	District	Commuting		
Elementary	520	416	104	135	655
Secondary	121	86	35	199	320
Administrative	45	35	10	77	122
Total	686	537	149	411	1,097

ment of resident and non-resident teachers.

In comparing the total resident group with the non-resident group it may be noted that almost two-thirds (62.53 per cent) of the 1097 teachers are local persons, while the non-resident teachers constitute only a little more than one-third (37.47 per cent) of the total number. In other words, the percentage of local persons employed in all positions combined is almost double the number imported from the more remote outside territory.

If the comparison is restricted to the elementary teachers, the difference is even greater. The percentage of resident elementary teachers employed is almost four times as great as the percentage of non-residents, the percentages being 47.4 per cent and 12.31 per cent, respectively, of the total number. The non-resident group excels in both the secondary teachers and the administrators. While 18.14 per cent of the total number of teachers are non-resident secondary teachers, only 11.03 per cent are residents. Seven and two hundredths per cent of the 1097 teachers are non-resident administrators while only 4.10 per cent are local products. If the secondary teachers and administrators are combined, it is found that 25.16 per cent are non-residents while only 15.13 per cent are residents. Thus, a large majority of the positions at the higher professional levels, which usually pay the higher salaries and require the greater training, are filled by non-residents.

The percentage of district teachers is approximately four times as great as that of commuting teachers - 48.95 per cent and 13.58 per cent, respectively. The ratio between proportions of district and commuting elementary teachers is practically the same as for totals of the district and commuting groups, the ratio in the former case being exactly four to one. Among the secondary teachers, the percentage in the district group is more than

TABLE II

PERCENTAGE DISTRIBUTION OF THE 1097 TEACHERS ACCORDING TO TEACHING POSITION AND ZONE OF RESIDENCE

Level of Position	Resident Group			Non-Resident Group	Grand Total
	Total	District	Commuting		
Elementary	47.40	37.92	9.48	12.31	59.71
Secondary	11.03	7.84	3.19	18.14	29.17
Administrative	4.10	3.19	.91	7.02	11.12
Total	62.53	48.95	13.58	37.47	100.00

double that in the commuting group. Of the 1097 teachers, 3.19 per cent are classified as district administrators while only .91 per cent are found to be commuting administrators. From the evidence presented, it is apparent, in so far as the total number and the elementary group are concerned, that preference in appointment has been given (1) to the district group, (2) to the non-resident group, and (3) to the commuting group. In the cases of secondary and administrative groups, the order of the resident and non-resident groups is reversed, the non-resident being first and the resident second. The commuting group remains in third position throughout this comparison (Table II). It thus appears that boards of education employ almost fifty per cent of the teachers (48.95 per cent) from applicants who are already in some definite way identified with the district in which they are to teach and that, when others are employed, the greater part of them (37.47 per cent) is taken from the remote zone or from non-residents. Since only 13.58 per cent of the total number are commuting teachers, it is apparent that, if boards of education employ teachers from outside the district, they select them from the more remote territory - the non-resident group.

In most of the school systems, the commuting zone is the rural territory surrounding the towns. Residents of small towns may possess attitudes which cause them to discriminate against rural teachers for the town school. Jealousies of near-by towns may also prevent employment of teachers from that type of commuting territory.

Percentage of the teachers of each level of position employed from each zone of residence.- In Table III, the data of Table I have been reduced to a percentage basis, each level of position being considered separately. Approximately eighty per cent (79.39 per cent) of the total number of elementary teachers

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TABLE III

PERCENTAGE DISTRIBUTION OF TEACHERS OF EACH LEVEL OF POSITION
AMONG THE THREE ZONES OF RESIDENCE

Grand Total	Level of Position	Resident Group			Non- Resident Group	Total
		Total	District	Commuting		
59.71	Elementary	79.39	63.51	15.88	20.61	100.00
29.17	Secondary	37.81	26.87	10.94	62.19	100.00
11.12	Administrative	36.89	28.69	8.20	63.11	100.00
100.00	Total	62.53	48.95	13.53	37.47	100.00

belong to the resident group; only about twenty per cent (20.61 per cent) to the non-residents. By further consideration of the resident elementary group, it is found that the district group is approximately four times as large as the commuting group. Thus, in the elementary group approximately four residents are employed for each non-resident; four from the district group, for each commuting teacher; and three from the district group, for each non-resident.

In the secondary group the order is reversed. Almost forty per cent (37.81 per cent) are residents and slightly more than sixty per cent (62.19 per cent) non-residents. The district group is approximately two and one-half times as large as the commuting group (26.87 per cent and 10.94 per cent, respectively). In the administrative groups practically the same proportions prevail with a shift of approximately one per cent from the resident to the non-resident group and a shift within the resident group of approximately two per cent from the commuting to the district group.

It is of interest to note that the proportions of resident and non-resident teachers in the regional totals are almost the same as those of the secondary group but with the order reversed, 62.53 per cent being residents, 37.47 per cent non-residents. Of the resident group 48.95 per cent are district teachers while only 13.53 per cent are commuting teachers.

The data presented in Table III in the main agree with those of Table II as to the relative number of teachers from the three different zones of residence employed.

Percentage of the teachers from each zone of residence employed at each of the three levels of positions.- The data of Table IV are derived by dividing the number of teachers in each

TABLE IV

PERCENTAGE OF THE TEACHERS FROM EACH ZONE OF RESIDENCE
EMPLOYED IN EACH OF THE THREE LEVELS OF POSITIONS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	f_p P.E.: f_p	75.81 .13	77.47 4.56	69.80 3.04	32.85 2.72
	Index of Signifi- cance of Difference	$\leftarrow 15.58$ $\leftarrow 8.56$ $\leftarrow 9.05$ $\leftarrow 1.40$			
Second- ary	f_p P.E.: f_p	17.63 2.33	16.01 3.95	23.49 4.84	48.42 2.39
	Index of Signifi- cance of Difference	$9.22 \rightarrow$ $7.35 \rightarrow$ $4.61 \rightarrow$ $1.20 \rightarrow$			
Adminis- trative	f_p P.E.: f_p	6.56 2.49	6.52 11.84	6.71 5.34	18.73 3.00
	Index of Signifi- cance of Difference	$3.12 \rightarrow$ $1.00 \rightarrow$ $1.96 \rightarrow$ $.02 \rightarrow$			
Total		100.	100.	100.	100.

classification of Table IV by the number of teachers in the corresponding classification of Table I. The procedure thus produced a series of percentage distributions; for example, 75.81 per cent elementary teachers, 17.63 per cent secondary teachers, and 6.56 per cent administrators in the resident zone. A distribution for each of the other zones is worked out in the same way. Thus the percentage of resident elementary teachers can be compared directly with the percentage of non-resident elementary teachers and the significance of this difference may be tested statistically. In like manner comparisons may be made with corresponding items of any two corresponding percentages.

Attention is first called to the comparisons; later, to the significance of differences. At the elementary level 75.81 per cent of the resident group are elementary teachers while only 32.85 per cent of the non-resident group are elementary teachers. Within the resident group there is a slight tendency for the percentage of district teachers to exceed that of the commuting

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teachers in the elementary field. In the secondary groups the order is reversed. Of the non-resident teachers 48.42 per cent are secondary teachers while on the other hand only 17.63 per cent of the resident group are secondary teachers. Also, there is a slight tendency for more commuting than district teachers to reach the secondary level. At the administrative level 18.73 per cent of the non-resident and 6.56 per cent of the resident group are administrators, with a slight tendency for the commuting administrators (6.71 per cent) to exceed the district group. It is thus apparent that the resident group excels the non-resident in its percentage of elementary teachers and that the non-resident excels in the percentage of secondary teachers and administrators. It may be noted also that the percentage of non-residents who are elementary teachers (32.85 per cent) is almost double the percentage of the resident group (17.63 per cent) who are secondary teachers, and practically five times the percentage of the resident group (6.56 per cent) who are administrators. At each level the commuting group falls between the district and the non-resident groups but is only slightly different from the district group.

In order to test the significance of difference between any two of these corresponding percentage frequencies, a series of simple statistical calculations is made. First it is necessary to find the probable error of the frequency percentage. This is found by the application of Holzinger's formula¹ for the probable error of a percentage frequency, which is as follows:

$$P.E.f_p = .6745 \sqrt{\frac{f_p(100 - f_p)}{N}}$$

Second, the probable error of the difference between the two desired percentage frequencies is calculated by the application of another formula proposed by Holzinger² as follows:

$$P.E.(diff) = \sqrt{(P.E.f_{pA})^2 + (P.E.f_{pB})^2}$$

The difference between the two frequency percentages is then divided by the result obtained from this formula for the P.E.(diff). This is the ratio of the difference between the two frequency percentages and the square root of the sum of the squares of the probable errors of the two frequency percentages. This ratio is

¹Karl J. Holzinger, Statistical Methods for Students in Education, Formula No. 102, p. 243.

²Ibid., Formula No. 89, p. 244.

the real index of the significance of difference between the two frequency percentages and may be written in the form:

$$\text{Index of Significance of Difference of two Frequency Percentages} = \frac{F_{pA} - F_{pB}}{\sqrt{(P.E.f_{pA})^2 + (P.E.f_{pB})^2}}$$

In Table IV, for example, it is desirable to determine the significance of difference between the percentages of elementary teachers (1) in the resident and the non-resident groups, (2) in the district and the non-resident groups, (3) in the commuting and non-resident groups, and (4) in the district and commuting groups. It is desirable to know whether the difference between the non-resident and total resident groups is significant. It is also desirable to know whether the two types of resident groups - the district and commuting - are each significantly different from the non-resident group. Finally, it is desirable to know whether the two resident groups are significantly different from each other. To summarize, it is desirable to know whether there are really two or three groups of teachers which are distinctly different from each other on the basis of residence.

According to Holzinger "the general rule is that a difference or a statistical constant of any sort is not significant unless it is at least four times its probable error."¹ In Table IV opposite the heading, "Index of Significance of Difference," are four lines each connecting two points directly under the centers of two groups which are being compared. The arrows readily indicate which of the two terms being compared is larger. The index of significance is written on the arrow-line. The percentage frequencies of the secondary teachers and of the administrators are treated in a similar manner.

With the data charted in this form, the meaning of the table is roughly seen at a glance. It is noted that all arrows between the elementary groups point to the left and that all arrows in the secondary and in the administrative groups point to the right. Thus it is clear that the resident groups supply the greater part of the elementary teachers; the non-resident group, the major portion of the secondary teachers and administrators.

But which of these differences are really significant? First, the distribution of the resident group into the district and commuting groups does not appear to be significant on the basis of the proportion of elementary teachers, secondary teachers

¹Ibid., p. 237.

and administrators found in each group, the index of significance varying from .02 to 1.40 and in no case reaching the necessary minimum ratio of 4.00. In other words, the district and commuting groups are divided into the three levels of positions in about the same proportions. Second, all comparisons between percentages of the non-resident groups and corresponding groups of the other three zones are significant in so far as the elementary and secondary teachers are concerned. A significantly larger number of local teachers is employed in elementary positions, and a significantly larger number of non-residents is employed in secondary positions. Third, the differences between the various groups as to the percentages which are administrators are of little significance, the index varying from .02 to 3.12. Occasionally the number of administrators is small in some of the comparisons. Only when the total resident and non-resident administrators are compared do the differences tend to approach the minimum index for significance of difference. Fourth, the indices of significance of difference are always greatest in comparisons of the non-resident and the resident groups. Thus the findings from Table IV show: (1) that the percentage of either the resident, district, or commuting group employed as elementary teachers is significantly greater than that of the non-resident group; but (2) that the percentage of the non-resident group employed at the secondary level is greater than that of either the resident, district, or commuting group; and (3) that there is a strong tendency for the percentage of the non-resident group employed as administrators to exceed that of each of the other administrative groups.

Correlation between Zone of Residence and Level of Position
Held at the Time these Data were Collected

By use of the correlation method, the relationship between the zone of residence and the level of position held by these individuals may be studied. Since both of these characteristics are unordered, that is, qualitative rather than quantitative, the coefficient of contingency (C) is probably better adapted to a study of the relationship between zone of residence and level of position held than any other correlation formula. The procedure for computing the correlation of contingency is described by Holzinger.¹ His "Second Computation Form for Contingency"² is

¹Ibid., Pp. 273-78.

²Ibid., Formula 128b, p. 275.

probably best adapted to the calculation of a correlation between two unordered characteristics.

When the formula for the coefficient of contingency is used in problems having less than six or seven categories, it is necessary to use a correction formula in order to obtain greater accuracy. In this instance the formula for the "Correction to the Contingency Coefficient for Broad Grouping"¹ is used. In order to use the correction formula, it is necessary to go back to another formula for the correlation of a variable with its own class value.² A detailed description of the use of the three formulae for determining the coefficient of contingency and its correction is given by Holzinger.³ This method of calculating correlation gives results which are very close to those obtained by the product-moment method for linear correlation (r).

All the data needed for the application of the contingency formula and its correction are presented in Table V. The vertical columns are arranged according to the level of position; the horizontal rows, according to the nearness of the zone of residence, to the school system in which the teacher is now employed, that is, according to the degree of identification with the community in which the teacher's position is now located. By applying formula 128b from Holzinger, the coefficient of contingency is obtained as follows:

$$C = \sqrt{\frac{S-1}{S}} = \sqrt{\frac{1.1827-1}{1.1827}} = .393,$$

when

$$S = \frac{f^2_{xy}}{f_x f_y} = 1.1827.$$

The calculation of the correction of C by the use of Holzinger's formula 129 is as follows:

First, it is necessary to obtain the correlations of the two variables with their class values, which are determined by the use of Holzinger's formula 123:

$$r_{xc} = \sqrt{\frac{N}{f_x}} (Z_s - Z_{s+1})^2 = \sqrt{.7586} = .86$$

¹Ibid., Formula 129, p. 277.

²Ibid., Formula 123, p. 269.

³Ibid., Pp. 260-70 and 273-78.

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TABLE V

RELATIONSHIP BETWEEN ZONE OF RESIDENCE AND LEVEL OF TEACHING POSITION AS MEASURED BY THE COEFFICIENT OF CONTINGENCY (C)

Level of Position and Statistical Measures Used	Zone of Residence and Statistical Measures Used						
	Dis- trict	Commut- ing	Non- Res'nt	f _y	f _y /N	Z _s	Z _s ' - Z _s +1
Adminis- trative							
f _{xy}	35	10	77	122	.111	.1893	+.1893
f _{2xy}	1225	100	5929				
f _{xy}	65514	18178	50142				
f _{2xy} /f _{xy}	.0187	.0055	.1182				
Secondary							
f _{xy}	86	35	199	320	.292	.3971	+.2078
f _{2xy}	7396	1225	39601				
f _{xy}	171840	47680	131520				
f _{2xy} /f _{xy}	.0430	.0257	.3011				
Elementary							
f _{xy}	416	104	135	655	.597	.0000	-.3971
f _{2xy}	173056	10816	18225				
f _{xy}	351735	97595	269205				
f _{2xy} /f _{xy}	.4920	.1108	.0677				
f _x	537	149	411	1097			
f _x /N	.4895	.1358	.3747		1.000		
Z _s	.0000	.3989	.1826				
Z _s Z _s 1	.3989	.2163	.1826				
N/f _x	(Z _s -Z _s +1) ²	N/f _x (Z _s -Z _s +1) ²	N/f _y	(Z _s '-Z _s +1) ²	N/f _y (Z _s '-Z _s +1) ²		
2.669	.03334	.0890	8.992	.03583	.3222		
7.362	.04679	.3445	3.428	.00075	.0026		
2.043	.15912	.3251	1.675	.15769	.2641		
		.7586			.5889		

$$r_{yc} = \sqrt{\frac{N}{f_x} (Z_s' - Z_s + 1)^2} = \sqrt{.5889} = .77$$

Finally, with these two needed elements known, the calculation of the coefficient of contingency with its correction is easily obtained by use of formula 129:

$$C = \frac{.393}{r_{xc} \cdot r_{yc}} = \frac{.393}{.86 \cdot .77} = .593 \pm .015^1$$

¹Ibid., Formula 130 for P.E._c

It is evident that the relationship between the level of teaching position held and the zone of residence is significant, the correlation (r_c) being .593 .015. This relationship suggests the possibility of an arrested development of home teachers who are employed as elementary teachers as soon as minimum requirements for teaching are attained.

Summary

In this section of the study an attempt has been made to center attention upon the proportions of resident and non-resident teachers employed in 1930 from the three zones of residence in a group of village and small city systems in Kentucky.

On the basis of the evidence thus far presented, it is apparent that if the 1097 teachers are considered as a single group a majority of the teachers employed are local products. One would probably expect to find most of the teachers of a school system selected from the area in which the school is located. However, when the elementary teachers, the secondary teachers, and the administrators are considered in separate groups, it is equally evident that the proportions of each coming from the different zones of residence do not always harmonize with the proportions found when the group as a whole is considered. While there are more local teachers at the elementary level, non-residents are more numerous in the secondary and administrative positions. The higher the level of the position, the greater is the percentage of non-residents employed. The tendency to employ home teachers is thus not evident except at the elementary level where the practice has become decidedly marked.

Apparently the percentage of resident teachers in the elementary group is not only greater than the percentage of elementary teachers in the non-resident group but the difference is statistically significant. Should other samplings be made under similar conditions in the state, the chances that their differences would be significant are therefore virtually certain. On the other hand, the difference in the percentage of each group which are secondary teachers is the reverse of that found for elementary teachers and this difference is also significant. While there is a tendency toward a greater percentage of administrators in the non-resident group than in the resident groups, not any of the differences seem to be significant. Furthermore, in no case is the difference between the district and commuting groups of any significance.

A correlation of .593 .015 between the level of position and the zone of residence of the teachers is additional evidence

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of the close relationship between the level of position held by a teacher and the distance of the teacher's home from the place of employment.

CHAPTER III

VARIABILITY AMONG TEACHERS OF DIFFERENT ZONES OF RESIDENCE WITH RESPECT TO LENGTH OF SERVICE

In Chapter II, the analysis was restricted to the proportions of resident and non-resident teachers now employed in village and small city school systems in Kentucky. In Chapter III, the comparisons are extended to include the entire teaching records of these groups of teachers from the time of their entrance into the profession to the time these data were collected. Some portions of the chapter involve the use of Tables I and II of Chapter II.

Comparisons presented in this chapter logically fall into three divisions as follows:

1. Comparisons in which the entire period of teaching service or some important aspect of it is considered. These comparisons are based on the mean number of years of the teacher's period of service: (a) in all school systems combined in which the teacher has been employed from the time of entrance into the profession to and including the year 1930, (b) in the system in which the teacher is now employed, and (c) in all systems combined in which the teacher was employed previous to admission to the present system. These comparisons also include a more detailed analysis of the teaching records in other communities, such as, (d) the mean number of school systems in which this previous experience was gained, and (e) the mean number of years of service in each of these previous systems.

Through these comparisons, an attempt is made to determine (a) whether the length of service of the home teacher as a rule tends to exceed that of the non-resident on the foregoing bases; (b) whether such differences, as are found to exist between the groups, are statistically significant; and (c) whether the district, commuting, and non-resident groups tend to fall into three groups - district, commuting, and non-resident - which are distinctly different from each other or into two significant groups only - the resident and non-resident.

2. Comparisons involving teachers who have been employed from the beginning of their teaching careers to the time of the study in the one system in which they now serve. Consideration is given: (a) to the total number of teachers who have had no

experience outside of the system in which they are now employed, and (b) to those, only, who are teaching this year for the first time. Of course, the latter are included in the former. In these comparisons, an attempt is made to determine to what extent teachers from the different zones of residence tend to restrict their teaching experience to the communities which they are now serving.

3. Comparisons involving the number of withdrawals and recruits from the various zones of residence. Comparisons are made between the proportions of persons now employed (Table II) in the various classifications and the corresponding proportions of withdrawals from and of recruits to the faculties of the schools. Finally, comparisons are made between the number of withdrawals and recruits.

In these comparisons of frequency percentages an attempt is made to determine: (a) whether the proportion of withdrawals or recruits from each regional group is greater or less than the proportion at present employed from the corresponding regional group; (b) whether such differences, if any are found to exist, are significant; and (c) whether differences between the proportions of withdrawals and recruits are of any significance. In other words, it is the purpose of the comparisons to determine whether the proportions of persons from the various zones now employed at the different levels tend to remain the same or to become significantly greater or smaller.

Total Amount of Teaching Experience

In the selection and retention of individuals for teaching positions, the total amount of previous experience in the profession is usually regarded as one of the most important factors to be considered. This view of the importance of total experience is often held by teachers, especially by those who have had little training for their work beyond that gained through experience in teaching. Teachers of both experience and training more often accept the theory that experience beyond a period of some five to eight years usually does not add materially to the quality of teaching unless supplemented by additional training. In this study the question of experience is considered quantitatively from several points of view, the first of which is an analysis of the total amount of experience.

A summary of the mean number of years of the entire experience of teachers in the various positions from the different zones is presented in Table VI. Although the form of this table is similar to that of Table IV it differs from Table IV in certain respects. Since Table IV has already been described in detail,

TABLE VI

AVERAGE YEARS OF TEACHING EXPERIENCE OF
RESIDENT AND NON-RESIDENT TEACHERS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	M.	10.46	10.89	8.67	6.78
	S.D.	9.28	2.93	7.36	5.60
	P.E.m	.27	.10	.49	.23
	N.	512.	408.	104.	135.
	Index of Signifi- cance of Difference	← 10.51 ← 16.44 ← 3.57 ← 4.44			
Second- ary	M.	9.27	10.29	6.77	6.64
	S.D.	8.80	9.56	5.84	6.27
	P.E.m	.54	.70	.67	.30
	N.	120.	85.	35.	197.
	Index of Signifi- cance of Difference	← 4.24 ← 4.80 ← .18 ← 3.63			
Adminis- trative	M.	19.87	20.94	-----	13.08
	S.D.	10.45	11.16	-----	7.43
	P.E.m	1.05	1.27	-----	.57
	N.	45.	35.	10*	76.
	Index of Sig. of Dif.	← 5.71 ← 5.65			
Total	M.	10.86	11.52	8.61	7.87
	S.D.	9.50	10.07	7.23	7.15
	P.E.m	.25	.31	.40	.24
	N.	677.	528.	149.	408.
	Index of Signifi- cance of Difference	← 8.54 ← 9.61 ← 1.57 ← 5.71			

* Index of significance is not computed on account of fewness of cases.

it is necessary here to merely call attention to points of difference. The former table is composed of a series of percentage frequency distributions arranged in four columns; the latter is a series of the mean number of years of teaching experience. In Table IV, it is necessary to show the standard deviation of each mean in order to determine the probable error of the mean. The number of cases in each group in Table VI is repeated from Table I for the convenience of the reader. In all other respects the arrangement of the two tables is the same. Groups containing less than twenty-five (25) cases are usually omitted in making compar-

isons since comparisons involving a small number of cases are not reliable.

In the elementary groups.- The mean number of years of teaching experience of elementary teachers of the resident group amounts to 10.46, while the corresponding mean experience of the non-residents is only 6.78 years, which is approximately four years less, or slightly more than half as much as in the case of the resident teachers. Of the two sub-groups of resident teachers, the mean amount of experience of the district representatives exceeds the mean of the commuting teachers by approximately two years. The index of significance of difference shows the experience of the non-resident group distinctly lower than that of the resident group and lower than that of the district portion of the resident group. The indices do not, however, show the non-resident group significantly different from the commuting group. The two resident groups are also decidedly different from each other. The most significant difference is found between the district and the non-resident groups in which the ratio of the difference between the means to the probable errors of the difference is 16.44 to 1.

In the secondary groups.- As in the elementary groups, the resident teachers exceed the non-residents in mean number of years of experience, the former being 9.27 years, the latter, only 6.64 years. The district group exceeds the commuting group by a mean difference of 3.52 years. The mean number of years of experience of the commuting group is approximately the same as for the non-residents. The experience of the non-resident group is significantly less than that of the resident or district groups, but is, of course, not significantly different from the commuting group. The two resident groups are not significantly different from each other.

In the administrative groups.- The total resident group has a mean experience of 19.47 years as compared to the non-residents' mean experience of 13.08, which is more than six years less. The mean for the district group is 20.94 or more than a year greater than for the resident group as a whole. Each of these groups is significantly different from the non-resident group. No comparisons are made with the commuting group on account of the small number of cases.

In the three levels combined.- When the three levels of positions are combined, it is found that the mean experiences of the resident, district, commuting, and non-resident groups are, respectively, 10.86, 11.52, 8.61, and 7.87 years. All comparisons for the groups as wholes with one exception show them significantly different. The mean number of years of experience of the com-

muting group and that of the non-residents do not differ significantly.

Summary.- The results obtained appear to show some very definite relationship: (1) The resident group shows a significantly greater mean number of years of experience than the non-resident group. (2) The district group has a significantly greater mean years of experience than the non-resident group. (3) Although the mean number of years of experience of the commuting teachers is greater than that of the non-residents, it appears that these two groups combined are, nevertheless, more homogeneous than either the district group or the commuting group, the difference in no case being significant. (4) The elementary groups and the combined groups show significant differences between the district and the commuting teachers. (5) The mean years of experience of the district group is slightly greater in comparison with the commuting group when the latter is separated from it. (6) All arrows point to the left, thereby showing that the mean experience of the non-resident group tends to be less than that of the corresponding group in each of the zones, even though the differences may not always be statistically significant. Finally, it may be assumed from the evidence presented in this table that resident and district teachers excel the non-resident in mean amount of experience, and that the average commuting teacher tends to excel the average non-resident. If years of experience is accepted as a criterion of desirability, it may then be concluded that the home teacher is to that extent the more desirable.

Teaching Experience in Present School Systems

The amount of experience which the groups of teachers have had in their present school systems is of peculiar interest in this investigation when studied in its relationship to the amount of experience and to the average period of service in other school systems. For the present, consideration is directed to the amount of experience in present systems as shown in Table VII.

In the elementary groups.- In the elementary groups, the resident teachers have had a mean experience of 7.01 years in present systems; non-residents, only 2.87. By separating the commuting group from the total resident group, the mean number of years of experience of the district group is found to be 7.62; that of the commuting group, only 4.53. In this section all the differences between the mean experiences are significant as indicated by the indices on the arrow lines in the table. It may also be noted that these differences are, if such a condition were possible, even more significant than those of the correspond-

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TABLE VII

AVERAGE YEARS OF TEACHING EXPERIENCE OF ALL RESIDENT AND NON-RESIDENT TEACHERS IN PRESENT POSITIONS ONLY

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	7.01	7.62	4.53	2.87
	S.D.	6.97	7.37	4.23	2.64
	P.E.m	.21	.25	.29	.15
Elementary	N.	507.	407.	100.	135.
	Index of Significance of Difference	← 15.92 ← 16.38 ← 5.03 ← 8.13			
Secondary	M.	6.36	7.33	4.03	2.87
	S.D.	7.27	7.94	4.55	3.28
	P.E.m	.45	.58	.52	.16
Secondary	N.	119.	84.	35.	198.
	Index of Significance of Difference	← 7.27 ← 7.43 ← 2.15 ← 4.23			
Administrative	M.	12.82	15.03	-----	4.08
	S.D.	10.52	10.81	-----	3.12
	P.E.m	1.07	1.25	-----	.24
Administrative	N.	44.	34.	10.	77.
	Index of Sig. of Dif.	← 7.95 ← 8.62			
Total	M.	7.28	8.07	4.45	3.10
	S.D.	7.43	7.96	4.39	3.10
	P.E.m	.19	.23	.24	.10
Total	N.	670.	525.	145.	410.
	Index of Significance of Difference	← 19.90 ← 19.88 ← 5.19 ← 11.31			

ing comparisons of total teaching experience given in Table VI.

As a general rule, it appears that the greater the distance of the elementary teacher's zone of residence from the school in which the present position is held, the less is the number of years she has held the position in that system. When considered on the basis of mean amount of teaching experience in other systems, three distinctly different groups of elementary teachers are found.

In the secondary groups.- While the mean years of experi-

ence of resident secondary teachers is greater than that of non-residents, it is slightly less than that of the resident elementary group. Here again the mean experience of the district group (7.33 years) is greater than that of the commuting teachers (4.03 years), which in turn is slightly greater than that of the non-residents (2.87 years). The mean years of experience of the non-resident elementary and secondary teachers are the same (2.87 years). All the differences between the mean experiences of the secondary groups in their present school systems are significant except that between the commuting and non-resident groups. While the two divisions of the resident group are significantly different, at the secondary level, the average commuting teacher is only slightly different from the average non-resident on the basis of mean years of experience in present systems.

In the administrative groups.- The mean number of years of teaching experience of the resident administrators (12.82 years) is three times that of the non-residents (4.08 years). By removing the small group of commuting teachers from the resident group, the mean number of years of experience of the district group is found to be 15.03, which is approximately double that of either the district elementary or secondary teachers, and is almost four times as great as that of the non-resident group. Evidently the mean amount of experience of the commuting group would lie very close to that of the non-resident. Finally, on the basis of the mean number of years of experience in present systems, it is evident that the differences between (1) the total resident and the non-resident groups, (2) the district and the non-resident groups, and (3) the commuting and the non-resident groups are significant.

In the three levels combined.- When the three levels of positions are combined by zones, the mean years of teaching experience of the total resident group is found to be 7.28 years as compared to 3.10 years among the non-residents. The mean for the district group is 8.07 years; for the commuting group, 4.45 years. It is therefore apparent that the difference between the mean experiences of the commuting and non-resident elementary teacher is so great that the difference between the mean of the total representations of these two zones is significantly different even after the secondary teachers and the administrators have been added to the elementary teachers in each case, the index being 5.19. All other indices of significance of difference between the zones with all positions combined are highly significant, ranging from 11.31 to 19.90. It thus appears certain, on the basis of the mean years of experience in present systems, that the three groups are significantly different from each other.

Summary.- In summarizing the findings relative to the

question of mean amount of teaching experience in present school systems, it may be said: (1) that resident, district, and commuting teachers have usually held their present positions for a much longer period than non-residents, the differences in most instances being highly significant; (2) that the average period of service of members of the administrative group has been much longer than that of either the elementary or the secondary group among the total resident and district teachers, and slightly greater among non-residents; (3) that the average period of service of the non-resident group in comparison with that of the total resident and district groups has been noticeably smaller; and (4) that in most instances the mean differences in the experience between corresponding groups have been so significant as to result in showing the existence of three distinct groups.

Teaching Experience in Other Systems

A comparison of the mean total years of teaching experience in all other school systems is presented in Table VIII. The table includes data from all teachers in the study, those who have had no previous experience as well as those with such experience.

No significant difference is found between the mean length of teaching experience of the total resident elementary group (3.38 years) and that of the non-resident group (3.88 years); neither is there any significant difference between the mean amount of teaching experience of the commuting group (4.06 years) and that of the non-residents. However, the difference between the mean of the district group (2.22 years) and that of the non-residents is significant. The same is true of the difference between the mean of the district group and that of the commuting group. The two significant differences are indicated on the arrow-line pointing to the right.

The mean previous experience of secondary teachers varies from 2.74 years for the commuting group to 3.80 years for non-residents. While the average non-resident tends to have more teaching experience in previous systems than the average of any resident group, the differences are not sufficiently large to be of significance.

Practically the same situation prevails in the administrative groups as in the secondary groups. The non-resident group has a mean experience of 8.96 years in other systems; the resident group, 7.05; and the district, only 6.48. While the mean experience of the non-resident tends to exceed in each comparison, neither of the differences is significant.

When the positions of all levels in each residential group

TABLE VIII

AVERAGE YEARS OF TEACHING EXPERIENCE OF ALL RESIDENT AND
NON-RESIDENT TEACHERS IN ALL OTHER SCHOOL SYSTEMS
PREVIOUS TO THE FIRST YEAR IN PRESENT SYSTEMS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	M.	3.38	3.22	4.06	3.88
	S.D.	5.12	5.29	5.10	4.10
	P.E.m	.15	.18	.34	.24
	N.	508.	408.	100.	135.
	Index of Signifi- cance of Difference	1.79 5.53 4.84 .43			
Second- ary	M.	2.86	2.90	2.74	3.80
	S.D.	4.30	4.61	3.54	5.12
	P.E.m	.27	.34	.40	.25
	N.	119.	84.	35.	197.
	Index of Signifi- cance of Difference	2.54 2.14 2.30 .31			
Adminis- trative	M.	7.05	6.48	-----	8.96
	S.D.	6.44	6.74	-----	6.60
	P.E.m	.66	.79	-----	.51
	N.	43.	33.	10.	76.
	Index of Sig. of Dif.	2.30 2.64			
Total	M.	3.53	3.38	4.08	4.79
	S.D.	5.29	5.34	5.05	5.56
	P.E.m	.14	.16	.28	.19
	N.	670.	525.	145.	408.
	Index of Signifi- cance of Difference	5.25 5.64 2.09 2.26			

are combined there is found a significant difference in the first two comparisons. The non-resident group with a mean previous experience of 4.79 years is distinctly different from the resident group whose mean experience is only 3.53 years, and from the district group whose mean experience is only 3.38 years. There is, however, no significant difference between either the means of the non-resident and the commuting groups, or between the means of the district and commuting groups.

Considering Table VIII as a whole, it appears that the differences between the corresponding means show a condition more homogeneous than that in Tables VI and VII. In other words, differences in the mean years of experience in all other systems are much less significant as a whole than differences in mean total years of experience and in mean years of experience in present systems. All comparisons, with two exceptions, show that the teachers from the more remote of any two zones tend to possess the greater average amount of experience in other systems. In a few cases this trend actually becomes one of significance, especially when the totals of columns are compared. It appears, from the evidence presented in Tables VI-VIII inclusive, that the chief differences in the amount of teaching experience of teachers coming from the three zones of residence lie rather in the differences in the length of time they have been in their present systems. The implications of such a statement are sufficiently important for the purposes of this study that its verification through additional comparisons is necessary.

Previous Teaching Experience Limited to Those Who Have Actually Taught in Other Systems

While it is important to know the previous teaching records of the different groups considered as wholes, it is also desirable to eliminate from such a study those who have had no previous teaching experience in other systems and to study separately that aspect of their records. The data presented in Table IX make possible such an analysis.

An examination of this table reveals the fact that there is not a single significant difference between the mean number of years of teaching experience in other systems of the teachers of the different groups. There is, however, (1) a slight trend in the elementary section for the mean experience of the resident groups to exceed that of the non-resident group, (2) a slightly greater tendency for the mean experience of the non-resident administrators to surpass that of the resident administrators, and (3) a still greater tendency for the mean experience of the non-resident secondary group to exceed that of the resident secondary groups. When the three levels of positions are combined in each zone, one finds the greatest tendency for the non-residents to exceed the residents in this respect. However, in no case, is the difference sufficiently large to be considered significant, the greatest index of significance being only 3.36. It is, therefore, evident that a greater amount of teaching experience in present systems does not necessarily mean a greater amount of ex-

TABLE IX

THE MEAN NUMBER OF YEARS OF PREVIOUS TEACHING EXPERIENCE
OF RESIDENT AND NON-RESIDENT TEACHERS IN
OTHER SCHOOL SYSTEMS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	4.96	4.94	5.00	4.72
	S.D.	5.72	5.86	6.04	5.70
	P.E.m	.21	.20	.45	.36
Elementary	N.	347.	266.	81.	111.
	Index of Significance of Difference	← .57 ← .45 ← .48 ← .12 →			
Secondary	M.	4.21	4.14	-----	5.27
	S.D.	4.78	5.15	-----	5.82
	P.E.m	.36	.45	-----	.33
Secondary	N.	81.	59.	22.	142.
	Index of Sig. of Dif.	2.16 → 2.02 →			
Administrative	M.	8.42	7.93	-----	9.46
	S.D.	6.12	6.28	-----	6.42
	P.E.m	.69	.82	-----	.51
Administrative	N.	36.	27.	9.	72.
	Index of Sig. of Dif.	1.21 → 1.58 →			
Total	M.	5.09	5.03	5.27	6.04
	S.D.	5.70	5.85	5.12	5.77
	P.E.m	.18	.21	.32	.21
Total	N.	464.	352.	112.	325.
	Index of Significance of Difference	3.32 → 3.36 → 2.03 → .63 →			

perience in other systems. No such relationship appears to exist

Number of Other School Systems in Which These Teachers Have Served

The data in Table X show the mean number of different school systems in which the teachers have been previously employed. From the evidence presented in this table certain trends may be noted relative to the mean number of previous systems served

TABLE X

MEAN NUMBER OF OTHER SCHOOL SYSTEMS IN WHICH RESIDENT AND NON-RESIDENT TEACHERS HAVE PREVIOUSLY BEEN EMPLOYED

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.76	1.74	1.83	2.26
	S.D.	2.07	2.15	1.71	2.06
	P.E.m	.06	.07	.12	.12
Elementary	N.	502.	403.	99.	131.
	Index of Significance of Difference	3.85 3.71 2.53 .64			
Secondary	M.	1.66	1.70	1.57	1.80
	S.D.	1.67	2.05	1.68	2.06
	P.E.m	.10	.15	.20	.10
Secondary	N.	119.	84.	35.	188.
	Index of Significance of Difference	1.00 .56 1.05 .52			
Administrative	M.	3.09	2.86	-----	4.03
	S.D.	2.36	2.27	-----	2.64
	P.E.m	.24	.26	-----	.20
Administrative	N.	45.	35.	10.	77.
	Index of Sig. of Dif.	3.03 3.54			
Total	M.	1.83	1.81	1.91	2.39
	S.D.	2.10	2.04	1.85	2.34
	P.E.m	.05	.06	.10	.08
Total	N.	666.	522.	144.	396.
	Index of Significance of Difference	6.22 5.80 3.75 .83			

by each group: (1) The average non-resident teacher, in most instances, has taught in a greater number of other school systems than has the average resident teacher. This mean number of previous systems in the case of the total resident group varies from 1.66 to 3.09; in the district group, from 1.70 to 2.86; in the commuting group, from 1.57 to 1.91; and in the non-resident group, from 1.80 to 4.03. (2) The administrators in each group have held positions in the largest mean number of other systems while the

secondary teachers have held fewest. (3) The mean number of other systems in which teachers have worked tends to increase according to the distance of the zone of residence from the location of the system in which they are now employed. (4) The indices of significance of difference between the mean numbers of previous systems tend to be lowest in the secondary group and highest in the elementary group, but are not significant at any level.

Only two comparisons in the table show a significant degree of difference, namely, that between the total non-resident and the total resident groups, and that between the total non-resident and the total district groups. Thus, the home teachers appear to have taught in fewer school systems than the outsiders.

Mean Length of Service in Other Systems

By dividing each teacher's total years of experience in other systems by the number of systems, the mean length of service in each case is available for analysis. With these individual means arranged in frequency distributions by groups, a summary of the trends with respect to average length of service in other systems can be made. A summary of this information is found in Table XI.

In the elementary and administrative groups, the resident teachers tend to serve longer than the non-residents in their previous systems. In the secondary group the opposite tendency appears. However, in each of these comparisons and in comparisons including the group totals, it is apparent that none of the differences in mean length of service is significant. The short average period of service in other systems is a conspicuous finding throughout this table, the range being from 1.70 years among non-resident elementary teachers to 2.90 years among district administrators. This evidence is of special importance in the case of the home teachers, who on the average have been employed for very much longer periods than the non-residents in the systems in which they are now employed.

Relative Tendencies of Residents and Non-Residents to Restrict Their Teaching Experience to a Single System

A comparison of the relative tendencies of resident and non-resident teachers to limit their experience to a single system - the present one - is another angle of possible approach to a solution of the problem. The data have been checked to determine the percentage of each group who have limited their teaching experience to the one system (Table XII). Since beginning teach-

TABLE XI

MEAN YEARS OF SERVICE OF RESIDENT AND NON-RESIDENT TEACHERS
IN OTHER SCHOOL SYSTEMS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	2.11	2.04	2.34	1.70
	S.D.	2.70	2.67	2.75	.79
	P.E.m	.10	.11	.22	.05
Elementary	N.	327.	253.	74.	106.
	Index of Significance of Difference	3.73 2.83 2.78 1.20			
Secondary	M.	1.73	1.76	-----	2.14
	S.D.	1.04	1.14	-----	1.36
	P.E.m	.08	.10	-----	.08
Secondary	N.	81.	59.	22.	132.
	Index of Sig. of Dif.	3.73 2.92			
Administrative	M.	2.81	2.90	-----	2.44
	S.D.	4.09	4.65	-----	1.23
	P.E.m	.45	.59	-----	.01
Administrative	N.	37.	28.	9.	72.
	Index of Sig. of Dif.	.82 .78			
Total	M.	2.09	2.06	2.21	2.06
	S.D.	2.64	2.72	2.37	1.29
	P.E.m	.08	.10	.16	.05
Total	N.	445.	340.	105.	310.
	Index of Significance of Difference	.44 .00 .88 .79			

ers are included in this table, it was thought advisable to separate them later for special consideration in another table (Table XIII). An analysis of the data of these two tables follows:

In Table XII, the percentages of the various groups which have taught exclusively in their present systems are given. The percentages of this table, and also those of the next table, were computed by dividing the number of cases in each classification by the number of cases (N) in the corresponding original classifications of Table I. Thus (N) is different in each group.

In the elementary groups.- Approximately thirty per cent

TABLE XII

PERCENTAGE OF TEACHERS FROM EACH ZONE OF RESIDENCE WITHOUT PREVIOUS TEACHING EXPERIENCE IN OTHER SCHOOL SYSTEMS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	30.96	34.13	18.27	17.78
	P.E.fp	1.37	1.57	2.56	2.22
	Index of Significance of Difference	$\leftarrow 5.05 \rightarrow$ $\leftarrow 6.01 \rightarrow$ $\leftarrow 5.28 \rightarrow$ $\leftarrow .14 \rightarrow$			
Secondary	fp	31.40	29.07	37.14	27.64
	P.E.fp	2.78	3.31	-----	2.14
	Index of Sig. of Dif.	$\leftarrow 1.07 \rightarrow$ $\leftarrow .36 \rightarrow$			
Administrative	fp	15.56	17.14	10.00	5.19
	P.E.fp	-----	-----	-----	-----
Total	fp	30.03	32.22	22.15	20.19
	P.E.fp	1.18	1.36	2.29	1.34
	Index of Significance of Difference	$\leftarrow 5.49 \rightarrow$ $\leftarrow 6.29 \rightarrow$ $\leftarrow 3.79 \rightarrow$ $\leftarrow .73 \rightarrow$			

(30.96) of the total resident group and 34.13 per cent of the district group have had all their teaching experience in the system in which they are now employed. However, only 18.27 per cent of the commuting group, and 17.78 per cent of the non-residents have confined their experience to the one system in which they are now employed. The difference between these percentages of the resident and non-resident groups which have thus limited their experience to the one system is significant. The same condition is true of comparisons of the district and non-resident groups. The percentages of the district and commuting groups differ significantly but those of the commuting and non-resident group are practically equal, 18.27 per cent and 17.78 per cent, respectively. In other words, the probability of the commuting teacher's confining his teaching to the system in which a position is now held is much less than that of the district teacher and agrees almost exactly with that of the non-resident group.

In the secondary groups The tendency for secondary teachers to limit their experience to their present system is practically the same as in the resident and district groups of elementary teachers. However, there is a pronounced tendency for the percentage of commuting and non-resident secondary teachers

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restricting their experience to present systems to be greater than the corresponding percentages of the elementary groups. Comparisons of the non-resident secondary teachers with each of the other secondary groups show a slight tendency for the resident, district, and commuting groups to exceed the non-resident group in the percentage employed exclusively in the present systems. None of these differences are significant.

In the three groups combined.- Comparisons at the administrative level are omitted since the number is so small. By combining the individuals of the three levels of zones into a total, the percentage of resident, district, or commuting teachers who have had all their experience in their present systems tends to exceed the percentage of non-residents in each case; the percentage of district teachers tends to exceed that of the commuting teachers. Only two percentage differences are found to be significant: (1) that between the resident (30.03 per cent) and the non-resident (20.19 per cent) groups; and (2) that between the district (32.22 per cent) and the non-resident groups. The percentage of commuting teachers who have had all their experience in their present systems tends to be nearer that of the non-resident than that of the district, or strictly local group.

Summary.- From the analysis of the data presented in Table XII, it may be assumed that the probability of remaining in one school system throughout one's teaching career tends to be greater in the case of district teachers than in the case of non-residents. Even the chances of commuting groups, as a general rule, are much less than those of the district group. It is noteworthy that all significant differences found in this aspect of the study of length of service support the foregoing conclusions. It is only in the secondary groups that the probability of remaining in one school system throughout one's teaching career is equal in the case of resident and non-resident teachers. Naturally, lack of data prevents reliable, separate comparisons of administrative groups. Of course it must be kept in mind that these comparisons are based on the conditions found at the time these data were collected. Some of these teachers may yet teach in other systems. However, it is likely that the advent of others to take their places would result in a similar condition at some future time, all other factors remaining the same.

Beginners with no previous teaching experience.- In Table XIII, frequency percentages of the seventy-five teachers from all the zones of residence now employed for their first year's teaching experience are shown. This table was derived in the same way as Table XII. Since these teachers are beginners and have never taught in other systems, they are also included in the data of

TABLE XIII

PERCENTAGE OF THE TEACHERS FROM EACH ZONE OF RESIDENCE
TEACHING FIRST SCHOOL TERM IN THE YEAR 1930

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	f_p P.E. f_p	5.19 .65	5.77 .77	2.88 -----	8.15 1.59
	Index of Sig. of Dif.	1.72 1.34			
Second- ary	f_p P.E. f_p	11.57 1.96	9.30 2.11	17.14 -----	11.56 1.54
	Index of Sig. of Dif.	.00* .84			
Total ¹	f_p P.E. f_p	5.98 .61	5.96 .69	6.04 1.32	8.27 .92
	Index of Signifi- cance of Difference	2.08 2.00 1.38 .07			

¹ There were no administrators listed among the beginners in 1930.

Table XII. Differences in percentages found in Table XIII should indicate to some extent trends in the filling of the most recent vacancies in the teaching positions of these school systems. The inadequacy of the data - the smallness of the number of cases involved or the resulting low percentages - renders many possible comparisons of little value. The arrows of the table tend to show the percentages of the non-residents greater in most comparisons, yet in no case are the differences significant. Therefore on account of a lack of cases, low percentages in the distributions, or low indices of significance of difference, this table provides no proof that the several percentages of non-residents teaching their first school term in these school systems exceed the corresponding percentages of the resident groups. While the data in Table XII show the probability of a significantly greater percentage of home teachers devoting their entire period of teaching service to the local school system, the data of Table XIII show no significance of differences in the percentages of the groups which obtain their first year's experience in any particular system. Although the zone of residence of the commuting group lies geographically between the zones of the district and non-

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resident groups, the commuting group on the average agrees more closely with the non-resident than the resident group in the probability of restricting their teaching experience to a near-by school.

Tendencies Revealed by Recent Withdrawals and
Recruitments of Teachers

While the second chapter is devoted to a study of the relative number of teachers employed at the various levels from the three different zones of residence, Chapter III, up to this point, is devoted to an analysis of the length of service of the different groups of teachers made from several points of view. It yet remains, however, to show the present trends with respect to the length of service of the different groups of teachers. This may possibly be accomplished through an analysis of the distribution of recent recruits to and withdrawals from the faculties of these school systems.

The teacher-data sheets were checked to determine the distribution, by zone and positions, of all teachers who are employed in the systems during the present school year for the first time. These teachers may or may not have had previous experience in other systems. Withdrawals from the teaching force of the previous school year were distributed in like manner by zones. Withdrawals include those who withdrew voluntarily as well as those who were intentionally not re-elected by the boards of education. A few teachers whose positions were not known were omitted from the table of withdrawals. Of course, the withdrawals are not included in the 1097 teachers whose personal data constitute the principal basis of the study.

After the number of withdrawals and recruits was determined and distributed on the basis of zone and position, as just described, a percentage distribution of each was worked out. For example, the percentage of the total number found in each group was determined by dividing the number of withdrawals in each classification by the total number of withdrawals. The same procedure was followed for recruits. These two percentage distributions were then used in making three comparisons:

1. A comparison between the percentage distribution of withdrawals and the corresponding percentage distribution of the total number employed (Table II) at the time these data were collected.

2. A comparison between the percentage distribution of recruits and the percentage distribution of the total number now employed (Table II).

3. A comparison between the percentage distribution of withdrawals and the percentage distribution of recruits themselves.

Withdrawals and total number employed.- Since the number of withdrawals during any one year is the principal basis for the need of recruiting the staff the following year, comparisons involving the withdrawals are considered first. Table XIV contains a summary of these data. In this table the frequency percentages of teachers employed (f_p) and of teachers withdrawn (f_p') are compared for each separate group. In order to do this, the probable errors of the percentages ($P.E.f_p$ and $P.E.f_p'$) are determined by the use of the formula previously employed in this study.¹ The larger percentage is then subtracted from the smaller ($f_p - f_p'$, for example). The probable error of the difference between the two percentages, $P.E.(diff)$, is determined by the use of a formula previously employed.² Finally, the index of the significance of the difference between them is found by dividing the difference between any two corresponding percentages of the frequency distribution by the probable error of their difference. This index is found in Table XIV on the arrow-line drawn in the space between the two percentages compared. These indices and arrow-directions are the important considerations of the table.

In 1930, 47.40 per cent of all teachers employed in these school systems were district elementary teachers. However, only 29.64 per cent of the total number of withdrawals of the previous year were classified as resident elementary teachers. This difference shows an index of significance of 8.11. It is thus apparent that the percentage of resident elementary teachers withdrawing from these schools is significantly lower than the percentage of the number now employed from the resident group as elementary teachers. The percentage of secondary teachers now employed is less than the percentage withdrawing but the difference is not significant, the index being only 2.42. In the totals for the resident group, 62.53 per cent of those now employed and only 45.06 per cent of the withdrawals are elementary teachers. In this case, even with the secondary and administrative groups included, a significant difference is found between the number now employed and the number of withdrawals. Thus in the elementary and total number of resident teachers employed, the number of withdrawals is significantly lower than the number now employed.

By considering the district group separately, a similar situation is found. In both the elementary and group total the

¹P. 15.

²P. 15.

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TABLE XIV

PERCENTAGES OF THE DIFFERENT GROUPS EMPLOYED AT PRESENT
AND WITHDRAWN DURING PAST YEAR

Group		Percentage of Total Number		
		Employed		Withdrawn
		f _p and P.E.f _p	Index of Significance of Difference	f _p and P.E.f _p
Tot.	Elem.	47.40 1.02	← 8.11	29.64 1.94
	Sec.	11.03 .63	2.42 →	15.02 1.52
	Adm.	4.10 .40	----	(.40) ----
	Tot.	62.53 .98	← 7.50	45.06 2.11
Dist.	Elem.	37.92 .99	← 8.52	20.95 1.73
	Sec.	7.84 .55	.93 →	9.09 1.22
	Adm.	3.19 .38	----	(.40) ----
	Tot.	48.95 1.01	← 8.42	30.43 1.95
Com.	Elem.	9.48 .59	← .60	8.69 1.19
	Sec.	3.19 .36	2.58	----
	Adm.	.91 .19	----	(.00) ----
	Tot.	13.58 .69	.64 →	14.62 1.48
Non- Res.	Elem.	12.31 .67	4.29 →	20.16 1.70
	Sec.	18.14 .78	7.00 →	33.20 2.00
	Adm.	7.02 .52	----	(1.53) ----
	Tot.	37.47 .98	9.00 →	54.94 2.11

¹ Omissions indicate insufficient number of cases.

differences between the percentages of the number now employed and the number withdrawing are significant. The withdrawals are not in proportion to the number now employed from the district group. In the commuting group the trends are practically the same as for those above but in no case is the difference of any significance. In other words, the percentages of withdrawals who are identified with the commuting zone are practically the same as the percentages from that zone now employed.

In the non-resident group, the percentages of withdrawals in every case are greater than the corresponding percentages of those now employed from the remote zone. In each case, with the exception of the administrative group in which the number of cases is too small for reliable comparisons, these differences are significant, the index varying from 4.29 in the non-resident elementary comparison to 9.00 in the comparison of the non-resident group as a whole. These facts tend to show that, with the exception of administrators, non-resident teachers withdraw at a rate which exceeds their proportion of the total number now employed in these school systems.

When considered as a whole, the data of Table XIV tend to favor the home teachers, especially those who teach within their own district. With certain exceptions previously mentioned, it appears (1) that the district group is gaining in the percentage of its group now employed, (2) that the commuting teachers are holding their own, and (3) that the non-residents are actually losing. Most of these tendencies appear to be significant.

Recruits and total number employed.- The data contained in Table XV are the basis of the second comparison previously mentioned. It is a comparison of the percentage of the total number of teachers now employed in each classification and the percentage of the total number of recruits in each. Recruits, it will be remembered, are those who are teaching in the system for the first time. They may or may not have had previous experience in teaching. The method used in preparing Table XV is the same as that used in the preparation of Table XIV.

The percentages of the total number of recruits found in each of the four classes of the resident group are less than the corresponding items for the number now employed. However, in each zone the comparisons involving the elementary group and the group total only show significant differences. With an insufficient number of cases in the administrative group and with an index of significance of only 1.71 for secondary teachers, it is apparent that only the elementary and total comparisons are significant. With these exceptions, the percentages of teachers employed this year for the first time in the system as resident teachers are as a whole now keeping pace with the percentages from that zone now represented in the total number employed. A similar trend was found in the corresponding comparisons of Table XIV. Thus, while the rate of withdrawals from the resident group tends toward an increase in the percentage of resident teachers now employed, the percentage of recruits tends to somewhat lower the proportion of residents now employed. The one trend appears to neutralize the other.

Group	
Consider	
Tot. Res.	Elen
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	Adm
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Dis.	Elen
	Sec
	Adm
	Tot
Com.	Elen
	Sec
	Adm
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Non-Res.	Elen
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TABLE XV

PERCENTAGE OF DIFFERENT GROUPS EMPLOYED AT PRESENT
AND RECRUITED FOR CURRENT YEAR

Group		Percentage of Total Number of		
		Those Now Employed		Recruits
		f_p and P.E. f_p	Index of Significance of Difference	f_p and P.E. f_p
Tot. Res.	Elem.	47.20 1.02	← 6.21	33.19 2.05
	Sec.	13.03 .63	← 1.71	10.50 1.34
	Adm.	4.10 .40	----	(1.27) ----
	Tot.	62.53 .98	← 7.38	44.96 2.17
Dis.	Elem.	37.92 .99	← 5.94	25.21 1.90
	Sec.	7.84 .55	← 1.69	5.88 1.03
	Adm.	3.19 .38	----	(.42) ----
	Tot.	48.95 1.01	← 7.68	31.51 2.03
Com.	Elem.	9.48 .59	← 1.13	7.98 1.19
	Sec.	3.19 .36	→ 1.44	4.62 .92
	Adm.	.91 .19	----	(.85) ----
	Tot.	13.58 .69	← .08	13.45 1.49
Non-Res.	Elem.	12.31 .67	→ 3.99	19.75 1.74
	Sec.	18.14 .78	→ 10.62	30.25 .84
	Adm.	7.02 .52	← 1.83	5.04 .95
	Tot.	37.47 .98	→ 7.38	55.04 2.17

* Omissions indicate insufficient number of cases.

Again in the district portion of the resident group, the results are approximately the same as in the comparisons of residents, that is, only comparisons of the elementary group and of the group totals show significant differences. Here, as in the resident comparisons, the trends found to exist in Table XIV appear to be somewhat neutralized by the trends revealed in Table XV. In the commuting group, no significant differences are found in any of the comparisons. Apparently, recruiting from the com-

muting group tends to keep about the same proportion of commuting teachers in the service. Practically the same conditions prevail with respect to withdrawals as shown in the previous table.

In the non-resident group, the trend is the opposite to that found in the other comparisons of Table XV. There is a significant difference in practically all comparisons except that between administrators where the index of significance of difference is only 1.83. The index of significance is on the border line (3.99) in the elementary comparison, which really indicates a significant difference or an exceptionally strong trend in that direction in this classification. The index of significance in the comparison of secondary teachers is unusually high. While the percentages of withdrawals represented in the non-resident comparisons tend to show a falling off in the proportion of non-residents now employed, the tendency toward an increase in the proportion is shown by the evidence from recruiting in this table.

In summarizing the findings of this table, it may be said: (1) that there appears to be a tendency toward a reduction in the percentages of recruits chosen from the home teachers; (2) that the commuting group is practically at a standstill in so far as increasing or decreasing its proportion of recruits; and (3) that the non-resident is increasing its ratio of recruits in comparison with its percentage now employed from that zone.

Withdrawals and recruits.- Since frequent reference has been made to Table XIV in discussing Table XV, it seemed advisable to make direct comparisons between the frequency percentages of withdrawals and recruits. Are the differences between corresponding percentages of these two distributions significant? Or rather is there a tendency for the proportion of withdrawals to neutralize the proportion of recruits in each classification as suggested by preceding comparisons (Tables XIV and XV)? The answers to these questions are suggested by the data in Table XVI from which comparisons of the frequency percentages of withdrawals and recruits are made.

A few statements are sufficient to explain the findings of Table XVI: (1) Four comparisons are omitted on account of the small number of cases involved. (2) Of the twelve remaining comparisons, the percentages of withdrawals exceed the percentages of recruits in eight cases and are less in the other four. (3) In no comparisons of the table are the differences between the percentages significant, that is, the proportion of recruits in each comparison apparently tends to neutralize the proportions of withdrawals. And (4) while comparisons of the frequency percentages of withdrawals and of recruits with the frequency percentages of those now employed show significant differences in most cases,

Group
Considered

	Elem.
Tot. Res.	Sec.
	Adm.
	Tot.
Dis.	Elem.
	Sec.
	Adm.
	Tot.
Com.	Elem.
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	Adm.
	Tot.
Non-Res.	Elem.
	Sec.
	Adm.
	Tot.

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TABLE XVI

PERCENTAGES OF DIFFERENT GROUPS WITHDRAWN AND RECRUITED DURING PAST YEAR

Group Considered		Percentage of Total Number of		
		Recruits		Withdrawals
		f_p and P.E. f_p	Index of Significance of Difference	f'_p and P.E. f'_p
Tot. Res.	Elem.	33.19 2.05	← 1.26	29.64 1.94
	Sec.	10.50 1.34	2.24 →	15.02 1.52
	Adm.	(1.27) -----	----	(.40) -----
	Tot.	44.96 2.17	.03 →	45.06 2.11
Dis.	Elem.	25.21 1.90	← 1.66	20.95 1.73
	Sec.	5.88 1.03	1.36 →	9.09 1.22
	Adm.	(.42) -----	----	(.40) -----
	Tot.	31.51 2.03	← .38	30.43 1.95
Com.	Elem.	7.98 1.19	.42 →	8.69 1.19
	Sec.	4.62 .92	.96 →	5.93 1.00
	Adm.	(.85) -----	----	(.00) -----
	Tot.	13.45 1.49	.56 →	14.62 1.48
Non-Res.	Elem.	19.75 1.74	.17 →	20.16 1.70
	Sec.	30.25 .84	1.36 →	33.20 2.00
	Adm.	5.04 .95	----	(1.53) -----
	Tot.	55.04 2.17	← .04	54.94 2.11

the percentage of withdrawals and recruits in comparison with each other do not show a single significant difference.

Summary

The mean number of years of the total teaching experience of either the entire resident group or of the district group is significantly greater than that of the non-resident group. While the total experience of the commuting group is less than that of the resident and more than that of the non-resident, the three

do not fall into three distinctly different groups. The commuting group appears to be significantly different from the district group in the elementary and total classification but is not significantly different from the non-resident group at any level.

With respect to the mean amount of teaching experience in school systems in which they are now employed, the mean experience of resident, district, or commuting teachers is significantly greater than that of the non-resident, except in the case of differences between the commuting and non-resident secondary teachers and possibly among the administrators (where the number of cases is too limited for reliable comparisons). With the two exceptions cited, the district, commuting, and non-resident group therefore tend to fall into three distinctly different types of groups on the basis of amount of experience in their present systems.

A study of the mean experience in all previous school systems reveals a tendency toward smaller differences between the local and non-resident groups. Although the non-resident group tends to show slightly more experience in previous systems, there are only four cases in which the differences are significant. Two of these significant differences appear at the elementary level - between the district and non-resident groups, and between the district and commuting groups; two in the zone totals - between the total resident and non-resident groups, and between the district and non-resident groups. It is thus evident that few differences in the mean amount of teaching experience in previous systems are significant. And it is also evident that the district, commuting, and non-resident groups do not fall into three distinctly different groups, or even into two (except, indeed, in one or two instances).

By eliminating all teachers who have had no experience in other school systems, comparisons may be confined to those who have actually taught elsewhere. This provides a more valuable comparison of average experiences in other communities. In such comparisons local teachers tend to have more experience than non-residents at the elementary level, but less at all other levels. However, none of the differences are significant. It may then be assumed that the mean total experience in other communities is practically the same for teachers from the different zones of residence.

With two exceptions, no significant differences are found in the mean number of other systems which have previously employed these teachers. The experience of either the total district or total commuting groups is significantly greater than that of the non-resident. By eliminating those with no experience in other systems, these two significant differences would probably

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be eliminated, thereby showing that these groups are practically alike with respect to the number of other systems in which they have previously been employed.

The tendency to remain as teacher in one school system only is greater among local teachers than among non-residents. However, there appear to be no significant differences in the chances of beginners' securing their first positions at home or away from home. It is only when all teachers who have restricted their full experience to their present employing system are considered that significant differences are found, all of which favor the strictly local teacher. Commuting teachers' chances agree rather closely with those of the non-residents.

A study of the effect of withdrawals and recruitments on the percentages of teachers now employed from the three zones of residence reveals a markedly stabilized situation. As a result of withdrawals, the home teachers are inclined to show significant increases in the proportion of their group now employed; on the same basis, the non-residents show decided decreases. On the other hand, in comparisons based on recruiting tendencies, the situation is almost exactly the opposite to that shown by withdrawals, that is, the resident groups tend to decrease their proportion now employed while that of the non-residents is increased. However, direct comparisons of the percentages of withdrawals and recruits tend to show no significant differences. Opposing tendencies toward withdrawing and recruiting are thus apparently neutralized. The proportions of residents and non-residents now employed in these systems have evidently reached the point of equilibrium and are probably not being influenced by recent changes resulting from the processes of withdrawing and recruiting.

CHAPTER IV

VARIABILITY AMONG TEACHERS OF DIFFERENT ZONES OF RESIDENCE WITH RESPECT TO TRAINING

This chapter is devoted to an analysis of the comparative scholarship and college and university attendance of the different groups of teachers. Important professional attitudes are also suggested by many of the comparisons. The amount of training is a matter of great importance in the selection and retention of teachers. The type of the training, as revealed by its distribution under various categories, is probably of even greater importance. The purpose of the data presented in the chapter is to throw light on both the amount and the type of training of the various groups of teachers under consideration. The amount of college and university residence included in obtaining the training is given considerable space in the analysis. Finally, tendencies to take training in summer school and through home-study courses are analyzed. Attitudes of the various groups of teachers toward better preparation for teaching are suggested in the analysis of summer school attendance and of training through home-study courses.

Comparisons offered in this chapter fall into three divisions as follows:

1. Comparisons of the undergraduate and graduate degrees previously obtained by the teachers of each group. Comparisons are made on the basis of: (a) the percentage of each group who have the Bachelor's degree; (b) the percentage of the graduates of each group who have had some graduate work; (c) the percentage of graduate students of each group who have the Master's degree; and (d) a summary of the persistency of members of each group to pursue their training to the point of obtaining the Master's degree. Since only 477 of the teachers have the Baccalaureate degree, other comparisons of their training are necessary in order to include the records of all.

2. Comparisons of the scholarships of the groups of teachers on the basis of semester hours of training. The comparisons are made with respect to: (a) the total amount of training, graduate and undergraduate combined; (b) the total amount of graduate work only; (c) the total amount of training in major subjects ("major" meaning the subject or subjects of chief interest);

(d) the total amount of training in minor subjects; and (e) the total amount of professional training.

3. Comparisons of the amounts of college and university attendance and of the methods used in meeting attendance requirements. This portion of the chapter is divided into four main parts, some of which are further subdivided: (a) recency of graduation; (b) total amount of undergraduate and graduate attendance; (c) summer school attendance; and (d) home-study activities.

Attention will be called especially to characteristic group attitudes toward training as revealed in the comparisons involving summer school attendance and training by home-study courses.

In this chapter, as in those preceding it, answers are sought to the second and third questions raised in the introduction. Stated in terms of the problems of this chapter, the questions may be re-stated as follows:

1. Are there significant differences between the resident and non-resident teachers with respect to number and kind of degrees obtained, semester hours of training, total attendance, summer-school attendance, and training by the home-study method?

2. Do such differences as are found to exist between resident and non-resident teachers tend to be in agreement with differences in the relative proportions of each group employed in the schools?

To the first of these questions may be added the idea of professional attitude which is revealed in this chapter in a limited way, its principal consideration being reserved to the following chapter.

Comparative Tendencies to Obtain Undergraduate and Graduate Degrees

In this section of the chapter, five tables are presented. The first, Table XVII, constitutes the base from which the percentages of the other four tables are computed. In these tables an attempt is made to analyze the relative tendencies of resident and non-resident teachers to obtain college and graduate degrees. An effort is made to determine the comparative persistency of the groups of teachers with respect to the acquisition of degrees.

The following questions are considered at this point in the study: (1) Are differences between the percentages of resident and non-resident teachers who pursue their training program to the point of graduation from a standard four-year college statistically significant? (2) Are differences between the percentages of the groups whose training programs have included at least some graduate study significant? (3) Are differences be-

TABLE XVII

DISTRIBUTION OF RESIDENT AND NON-RESIDENT TEACHERS ON THE BASIS OF: THE NUMBER NOW EMPLOYED, THE NUMBER WITH THE BACHELOR'S DEGREE, THE NUMBER WITH GRADUATE CREDIT, AND THE NUMBER WITH THE MASTER'S DEGREE

Level of Position	Degree of Training	Number of Resident Group			Number of Non-Res. Gr.
		Total	District	Commuting	
Elementary	Now Employed	520	416	104	135
	Baccalaureate Deg.	55	43	12	52
	Graduate Work	13	11	2	12
	Master's Degree	0	0	0	1
Secondary	Now Employed	121	86	35	199
	Baccalaureate Deg.	96	67	29	187
	Graduate Work	39	28	11	86
	Master's Degree	4	4	0	10
Administrative	Now Employed	45	35	10	77
	Baccalaureate Deg.	20	12	8	67
	Graduate Work	16	9	7	57
	Master's Degree	7	5	2	31
Total	Now Employed	686	537	149	411
	Baccalaureate Deg.	171	122	49	306
	Graduate Work	68	48	20	155
	Master's Degree	11	9	2	42

tween the percentages of the groups which have obtained the Master's degree significant? And finally, (4) do significant differences exist between the groups with respect to the degree of persistency of those employed in becoming college graduates, with respect to the degree of persistency of the college graduates in taking graduate work, and with respect to the degree of persistency of the graduate students in obtaining the Master's degree? Data bearing on and suggesting answers to the foregoing questions are now presented.

Comparisons of percentages of the groups which have obtained the Bachelor's degree.- In Table XVII is found a classification of resident and non-resident teachers (1) who are now employed (same as Table I), (2) who have the Bachelor's degree, (3) who have been enrolled in graduate courses, and (4) who have the Master's degree. Since the data of this table are not in a form for comparative study, no discussion of it is necessary. However, the next four tables, which give percentage distribution from the data contained in Table XVII, will be carefully examined for evidence bearing on the questions previously presented for consideration in this section.

The data in Table XVIII show the percentage of each group who are college graduates. The method of constructing this table is the same as that used in formulating Table XII. The probable error (P.E.f.p) has not been computed where the number of persons holding college degrees is too small for comparative purposes. In cases of doubtful value the data are given in parentheses. The discussion of the data for each level of position follows.

1. In the elementary group.- Only 10.58 per cent of the total resident group of elementary teachers are graduates of standard four-year colleges as compared to 38.52 per cent for the corresponding non-resident group. The percentages of graduates among the district and commuting groups vary but little from that of the two combined (the resident group). The resident group or either of its sub-groups (the district or the commuting group) shows a significant difference when compared with the non-residents on the basis of the percentage of individuals holding college degrees. However, a very slight difference exists between the two resident sub-groups themselves.

2. In the secondary group.- The percentages of home teachers at the secondary level who are college graduates are much higher than that at the elementary level. This is to be expected on account of the higher standards of training required of secondary teachers. Also, at the secondary level and in comparison with the non-resident group, the percentages of the home group who are college graduates are slightly higher than that in the elementary section. Seventy-nine and thirty-four hundredths (79.34) per cent of the resident group, 77.91 per cent of the district group, and 82.86 per cent of the commuting group hold college degrees. The percentage of college graduates in the non-resident group is higher (93.97 per cent). The difference between the percentage of college graduates in the total resident group and that of the non-resident group is significant. That between the district and non-resident groups is also significant. However, the difference (1) between the commuting and non-resident groups and (2) that between the commuting and district groups are too small to be of any significance.

3. In the administrative group.- A significant difference is found between the percentages of the resident (44.44) and non-resident (87.01) groups who have already obtained the Baccalaureate degree. The latter percentage is practically double that of the former. The difference between the percentages of the district and non-resident groups who have obtained the Bachelor's degree is also significant.

4. In the three levels of positions combined.- When the total percentages in each regional group are compared, the differ-

TABLE XVIII

PROPORTIONS OF RESIDENT AND NON-RESIDENT GROUPS WHO ARE GRADUATES OF STANDARD FOUR-YEAR INSTITUTIONS OF HIGHER LEARNING

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	10.58	10.34	11.54	38.52
	P.E.fp	.91	1.01	2.11	2.83
	N.	520.	416.	104.	135.
	Index of Significance of Difference	9.41 8.97 7.97 .51			
Secondary	fp	79.34	77.91	82.86	93.97
	P.E.fp	2.48	3.02	4.30	1.14
	N.	121.	86.	35.	199.
	Index of Significance of Difference	5.36 4.97 2.50 .94			
Administrative	fp	44.44	(34.29)	80.00	87.01
	P.E.fp	5.00	(5.41)	-----	2.58
	N.	45.	35.	10.	77.
	Index of Sig. of Dif.	7.56 (8.80)			
Total	fp	24.93	22.72	32.88	74.45
	P.E.fp	1.11	1.22	2.60	1.45
	N.	686.	537.	149.	411.
	Index of Significance of Difference	27.21 27.37 13.94 3.54			

ences are found to be even more significant than in the separate considerations at each level of position. Only 24.93 per cent of the total resident group are found to be college graduates. On the other hand 74.45 per cent of the non-residents are college graduates. The percentage of the non-resident group who are college graduates is approximately three times that of the residents who have received undergraduate degrees. The index of significance in this comparison is exceedingly high (27.21). The percentage of the district group (22.72 per cent) who are college graduates is slightly less than that of the resident groups as a whole; that of the commuting group slightly more, 32.88 per cent. Although the difference between the percentages of the district and commuting groups is approximately ten per cent, it is scarcely large enough to produce a significant difference, the index being

only 3.54. However, the index of significance of difference between the district and non-resident groups is 27.37; in the case of the commuting and non-resident groups, it is 13.94. The non-resident group is decidedly different from each of the other groups with respect to the proportion of its members who are college graduates, but the district and commuting groups do not show a significant difference, the index being 3.54.

Comparisons of percentages of those previously enroled in graduate work.- In Table XIX which was computed in the same way as the preceding one, the percentage of each group having graduate records is given. Of the 1097 teachers, 223 have had some graduate study. Sixty-eight of these are resident teachers; 155 are non-residents. Nine comparisons are offered in the table.

1. In the elementary group.- The percentages of elementary teachers who have had graduate work are exceedingly low, ranging from 1.92 per cent in the commuting group to 8.89 per cent among the non-residents. While the percentage of non-residents previously enroled in graduate courses is approximately three times that of each of the other groups, no significant differences are found at the elementary level.

2. In the secondary group.- As one should expect, a much greater percentage of the secondary teachers have had graduate work, the range being from 31.43 per cent in the commuting group to 43.22 among the non-residents. However, differences at the secondary level, as at the elementary, are too small in every case to be regarded as significant.

3. In the administrative group.- Greater variations and still larger percentages are found at the administrative level than at the elementary and secondary. The percentage of graduate students in the resident group is 35.56; that of the non-resident group, 74.03. The index of significance of difference resulting from the difference between these two percentages, divided by the square root of the sum of the squares of their probable errors, is 6.71. This is the first significant difference found in Table XIX.

4. In the three levels of positions combined.- When totals are computed for the three levels of positions the comparisons of the table become more significant. Although only one significant difference is found in studying the groups separately, three such results are obtained through comparisons of the combined groups. In the resident group, 9.91 per cent have had graduate work; in the non-resident group, 37.71 per cent. This difference results in an exceedingly high index of significance of difference (15.83). The district group is lowest in the percentage of its members attending graduate schools (8.94 per cent). The index of signifi-

TABLE XIX

PROPORTION OF COLLEGE GRADUATES FROM RESIDENT AND NON-RESIDENT GROUPS WHICH HAVE PURSUED GRADUATE STUDY

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	2.50	2.64	1.92	8.89
	P.E.fp	.46	.53	----	1.65
	N.	55.	43.	12.	52.
	Index of Sig. of Dif.	3.74			3.61
Secondary	fp	32.23	32.56	31.43	43.22
	P.E.fp	2.87	3.41	----	2.37
	N.	96.	67.	29.	187.
	Index of Sig. of Dif.	2.95			2.57
Administrative	fp	35.56	25.71	70.00	74.03
	P.E.fp	4.82	----	----	3.10
	N.	20.	12.	8.	67.
	Index of Sig. of Dif.	6.71			
Total	fp	9.91	8.94	13.42	37.71
	P.E.fp	.77	.83	1.88	1.61
	N.	171.	122.	49.	306.
	Index of Significance of Difference	15.53			15.90
					9.80
		2.19			

cance of difference in this case is 15.90. The percentage of the commuting group (13.42) having graduate records lies in size between that of the district and that of the non-resident, and results in an index of 9.80 when compared with the latter, and in an index of only 2.00 when compared with the former. Therefore, the percentage of all non-residents having graduate records is significantly greater than that of the resident regional total of that of either of its sub-groups.

Comparisons of percentages of those who have obtained the Master's degree.- Since none of the 1097 teachers holds the Doctor's degree (Ph.D.), comparisons of the percentages of corresponding groups at each level of position thereby resolve themselves into comparisons of proportions of those holding the Master's degree. Of the 1097 teachers included in the study, 471 teachers, or 43.5 per cent, have the Bachelor's degree; 223 teachers, or 20.3 per cent, have had graduate work; and 53 teachers, or 4.8 per cent, have Master's degrees. The futility of carrying

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the comparison on to include only those who are working for the Doctorate is apparent. In fact, the number of persons holding the Master's degree is too small for reliable comparisons such as those offered in Tables XVIII and XIX, except in comparisons of regional totals.

Table XX is abbreviated to show the percentages of resident and non-resident teachers who have the Master's degree. The separate comparisons of the elementary, secondary, and administrative groups are omitted; comparisons of totals only are presented.

In the table it is shown that 10.22 per cent of the non-residents hold Master's degrees, whereas only 1.60 per cent of the total resident group and 1.68 per cent of the district group hold the advanced degree. In comparing the percentage of the total resident group with that of the non-resident, an index of significance of difference of 8.13 is obtained. In a similar comparison between the district group and the non-residents, an index of 7.91 is obtained. It is, therefore, practically certain that the percentage of the non-resident group who hold the Master's degree would also be greater than that of either the total resident or that of the district group if other samplings were made in similar school systems of Kentucky. A much larger sampling would probably show significant differences in the elementary, secondary, and the administrative positions, since the data available point that way.

Relative persistency in obtaining degrees and in doing graduate work.- In Table XXI an attempt is made to show further the persistency of resident and non-resident teachers in obtaining degrees and in doing graduate work. Since significant differences were found to exist throughout the three preceding tables, especially in the final comparisons of each, it was decided to extend the last section of Table XVIII as shown in Table XXI. The percentages in the first section of this table, which is an exact duplicate of the last section of Table XVIII, were obtained by dividing the number now employed in each regional group by the number of college graduates from that zone.

As stated in the analysis of the data presented in Table XVIII, 74.45 per cent of the entire non-resident group have obtained the Baccalaureate degree while only 24.93 per cent of the resident group have obtained the Baccalaureate degree. With the percentage of non-residents having college degrees approximately three times that of the total resident group, abnormally large differences are found to exist between the percentages of college graduates in the non-resident and each of the other groups, the index being 27.21 in the comparison involving the resident group,

TABLE XX

PROPORTION OF ALL GRADUATE STUDENTS FROM THE RESIDENT AND NON-RESIDENT GROUPS WHO HOLD THE MASTER'S DEGREE

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
All Positions Combined	f_p	1.60	1.68	1.34	10.22
	P.E. f_p	.32	.38	----	1.01
	N.	68.	48.	20.	155.
	Index of Sig. of Dif.	8.13			→
		7.91			→

TABLE XXI

PERSISTENCY OF RESIDENT AND NON-RESIDENT GROUPS IN SECURING THE BACHELOR'S DEGREE, IN CONTINUING TRAINING IN GRADUATE WORK, AND IN OBTAINING THE MASTER'S DEGREE¹

Percentage Ratios	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Percentage of number employed who hold the baccalaureate degree ²	f_p	24.93	22.72	32.88	74.45
	P.E. f_p	1.11	1.22	2.60	1.45
	Index of Significance of Difference	27.21			→
		27.37			→
		13.94			→
		3.54			→
Percentage of college graduates who have done graduate work	f_p	39.77	39.34	(40.82)	50.65
	P.E. f_p	2.52	2.98	-----	1.93
	Index of Significance of Difference	3.43			→
		3.19			→
		1.96			→
		.26			→
Percentage of graduate students who have master's degree	f_p	(16.18)	(18.75)	(10.00)	27.10
	P.E. f_p	-----	-----	-----	2.35
	Index of Significance of Difference				

¹None of the 1097 teachers hold the Doctor's degree.

²Last section of Table XVIII repeated.

27.37 in the comparison involving the district group, and 13.94 in the comparison involving the commuting group. However, no significant difference was found between the percentages of college graduates among the resident and the commuting groups.

The second section of the table was computed by dividing

in each case the number of persons doing graduate work by the number of that group holding the Baccalaureate degree. The result is the percentage of the college graduates of each zone who continue their training on the graduate level. It is noted that the number of cases in the commuting group is too small to make that percentage of any value in the comparison. More important than the smallness of sampling in the commuting group, however, is the revelation that none of the slight differences found between the non-resident and the other groups are of any significance.

The number of persons holding the Master's degree and the number doing graduate work are so small that when the former is divided by the latter in each case the resulting percentages are deceptive, except in the non-resident group. As a result comparisons are not presented at this point since only one of the obtained percentages is based upon a sufficient number of cases.

It is thus evident that the significant difference in the persistency of the two groups in obtaining degrees and in doing graduate work lies in the fact that the percentage of non-residents with the Bachelor's degree is three times as large as that of the resident group. Although the percentages of the non-residents tending to do graduate work and to obtain the Master's degree are greater than the corresponding percentages of the resident group, the differences are not significant.

Summary.- The data presented in the five tables (Tables XVII-XXI) show: (1) that, on the basis of college degrees and graduate study, the non-resident group has a more commendable record than the resident groups; (2) that, at all levels of position, the percentage of non-residents holding the Bachelor's degree tends to be significantly greater than that of each of the resident groups; (3) that a greater percentage of the non-residents appear to do graduate work although significant differences are found in comparison of regional totals only, with the single exception of the resident administrators; (4) that the regional totals tend to show a significantly higher percentage of the non-residents acquiring the Master's degree; (5) that, wherever the data are adequate for comparative purposes, the percentages of the commuting group tend to conform rather closely to the percentages of the district group; and (6) that differences in the persistency of the groups in obtaining degrees and in doing graduate work are due almost wholly to the greater proportion of the non-residents who obtain the undergraduate degree.

Comparative Scholarship on Basis of the Number of Semester Hours of Training

In this section, comparisons are made of preparation in

terms of semester hours of training. The mean number of semester hours of training and the index of significance of difference constitute the chief instruments of measurement and comparison. Comparisons are made of the college records of the groups of teachers with respect to: (1) the total amount of training, graduate and undergraduate combined; (2) the total amount of graduate work only; (3) the total amount of training in major subjects; (4) the total amount of training in minor subjects; and (5) the total amount of professional training.

The mean number of semester hours of graduate and undergraduate training combined.- Evidence obtained from the teachers as to the number of semester hours of training they have had is presented in Table XXII. A study of the data indicates that on the average the non-resident teacher has more training than the local product.

1. Elementary teachers.- The resident elementary teacher has an average of 69.9 semester hours of college and university training; the non-resident, an average of 99.5. The difference is approximately one collegiate year. Teachers of the commuting group on the average have slightly more training (74.3 semester hours) than the district group (68.8 semester hours). This is approximately an average of two years of training for the home teacher and an average of three years for the non-resident. The difference between the average training of the non-resident and that of each of the other groups is highly significant, the indices varying from 8.51 to 13.00. The difference between the average training of the two resident sub-groups is too small to be significant.

2. Secondary teachers.- Standards for secondary teachers enforced by accrediting agencies and state laws have greatly improved the amount of training of teachers at the secondary level as compared to that of elementary teachers. Yet the resident teacher with an average of 125.5 semester hours has scarcely exceeded the standard requirement of four years of college training. On the average the non-resident teacher has 138.2 semester hours of training, or 12.7 semester hours more than the resident teacher. This is a little more than the equivalent of one quarter's work in college. The commuting teacher as a general rule has slightly more training than the district teacher but the difference is not significant. Neither is the average training of the non-resident teacher significantly different from that of the commuting teacher. However, the difference between the average training of the non-resident and the average training of either the resident or the district group is significant.

3. Administrators.- Two reliable comparisons are possible

TABLE XXII

MEAN NUMBER OF SEMESTER HOURS OF GRADUATE AND UNDERGRADUATE TRAINING (COMBINED) IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	69.9	68.8	74.3	99.5
	S.D.	32.9	33.0	31.5	35.6
	P.E.m	.99	1.11	2.09	2.10
	N.	504.	401.	103.	132.
	Index of Significance of Difference	12.76 13.00 8.51 2.32			
Secondary	M.	125.5	124.3	128.3	132.2
	S.D.	27.4	28.5	22.5	20.4
	P.E.m	1.69	2.10	2.53	.97
	N.	120.	84.	36.	198.
	Index of Significance of Difference	6.50 6.02 3.65 1.21			
Administrative	M.	103.4	96.6	-----	150.9
	S.D.	53.7	48.9	-----	33.0
	P.E.m	5.52	5.74	-----	2.50
	N.	43.	33.	10.	77.
	Index of Sig. of Dif.	7.83 8.64			
Total	M.	82.3	79.6	91.9	128.1
	S.D.	40.5	39.0	42.0	34.5
	P.E.m	1.05	1.15	2.32	1.15
	N.	667.	518.	149.	409.
	Index of Significance of Difference	30.74 33.22 14.20 4.82			

at the administrative level. The resident administrator has on the average only 103.4 semester hours of training. This is an average of 21.1 semester hours less than that possessed by the district secondary teacher. The district representative averages even less, 96.6 semester hours, which is 27.7 semester hours less training than that of the district secondary teacher. On the other hand, the average training of the non-resident administrators is 150.9 semester hours, or an average of 12.7 semester hours more than that of the non-resident secondary teacher. Although the training of the resident or district administrator tends to fall below that of the corresponding secondary teacher, the average of the non-resident administrator is greater than that of the second-

ary teacher of the non-resident group. Within the administrative group, the non-resident teacher has an average of 47.5 semester hours, or approximately one and one-half years more training than that of the resident teacher; and an average of 54.3 semester hours - or slightly less than two years - more than that of the district teacher. Both of these comparisons show a high degree of significance of difference. The percentage of administrators who are elementary principals is much larger in the resident group than in the non-resident groups; salaries of elementary principals are usually lower than those of high-school principals and superintendents.

4. Elementary, secondary, and administrative groups combined.- When the elementary, secondary, and administrative groups of each zone are combined, it is found that the resident teacher has an average of 82.3 semester hours of training, whereas the non-resident has an average of 128.1. The commuting teacher's training with an average of 91.9 semester hours is significantly greater than that of the district teacher who has only 79.6 semester hours. The average amount of training of the non-resident teachers is 45.8 semester hours, or one and one-half years, greater than that of the district teachers, and 36.2 semester hours greater than that of the commuting teachers. The commuting teacher on the average has 12.3 semester hours more than that of the district teacher. All four comparisons are significant.

The mean number of semester hours of graduate work only.- The data of Table XXII include the combined undergraduate and the graduate scholastic records of the teachers. The record of the graduate work is given separately in Table XXIII. Because of the small number of elementary teachers and resident administrators with graduate records, this table is abbreviated to include the secondary teachers and the regional totals only.

In the secondary group, the 39 resident teachers have a mean of 14.3 semester hours of graduate credit while the 86 non-residents have a mean of 17.1 semester hours. The mean of the district group is slightly less than that of the resident group as a whole. Although the mean number of semester hours tends to increase from the local to the non-resident group, the comparisons made at the secondary level show no significant differences.

Only two comparisons of regional totals are possible since there are but twenty commuting teachers who have had graduate work. On the average the resident teacher has 15.7 semester hours of graduate work; the non-resident, 22.8 semester hours. The mean for the district group is, again, slightly less than that of the resident group as a whole. These two comparisons indicate that, on the basis of the amount of graduate study previously done, the average of the non-resident group is significantly

TABLE XXIII

MEAN NUMBER OF SEMESTER HOURS OF GRADUATE STUDY OF EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Second-ary	M.	14.3	13.5	-----	17.1
	S.D.	10.60	12.10	-----	10.85
	P.E.m	1.14	1.54	-----	.79
	N.	39.	28.	11.	86.
	Index of Sig. of Dif.	2.01			}
2.08					
Total	M.	15.7	14.7	-----	22.8
	S.D.	12.20	13.65	-----	15.35
	P.E.m	1.00	1.33	-----	.83
	N.	68.	48.	20.	155.
	Index of Sig. of Dif.	5.46			}
5.16					

superior to the average of either the resident or of the district group. It thus appears that the non-resident teacher, as a general rule, excels the resident, not only on the basis of the total amount of training but also on the basis of the amount of graduate training. More significant differences, however, are found in the comparisons of total training than in those of graduate training only.

Mean number of semester hours of training in major subjects.- In Table XXIV the mean number of semester hours of training in the teachers' major subjects are given. Both the undergraduate and graduate records are included in this table. A study of the findings revealed by the table follows:

1. At the elementary level.- On the average, the non-resident teacher at the elementary level has 26.6 semester hours of training in his major subject or subjects while the resident teacher has only 20.3 semester hours. On this basis the training of the commuting teacher slightly exceeds that of the district teacher. On the average the commuting teacher does not differ significantly from either the district or the non-resident teacher with respect to the amount of training in major subjects. The average amount of training increases gradually from the district to the non-resident group. The non-resident teacher is in this respect distinctly different from either the resident or the district teacher. Thus the non-resident elementary teacher is, as a rule, inclined to prepare more than the local elementary teacher in fields of major interests.

2. At the secondary level.- The amount of training in major subjects is greater in the case of secondary teachers than

TABLE XXIV

MEAN NUMBER OF SEMESTER HOURS OF TRAINING IN MAJOR SUBJECTS
IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	20.3	19.8	22.3	26.6
	S.D.	10.85	10.75	11.45	14.05
	P.E.m	.34	.38	.80	.84
	N.	454.	360.	94.	126.
	Index of Significance of Difference	7.00 7.40 3.71 3.01			
Secondary	M.	31.9	31.2	33.5	37.7
	S.D.	11.75	13.00	12.10	14.85
	P.E.m	.75	.99	1.40	.72
	N.	112.	78.	34.	191.
	Index of Significance of Difference	5.58 5.33 2.68 1.34			
Administrative	M.	34.9	29.9	-----	47.3
	S.D.	21.00	16.20	-----	19.10
	P.E.m	2.30	2.03	-----	1.48
	N.	38.	29.	9.	76.
	Index of Sig. of Dif.	4.54 6.53			
Total	M.	23.4	22.4	27.0	36.0
	S.D.	13.25	12.40	15.25	17.25
	P.E.m	.36	.39	.88	.59
	N.	604.	467.	137.	393.
	Index of Significance of Difference	18.56 19.23 8.49 5.35			

in the case of elementary teachers. At the secondary level, the mean number of semester hours of training of the non-residents is 37.7; that of the residents, only 31.9. The average of the non-resident group is again significantly greater than that of either the resident or the district group. The average amount of training of the commuting teacher is more than that of the district teacher but is less than that of the non-resident, with no significant difference between them in either case.

3. At the administrative level.- Except in the district group, the administrator has a higher average amount of training in major subjects than the secondary teacher of the same zone. Furthermore, the increase in the non-resident group (9.6 semester

hours) is greater than that in the total resident group (3.0 semester hours). The mean of the district group actually decreases (1.3 semester hours). The non-resident administrator has a mean of 47.3 semester hours of training in major subjects; the resident administrator, 34.9 semester hours; and the district administrator, only 29.9 semester hours. On this basis the non-resident administrator tends to be significantly superior to the administrator of either the resident or the district group. Thus, in so far as the amount of training in major interests is concerned, the non-resident group is the better trained group at the administrative level.

4. Elementary, secondary, and administrative levels combined.- The mean amount of training in major subjects is approximately fifty per cent greater in the non-resident group than in the resident group, the former having on the average 36.0 semester hours, the latter, only 23.4 semester hours. As in the other comparisons of this table, the average amount of training of the commuting teachers lies between the averages of the district and non-resident groups. In this case, however, the average commuting teacher differs from each of the other two groups in a significant way. The difference between the average training of the non-residents and that of each of the resident groups is abnormally high, attaining in one instance an index of 19.23. All comparisons of corresponding totals are therefore significant, the greater amount of training being found in each comparison in the group whose home is the more remote from the community in which the position is held.

The mean number of semester hours of training in minor subjects.- The data of Table XXV were obtained by tabulating the semester hours of training in the minor subjects of the various groups of teachers.

At the elementary level, significant differences with respect to amount of training in minor subjects are found between the non-resident group and each of the corresponding regional groups, the training of the former being the greater; but the corresponding difference between the averages of the district and commuting groups - .5 semester hours - is of no significance. At the elementary level the number of significant differences found between the mean number of semester hours in minor subjects is slightly greater than was found in the mean amount of credit in major subjects.

At the secondary level, no significant differences are to be found. The nearest approach to a significant difference occurs in the case of the commuting group which has the least amount of training. Although significant differences were found

TABLE XXV

MEAN NUMBER OF SEMESTER HOURS OF TRAINING IN MINOR SUBJECTS
IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	20.1	20.0	20.5	26.7
	S.D.	10.85	12.85	12.75	12.70
	P.E.m	.36	.47	.92	.76
Elementary	N.	421.	334.	87.	126.
	Index of Significance of Difference	7.85 7.53 5.21 .50			
Secondary	M.	34.0	35.0	31.7	34.6
	S.D.	13.65	13.55	13.35	13.65
	P.E.m	.89	1.06	1.57	.68
Secondary	N.	108.	75.	33.	182.
	Index of Significance of Difference	.50 .30 1.70 1.75			
Administrative	M.	28.0	26.1	-----	39.2
	S.D.	20.00	20.40	-----	18.30
	P.E.m	2.16	2.56	-----	1.43
Administrative	N.	39.	29.	10.	75.
	Index of Sig. of Dif.	4.32 4.43			
Total	M.	23.3	22.9	25.0	32.9
	S.D.	14.65	14.65	14.25	15.45
	P.E.m	.41	.47	.84	.53
Total	N.	568.	438.	130.	383.
	Index of Significance of Difference	14.33 14.08 7.98 2.18			

in the first two comparisons at this level in Table XXIV, the effect of accrediting agencies has probably caused a leveling of the amount of credit of secondary teachers with respect to minor subjects.

In the administrative groups, the situation is similar to that found in Table XXIV. The non-resident group proves to be distinctly better qualified than the local talent on the basis of amount of training in minor subjects. It may also be noted that local administrators tend to have slightly less training in their minor subjects than in their major subjects and that the non-residents tend to have considerably more.

When the regional totals are compared, it is found that

the mean amount of training in minor subjects is almost exactly the same as that found in the corresponding groups of Table XXIV. The non-resident group has a mean of 32.9 semester hours; the total resident group, a mean of 23.3 semester hours, the index of significance in this comparison being 14.33. The index between the mean of the non-resident group and that of the district group is 14.08; that between the non-resident and commuting groups, 7.98. The district and commuting groups, however, are not significantly different.

The difference in the number of significant variations in Tables XXIV and XXV is due mainly to the tendency of non-resident high-school teachers to take more training in their major subject than the resident teachers. There is also a tendency for non-resident elementary teachers to take more training in their minor subjects than commuting teachers.

Mean number of semester hours of professional training.-

A comparison of the amount of professional training of the teachers is probably of even greater importance than are some of the previous comparisons which have been presented. The influence of accrediting agencies is felt, but it is essential to know whether non-resident teachers tend to exceed these standards to a greater extent than do the local teachers. Data bearing on this question are presented in Table XXVI.

Among the elementary teachers, it appears that the amount of professional training of the non-resident group is, on the average, decidedly greater than in each of the other groups. The non-residents have a mean of 23.80 semester hours of professional training as compared to the residents' mean of 19.43 semester hours, the comparisons resulting in an index of significance of difference of 6.72. In comparison with the district group, the index is 6.56; and in comparison with the commuting group, the index is 5.33. The commuting and the district groups, on the average, have approximately the same amount of professional training.

The resident teacher at the secondary level has, on the average, 24.7 semester hours of professional training; the non-resident, 26.05 semester hours. The district and commuting groups show a mean difference of only .65 semester hours. Therefore, no significant difference exists between the amount of professional training in the various regional groups at the secondary level.

The resident administrator has a mean of 29.1 semester hours of professional training; the non-resident administrator, an average of 41.20 semester hours. The district average is only 27.5 semester hours. It is evident that non-resident administrators tend to excel the resident and district administrators on the

SUBJECTS

Non-Resident Group
26.7
12.70
.76
126.

21.

34.6
13.65
.68
182.

70.

39.2
18.30
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75.

32.9
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TABLE XXVI

MEAN NUMBER OF SEMESTER HOURS OF PROFESSIONAL TRAINING
IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	19.43	19.47	19.32	23.80
	S.D.	9.40	9.55	8.85	9.80
	P.E.m	.29	.33	.60	.58
	N.	485.	386.	99.	131.
	Index of Significance of Difference	6.72 6.56 5.33 .22			
Secondary	M.	24.7	24.5	25.15	26.05
	S.D.	9.95	10.00	9.72	8.55
	P.E.m	.63	.75	1.12	.42
	N.	114.	80.	34.	193.
	Index of Significance of Difference	1.80 1.80 .75 .48			
Administrative	M.	29.1	27.5	-----	41.20
	S.D.	11.15	10.25	-----	18.30
	P.E.m	1.16	1.22	-----	1.41
	N.	42.	32.	10.	77.
	Index of Sig. of Dif.	6.64 7.33			
Total	M.	21.0	20.8	21.71	28.22
	S.D.	10.60	10.00	10.25	13.15
	P.E.m	.28	.30	.58	.44
	N.	641.	498.	143.	401.
	Index of Significance of Difference	13.88 14.00 8.89 1.43			

basis of the amount of professional training acquired, the index of significance of difference being 6.64 in the case of the resident group, and 7.33 in the case of the district group.

In considering the regional totals it is found that the resident teacher has an average of 21.0 semester hours of professional training; the district teacher, an average of 20.8 semester hours; the commuting teacher, an average of 21.73 semester hours; and the non-resident, an average of 28.22 semester hours. Three of the four comparisons show significant differences, all of which favor the non-resident group, the indices being 13.88, 14.00, and 8.89, respectively. The average difference in the professional training of the commuting and district teachers is negligible.

Summary of comparative amounts of training on basis of semester hours of credit.- On the basis of the evidence presented in Tables XXII-XXVI inclusive, certain definite differences appear to exist with respect to the amount of preparation of resident and non-resident teachers in the school systems of Kentucky.

In all the comparisons there is a pronounced tendency for the training of the non-resident teachers to exceed in amount that of the resident teachers. Although differences are least pronounced at the secondary level, even there non-residents show a decided superiority with respect to the total amount of undergraduate and graduate training combined and in the amount of credit in fields of major interest. Of the 48 comparisons made between the non-resident group and the total resident, district, and commuting groups, 37 comparisons (77.1 per cent of the comparisons made) show significant differences. Ten of the eleven comparisons lacking significant differences are at the secondary level. The commuting group appears to rank closest to the non-resident, since five of the comparisons showing no significant differences are between these two groups. Only two significant differences are found between the commuting and the district groups, both of which are in the comparisons of the regional totals. It is therefore, evident that, as a general rule, the teachers do not tend to fall into three distinctly different groups, but only into two. The two exceptions to this condition are found in the regional totals of semester hours of undergraduate and graduate work combined and in semester hours of credit in major subjects. Of the 18 comparisons made between the regional totals, only two fail to show significant differences, these being between commuting and district teachers.

It thus appears that, as a general rule, the training of the teachers tends to increase with the remoteness of their zone of residence from the location of their present positions. These differences tend to increase from zone to zone to such an extent that differences between the first - the district - and the last - the non-resident - are significant in every case except two. Resident high-school teachers make a better showing than any other resident group. The evidence on training strongly favors the non-resident group.

Comparative Amounts of College Attendance, Summer School Attendance, and Training through Home-Study Courses

In this final section of the chapter are presented comparisons of the number of weeks of college and university attendance of resident and non-resident teachers. Analysis bearing on

the comparative amount of college attendance of teachers may be conveniently divided into four parts: (1) recency of graduation; (2) total amount of undergraduate and graduate attendance; (3) summer school attendance; and (4) home-study or extension work. In this section an attempt is made to find answers to the question stated in the introduction to the chapter, in so far as college attendance, recency of graduation from college, amount of undergraduate and graduate attendance, summer school attendance, and home study work are concerned. Some consideration is given to the question of professional spirit or attitude.

Recency of graduation.- In Table XXVII are presented data bearing on the recency of graduation from a standard four-year college course. Although the comparisons are offered in terms of mean number of years since graduation, the means may well be thought of as index numbers. The means were obtained by checking the teachers' answers to the question as to date of graduation from a standard four-year college. A value of "1" was given in case of teachers who had graduated during the year in which the data were collected. A value of "2" was given in the case of those who had graduated during the previous year. This process was continued until the number of years since graduation was obtained for each teacher. Thus the average years since graduation or indices of recency of graduation are given in Table XXVII.

At the elementary level, the resident teacher has been a graduate of a standard four year college, on the average, for 4.74 years; the non-resident, 3.04 years. The difference is not statistically significant. Although the average of the district group is 5.31 years, it is not significantly greater than that of the non-resident group. On the basis of recency of graduation from standard colleges, resident and non-resident elementary teachers are not very different statistically.

In each group at the secondary level, the index of recency of graduation from college is greater than that of the corresponding group at the elementary level. The mean number of years since graduation from college tends to be greater in the case of resident groups than in the case of the corresponding non-resident group, but none of the differences are significant. It is thus apparent that differences in the indices of recency of graduation from college of resident and non-resident secondary teachers are not statistically significant.

If the elementary and secondary teachers and the administrators of each zone are combined, the average index of recency of graduation of the district group is found to be 6.81 years; that of the commuting, 6.19 years; and that of the non-resident, only 5.50. Even though the average for each of the resident group

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TABLE XXVII

MEAN NUMBER OF YEARS SINCE GRADUATION FROM A STANDARD
FOUR-YEAR COLLEGE BY EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	M.	4.74	5.31	-----	3.04
	S.D.	7.90	8.97	-----	2.33
	P.E.m	.73	.93	-----	.22
	N.	53.	42.	11.	51.
	Index of Sig. of Dif.	← 2.24			
		← 2.38			
Second- ary	M.	6.39	6.29	6.62	4.75
	S.D.	6.58	6.36	6.73	5.13
	P.E.m	.46	.53	.84	.25
	N.	94.	65.	29.	185.
	Index of Signifi- cance of Difference	← 3.21			
		← 2.61			
		← 2.09			
		← .43			
Total	M.	6.81	7.02	6.19	5.50
	S.D.	8.35	8.78	6.80	5.98
	P.E.m	.44	.54	.67	.23
	N.	166.	119.	47.	303.
	Index of Signifi- cance of Difference	← 2.62			
		← 2.58			
		← .97			
		← .93			

tends to be greater than that of the non-resident group, no significant differences are found in any of the comparisons of the regional totals.

When considered alone the lack of significant differences in Table XXVII is probably of little or no importance; but when considered in connection with the corresponding amounts of teaching experience and training, it has a greater meaning.

Total number of weeks of undergraduate and graduate attendance.— The mean number of weeks of undergraduate and graduate attendance combined is presented in Table XXVIII.

At the elementary level, the resident teachers have attended an institution of higher learning for an average period of 72.04 weeks; the non-resident teachers, an average period of 108.02 weeks. The district teachers have on the average attended 6.13 weeks less than the commuting teachers. The difference between the average amount of attendance of the resident teachers and that of the non-residents is approximately 36 weeks or one collegiate year. The difference between the average length of

TABLE XXVIII

MEAN NUMBER OF WEEKS OF THE COMBINED UNDERGRADUATE AND GRADUATE ATTENDANCE OF EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	72.04	70.80	76.93	108.02
	S.D.	40.98	41.60	39.14	41.38
	P.E.m	1.26	1.44	2.67	2.45
	N.	480.	382.	98.	129.
	Index of Significance of Difference	13.08 13.11 8.59 2.02			
Secondary	M.	133.23	132.34	135.29	148.82
	S.D.	38.63	40.92	32.68	24.95
	P.E.m	2.45	3.11	3.78	1.22
	N.	113.	79.	34.	191.
	Index of Significance of Difference	5.69 4.93 3.39 .60			
Administrative	M.	112.38	104.38	-----	164.61
	S.D.	60.16	60.08	-----	48.11
	P.E.m	6.26	7.16	-----	3.70
	N.	42.	32.	10.	77.
	Index of Sig. of Dif.	7.18 7.47			
Total	M.	85.60	82.82	95.22	138.62
	S.D.	48.60	48.96	46.30	42.30
	P.E.m	1.30	1.49	2.58	1.45
	N.	635.	493.	142.	397.
	Index of Significance of Difference	27.07 27.08 14.71 4.16			

attendance of the non-resident teachers and that of each of the resident groups is highly significant, ranging from an index of difference of 8.59 for commuting teachers to 13.11 for district teachers. The difference between the means of the district and commuting teachers is not significant.

The resident secondary teachers have attended college and university for an average of 133.23 weeks; the non-resident, for an average of 148.82 weeks. The latter is approximately 15 weeks more than the former, which represents a significant difference, the index being 5.69 weeks. The average length of attendance of the district secondary teachers is slightly less than that of the resident group and its comparison with the average of the corre-

ponding non-resident group reveals a significant difference, the index being 4.93. The difference between the average periods of attendance of the commuting and non-resident groups is not significant. Neither is the difference between the averages of the commuting and district groups significant.

The resident administrators have had an average college and university attendance of only 112.38 weeks; the non-resident administrators, 164.61 weeks. This difference of approximately 52 weeks is significant, the index being 7.18. The district teachers have averaged only 104.38 weeks of college attendance - almost two years less than that of the resident teachers - the difference being statistically significant. With the exception of the non-resident group, the administrators on the average have had considerably less attendance than the corresponding secondary teachers. Non-resident administrators have on the average had 15.79 weeks more attendance than the secondary teachers of the same zone.

All four comparisons between the averages of the regional totals show significant differences. The non-resident teachers have had an average college and university attendance of 53.02 weeks more than the resident teachers, 56.80 weeks more than the district teachers, and 43.40 weeks more than the commuting teachers. The average attendance of the commuting teachers is 13.40 weeks more than that of the district teachers. The index of significance in the last case is 4.16 while those of the three comparisons between the non-resident group and the other groups are extremely high, ranging from 14.71 to 27.08.

The non-resident teachers tend to be more consistent with respect to increases in attendance from the elementary to the secondary positions and from the secondary to the administrative positions, local teachers showing a decided tendency to reach the highest point at the secondary level.

Summer school attendance.- It has already been shown that on the basis of recency of graduation differences between resident and non-resident teachers are not significant. There are decided differences between them with respect to the length of college and university attendance, that of the non-resident group exceeding that of the resident group. A study of summer school attendance should throw light on the character of the differences between teachers from the different zones. In the three tables (Tables XXIX-XXXI) which follow, data bearing on differences in summer school attendance are considered. In these tables summer school attendance is considered from the following points of view: (1) proportion of each group who have attended summer school, (2) amount of summer school attendance, (3) proportion of the total

college and university attendance acquired in summer schools. It will be recalled that the study of total attendance in Table XXVIII included residence acquired during both the regular year and summer schools. This portion of the study is a further refinement of the analysis of attendance restricted to summer school attendance only.

The percentage of each group who have at some time added to their college and university residence through summer school attendance is presented in Table XXIX. A consideration of these data reveals the following conditions: (1) Throughout the table differences between the percentages of the non-resident and resident groups who have attended summer school are very small and in no case significant. This statement is equally true for the regional totals. (2) There is a slight tendency for the local teachers to show the greater percentages, the administrative group being the only exception. (3) Percentages at the secondary level of each zone are slightly less than the corresponding elementary or administrative percentages of the groups attending summer school. (4) Approximately eighty to ninety per cent of the teachers of each group have at some time attended summer school. (5) Finally, consideration of the table may be dismissed with the general statement that approximately the same proportions of resident and non-resident teachers have attended summer school.

Since no material differences were found in the percentages of the groups attending summer school, a quantitative analysis on the basis of the number of weeks attended is presented in Table XXX. All teachers responding to this question in the data sheet are included in the table, that is, those answering "0" (meaning no summer school attendance) as well as those with summer school records were included.

An examination of these data reveals the close resemblance between Table XXX and the preceding table. Consideration of the table as a whole shows the following: (1) With the exception of one arrow at the secondary level and the four arrows of the regional totals, all arrows point in the same direction as those of the preceding table. (2) Local teachers at the elementary and secondary levels appear to have attended summer school longer than the corresponding non-resident teachers; at the administrative level and in the regional totals, non-residents have the longer summer school attendance records. (3) Elementary and secondary teachers attend summer school on the average from 17.88 to 25.75 weeks; administrators, from 37.00 to 42.34 weeks; and elementary and secondary teachers and administrators combined, from 23.55 to 25.28 weeks. (4) It is clear that administrators, as a rule, have attended summer school for a longer time than

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TABLE XXIX

PERCENTAGE OF THE TEACHERS OF THE VARIOUS GROUPS
WHO HAVE ATTENDED SUMMER SCHOOL

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	f_p	91.22	90.88	92.59	88.99
	P.E. f_p	.95	1.07	1.96	2.02
	N.	410.	329.	81.	109.
Elementary	Index of Significance of Difference	$\leftarrow 1.00 \rightarrow$ $\leftarrow .83 \rightarrow$ $\leftarrow 1.28 \rightarrow$ $\leftarrow .77 \rightarrow$			
	f_p	81.19	78.57	87.10	80.67
	P.E. f_p	2.62	3.30	4.06	2.10
Secondary	N.	101.	70.	31.	150.
	Index of Significance of Difference	$\leftarrow .15 \rightarrow$ $\leftarrow .54 \rightarrow$ $\leftarrow 1.41 \rightarrow$ $\leftarrow 1.66 \rightarrow$			
	f_p	91.43	92.31	-----	93.55
Administrative	P.E. f_p	3.12	3.26	-----	2.10
	N.	35.	26.	9.	62.
	Index of Sig. of Dif.	$\leftarrow .56 \rightarrow$ $\leftarrow .31 \rightarrow$			
Total	f_p	89.38	88.94	90.91	85.98
	P.E. f_p	.89	1.02	1.54	1.32
	N.	546.	425.	121.	321.
Total	Index of Significance of Difference	$\leftarrow 2.13 \rightarrow$ $\leftarrow 1.77 \rightarrow$ $\leftarrow 2.43 \rightarrow$ $\leftarrow 1.07 \rightarrow$			

either the elementary or secondary teachers. (5) Most important of all, none of the differences found in the table are statistically significant. (6) Finally, the findings of the table may be dismissed with the generalization that resident and non-resident teachers do not differ statistically with respect to the amount of summer school attendance.

In the study of this phase of the problem, a companion table to Table XXX was constructed; in this table those teachers who have had no summer school attendance are omitted. Only those who have actually attended summer school are studied. Fifty-eight resident and 45 non-resident teachers have not attended summer school. Mention is made of this table, although it is not included in the study. It agrees almost exactly with Table XXX, all arrows pointing in the same direction and none of the differences being significant. Averages are slightly increased. This

TABLE XXX

MEAN NUMBER OF WEEKS OF SUMMER SCHOOL ATTENDANCE
BY EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	23.09	22.77	24.35	21.26
	S.D.	18.12	18.43	16.68	15.58
	P.E.m	.60	.69	1.25	1.07
	N.	410.	329.	81.	109.
	Index of Significance of Difference	1.50 1.19 1.87 1.10			
Secondary	M.	23.37	25.75	17.98	21.17
	S.D.	24.03	26.57	15.70	20.09
	P.E.m	1.62	2.14	1.90	1.11
	N.	101.	70.	31.	150.
	Index of Significance of Difference	1.12 1.90 1.45 2.71			
Administrative	M.	37.00	37.50	-----	42.34
	S.D.	26.01	23.06	-----	26.64
	P.E.m	2.97	3.05	-----	2.28
	N.	35.	26.	9.	62.
	Index of Sig. of Dif.	1.43 1.27			
Total	M.	24.03	24.16	23.55	25.28
	S.D.	20.20	20.61	18.70	22.12
	P.E.m	.58	.67	1.15	.83
	N.	546.	425.	121.	321.
	Index of Significance of Difference	1.24 1.05 1.22 .46			

is important in that it strengthens the previously stated conclusion that resident and non-resident teachers do not differ in a significant way in the number of weeks they have attended summer school.

Although the proportion of local teachers who attend summer school is practically equal to the proportion of non-resident attending and although the amount of attendance is approximately equal in the comparisons, the data in Table XXIX clearly show that the average number of weeks attended by non-resident teachers is significantly greater than that attended by the local teachers. This indicates that the average amount of attendance during the

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regular year is greater in the case of non-resident teachers than in the case of resident teachers. If attendance during the regular year is more desirable than attendance during the summer school, this condition would tend to favor the non-resident group. Attendance during the regular year is usually regarded as more desirable, but requires a greater sacrifice of the instructional time of the teachers in service - an economic consideration of considerable importance.

Since the data of the foregoing tables which show the proportion of each group attending summer school as well as the amount of summer school attendance failed to show any significant differences between resident and non-resident teachers, one other table based on summer school attendance is offered. The data in the table show the proportion of the total attendance of each group which was made in summer schools. In computing the proportion of total residence acquired through summer school attendance, the total number of weeks of summer school attendance was divided by the total weeks of college residence of each teacher. The proportion was then reduced to a percentage for each individual. Frequency distributions of these percentages were next constructed and the mean percentage in each group determined. These data are assembled in Table XXXI.

At the elementary level, an average of 42.95 per cent of the attendance of the resident teachers was restricted to summer schools; whereas an average of only 24.20 per cent of the attendance of the non-resident teachers was acquired during the vacation months. Although the data of Table XXX show no significant differences between the average amount of summer school attendance of resident and non-resident teachers at any level or in the regional totals, the comparison between the resident and non-resident elementary groups gives an index of significance of 9.72. The non-resident elementary teacher thus tends to be significantly different from either the district or commuting elementary teacher in this respect. The difference between the two resident elementary groups is very small.

At the secondary level, the average difference between the non-resident and district teachers is significant, the index in the comparison being 4.21. There is a strong trend toward a significant difference between the averages of the total resident and non-resident groups but the index is less than the necessary 4.00. The other two secondary comparisons are of no significance. It may also be noted that the proportion of the total residence obtained by summer school attendance is greater in the case of elementary teachers than in the case of secondary teachers. This is true of teachers from each zone; yet the difference in the non-

MEAN PERCENTAGE OF COLLEGE AND UNIVERSITY ATTENDANCE OF EACH GROUP OBTAINED IN SUMMER SCHOOLS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	Mp	42.95	43.80	39.50	24.20
	S.D.	34.65	35.35	31.05	23.80
	P.E.mp	1.17	1.33	2.33	1.54
	N.	401.	320.	81.	109.
Index of Significance of Difference		9.72 9.66 5.48 1.60			
Secondary	Mp	22.40	25.20	15.20	15.05
	S.D.	25.60	27.80	18.45	14.65
	P.E.mp	1.74	2.27	2.24	.81
	N.	99.	68.	31.	149.
Index of Significance of Difference		3.83 4.21 .48 2.82			
Administrative	Mp	46.60	54.70	-----	27.58
	S.D.	36.65	37.85	-----	17.90
	P.E.mp	4.24	5.03	-----	1.52
	N.	34.	25.	9.	63.
Index of Sig. of Dif.		4.23 5.17			
Total	Mp	39.37	41.40	32.40	20.61
	S.D.	34.25	35.15	29.85	19.55
	P.E.mp	1.00	1.17	1.83	.74
	N.	534.	413.	121.	321.
Index of Significance of Difference		11.85 14.96 5.98 4.15			

The district administrators as a rule have obtained more than half of their residence credit in summer school (54.70 per cent) and the average of the entire group is 46.60 per cent. On the other hand, the non-resident administrators have completed only 27.58 per cent of their attendance in summer schools. The variation from one position level to another is very noticeable in the resident groups but is most constant in the non-resident groups. Both differences between administrative groups are significant.

The four comparisons between the averages of regional

totals are significant, two of them highly significant. The average percentage in the district total is slightly more than double that of the non-resident total, the former being 4.40 per cent; the latter, 21.61 per cent. The average of the commuting group falls between the averages of the district and non-resident groups and is distinctly different from either of them.

Of the 534 resident teachers supplying this information, 101 secured 100 per cent of their attendance in summer schools. Of the 101, 87 are elementary teachers. Only six of the 321 non-resident teachers obtained 100 per cent of their attendance in summer schools. Fifty-two (52) resident teachers have secured no part of their attendance in summer school; 46 of the non-residents have also obtained all their attendance during the regular year. These various statements apparently mean that the local teachers are inclined to secure a greater proportion of their college attendance through summer schools during the vacation months when they are not teaching. On the other hand, non-resident teachers are more inclined either to take a greater part of their training before entering positions or to leave their positions for training during the regular college year. The last two statements have at least two implications, one or both of which may be true in individual cases. The tenure of non-resident teachers may be less stable than that of local teachers; this may account for the greater amount of college attendance by non-resident teachers during the regular year. Data presented in Chapters II and III indicate a trend in that direction. Again the professional spirit of the local teacher may be at a lower ebb than that of the non-resident. More material bearing on this point will be presented in the following chapters, especially in Chapter V.

Credits earned through extension work.- Differences in the quality of college work done in residence and by extension are probably considerably greater than differences in the quality of work accredited to summer school and the regular year. That the use of the libraries and laboratories are usually lacking to those studying by extension is significant. Frequently the personal contact between teacher and student is also lacking as in correspondence courses. The colleges have also placed a premium on residence, since only a limited amount of work done by extension is accepted by most colleges in meeting the requirements for degrees. Most graduate schools accept little, if any, work done by extension. A minimum of one year's residence is required by all institutions as a prerequisite for a degree of any kind. It thus appears that work done in residence is generally considered the more desirable.

Comparisons of the amount of work done by extension are

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offered as one type of evidence relating to the quality of training. The attitude of the teacher toward work by extension is also implied in the degree to which credit has been earned through that avenue. There is also an economic implication which will be considered later. Comparative data related to credit earned by extension are presented in the remaining tables of this chapter as follows: (1) percentage of each group who have earned credit through extension, (2) mean number of semester hours of credit thus earned by each group, and (3) proportion of the total credit earned to date which was earned through extension courses. The procedure in the analysis of these data is very much the same as that in the analysis of the summer school attendance.

Data showing the percentage of each group who have had part of their training by correspondence and extension are presented in Table XXXII.

Forty-four and eighteen hundredths (44.18) per cent of the non-resident elementary teachers have had training by extension. On the other hand, 61.50 per cent of the district elementary teachers and 79.79 per cent of the elementary commuting teachers have had training by this method. Approximately two-thirds (65.17 per cent) of the entire local elementary group of teachers have had some training by extension. It is to be noted that the extension method of training is most characteristic of the commuting teachers and least characteristic of the non-resident teachers in the elementary positions. In fact, the three elementary groups - the district, commuting, and non-resident groups - fall into three distinctly different types with respect to the percentage of each who have had some training by extension. All these comparisons show significant differences.

The percentage of secondary teachers who have had training through extension courses is much smaller in each zone than that of the elementary teachers; in fact, it is approximately one-half as large, except in the non-resident group, where it is only about twelve per cent less. It will also be noted that the percentage of secondary teachers who have had work through extension courses is approximately the same from zone to zone, the range being from 32.12 per cent to 34.23 per cent. None of the differences are significant. It is obvious that the tendency to take extension courses is practically uniform among secondary teachers of the resident and non-resident groups.

In each zone the percentage of administrators who have had extension courses conforms more closely with that of the elementary group than with that of the secondary group, except that the differences are not significant in any comparisons at this level.

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TABLE XXXII

PERCENTAGE OF EACH GROUP WHO HAVE EARNED SOME COLLEGE CREDIT BY EXTENSION

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	65.17	61.50	79.79	44.18
	P.E.fp	1.48	1.70	2.79	2.89
	N.	468.	374.	94.	129.
Elementary	Index of Significance of Difference	$\leftarrow 6.46$ $\leftarrow 5.17$ $\leftarrow 8.86$ $\rightarrow 5.59$			
	fp	34.23	35.53	-----	32.12
	P.E.fp	3.04	3.70	-----	2.27
Secondary	N.	111.	76.	35.	193.
	Index of Sig. of Dif.	$\leftarrow .56$ $\leftarrow .79$			
	fp	57.50	61.29	-----	42.85
Administrative	P.E.fp	5.27	5.90	-----	3.80
	N.	40.	31.	9.	77.
	Index of Sig. of Dif.	$\leftarrow 2.33$ $\leftarrow 2.62$			
Total	fp	59.13	57.38	65.22	38.09
	P.E.fp	1.33	1.52	2.73	1.64
	N.	619.	481.	138.	399.
Total	Index of Significance of Difference	$\leftarrow 9.97$ $\leftarrow 8.61$ $\leftarrow 8.53$ $\rightarrow 2.50$			

When the percentages of elementary and secondary teachers and administrators of each zone are combined, it is found that 38.09 per cent of the non-residents have had extension courses as compared to 57.38 per cent of the district group, 65.22 per cent of the commuting group, and 59.13 per cent of the entire resident group. The percentage of the commuting group is highest; that of the non-resident, lowest. The difference between the percentages of non-residents who have had extension training and that of the resident, district, and commuting groups in each case is highly significant, but the difference between the percentages of the district and commuting groups is not significant. The percentages of commuting secondary teachers and administrators who have had training by extension are apparently sufficiently lower than the corresponding percentages of the district group as to eliminate the possibility of a significant difference between the district and commuting groups in the comparison of the regional totals.

Although the district, commuting, and non-resident groups, at the elementary level, fall into three distinctly different groups, comparisons of regional totals show only two such groups - the non-resident and the resident - the latter including both the district and commuting groups.

For the table as a whole, the variations of the non-resident percentages in the different positions are much smaller than in the other groups, thereby indicating a more stable and uniform condition on this basis in that group. The commuting elementary group is unique in one respect, that is, even though burdened daily with the longest journey to and from school, the percentage of this group who have had extension courses is significantly larger than that of each of the other zones. This significant characteristic of elementary commuting teachers is sufficient to produce a strong tendency in that direction in the comparisons of regional totals also. The cause of the situation may be partially an economic one. However, this aspect of the problem will be considered in a later chapter.

In Table XXXIII, data are presented to show the amount of training obtained by each group through extension. This is shown on the basis of the mean semester hours of credit earned by those answering the question. The following conclusions are apparently justified on the basis of the data: (1) As a general rule there is a very strong tendency at each level for the amount of extension work acquired by the local teacher to be significantly greater than that acquired by the non-resident. Although the index is 3.30 or more in seven of the eight possible comparisons, it actually reaches the necessary 4.00 in one comparison, that between the district and non-resident administrators which is 4.01. (2) The mean regional totals show that the local groups, both separately and as a whole, have had significantly greater amounts of work through extension than have the non-residents. (3) The local teacher has apparently averaged two to three three-hour courses by extension; the average non-resident, one to two. (4) Secondary teachers tend to take the least amount of training by this method. (5) The group with the lowest average amount of work acquired by extension is the non-resident secondary group; the highest, the district administrative group. (6) On the basis of the amount of training earned by the combined regional groups by extension, the teachers fall into two distinctly different types as in the previous table.

Table XXXIV, a companion to Table XXXIII, differs from the latter to such an extent that it is included in the body of the study. In Table XXXIV the means were computed by omitting all teachers who have had no training by extension, that is, only

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TABLE XXXIII

MEAN NUMBER OF SEMESTER HOURS OF COLLEGE AND UNIVERSITY CREDIT
EARNED THROUGH EXTENSION BY ALL TEACHERS PROVIDING IN-
FORMATION

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	8.22	8.20	8.32	5.10
	S.D.	10.36	10.78	8.45	12.21
	P.E.m	.32	.38	.59	.73
	N.	468.	374.	94.	129.
Index of Significance of Difference		$\leftarrow 3.90$ $\leftarrow 3.78$ $\leftarrow 3.43$ $\rightarrow .17$			
Secondary	M.	5.63	5.56	5.79	2.67
	S.D.	12.70	10.76	16.64	5.76
	P.E.m	.81	.83	1.90	.28
	N.	111.	76.	35.	193.
Index of Significance of Difference		$\leftarrow 3.47$ $\leftarrow 3.30$ $\leftarrow 1.63$ $\rightarrow .11$			
Administrative	M.	8.31	9.76	-----	3.86
	S.D.	10.40	11.16	-----	7.44
	P.E.m	1.11	1.35	-----	.57
	N.	40.	31.	9.	77.
Index of Sig. of Dif.		$\leftarrow 3.56$ $\leftarrow 4.01$			
Total	M.	7.76	7.88	7.36	3.68
	S.D.	10.86	10.88	11.03	8.73
	P.E.m	.29	.33	.63	.29
	N.	619.	481.	138.	399.
Index of Significance of Difference		$\leftarrow 9.46$ $\leftarrow 8.82$ $\leftarrow 5.33$ $\leftarrow 2.37$			

those who have had some training by extension are included. Of course, this tends to increase the means throughout the table, since 253 of the resident teachers and 247 of the non-residents supplying the information have had no training through extension courses.

The data of Table XXXIV reveal the following situation:
(1) Differences between the elementary groups of the different zones are of considerable less magnitude than those found in the previous table. (2) Although the elementary commuting group appeared unique on the basis of the large percentage of the group taking work by extension, these data show that the elementary

TABLE XXXIV

MEAN NUMBER OF SEMESTER HOURS OF COLLEGE AND UNIVERSITY CREDITS
EARNED BY EACH GROUP THROUGH EXTENSION COURSES¹

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	M.	12.61	13.22	10.43	11.54
	S.D.	10.45	10.55	9.60	17.55
	P.E.m	.40	.47	.75	1.57
	N.	305.	230.	75.	57.
	Index of Signifi- cance of Difference	$\leftarrow .66 \rightarrow$ $\leftarrow 1.02 \rightarrow$ $\leftarrow 1.34 \rightarrow$ $\leftarrow .64 \rightarrow$			
Second- ary	M.	16.45	15.65	-----	8.31
	S.D.	17.15	13.00	-----	7.50
	P.E.m	1.88	1.69	-----	.63
	N.	38.	27.	11.	62.
	Index of Sig. of Dif.	$\leftarrow 4.06 \rightarrow$ $\leftarrow 4.08 \rightarrow$			
Adminis- trative	M.	-----	-----	-----	9.02
	S.D.	-----	-----	-----	9.10
	P.E.m	-----	-----	-----	1.07
	N.	23.	19.	4.	33.
	Index of Signifi- cance of Difference	$\leftarrow 4.55 \rightarrow$ $\leftarrow 5.14 \rightarrow$ $\leftarrow 1.53 \rightarrow$ $\leftarrow 2.61 \rightarrow$			
Total	M.	13.13	13.73	11.28	9.67
	S.D.	11.35	11.20	11.70	11.80
	P.E.m	.40	.45	.83	.65
	N.	366.	276.	90.	152.
	Index of Signifi- cance of Difference	$\leftarrow 4.55 \rightarrow$ $\leftarrow 5.14 \rightarrow$ $\leftarrow 1.53 \rightarrow$ $\leftarrow 2.61 \rightarrow$			

¹Persons lacking extension credits omitted.

commuting teachers who actually take such training take a lower average amount than the individuals of the other groups. (3) The tendency for local secondary teachers to take extension courses is approximately twice as strong as that of the non-resident teachers and in both comparisons at this level the differences are significant. Corresponding differences in the previous table are not significant. (4) The differences between the mean of the regional total of non-residents and the corresponding means of the resident and district groups are significant, but the mean of the commuting teachers is not significantly different from that of either the district or the non-resident teacher. (5) Where significant differences are found in the table, the teachers tend to fall into two distinctly different groups only. (6) The most

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important differences between the data presented in this and the preceding table is found at the secondary level, where, as a general rule, the different regional groups have been found throughout the study to be most homogeneous. It may be suggested that this condition is due to the greater necessity of completing a college course in the case of certain local secondary teachers who have not met the full requirements of the accrediting association.

In Table XXXV, the final table of the chapter, are presented data showing the percentage of the teacher's total amount of training which was acquired by extension courses. This table was constructed in the same way as Table XXXI. Comparisons are made between the percentage averages. The total number of teachers answering the question were included in computing the percentage averages.

In the elementary groups, the non-resident teachers have earned an average of only 5.49 per cent of their credits by extension; the commuting teachers, 11.77 per cent; the district teachers, 15.04 per cent; and the teachers of the entire resident group, 14.39 per cent. The average percentage of training acquired by this method by the non-resident teachers is approximately one-half that done by this method by the commuting teachers, and approximately one-third that done by the district teacher. On this basis the average proportion of the non-resident teachers' training acquired by extension courses is significantly less than that of either the commuting or district group or the two combined. However, the commuting group does not differ materially from the district group. Thus the elementary teachers, on this basis, fall into two distinctly different groups only.

At the secondary level no significant differences are found, although the differences between the non-resident and total resident and district groups tend to be large, the latter being the greater. It is noted also that secondary teachers in each zone have taken a much smaller proportion of their training by extension than have the elementary teachers. In the administrative groups, the average of the non-resident group is significantly smaller than the corresponding averages of the total resident and district groups, the former being only 3.08 per cent, the latter being 11.81 and 14.44 per cent, respectively. At the administrative level, significant differences are found on this basis between the average of the non-resident administrator and that of either the resident or district administrator, the average for the local groups being the higher.

In comparisons of the regional totals, an average of only 3.64 per cent of the training of the non-residents was acquired

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TABLE XXXV

PERCENTAGE OF THE TOTAL TRAINING EARNED BY EACH GROUP THROUGH EXTENSION COURSES

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	Mp	14.39	15.04	11.77	5.49
	S.D.	18.75	19.93	12.68	10.75
	P.E.mp	.59	.64	.89	.67
Elementary	N.	466.	373.	93.	127.
	Index of Significance of Difference	← 10.47 ← 10.27 ← 5.56 ← 2.97			
Secondary	Mp	5.45	5.89	4.50	2.64
	S.D.	10.16	11.57	12.31	8.30
	P.E.mp	.65	.90	1.40	.41
Secondary	N.	111.	76.	35.	191.
	Index of Significance of Difference	← 3.65 ← 3.28 ← 1.27 ← .84			
Administrative	Mp	11.81	14.44	-----	3.08
	S.D.	16.32	17.60	-----	6.52
	P.E.mp	1.74	2.13	-----	.50
Administrative	N.	40.	31.	9.	77.
	Index of Sig. of Dif.	← 4.82 ← 5.19			
Total	Mp	12.61	13.57	9.32	3.64
	S.D.	15.91	19.00	16.17	9.06
	P.E.mp	.43	.58	.93	.31
Total	N.	617.	480.	137.	395.
	Index of Significance of Difference	← 19.09 ← 15.05 ← 5.80 ← 3.86			

by this method, while averages of 9.32 per cent of that of the commuting teachers, 13.57 per cent of that of the district teachers, and 12.61 per cent of that of the resident teachers were obtained in this way. Each of these three averages of the home groups is significantly different from that of the average of the corresponding non-resident group. There is also a very strong tendency toward a significant difference between the averages of the district and commuting groups which, on this basis, would place the teachers in three distinctly different types.

A marked tendency is noted for local teachers to become more strongly identified with the home-study method of training than is true of non-residents. Apparently those who teach away

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SUMMARY

As a result of the foregoing analysis of data relative to the amount of training and college attendance of resident and non-resident teachers, the following general conclusions are apparently warranted:

1. Resident and non-resident teachers tend to differ greatly with respect to the number of degrees held. The chief source of the difference between the groups on this basis is due to the percentage obtaining the Bachelor's degree. The percentage of non-resident teachers who have the Bachelor's degree in the elementary, secondary, and administrative positions is significantly higher than the corresponding percentages of the local groups. Comparisons between the regional totals show abnormally large differences, amounting to indices of significance of difference of 13.94 to 27.37. Beyond the Bachelor's degree comparisons of regional totals show significant differences in the percentages of those who have had some graduate work and in the percentages of those who have attained the Master's degree. On the basis of degrees obtained, the teachers apparently fall into two types only - the resident and non-resident.

2. The non-resident teachers, as a general rule, are significantly superior to the local teachers with respect to average amount of training on the basis: (a) of semester hours in undergraduate and graduate work combined, (b) of semester hours of graduate work only, (c) of semester hours in fields of major and minor interests, and (d) of semester hours of professional training. Even at the secondary level, where the most homogeneous condition has been found thus far in the study, the superiority of the non-resident group proves to be significant in comparisons (1) of total amount of training, and (2) of amount of training in fields of major interests. On this basis, in fact, 77.1 per cent of the 48 comparisons made between the semester hours of training of the resident and non-resident groups show significant differences.

On the basis of the number of semester hours of training, the teachers tend to fall into two distinct types only, except in the comparisons of regional totals of undergraduate and graduate work combined and of work in fields of major interests, in which case they fall into three distinctly different types.

3. Home teachers on the average have been college graduates longer than non-residents, yet the differences in no cases are significant. Great differences exist between the average

length of college attendance of the local and non-resident groups, the latter being significantly greater than the former. In considering the regional groups as wholes, it is found that on this basis they fall into three types.

4. The study of the summer school attendance indicates: (a) that approximately the same per cent of resident and non-resident teachers have attended summer school; (b) that, on the average, the period of attendance has been practically the same; but (c) that a significantly greater proportion of the average local teacher's total residence in college has been obtained through summer school attendance. In fact, the differences just mentioned are so great that three distinctly different types are found in comparisons of the regional totals, the district and secondary groups differing significantly from each other as well as each differing from the non-resident group.

5. The percentage of local teachers who have had some extension training tends to be significantly greater than that of the non-resident group. Comparisons of regional totals show that the average amount of credits thus earned by the local teachers is significantly greater than that of non-residents. By restricting the number of cases to those who have actually had some extension training, it is discovered that even the local teachers at the secondary level have, on the average, had twice as much such training as the non-resident group. Finally, on the basis of the proportion of the total amount of training which was acquired by extension courses, the differences between the groups are further magnified, the differences being significant in all comparisons except at the secondary level and even there a strong tendency in that direction appearing. The status of the commuting group, on this basis, appears to agree rather closely with that of the district group. Local teachers evidently are the more closely identified with extension courses as a method of improvement and of meeting required standards of training.

6. A more condensed statement of the situation as revealed by the data in this chapter follows: (a) Home teachers who are college graduates graduated from college at approximately the same time as non-residents; (b) they have attended college for a much shorter length of time; (c) they have attended summer school for approximately the same length of time although the summer proportion of their total residence is much lower than that in the case of non-residents; (d) local teachers, as a rule, are very much more inclined to use the extension method as a means of increasing their training.

7. Some possible explanations for the existence of these group characteristics are suggested by these and previously pre-

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sented data. Local teachers may, through means other than merit, training, etc., secure positions at home before their training programs have advanced far, if any, beyond the minimum legal or local requirements for teaching. Positions once obtained by local teachers may be more easily held for the same reason. With tenure more secure, the teachers may cling more closely to the positions, thereby failing to continue training in residence on a larger scale during the regular school year. But for this weakness the local teachers appear to compensate to some degree by attending summer school in amounts equal to the attendance of non-resident teachers. More frequently, however, the home teachers appear to meet the situation by taking extension courses. On the other hand, the non-resident teachers must complete a larger part of the necessary training before they can successfully meet local competition in securing and holding positions away from home. The greater training of the non-resident teachers is offered as the neutralizer of these hidden influences which apparently aid the local competitors in securing and holding positions. The non-resident teachers, too, have apparently shown a desirable professional spirit by continuing their training in summer school and through extension beyond the minimum requirements. However, that may have been necessary from a competitive standpoint as previously suggested.

8. Again the explanation may rest, at least in part, on an economic basis. Perhaps the salaries of the local teachers are lower than those of the non-residents, especially in school systems employing a majority of their teachers from the local zones. Perhaps the employing of a predominating proportion of local teachers lowers the level of the salary scale in such school systems. Perhaps the local teachers have more dependents and greater home financial responsibilities. These questions will be considered in a later chapter. However, for the present, the fact remains that local teachers, as a rule, in comparison with non-resident teachers, have apparently held their positions longer, have ventured away from home for a less proportion of their training during the regular year, and have earned a greater proportion of their credits by extension. It seems fair to conclude from these facts and suggestions that local teachers tend to show a poorer professional attitude toward continued training, a greater proportion of which is obtained by ways requiring the least sacrifice of time, money, and security of tenure on the part of the teachers.

9. It is apparent from the evidence presented in this and previous chapters that the status of training and college attendance of local teachers is not in proportion to the percentage of

their group employed and to the period of their service in the home school systems. With much less training, the home teachers, as a general rule, hold a greater proportion of the positions and experience a longer period of service in them. The secondary teachers are the only ones who show a tendency to deviate from this general condition. Accrediting agencies beyond the control of local authorities are at least partially responsible for this improvement in the status of the secondary teacher.

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CHAPTER V

PROFESSIONAL ATTITUDE AS REVEALED BY PROFESSIONAL ACTIVITIES

In this chapter consideration is given to differences between the resident and non-resident teachers with respect to the following criteria:

1. Punctuality in teaching hours.
2. Recent college and university attendance and credits obtained.
3. Membership in professional clubs, fraternities, and associations.
4. Attendance and participation in educational meetings.
5. Creative scholarship - production and publication of professional articles.

Tables bearing upon the foregoing topics are presented. The tables in structure are of the same general type as those previously presented - frequency distributions of means and percentages, with the index of significance of difference. In some cases in which no significant differences are found, only a short discussion appears in the context of the chapter, the supporting table or a portion of it having been included in the appendix.

The characteristic method of presenting the data of this chapter, with few exceptions, is as follows. For each item of comparison two tables are usually used. The first is a percentage table, showing the proportion of those responding from each group who meet the criterion under consideration. This is followed by a table of means showing the degree of participation by members of the groups. At some levels participation has been too light to be included in the table. Assuming these topics as criteria of professional attitude or spirit of teachers, the data in this chapter have been analyzed and are now presented for the purpose of offering answers to the following questions:

1. Do resident and non-resident teachers differ significantly with respect to professional attitude?
2. How do these differences between resident and non-resident teachers agree with differences found earlier in the study relative to the proportions of each group employed in these school systems?

The treatment of the five topics or criteria of profes-

sional attitude follows in the order in which they are listed in the introduction to the chapter.

Punctuality in Teaching Hours

The teachers were asked to indicate on the data sheet the number of days they were absent from their teaching work within the past year from any causes. It was anticipated in advance that the number of teachers absent and the number of days out of school would not be sufficiently large to permit an analysis of the causes of absence. For this reason, absences on teaching days may not be a good indication of the professional attitude of the teacher but rather a matter of economic importance to the board of education, especially in cases involving the payment of salaries of substitutes through the use of additional funds.

Two tables containing data bearing on this criterion are found in the appendix.¹ Since this criterion is probably of less value than other criteria used as a measure of professional attitude, these tables have not been inserted in the body of the chapter. A short discussion of them will suffice. There were 815 replies to this question in the data sheet and of that number 374 had not been absent from their teaching work during the year. Averages in the tables are based on the total number responding. This plan of determining means is followed throughout the chapter.

The data presented in Table LXXXI show the percentage of each group of teachers who have not been absent from teaching work within the past year. The following summary contains the more outstanding characteristics of the table: (1) The percentages of the various groups of teachers who have not been absent from their teaching work within the past year vary from 30.65 per cent in the non-resident administrative group to 51.82 per cent in the non-resident secondary group. (2) No differences between corresponding groups are significant and most of the indices show only slight trends of differences. (3) Such trends as are found apparently favor the non-resident group at the secondary level; the local teachers, in the other three divisions of the table.

The data found in Table LXXXII show the average number of days the teachers were absent from school during the previous year. The findings of these data are given in the following summary: (1) The average number of days during which teachers were absent from school varies from 1.88 days in the non-resident elementary group to 5.42 days in the district administrative group. (2) None of the comparisons shows a significant difference.

¹ Tables LXXXI and LXXXII, Pp. 193-194.

the index being very small in each case. (3) The strongest trends toward significant differences are found in comparisons within the elementary and administrative group. (4) These tendencies show that at the elementary and administrative levels local teachers are inclined to be absent more than non-residents, but that in comparisons of secondary groups and of regional totals local teachers are inclined to be absent less than non-residents. The indices of significance of differences are smaller in the latter comparison. (5) The trends revealed by the data of the two tables substantially agree with each other, except in comparisons of regional totals, where the arrow directions are reversed.

The data presented in these two tables show rather clearly that the local and non-resident teachers are practically equal with respect to their promptness in being present for the daily duties of their teaching positions.

Recent College Attendance and Credits Earned

Many of the educational institutions of the country now require that all work leading to a master's degree in education be done within five years of the date of the awarding of the degree. This ruling was suggestive of the idea of finding out recent tendencies of the teachers in improving their qualifications for teaching. Thus it was decided to ascertain what had been done along this line within the five years preceding the collection of these data. Of course many teachers of each group have not taught as much as five years; some of them have had all of their college training within that time. It was shown earlier in the study that on the average the non-resident teachers graduated from college at a slightly more recent date than the resident teachers, but the differences in these dates were not significant. It is important to know how active the members of the groups have been within the past few years if recency of training is to be regarded as an index of their professional attitude.

Proportions attending.- The data contained in Table XXXVI show the percentage of each group who have attended college or university within the past five years. The teachers responded in a highly satisfactory way in answer to this question of the data sheet, 1050 of the 1097 supplying the desired information. Of this number 650 are resident teachers; 400, non-residents. Fifty-three (53) resident teachers and 17 non-residents had not attended an institution of higher learning within this period.

One sees in this table several significant differences and strong tendencies toward significant differences; (1) With

TABLE XXXVI

PERCENTAGES OF THE VARIOUS RESIDENT AND NON-RESIDENT GROUPS WHO HAVE ATTENDED INSTITUTIONS OF HIGHER LEARNING WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	93.98	93.47	96.00	99.24
	P.E.fp	.72	.84	1.32	.51
	N.	498.	398.	100.	132.
	Index of Significance of Difference	5.98 → 5.89 → 2.30 → 1.61 →			
Secondary	fp	85.59	82.05	93.94	94.24
	P.E.fp	2.25	2.93	2.80	1.13
	N.	111.	78.	33.	191.
	Index of Significance of Difference	3.43 → 3.88 → .10 → 2.94 →			
Administrative	fp	85.37	80.65	-----	96.10
	P.E.fp	3.72	4.79	-----	1.49
	N.	41.	31.	10.	77.
	Index of Sig. of Dif.	2.68 → 3.08 →			
Total	fp	92.00	90.93	95.80	96.25
	P.E.fp	.71	.89	1.13	.64
	N.	650.	507.	143.	400.
	Index of Significance of Difference	6.51 → 4.84 → .35 → 3.38 →			

one minor exception, all arrows of the table indicate that greater proportions of the non-resident than of resident teachers have attended institutions of higher learning within the past five years. (2) The first two comparisons of elementary groups and the first two of the regional totals show significant differences. Seven other comparisons show strong trends in the same direction, the indices being 2.30 or more. (3) The percentages of the commuting teachers tend to fall between the other two groups. (4) The percentages range from 80.65 in the district administrative group to 99.24 in the non-resident elementary group.

Mean length of attendance.- Comparisons of the average number of weeks of attendance are shown in Table XXXVII. Although only four comparisons of the previous table were found to be significant, nine such comparisons are found in this table. The chief points of interest in this table may be summarized as fol-

TABLE XXXVII

MEAN NUMBER OF WEEKS OF ATTENDANCE BY EACH GROUP AT INSTITUTIONS OF HIGHER LEARNING WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	40.97	38.97	48.80	64.54
	S.D.	33.78	32.40	37.48	42.43
	P.E.m	1.02	1.10	2.53	2.49
	N.	498.	398.	100.	132.
	Index of Significance of Difference	8.76 9.40 4.40 3.56			
Secondary	M.	53.70	46.80	70.00	72.82
	S.D.	50.62	49.16	50.27	55.86
	P.E.m	3.24	3.75	5.90	2.73
	N.	111.	78.	33.	191.
	Index of Significance of Difference	4.51 5.61 .43 3.32			
Administrative	M.	26.83	24.19	-----	42.20
	S.D.	30.64	27.22	-----	33.60
	P.E.m	3.23	3.30	-----	2.58
	N.	41.	31.	10.	77.
	Index of Sig. of Dif.	3.72 4.30			
Total	M.	42.25	39.28	52.79	64.20
	S.D.	37.55	35.57	42.20	48.75
	P.E.m	.99	1.07	2.38	1.64
	N.	650.	507.	143.	400.
	Index of Significance of Difference	10.98 12.22 3.87 5.18			

lows: (1) Of the eleven comparisons between the non-resident group and the resident group or either of its sub-groups, eight are significant. (2) The indices of significance tend to be much larger than those in the previous table of percentages. (3) The means of the commuting group tend to fall between those of the district and non-resident groups, being slightly nearer the latter in most cases. (4) The mean number of weeks of attendance ranges from 24.19 weeks in the district administrative group to 72.20 weeks in the non-resident secondary group. (5) The resident administrators stand lowest of all groups in both the percentage of their group attending and in the number of weeks attended. It is significant that this group should fall so low since it occupies

such an important position of leadership. (6) In each zone, the secondary teacher has attended school most; the administrators, least. (7) Finally, it may be said that the average length of attendance at institutions of higher learning within the past five years varies from zone to zone, increasing with the distance of the zone from the position held.

Proportion earning semester hours.- In Table XXXVIII, the percentage of each group who have earned some credit within this five year period is shown. This includes work done through extension as well as that obtained in residence. Of the 1097 teachers included in the study, 1016 responded to this question. Of that number 635 are resident teachers; 381, non-residents.

A summary of the findings from these data shows important facts: (1) With three exceptions, all arrows point to the right. (2) The first two comparisons at the elementary level are significant; most other comparisons of the table merely show strong trends, the lowest index being 1.19. (3) Percentages range from 81.25 in the resident administrative group to 99.19 in the non-resident elementary group. The percentages are almost the same as the corresponding percentages of Table XXXVI, indicating that the local administrators are weaker than the non-residents in this respect. (4) The commuting group shows a considerable tendency to exceed the non-resident group at the secondary level and in regional totals. (5) The highest general level of percentages is found in the elementary group; a similar condition was also found in Table XXXVI. But this high level of percentages is more consistently maintained in the secondary and administrative positions by the non-residents than by the home teachers, the percentages of the latter group falling off much more than those of the former. This condition was likewise found in Table XXXVI.

Mean semester hours earned.- The close relationship between attendance and credits earned in institutions of higher learning is shown by comparing the data in Tables XXXVI and XXXVII with those of Tables XXXVIII and XXXIX, respectively. The mean number of semester hours of credits earned by the various groups within the five-year period is shown in Table XXXIX.

The findings from these data are very significant: (1) Eight of the fourteen comparisons show significant differences, with very strong trends toward significant differences in all other comparisons except one. Only one index of the table falls below 3.21. (2) The average semester hours earned range from 26.88 in the district administrative group to 69.89 in the non-resident secondary group. It will be recalled that the extremes of the attendance comparisons of Table XXXVII are in these same groups and in the same order. (3) Differences in average semester

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TABLE XXXVIII

PERCENTAGE OF EACH GROUP WHO HAVE EARNED SOME COLLEGE OR UNIVERSITY CREDITS WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	95.21	94.75	96.97	99.19
	P.E.fp	.65	.77	1.16	.55
	N.	480.	381.	99.	124.
	Index of Significance of Difference	4.68 → 4.67 → 1.73 → 1.60 →			
Secondary	fp	87.72	83.95	96.97	93.44
	P.E.fp	2.07	2.75	2.01	1.23
	N.	114.	81.	33.	183.
	Index of Significance of Difference	2.37 → 3.15 → 1.50 → 3.82 →			
Administrative	fp	85.37	81.25	-----	94.59
	P.E.fp	3.72	4.65	-----	1.77
	N.	41.	32.	9.	74.
	Index of Sig. of Dif.	2.24 → 2.68 →			
Total	fp	93.23	92.11	97.16	95.54
	P.E.fp	.67	.82	1.16	.71
	N.	635.	494.	141.	381.
	Index of Significance of Difference	2.36 → 3.15 → 1.19 → 3.56 →			

hours of credit are more outstanding than differences in the percentages of the teachers who have earned some credit. (4) At each level of position and in the regional totals, the commuting group falls between the district and non-resident groups on the basis of the mean number of semester hours of credit earned. (5) Finally, it is evident that the greater the distance of the teacher's zone of residence from the position held, the greater is the average amount of training obtained within the past five years.

Proportion earning professional credit.- Comparisons of the percentages of the various groups of teachers who have earned some professional credit within the past five years are obtained from the data of Table LXXXIII (appendix). A summary of the findings from these data follows: (1) Throughout the table, the percentages of the commuting groups show a tendency to exceed those of the district and non-resident groups. (2) The percentages of

TABLE XXXIX

MEAN NUMBER OF SEMESTER HOURS OF COLLEGE AND UNIVERSITY CREDIT
EARNED BY EACH GROUP WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	M.	43.98	42.25	50.60	66.45
	S.D.	30.63	30.00	32.06	38.20
	P.E.m	.94	1.04	2.17	2.31
	N.	480.	381.	99.	124.
	Index of Signifi- cance of Difference	9.02 9.57 5.00 3.47			
Second- ary	M.	52.29	45.81	68.18	69.89
	S.D.	47.22	45.99	46.41	51.59
	P.E.m	2.98	3.45	5.45	2.57
	N.	114.	81.	33.	183.
	Index of Signifi- cance of Difference	4.58 5.60 .28 3.47			
Adminis- trative	M.	27.81	26.88	-----	40.67
	S.D.	28.58	26.15	-----	33.79
	P.E.m	3.01	3.12	-----	2.65
	N.	41.	32.	9.	74.
	Index of Sig. of Dif.	3.21 3.37			
Total	M.	44.43	41.85	53.47	63.09
	S.D.	34.51	33.21	36.36	45.71
	P.E.m	.92	1.01	2.07	1.58
	N.	635.	494.	141.	381.
	Index of Signifi- cance of Difference	10.20 11.30 3.70 5.05			

the non-resident groups tend to exceed those of the total resident and district groups except in the comparisons of regional totals in which the order is reversed. (3) Trends in the elementary and administrative comparisons are very slight; in the secondary and regional totals, trends are stronger than in the elementary and administrative comparisons. Only one comparison shows a significant difference - that between the regional totals of the commuting and non-resident groups. (4) Percentages range from 79.41 in the district secondary group to 94.78 in the regional total of the commuting group. (5) As a whole, the data of the table tend to favor the local group, especially the commuting teachers, where a slight tendency toward a greater percentage taking professional

training during the past five years is found.

Mean semester hours of professional credit.- The data contained in Table XL show the average semester hours of professional credit obtained within the past five years. The slight tendencies of the previous table are almost completely reversed in this table as follows: (1) With one exception, all arrows of the table point to the right - to the group from the more remote zone. (2) Of the fourteen comparisons made, nine show significant differences, the indices ranging from 4.20 to 8.54. (3) Even in the comparisons of the secondary groups, one significant difference is found - that between the district and non-resident groups. (4) The mean semester hours of professional training range from 10.96 in the district administrative group to 20.32 in the non-resident administrative group. The administrators of the non-resident group have had within the past five years an average of approximately twice as much professional training as that of the administrators of the district group. (5) The average professional training of the commuting group lies between those of the district and non-resident groups throughout the table. (6) It is clear from the data presented that the average amount of professional training tends to increase with an increase in the distance of the teachers' zone of residence from the location of the position held. (7) The slight tendency toward the superiority of the local groups as revealed in the previous table is much more than offset by the data of Table XL which show the opposite results in a more significant way.

The data relating to attendance and training obtained within the past five years show a general tendency for the non-resident groups to excel the corresponding local groups. Although there are some exceptions to the conclusion just stated, numerous comparisons show that the superiority of the non-resident groups is a significant tendency, especially in comparisons based on means. Without a single exception, the lower limit of the range falls in the district group - usually at the administrative level; the upper limit, in the non-resident group. The leadership of the non-resident group (the administrative) invariably shows a better record for recent professional training than the district group. With few exceptions, the amounts of training and college attendance acquired within the last five years tend to increase with the remoteness of the zone of the teacher's residence. If the amounts of attendance and training acquired within that time can be assumed as criteria of professional attitude, it is rather clear that the non-residents as a general rule prove to be on this basis the better trained group, and that the amount of the training tends to increase with the remoteness of the teacher's zone

TABLE XL

MEAN NUMBER OF SEMESTER HOURS OF PROFESSIONAL TRAINING ACQUIRED BY EACH GROUP WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	13.92	13.93	13.89	18.07
	S.D.	8.28	8.31	7.76	9.68
	P.E.m	.27	.30	.54	.60
	N.	441.	348.	93.	120.
	Index of Significance of Difference	6.38 6.18 5.16 .06			
Secondary	M.	12.76	11.65	15.13	15.56
	S.D.	9.19	9.37	8.28	9.88
	P.E.m	.62	.77	.99	.52
	N.	100.	68.	32.	167.
	Index of Significance of Difference	3.46 4.20 .38 2.78			
Administrative	M.	12.44	10.96	-----	20.32
	S.D.	9.66	8.82	-----	11.96
	P.E.m	1.09	1.14	-----	.97
	N.	36.	27.	9.	69.
	Index of Sig. of Dif.	5.40 6.24			
Total	M.	13.63	13.40	14.39	17.33
	S.D.	8.55	8.65	5.50	10.42
	P.E.m	.24	.28	.32	.37
	N.	577.	443.	134.	356.
	Index of Significance of Difference	8.41 8.54 6.00 2.35			

of residence.

Membership in Professional Organizations

The teachers were asked to state the number of professional clubs, fraternities, and associations in which they were holding memberships at the time. Membership in such organizations is usually recognized as a characteristic of alert teachers or as a criterion of their professional attitude. The question was answered by 887 teachers of whom 537 are resident teachers and 350, non-residents. To this question 85.18 per cent of the non-residents included in the study responded, while only 78.28 per cent of the local teachers responded. This indicates a slight difference

(6.90 per cent) in favor of the non-residents with respect to their willingness to respond to the question.

Percentage holding membership in professional organizations.- Two tables are presented as a means of showing the detailed differences between these groups on the basis of their membership in professional organizations. In the first of these, Table LXXXIV (Appendix),¹ are shown the percentages of teachers who hold membership in one or more professional organizations. Analysis of the data contained in this table shows the following: (1) With three exceptions every arrow points to the right - an indication that the percentages of the non-residents who are members of professional organizations tend to be greater than those of the local teachers. (2) The commuting teachers tend to run lowest with respect to the percentages of the groups holding such professional memberships. (3) None of the differences in the data of the table proves to be significant, nine of the fourteen comparisons resulting in indices of 1.00 or more only four of which reach 2.50. (4) The strongest trends toward significant differences are found in comparisons at the elementary level and between regional totals. (5) It should also be recalled that the non-resident teachers were more responsive than local teachers in supplying the needed information at this point.

Average number of memberships held in professional organizations.- The data contained in Table XLI show that the tendencies pointed out in the discussion of Table LXXXIV (Appendix)¹ are more than mere tendencies, if the data were refined to include also the mean number of such memberships. A summary of the findings from these data is as follows: (1) All arrows except four point, as in the previous table, to the right. (2) As before, the commuting group has the lowest averages of the table. (3) The mean number of memberships range from 1.65 in the commuting elementary group to 3.61 in the non-resident administrative group. (4) No significant differences are found in comparisons of elementary and secondary groups. (5) The average number of memberships held by the non-resident administrative group (3.61) is significantly greater than the number held by the district administrative group (2.58), the index of significance being 4.20. (6) Two significant differences are found in comparisons involving regional totals - that between the non-resident and total resident groups and that between the non-resident and district groups. Even in the comparisons between the non-resident and commuting groups the index is 3.39, which is representative of a strong trend. (7)

¹P. 196.

TABLE XLI

MEAN NUMBER OF MEMBERSHIPS IN PROFESSIONAL CLUBS, FRATERNITIES, AND ASSOCIATIONS HELD BY EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.85	1.90	1.65	1.87
	S.D.	1.27	1.25	1.29	1.24
	P.E.m	.043	.050	.100	.079
Elementary	N.	397.	323.	74.	111.
	Index of Significance of Difference	$\xrightarrow{\quad .22 \quad}$ $\xleftarrow{\quad .32 \quad}$ $\xleftarrow{\quad 1.73 \quad}$ $\xleftarrow{\quad 2.23 \quad}$			
Secondary	M.	2.06	2.10	1.96	2.12
	S.D.	1.34	1.29	1.46	1.46
	P.E.m	.091	.100	.190	.076
Secondary	N.	99.	71.	28.	167.
	Index of Significance of Difference	$\xrightarrow{\quad .51 \quad}$ $\xrightarrow{\quad .16 \quad}$ $\xrightarrow{\quad .79 \quad}$ $\xleftarrow{\quad .65 \quad}$			
Administrative	M.	2.98	2.58	-----	3.61
	S.D.	1.87	1.70	-----	1.66
	P.E.m	.197	.210	-----	.130
Administrative	N.	41.	31.	10.	72.
	Index of Sig. of Dif.	$\xrightarrow{\quad 2.67 \quad}$ $\xrightarrow{\quad 4.20 \quad}$			
Total	M.	1.98	1.98	1.96	2.35
	S.D.	1.36	1.32	1.57	1.58
	P.E.m	.040	.042	.100	.057
Total	N.	537.	425.	112.	350.
	Index of Significance of Difference	$\xrightarrow{\quad 5.29 \quad}$ $\xrightarrow{\quad 5.21 \quad}$ $\xrightarrow{\quad 3.39 \quad}$ $\xleftarrow{\quad .18 \quad}$			

Thus on the basis of membership in professional organizations it is evident that the superiority of the non-resident group is significant in some cases, especially in the comparisons of regional totals.

The analysis of the data contained in the two tables bearing upon membership in professional organizations shows that non-resident teachers tend to exceed local teachers in the percentage of the group holding such memberships and in the average number of memberships held. In the latter comparisons some differences are found to be significant.

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Attendance and Participation in Educational Meetings

Since it is possible for one to be a member of an organization and yet not attend its meetings, it seemed advisable to compare activities of the different groups in this respect. Attendance is probably a better index of professional attitude than mere membership. Participation in the meetings is probably a still better index of professional attitude. All of these symptoms of attitude are considered in this section of the chapter. In connection with educational meetings, the activities of these groups of teachers are studied from the standpoint of: (1) attendance, (2) assistance in preparation of programs, (3) presiding over meetings, (4) talks made during meetings.

Percentages attending professional meetings within the past year.- The data contained in Table XLII show the percentage of each group who have attended at least one professional meeting within the past year. This information was supplied by 963 teachers - 583 resident teachers and 380 non-residents. The data show that 92.45 per cent of the non-resident group responded to the question, while only 84.99 per cent of the resident group supplied the necessary information. Thus the non-resident group again shows a more willing attitude to supply the data needed for the study. These meetings do not include those held within the system in which the teachers are employed.

Analysis of the data reveals the following conditions:

(1) With two exceptions, all arrows point to the right. (2) No significant differences are found except in the first two comparisons of the regional totals. (3) The first two comparisons of the elementary groups, the last two of the secondary groups, and the third of the regional totals show strong trends, the indices being 2.48 or more. (4) The percentages range from 72.41 in the commuting secondary group to 97.37 in the non-resident administrative group. (5) With one exception (in the commuting secondary group), the tendency to attend educational meetings appears to increase with the remoteness of the zone of residence. (6) The percentages of non-residents who have attended educational meetings are much more uniform or constant in character than those of the other groups. (7) Non-residents show a strong tendency to exceed the resident groups in the comparisons, two of which are actually significant.

Average number of professional meetings attended.- The data in Table XLIII show a slightly stronger trend for resident and non-resident teachers to differ on the basis of the average number of professional meetings attended within the previous year. (1) All arrows except one point to the right, indicating a tendency

TABLE XLII

PERCENTAGE OF EACH GROUP WHO HAVE ATTENDED ONE OR MORE EDUCATIONAL MEETINGS WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	80.78	79.65	84.95	88.43
	P.E.fp	1.27	1.46	2.50	1.96
	N.	437.	344.	93.	121.
Secondary	Index of Significance of Difference	3.28			3.60
					1.09
		1.83			
Administrative	fp	84.31	89.04	72.41	86.89
	P.E.fp	2.36	2.47	5.60	1.68
	N.	102.	73.	29.	183.
Total	Index of Significance of Difference	.89			.72
					2.48
		2.72			
Elementary	fp	95.45	94.12	-----	97.37
	P.E.fp	2.12	2.72	-----	1.23
	N.	44.	34.	10.	76.
Secondary	Index of Sig. of Dif.	.78			1.09
Administrative	fp	82.51	82.26	83.33	89.47
	P.E.fp	1.06	1.21	2.18	1.06
	N.	583.	451.	132.	380.
Total	Index of Significance of Difference	4.64			4.48
					2.53
					.43

toward larger averages in the non-resident groups. (2) Ten of the fourteen comparisons provide indices of 2.00 or more, two of which are significant as was found in the comparison of regional totals in the previous table. (3) The average number of meetings attended ranges from 1.75 in the district elementary group to 3.58 in the non-resident administrative group. (4) With one exception, the averages within the comparisons of the commuting groups tend to fall between those of the district and non-resident groups, which indicates an increase in attendance at educational meetings with an increase in the remoteness of the teacher's zone of residence. (5) It therefore appears that not only does a larger proportion of the non-resident teachers attend educational meetings but that they also attend a larger average number of meetings.

Proportion of teachers assisting in the preparation of programs for professional meetings.- Attendance may be a more passive experience than some other types of experiences associated

Level of Position

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Secondary

Administrative

Total

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TABLE XLIII

MEAN NUMBER OF PROFESSIONAL MEETINGS ATTENDED
BY EACH GROUP WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.85	1.75	2.19	2.45
	S.D.	2.17	2.09	2.44	2.96
	P.E.m	.070	.076	.17	.181
	N.	437.	344.	93.	121.
	Index of Significance of Difference	3.09 3.57 1.05 2.37			
Secondary	M.	1.90	2.03	1.59	2.34
	S.D.	1.94	1.99	1.75	2.77
	P.E.m	.130	.16	.22	.138
	N.	102.	73.	29.	183.
	Index of Significance of Difference	2.33 1.47 2.88 1.62			
Administrative	M.	3.00	2.65	-----	3.58
	S.D.	2.71	2.37	-----	2.61
	P.E.m	.276	.27	-----	.20
	N.	44.	34.	10.	76.
	Index of Sig. of Dif.	1.70 2.77			
Total	M.	1.94	1.86	2.21	2.63
	S.D.	2.21	2.17	2.47	2.80
	P.E.m	.062	.07	.15	.097
	N.	583.	451.	132.	380.
	Index of Significance of Difference	6.00 6.42 2.35 2.11			

with educational meetings. Certain persons are responsible for the preparation of the programs of these meetings. A partial measure of one's professional spirit may be found in his willingness to participate in such an activity. Participation in this way may therefore be considered as an expression of professional recognition extended by some individual or group within the profession.

The percentage of each group who have assisted in some way within the preceding five years in the preparation of one or more programs for professional meetings is shown in Table XLIV. Only 619 teachers responded to this question - 293 resident and 161 non-resident teachers. The percentage of non-resident teachers responding to this question was 58.88, while only 54.96 per

TABLE XLIV

PERCENTAGE OF EACH GROUP WHO HAVE PARTICIPATED IN PREPARING PROGRAMS FOR EDUCATIONAL MEETINGS WITHIN THE PRECEDING FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	19.42	18.89	21.31	37.33
	P.E.fp	1.60	1.79	3.53	1.19
	N.	278.	217.	61.	75.
	Index of Significance of Difference	9.00 8.58 4.29 .61			
Secondary	fp	22.22	24.00	-----	19.64
	P.E.fp	3.31	6.04	-----	2.53
	N.	72.	50.	22.	112.
	Index of Sig. of Dif.	.61 .66			
Administrative	fp	51.85	-----	-----	56.36
	P.E.fp	2.89	-----	-----	1.43
	N.	27.	19.	8.	55.
	Index of Sig. of Dif.	1.40			
Total	fp	22.28	22.03	23.08	33.47
	P.E.fp	1.44	1.60	2.98	2.04
	N.	377.	286.	91.	242.
	Index of Significance of Difference	4.48 4.42 2.88 .31			

cent of the resident teachers responded. Again the non-resident group shows the greater inclination to respond with the information necessary for the study. It may also be noted that 454 of the 619 teachers answering had not participated in the preparation of programs for educational meetings within that period.

A summary of this analysis of group differences follows:

(1) All arrows except those in the comparisons of secondary teachers point to the right, indicating the greater amount of participation by the non-resident group. (2) Five of the nine comparisons made show significant differences, the indices running as high as 9.00. (3) All the comparisons showing significant differences are found at the elementary level and between regional totals, the indices in the former being the greater; percentages in the different groups at the secondary level are approximately equal. (4) The percentages of the groups who had thus participated in the preparation of programs for educational meetings range from

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18.89 per cent in the district elementary group to 56.36 per cent in the non-resident administrative group. (5) In the comparisons of regional totals 33.47 per cent of the non-resident group have assisted in program making while only 22.28 per cent of the resident group have likewise participated. (6) In the comparisons of elementary teachers the differences are even more significant than those between regional totals. (7) The percentages tend to increase with the remoteness of the zone of residence. (8) The evidence presented in this table strongly favors the non-resident group.

Number of programs prepared in part by the teachers.- Data in Table LXXXV (Appendix),¹ show the average number of programs these groups of teachers have helped to prepare within the past five years. This table takes an interesting turn in its findings when compared with other tables of this section of the chapter. Eight of the twelve arrows point to the left, showing a tendency for the averages of the resident groups to exceed those of the non-residents on this basis. No differences, however, are significant and only three indices equal or exceed 1.97. The average number of programs which the groups have helped to prepare range from .55 in the non-resident secondary group to 3.70 in the resident administrative group. While the average of the resident group shows a slight tendency to exceed that of the non-resident in comparisons of the regional totals, the indices are very small, the largest being .48. Although the non-resident groups tend to show in most instances a decided gain over the resident groups on the basis of the percentage of each assisting in the preparation of programs for educational meetings, they do not maintain this lead when compared on the basis of the average number of programs prepared by them. It will be recalled in this connection that only 165 of the 619 teachers answered this question in the affirmative. It thus appears that a much larger proportion of the non-resident group helped to prepare programs and that the resident teachers who rendered such service did so a larger number of times on the average. The former differences, however, proved to be significant.

The participation of a larger percentage of non-resident teachers in the preparation of programs for educational meetings is probably due to the fact that non-resident teachers (1) have come from a larger geographical area, (2) have had more training away from home, and (3) in these ways have acquired a greater number of professional friends who later ask them to contribute their services in the preparation of programs. Local secondary teachers

¹p. 197.

who have more training than other local groups constitute the only exception to the foregoing statement. On the other hand, regional educational meetings are held in these communities from time to time. It is only natural that local teachers who are in the community all the time be called upon to assist in the preparation for a particular meeting. However, few such meetings are held within the state.

Presiding over educational meetings.- The teachers were asked to state the number of educational meetings over which they had presided during the past year, exclusive of those within their own school systems. Only 754 teachers responded to this question. Of that number, only 36 had presided over educational meetings within that period of time. These 36 cases were distributed as follows:

Level of Position	Resident Group			Non- Resident Group
	Total	District	Commuting	
Elementary	8	7	1	5
Secondary	4	4	0	4
Administrative	4	3	1	11
Total	16	14	2	20

Very few have presided over educational meetings, more than half of whom (20 out of 36) were chosen or elected from the non-resident group. It is noteworthy that 11 of these were selected from the non-resident administrative group.

Since the number responding in the affirmative was so small, an abridged form of the usual percentage table was constructed but no attempt was made to develop a table of averages. In Table LXXXVI (Appendix)¹, is shown the percentage of each group at the elementary level and in the regional totals who have presided over professional meetings within the past year. Had this period been extended to include data for five years, the secondary and administrative groups could probably have been added to this table. The percentages range from 1.85 in the commuting total to 6.43 in the non-resident total. The percentage in the commuting group is much lower than in either of the other groups. However, none of the differences is significant, even though the tendencies are rather strongly in favor of the non-resident group, especially in comparisons of regional totals. A sampling several times as large or one for a longer period of time would probably have shown

¹P. 198.

some significant differences.

Proportion of teachers appearing on program of professional meetings.- Professional attitude and standing may be partially revealed by the degree to which the teachers appear as speakers on the programs of educational meetings. The teachers were asked to state the number of talks made or papers read by them before such meetings within the past year, exclusive of those within their own school systems. To this request for information there were 778 replies - 408 resident teachers and 324 non-residents. The non-resident group shows a greater willingness to supply the needed data since 78.83 per cent of that group replied to the question as compared to 66.18 per cent of the resident group. Of the 778 teachers replying, only 120 had appeared on the program of educational meetings - 74 from the non-resident group and 46 from the home group. These 120 teachers are distributed as follows:

Level of Position	Resident Group			Non-Resident Group
	Total	District	Commuting	
Elementary	25	17	8	16
Secondary	10	7	3	25
Administrative	11	5	6	33
Total	46	29	17	74

It is noted that 33 of the 77 non-resident administrators appeared on programs as compared to 11 of the 45 resident administrators, that 25 of the 199 high-school teachers appeared on programs, and that only 10 of the 121 resident secondary teachers addressed such meetings. Of the 520 resident elementary teachers included in the study, 25 appeared on programs; of the 135 non-resident elementary teachers, only 16 appeared. Non-resident teachers were more inclined to supply the desired information and more from that group appear to have participated in educational programs.

In Table XLV the percentages of the groups appearing on educational programs are given. Only the elementary group and the regional totals are included since only 120 teachers answered in the affirmative. A summary of these data shows the following: (1) Every arrow points to the right, a fact indicating that the percentages of the groups appearing on educational programs increase with the remoteness of the zone. (2) Comparisons between elementary groups do not show significant differences. However, two of the indices (3.24 and 3.52) show very strong trends toward significant differences. (3) In the comparisons of regional totals

TABLE XLV

PERCENTAGE OF EACH GROUP WHO HAVE APPEARED ON ONE OR MORE EDUCATIONAL PROGRAMS WITHIN THE PAST YEAR (INCLUSIVE OF ELEMENTARY AND REGIONAL TOTALS ONLY)

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	7.49	6.61	10.39	16.16
	P.E.fp	.97	1.05	2.28	2.50
	N.	334.	257.	77.	99.
	Index of Significance of Difference	3.24 3.52 1.71 1.51			
Total	fp	10.13	8.48	15.18	22.84
	P.E.fp	.96	1.02	2.29	1.57
	N.	454.	342.	112.	324.
	Index of Significance of Difference	6.91 7.68 2.76 2.67			

two significant indices are found in the first two comparisons and very strong tendencies in the other two cases. (4) The percentages of the groups of this table appearing on educational programs range from 6.61 per cent in the district elementary group to 22.84 per cent in the non-resident total. (5) The percentage of all non-resident teachers appearing on programs (22.84 per cent) is more than double that of the total resident group (10.13 per cent) and almost three times that of the district elementary group (8.48 per cent). (6) Without exception the more remote group tends to exceed the less remote in the percentage of its members appearing on educational programs. In two of the eight comparisons this tendency is significant.

Average number of appearances on educational programs.-

The average number of appearances of certain groups on educational programs is shown by the data of Table XLVI. Only the elementary and group totals are included. A summary of the data show: (1) Every arrow points to the right, thus favoring the non-resident group. (2) Three of the comparisons show significant differences, one of which is between the non-resident and the resident elementary groups. All the comparisons show the larger percentages in the non-resident group, only one index falling below 2.00. (3) The average number of appearances on educational programs ranges from .113 in the district elementary group to .617 in the non-resident regional total. (4) The percentages, in comparisons on this basis, increase as the remoteness of the zone increases.

TABLE XLVI

MEAN NUMBER OF APPEARANCES OF EACH GROUP ON EDUCATIONAL PROGRAMS
WITHIN THE PAST FIVE YEARS (INCLUSIVE OF THE ELEMENTARY
AND TOTAL COMPARISONS ONLY)

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elementary	M.	.138	.113	.221	.444
	S.D.	.571	.593	.767	1.220
	P.E.m	.021	.025	.059	.082
	N.	334.	257.	77.	99.
	Index of Signifi- cance of Difference	3.60 5.64 2.21 1.69			
Second- ary	M.	.183	.140	.313	.617
	S.D.	.663	.549	.937	2.01
	P.E.m	.021	.020	.059	.075
	N.	454.	342.	112.	324.
	Index of Signifi- cance of Difference	5.56 6.12 3.20 2.93			

(5) The superiority of the non-resident groups is apparently greater when comparisons are made on the basis of the average number of appearances on programs than when comparisons are made on the basis of the percentage of the groups thus appearing, even though significant differences are found in the latter comparisons.

The direction of 64 out of 80 arrow-lines of this section of the chapter indicate a tendency favoring the non-resident group; many of the indices indicate that this tendency is strong. All indices (14) showing significant differences between the groups are indicative of the superiority of the non-resident group. In almost all of the tables, the lower limits of the range of means and percentages were found in the resident groups; the upper limits, in the non-resident group. It is thus evident that in so far as attendance and participation in professional meetings is a measure of professional attitude, the prevailing trend of the evidence presented in this section points to the superiority of the non-resident group.

Professional Articles Written and Published

Probably one of the most exacting criteria of professional attitude of teachers is to be found in their productive scholarship. The teachers were asked to state the number of professional articles written and published by them within the past five years.

There were 756 replies to this inquiry - 446 from the resident group and 310 from the non-resident. The response of the non-resident teachers is approximately ten per cent higher than that of the resident group, 75.42 per cent of the former replying as compared to 65.02 per cent of the latter. Articles have been written and published by only 39 of the 756 teachers, of whom 30 are non-resident teachers and 9 resident teachers. The number of non-resident teachers publishing articles is more than three times the number of resident teachers. Nevertheless, there were 136 more resident than non-resident teachers responding.

The percentage of the teachers replying from each zone who have written and published professional articles within the past five years is shown in Table XLVII. (1) It will be noted that only 2.02 per cent of the resident group, 1.47 per cent of the district group, 3.81 per cent of the commuting group, and 9.68 per cent of the non-residents qualify under this criterion. (2) All four arrows thus point to the superiority of the more remote group. Either the resident or the district group is significantly lower than the non-resident group in the percentage of the group publishing professional articles. The index (3.47) resulting from the comparison between the non-resident and commuting groups shows a pronounced trend toward a significant difference; the index in the comparisons between the two resident groups (1.76) is large enough to show that there is a tendency for the number of articles published to increase with the distance of the zone of the author's residence from the school system in which the position is held. (3) In this very exacting test of professional attitude the non-resident group tends to show clearly its superiority over the resident group.

In Table XLVIII the light is thrown more directly on the productive section of each group, that is, on the 39 persons who have written and published articles in professional journals. On account of the small number in this group, no attempt is made to analyze the data statistically beyond that presented in the preceding table (Table XLVII). However, a study of the mere numerical distribution of the persons who have published articles and the number of articles published is of interest.

Table XLVIII should be read as follows: In the elementary groups, two resident teachers wrote and published three professional articles; this is an average of 1.5 articles per author. Again at this level, two non-resident teachers produced 7 articles or an average of 3.5 articles per author. While the numbers are too small to be treated statistically the comparisons tend to show that the small non-resident group is the more productive.

At the secondary level, two resident teachers produced

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TABLE XLVII

PERCENTAGE OF ALL TEACHERS FROM THE DIFFERENT RESIDENT GROUPS WHO HAVE WRITTEN AND PUBLISHED ONE OR MORE PROFESSIONAL ARTICLES WITHIN THE PAST FIVE YEARS¹

Statistical Measures Used	Resident Group			Non-Resident Group
	Total	District	Commuting	
f _p	2.02	1.47	3.81	9.68
P.E.f _p	.45	.44	1.26	1.13
N.	446.	341.	105.	310.
Index of Significance of Difference	_____ 6.28 _____>			
	_____ 6.79 _____>			
	_____ 3.47 _____>			
	_____ 1.76 _____>			

¹Regional totals only.

TABLE XLVIII

DISTRIBUTION OF THE TEACHERS OF EACH GROUP WHO HAVE PUBLISHED ONE OR MORE ARTICLES IN PROFESSIONAL JOURNALS WITHIN THE PAST FIVE YEARS

Level of Position	Number of:	Resident Group			Non-Res. Gr.
		Tot.	Dist.	Com.	
Elementary	Teachers Publishing Professional Articles	2	1	1	2
	Articles Produced by Them	3	1	2	7
	Average per Author	1.5	1.0	2.0	3.5
Secondary	Teachers Publishing Professional Articles	2	1	1	13
	Articles Produced by Them	2	1	1	18
	Average per Author	1.0	1.0	1.0	1.4
Administrators	Administrators Publishing Professional Articles	5	3	2	15
	Articles Produced by Them	11	8	3	23
	Average per Author	2.2	2.7	1.5	1.5
Total	Teachers Publishing Professional Articles	9	5	4	30
	Articles Produced by Them	16	10	6	48
	Average per Author	1.8	2.0	1.5	1.6

two articles or an average of one per teacher, while 13 non-resident teachers produced 18 articles or an average of 1.4 articles per author. The non-resident group again shows a tendency to excel. In the administrative comparisons 5 resident administrators published 11 articles or 2.2 articles per author; 15 non-resident administrators published 23 articles or an average of 1.5 per author. Although the non-resident administrative group is smaller than the resident administrative group, three times as many from the former group as from the latter have produced articles and the non-resident administrators have produced twice as many articles as the resident group. However, the average number of articles per author is higher in the resident than in the non-resident group.

In considering the regional totals, it is found that more than three times as many articles are produced by the non-resident group as by the resident group (30 and 9, respectively). Also the number of articles written by the non-resident group is exactly three times the number written by the resident group. The average number of articles per author is slightly higher in the non-resident than in the resident group. It must also be kept in mind that the resident group is considerably larger than the non-resident.

Although these data are too few in number for accurate statistical treatment, one is not inclined to accept such strong tendencies as accidentally favorable to the non-resident group.

Summary

The foregoing analysis of differences between resident and non-resident teachers based on the five criteria of professional attitude proposed in the introduction to the chapter warrant the following general conclusions:

1. Data bearing on the criterion of punctuality during teaching hours show that the percentage of resident teachers who have not been absent from school is slightly greater than that of the non-resident group. The percentages of the commuting group are lower than the corresponding percentages of either the district or non-resident groups; this condition is probably due to the larger distance traveled daily by commuting teachers. On the other hand, the average number of days absent from school tends to be greater in the resident group than in the non-resident group. However, none of the differences in percentage absent or days absent are significant. Therefore, it may be said that resident and non-resident teachers are practically equal with respect to punctuality in teaching hours.

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2. Analysis of data bearing on the criterion of recent college attendance and credit earned within the past five years shows a general tendency for the non-resident groups to exceed the corresponding resident groups. These differences are significant in numerous comparisons involving the percentage attending institutions of higher learning within the past five years, the mean length of attendance during that period, the percentage earning some college credit within the five year period, the mean number of credits earned, and the mean number of semester hours of professional credit acquired. Significant differences are more conspicuous in the tables of means than in the tables of percentages. With a single exception, the lower limit of the ranges of percentages and means fall in the district groups - usually at the administrative level; the upper limit, in the non-resident groups. Thus the non-resident administrative group maintains a higher standard than the administrators of the resident groups in so far as recent college attendance and credits earned are measures of such accomplishments. In most instances recent attendance and training tend to increase with the remoteness of the zone of residence of the teacher. It is evident that, in so far as recent college attendance and credit obtained are a criterion of professional attitude, the non-resident teachers as a general rule are superior to the resident teachers, and that the superiority increases with the remoteness of the teacher's zone of residence.

3. A study of the membership of the groups in professional organizations shows that non-resident teachers tend to exceed the resident teachers both in the percentage holding such memberships and in the average number of memberships held, some of the latter comparisons (means) being significant.

4. When compared on the basis of the criterion of attendance and participation in educational meetings, the non-resident groups are found to possess the superior professional attitude. The evidence presented indicates that the professional attitudes of the teachers as a general rule improve with the remoteness of their zones of residence. A greater proportion of non-resident teachers show a disposition to attend educational meetings and they also attend a larger average number of such meetings. A greater percentage of non-resident than resident teachers participate in the preparation of programs for educational meetings, but resident teachers slightly excel the non-resident teachers with respect to the average number of such programs which they have helped to prepare. The percentage of non-resident teachers presiding over educational meetings is slightly greater than that of the resident group. The percentage of non-resident teachers appearing on the programs of educational meetings is decidedly

higher than that of the resident group; the non-resident groups excel the resident group in an even more significant way with respect to the average number of appearances on the programs of educational meetings. Many of the comparisons based on this criterion reveal significant differences, all of which favor the non-resident group. In most instances the lower limits of the range of percentages or means are found in the resident group; the upper limit, in the non-resident group.

5. The evidence implied by productive scholarship which is probably the most discriminating criteria of professional attitude proposed in the chapter favors the non-resident group to a significant degree. Although only 39 of the 756 teachers responding to this question of the data sheet have written and published professional articles, 30 of these are non-resident teachers and only 9 are residents. On the other hand, 446 of the 756 teachers supplying this information were resident teachers, and only 310 non-residents.

6. Finally, the data presented thus far in the study appear to justify the additional conclusion that the ability of local teachers to secure and hold teaching positions exceeds their corresponding degree of professional attitude as implied in the criteria. On the other hand, the evidence shows that the professional attitude of the non-resident group is superior to that of the resident groups but that the proportion of the positions held by them and their length of service in these positions are greater than those of the non-resident group. Evidently factors other than training and professional attitude must be studied in determining more accurately (1) why such a large proportion of home teachers are employed in teaching positions and (2) why the length of service of local teachers in these positions is longer than that of non-residents. Evidently factors more powerful than training and professional attitude operate to the advantage of local teachers and to the disadvantage of non-resident teachers.

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CHAPTER VI

PARTICIPATION IN THE COMMUNITY LIFE OUTSIDE OF THE SCHOOL

In this chapter attention is focused on the degree to which the groups of teachers are affiliated with the life of the community outside of the school itself, that is, the teachers' activities as citizens are analyzed. An attempt is made to show the relationship between participation in community activities and questions of employment and period of service as teachers.

In order to make comparisons of the teachers as citizens of the community in which they teach the following criteria were selected as measures of community affiliation:

1. Number of week-ends per month spent in the community of the teaching position.
2. Number of visits to homes of pupils.
3. Identification with the church life of the community - membership in general, membership in local unit of a church, attendance, financial contribution, officer of church, and affiliation with auxiliary organizations of the church.
4. Affiliation with various community organizations, societies, clubs, fraternities, etc.
5. Economic considerations, such as buying from local business firms.

Ten tables containing data based on the foregoing criteria are presented for consideration in this chapter. The form of the tables is the same as that of the majority of the tables previously presented in the study - frequency distributions of means and percentages, with the index of significance. Most of the comparisons are so highly significant that all of the tables are included in the body of the chapter.

On the basis of the five foregoing criteria, the data of this chapter have been analyzed and are now presented in an effort to find answers to the following questions:

1. Do resident and non-resident teachers differ significantly with respect to participation in the life of the community in which they teach?
2. Do these differences harmonize with differences found earlier in the study relative to the proportion of each group employed in the positions in these school systems and relative to the length of service in their positions?

Week-ends in the Community

If participation in the activities of the community is characteristic of the group, the individual teachers must spend most of their time in the community. If the teachers are in the community during the school day only, as in the case of the commuting group, it appears likely that they are seriously handicapped in participating in many of the activities of the community. To be absent from the community on week-ends is an additional and more serious handicap in this respect. Many of the activities of the small community are restricted more or less to the week-ends. This is especially true of the church life of the village and small city. Since remaining in the community over the week-ends appears so essential to an active participation in many of the activities of the community, comparisons of resident and non-resident teachers on this basis are needed.

The data of Table LXIX show the mean number of week-ends per month spent in the teaching community by each of the groups of teachers. If all the week-ends are spent in the community, the answer is given as four week-ends. A study of the data in this table shows rather striking differences between the groups: (1) Contrary to the findings of most previous comparisons, except those of employment and period of service, the district and resident groups tend to excel the non-resident group in this respect. (2) With the exception of the administrators, the commuting teachers show the lowest average number of week-ends spent in the community. (3) Ten of the fourteen comparisons show significant differences, the index being 15.40 in the most extreme case. (4) No significant differences are found between the groups at the administrative level, trends there favoring the home groups. (5) With the exception of the administrative level, the district, non-resident, and commuting groups clearly fall into three distinctly different types of groups when compared on this basis. (6) The average number of week-ends spent in the teaching community varies from 1.68 in the commuting secondary group to 3.88 in the commuting administrative group.

No surprising results are found in these comparisons. The poorest showing, made by the commuting group, was to be expected. Commuting teachers live close enough to remain away on week-ends most of the time. On the other hand, the non-resident group, whose home is farther away, spends more of its week-ends in the teaching community. The district group, living in the community, is naturally there most of the time. The advantage of the district group and the disadvantage of the commuting group when compared on this basis is evident from the data herein presented.

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TABLE XLIX

MEAN NUMBER OF WEEK-ENDS PER MONTH SPENT BY EACH GROUP WITHIN THE DISTRICT IN WHICH TEACHING POSITIONS ARE HELD

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	3.44	3.79	1.99	2.57
	S.D.	1.19	.66	1.67	1.48
	P.E.m	.040	.025	.128	.101
Elementary	N.	398.	321.	77.	96.
	Index of Significance of Difference	← 7.98 → ← 11.73 → ← 13.84 → ← 3.56 →			
Secondary	M.	3.07	3.58	1.68	3.19
	S.D.	1.40	.84	1.67	1.04
	P.E.m	.098	.069	.225	.057
Secondary	N.	92.	67.	25.	150.
	Index of Significance of Difference	← 1.06 → ← 4.70 → ← 6.51 → ← 8.08 →			
Administrative	M.	3.78	3.76	3.88	3.55
	S.D.	1.62	.85	---	.93
	P.E.m	.180	.106	---	.077
Administrative	N.	37.	29.	8.	67.
	Index of Sig. of Dif.	← 1.18 → ← 1.60 →			
Total	M.	3.40	3.76	2.05	3.08
	S.D.	1.21	.68	1.70	1.22
	P.E.m	.036	.022	.109	.047
Total	N.	527.	417.	110.	313.
	Index of Significance of Difference	← 5.42 → ← 13.07 → ← 8.72 → ← 15.40 →			

Visits to Homes of Pupils

The teachers were asked to state the number of visits made to homes of their pupils within the past year. Analysis of these data appears in Table L. While no significant differences are found in the comparisons of the table, attention may be called to some interesting tendencies found therein: (1) All arrows except three point toward the right, indicating a larger number of visits by the more remote group in most instances. (2) Of the twelve comparisons made, eight show indices of 1.00 or more, two of which are 2.60 and 2.48. (3) The average number of visits

TABLE L

MEAN NUMBER OF VISITS BY EACH GROUP TO HOMES
OF PUPILS WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elementary	M.	14.03	14.40	12.85	19.02
	S.D.	15.5	15.0	16.0	48.2
	P.E.m	.54	.59	1.17	3.25
	N.	377.	292.	85.	100.
	Index of Signifi- cance of Difference	1.52 1.40 1.79 1.22			
Second- ary	M.	12.08	12.43	-----	13.62
	S.D.	18.9	16.2	-----	32.3
	P.E.m	1.78	1.53	-----	1.81
	N.	80.	56.	24.	145.
	Index of Sig. of Dif.	.69 .59			
Adminis- trative	M.	36.71	28.00	-----	33.73
	S.D.	39.9	24.0	-----	55.2
	P.E.m	4.61	3.12	-----	4.58
	N.	34.	27.	7.	66.
	Index of Sig. of Dif.	.46 1.03			
Total	M.	15.30	15.09	15.98	19.72
	S.D.	19.2	16.5	25.8	44.0
	P.E.m	.58	.57	1.62	1.68
	N.	491.	375.	116.	311.
	Index of Signifi- cance of Difference	2.48 2.60 1.61 .52			

made ranges from 12.85 in the commuting elementary group to 33.73 in the non-resident administrative group. (4) It is of interest to compare the results of Tables XLIX and L. Although a greater proportion of the average district teacher's time is spent within the district, the teachers of the non-resident group show a noticeable tendency to make more visits to the homes of their pupils. Even the members of the commuting group show a slight tendency to excel the district group, if the totals of the different groups are considered. It thus appears that teachers from the more remote zone are inclined to make more contacts with the home life of their pupils.

Identification with Church Life of the Community

Identification with and participation in the church life of the community is probably the most important local connection of teachers, since the church plays an important part in the life of the community. In recognition of this condition, data bearing upon the church affiliation of the resident and non-resident teachers are presented. These data center around the following criteria: (1) percentage of each group who are church members, (2) percentage holding membership in a local church unit, (3) average number of church attendances per month, (4) percentage of each group making the major portion of their financial church contribution to local units of the church. (5) percentage of each group holding an office in the local church unit, (6) average number of church auxiliary organizations with which members of each group are affiliated. Some of these criteria of church affiliation are rather universal while others are highly discriminating in character.

Church membership.- The teachers were asked the question: "Are you a church member?" To this question there were 1087 responses; only three of the non-resident and seven of the resident teachers failed to supply the needed information.

These data are presented in Table LI which shows the percentage of each group holding membership in some church. The following summary embodying the most important features of the table is offered: (1) Church membership is almost universal in all groups, ranging from 92.23 per cent in the commuting group to 100.00 per cent in the district secondary group. Only 25 resident teachers and 17 non-residents responding are not church members. (2) At the elementary level non-resident teachers tend to show the highest percentage of church memberships; home teachers tend to excel at the secondary and administrative levels and in the regional totals. (3) None of the differences is significant except two at the secondary level. The percentage of the district secondary group who are church members is significantly greater than either that of the non-resident group or that of the commuting group. It is interesting and probably significant that 100 per cent of the comparatively small group of district secondary teachers are church members. (4) Of the twelve comparisons showing evidence of trends only, seven show indices of 1.00 or more, four of which are 2.32 or more. (5) The most pronounced finding of the table is undoubtedly the high percentages throughout the table. It is also of particular interest that the two significant differences are in the comparisons of secondary teachers. It is clear that teachers are inclined to be affiliated with some religious sect.

TABLE LI

PERCENTAGE OF EACH GROUP HOLDING CHURCH MEMBERSHIP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	95.73	96.60	92.23	97.04
	P.E.fp	.60	.60	1.78	.98
	N.	515.	412.	103.	135.
Elementary	Index of Significance of Difference	$\xrightarrow{1.14}$ $\xrightarrow{.38}$ $\xrightarrow{2.37}$ $\xleftarrow{2.32}$			
	fp	98.32	100.00	94.29	94.92
	P.E.fp	.80	-----	2.40	1.06
Secondary	N.	119.	84.	35.	197.
	Index of Significance of Difference	$\xleftarrow{2.56}$ $\xleftarrow{4.79}$ $\xleftarrow{.24}$ $\xleftarrow{5.39}$			
	fp	97.78	97.14	-----	96.05
Administrative	P.E.fp	1.48	1.94	-----	1.50
	N.	45.	35.	10.	76.
	Index of Sig. of Dif.	$\xleftarrow{.82}$ $\xleftarrow{.44}$			
Total	fp	96.32	97.18	93.24	95.83
	P.E.fp	.49	.49	1.39	.67
	N.	679.	531.	148.	408.
Total	Index of Significance of Difference	$\xleftarrow{.59}$ $\xleftarrow{1.63}$ $\xleftarrow{1.68}$ $\xleftarrow{2.68}$			

Membership in local unit of church.- The teachers were also asked if they were identified by membership with a local unit of their religious choice. These data are found in Table LII. The findings from the data of this table are so extraordinarily significant that a detailed analysis of the data is necessary.

At the elementary level, 82.57 per cent of the resident group and 93.83 per cent of the district group are affiliated by membership with a local church unit; only 35.48 per cent of the commuting group and 25.81 per cent of the non-resident group are so affiliated. The index of significance of difference in the comparison between the resident and non-resident groups is 19.57; in that between the district and non-resident groups, 24.56; in that between the district and commuting groups, 16.91; but in that between the commuting and non-resident groups, only 2.26. Thus it is very clear that the percentage of either the resident or district group identified by membership with a local church

TABLE LII

PERCENTAGE OF EACH GROUP IDENTIFIED BY MEMBERSHIP WITH A LOCAL UNIT OF A CHURCH WITHIN THE DISTRICT OF THE POSITION

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	82.57	93.83	35.48	25.81
	P.E.fp	1.17	.82	3.35	2.65
	N.	482.	389.	93.	124.
Elementary	Index of Significance of Difference	← 19.57 ← 24.56 ← 2.26 ← 16.91			
	fp	69.57	87.80	24.24	27.32
	P.E.fp	2.89	2.43	5.03	2.22
Secondary	N.	115.	82.	33.	183.
	Index of Significance of Difference	← 11.61 ← 18.38 ← 14.37 ← .56			
	fp	88.37	96.97	-----	61.97
Administrative	P.E.fp	3.30	2.01	-----	3.89
	N.	43.	33.	10.	71.
	Index of Sig. of Dif.	← 5.18 ← 7.99			
Total	fp	80.63	93.06	34.56	33.33
	P.E.fp	1.05	.76	2.75	1.63
	N.	640.	504.	136.	378.
Total	Index of Significance of Difference	← 24.26 ← 33.18 ← .38 ← 20.53			

unit within that district is abnormally higher than that of the non-resident group. Furthermore, the tendency for the commuting group also to excel the non-resident group in this respect is pronounced.

At the secondary level, 69.57 per cent of the resident and 87.80 per cent of the district group hold membership in a local church unit; only 24.24 per cent of the commuting group and 27.32 per cent of the non-resident are thus affiliated. It may be noted that the secondary percentages show decreases in comparison with the elementary percentages of the same zone except in the non-resident group in which there is a slight increase. The decrease is lowest in the district zone. While the percentage of commuting elementary teachers who are members of a local church unit tends to exceed that of the non-resident group, this condition is reversed at the secondary level. All other comparisons at

this level show the larger percentages in the resident and district groups, the indices ranging from 11.61 to 18.38.

At the administrative level, the percentages become even more interesting. Here 88.37 per cent of the resident group and 96.97 per cent of the district group hold memberships in local units of their churches. These percentages are slightly higher than the corresponding percentages at the elementary level. On the other hand, it is noted that the percentage of non-resident administrators who are members of the local church unit is 61.97 per cent. This is more than double the corresponding percentage of the non-resident groups at the elementary and secondary levels. This increase at the administrative level in the non-resident zone is unusually large. The difference between the percentage of the non-resident group and that of either the resident or district group is significant. One of the most interesting aspects of Table LII is the one large percentage of non-residents - the administrative group - who are members of the local church unit.

In the comparisons of regional totals, it is found that 80.63 per cent of the resident group, 93.06 per cent of the district group, 34.56 per cent of the commuting group and 33.3 per cent of the non-resident group are affiliated by membership with a local church unit. The difference between the percentage of the non-resident group and that of either the resident or the district group is highly significant, the index being 24.26 and 33.18, respectively. The index in the comparison between the percentages of the district and commuting groups is also extraordinarily high (20.53). However, the percentage of the non-resident group is only slightly larger than that of the commuting group. It is interesting to note that exactly one-third of the non-resident teachers have their memberships in local church units.

It may be suggested that the larger percentage of strictly local teachers who are members of a local church unit is a condition one should expect to find. It does not necessarily follow from this that the commuting and non-resident teachers are less religiously inclined or less active in the church work of the district in which they teach. The length of time one has been in a community determines to some degree the location of church membership. Many of the district teachers have always lived in the vicinity, and have become members of churches having local units within the community. On the other hand, it is probable that many of the non-resident and commuting teachers going into other communities to teach find in those communities no local units of their particular churches. This tends to some extent to lower the percentages. Again, outside teachers frequently realize that they will not remain in the community for an indefinite period

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and as a result they fail to transfer their memberships to existing local church units. Many others through neglect fail to make these local contacts. It is likely that local church people look with disfavor on this neglect of outside teachers who are to be in the community for a period as long as that of a school term.

A question may be raised as to why the percentage of the non-resident administrators (61.97 per cent) who are so strongly identified with the local church unit is so much larger than that of either the non-resident elementary group (25.81 per cent) or that of the non-resident secondary group (27.32 per cent). Non-resident administrators are probably not more religiously inclined than either the elementary or secondary teachers of that zone; the longer period of service in present positions in the same community is probably a better explanation. Table VII of Chapter III supplies data bearing on this aspect of the problem. In Table VII, it is shown that non-resident elementary and secondary teachers have held their present positions, on the average, for a period of 2.87 years. The average length of service of non-resident administrators is 4.08 years which is 1.21 years more than that of non-resident elementary or secondary teachers. Obviously, the slight difference in average length of service could scarcely account for the larger difference in the percentages of non-residents who are members of local church units. It is more likely that the administrators recognizing the greater importance and prominence of administrative positions in the community realize the value of the local church affiliations and contacts in meeting the situations confronting them. This is probably a more plausible explanation than the suggestion that the religious devotion of the administrators is greater.

Church attendance.- Another characteristic of one's church connections is attendance. Even though one may hold membership in a local church unit of the community in which a teaching position is held, little community contact results with irregular and infrequent attendance at church services. Thus the teachers were asked to state the average number of times per month churches are attended within the district in which the teaching positions are held.

The results of a tabulation of church attendance within the teaching community are shown by the data contained in Table LIII. A summary of the most important characteristics of these data will suffice: (1) Resident and district teachers attend church more often than non-residents in every case except one - in the resident secondary group. (2) The average number of church attendances per month is smallest in the commuting group. (3) Of the 14 comparisons presented in the table, seven show significant

TABLE LIII

MEAN NUMBER OF CHURCH SERVICES ATTENDED PER MONTH BY EACH GROUP IN THE DISTRICT OF THE TEACHING POSITION

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	5.39	5.93	3.68	3.72
	S.D.	3.71	3.85	2.53	2.56
	P.E.m	.138	.164	.193	.169
	N.	328.	250.	78.	105.
	Index of Significance of Difference	7.66 9.36 .16 8.89			
Secondary	M.	4.20	4.54	3.24	4.48
	S.D.	2.50	2.52	2.21	3.07
	P.E.m	.173	.203	.298	.170
	N.	95.	70.	25.	149.
	Index of Significance of Difference	1.16 .23 3.62 3.60			
Administrative	M.	5.14	5.96	-----	4.95
	S.D.	3.61	3.69	-----	3.08
	P.E.m	.400	.470	-----	.268
	N.	37.	28.	9.	60.
	Index of Sig. of Dif.	.40 1.97			
Total	M.	5.13	5.65	3.49	4.32
	S.D.	3.51	2.17	2.43	2.94
	P.E.m	.110	.078	.155	.112
	N.	460.	348.	112.	314.
	Index of Significance of Difference	5.16 9.78 4.35 7.69			

differences. With one exception the attendance of either the resident or district group exceeds that of the non-resident group. (4) In the comparisons of the regional totals, the district, commuting, and non-resident groups definitely fall into three different types on the basis of church attendance. (5) Only three comparisons give indices less than 1.00 in size. (6) No significant differences are found at the secondary and administrative levels but strong trends are evident in most cases. (7) The average number of attendances per month range from 3.24 in the secondary commuting group to 5.96 in the district administrative group. (8) Average attendance appears to be somewhat in proportion to the average number of week-ends spent in the district.

the district group running highest, the non-resident group second, and the commuting group lowest.

Financial contribution to the church.- The teachers were asked to state the zone in which the major portion of their financial contribution to the church is made. The payment of money to the church may be thought of as one measure of church devotion. The percentage of each group making the major portion of their financial contribution to church units within the district in which the teaching positions are held is given in Table LIV.

A summary of the findings resulting from the analysis of these data is as follows: (1) The percentages of the commuting and non-resident groups making the major portion of their financial contribution to the local church unit range from 35.71 to 82.26 per cent; those of the district group, from 91.43 to 93.79 per cent. (2) The percentages of the corresponding commuting and non-resident groups are much alike, while those of the district group are approximately double the former. (3) Nine of the 14 comparisons show significant differences. Most of these indices run very high, the range being from 8.56 to 19.29. (4) The non-resident group tends to excel the commuting group as in the previous table. (5) Only one index is less than 1.69. (6) It may then be concluded that the most desirable condition is found among the district teachers, and the least desirable in the commuting group. The greatest degree of local affiliation is evident among home teachers.

Church officer.- A still more discriminating test of identification with the local community is found in the percentages of the different groups of teachers who are officers in local church units. These data are found in Table LV, a summary of which follows: (1) The percentages holding offices in local churches of the districts range from 7.29 per cent in the non-resident elementary group to 28.42 per cent in the district elementary group. (2) The ten comparisons of the groups reveal six significant differences, all of which favor the resident and district groups. Only one of the four remaining comparisons results in an index of less than 2.04. (3) If compared on the basis of the proportion holding office in a local church unit, it is clear that the district group falls into one group and the commuting and non-resident groups into another.

Church auxiliary organizations.- Since there are numerous other church organizations in addition to the church proper, it was thought advisable to determine the extent of teacher participation in these organizations - Sunday school, choir, young peoples clubs, etc.

Table LVI contains data bearing upon this aspect of the

TABLE LIV

PERCENTAGE OF EACH GROUP MAKING THE MAJOR PORTION OF THEIR FINANCIAL CONTRIBUTIONS TO LOCAL CHURCH UNITS WITHIN THE DISTRICT OF THE TEACHING POSITION

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	83.53	93.79	40.74	41.05
	P.E.fp	1.22	.88	3.68	3.41
	N.	419.	338.	81.	95.
Secondary	Index of Significance of Difference	$\leftarrow 11.73 \rightarrow$ $\leftarrow 14.98 \rightarrow$ $\leftarrow 14.03 \rightarrow$ $\rightarrow .06 \leftarrow$			
	fp	75.51	91.43	35.71	47.52
	P.E.fp	2.93	2.26	6.10	2.84
Administrative	N.	98.	70.	28.	141.
	Index of Significance of Difference	$\leftarrow 6.90 \rightarrow$ $\leftarrow 12.10 \rightarrow$ $\leftarrow 8.56 \rightarrow$ $\rightarrow 1.75 \leftarrow$			
	fp	90.00	93.55	-----	82.26
Total	P.E.fp	3.20	2.97	-----	3.27
	N.	40.	31.	9.	62.
	Index of Sig. of Dif.	$\leftarrow 1.69 \rightarrow$ $\leftarrow 2.55 \rightarrow$			
Total	fp	82.59	93.39	42.37	52.68
	P.E.fp	1.09	.80	3.07	1.95
	N.	557.	439.	118.	298.
	Index of Significance of Difference	$\leftarrow 13.41 \rightarrow$ $\leftarrow 19.29 \rightarrow$ $\leftarrow 16.10 \rightarrow$ $\rightarrow 2.83 \leftarrow$			

problem. These data show the average number of such organizations attended by the teachers of each group. It is evident that these data resemble closely in character those of the foregoing tables related to church affiliations: (1) The average number of church auxiliary organizations attended by the teachers varies from .87 in the commuting elementary group to 1.96 in the district elementary group. (2) The ten comparisons show seven significant differences; the other three show pronounced trends, the indices ranging from 1.23 to 3.98. (3) When considered as wholes, the district, commuting, and non-resident groups fall into three groups distinctly different from each other on the basis of the average number of church auxiliary organizations attended. (4) As in previous church comparisons, the district group shows the greatest amount of such participation; the commuting group, the least amount. (5) Differences at the secondary level are less

TABLE LV

PERCENTAGE OF EACH GROUP HOLDING OFFICES IN LOCAL CHURCHES

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	25.27	28.42	13.75	7.29
	P.E.fp	1.52	1.78	2.60	1.79
	N.	372.	292.	80.	96.
	Index of Significance of Difference	← 7.65 ← 8.38 ← 2.04 ← 4.66			
Secondary	fp	16.49	20.29	-----	9.86
	P.E.fp	2.54	3.26	-----	1.69
	N.	97.	69.	28.	142.
	Index of Sig. of Dif.	← 2.17 ← 2.84			
Administrative	fp	-----	-----	-----	-----
	P.E.fp	-----	-----	-----	-----
	N.	34.	25.	9.	61.
	Index of Significance of Difference	← 6.60 ← 4.12 ← .05 ← 5.57			
Total	fp	23.96	27.20	12.82	12.71
	P.E.fp	1.28	1.52	2.08	1.10
	N.	503.	386.	117.	299.
	Index of Significance of Difference	← 6.60 ← 4.12 ← .05 ← 5.57			

than those at the elementary level.

Affiliation with Other Community Organizations - Clubs, Societies, Fraternities, Drives, Fairs, Contests, etc.

The teachers were asked to check other community organizations with which they are associated. Such organizations include various types of clubs, societies, associations, fraternities, fairs, contests, drives, etc. Each such connection gives the teachers additional contacts in the community.

These data are found in Table LVII in the form of the average number of such community organizations with which the teachers have become identified. In the main, the trends revealed by the table conform rather closely to those of the preceding tables of the chapter: (1) The average number of community organizations with which the teachers are identified varies from .95 in the commuting elementary group to 2.62 in the non-resident administrative group. (2) Ten of the sixteen arrows of the table point to the left, indicative of the superiority of the resident

TABLE LVI

MEAN NUMBER OF LOCAL CHURCH AUXILIARY ORGANIZATIONS WITH WHICH EACH GROUP IS IDENTIFIED BY ATTENDANCE OR PARTICIPATION¹

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.76	1.96	.87	1.13
	S.D.	1.16	1.08	1.12	1.09
	P.E.m	.040	.042	.090	.078
	N.	374.	304.	70.	89.
	Index of Significance of Difference	← 7.16 ← 9.33 ← 11.01 2.18 →			
Secondary	M.	1.43	1.76	-----	1.29
	S.D.	1.17	1.05	-----	1.09
	P.E.m	.090	.096	-----	.070
	N.	77.	54.	23.	129.
	Index of Sig. of Dif.	← 1.23 ← 3.98			
Administrative	M.	-----	-----	-----	-----
	S.D.	-----	-----	-----	-----
	P.E.m	-----	-----	-----	-----
	N.	31.	24.	7.	68.
	Index of Significance of Difference	← 7.14 ← 11.23 ← 13.49 5.58 →			
Total	M.	1.71	1.95	.83	1.31
	S.D.	1.18	1.08	1.10	1.07
	P.E.m	.036	.037	.074	.043
	N.	482.	382.	100.	286.
	Index of Significance of Difference	← 7.14 ← 11.23 ← 13.49 5.58 →			

¹Sunday school, prayer meeting, church choir, young peoples meetings, etc.

group when compared on this basis. (3) Only four of the comparisons show significant differences. Three of these show the district group superior to either the commuting or the non-resident group; the other shows the non-resident group superior to the commuting group in the comparison of regional totals. (4) Five other comparisons show pronounced trends - indices ranging from 2.38 to 3.50. Four of these favor either the resident or the district group; one favors the non-resident group in comparison with the commuting group. (5) The averages of the administrative groups are practically equal. (6) As in other comparisons of the table, the averages of the commuting group are significantly less than those of the district group; in the comparisons of regional totals, significantly less than that of the non-resident group.

TABLE LVII

MEAN NUMBER OF COMMUNITY CONTACTS MADE BY EACH GROUP THROUGH MEMBERSHIPS IN COMMUNITY CLUBS, FRATERNITIES, AND ASSOCIATIONS, AND THROUGH PARTICIPATION IN COMMUNITY CONTESTS, DRIVES, FAIRS, ETC.

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.61	1.76	.95	1.35
	S.D.	1.31	1.31	1.06	1.37
	P.E.m	.048	.053	.090	.105
	N.	339.	276.	63.	78.
	Index of Significance of Difference	← 2.26 ← 3.50 ← 2.90 ← 7.79			
Secondary	M.	1.97	2.38	-----	1.46
	S.D.	1.47	1.32	-----	1.56
	P.E.m	.113	.120	-----	.094
	N.	77.	55.	22.	125.
	Index of Sig. of Dif.	← 3.47 ← 6.05			
Administrative	M.	2.58	2.54	-----	2.62
	S.D.	1.87	2.02	-----	1.75
	P.E.m	.220	.267	-----	.146
	N.	33.	26.	7.	65.
	Index of Sig. of Dif.	← .15 ← .26			
Total	M.	1.74	1.91	1.09	1.71
	S.D.	1.41	1.41	1.21	1.64
	P.E.m	.045	.050	.085	.068
	N.	449.	357.	92.	268.
	Index of Significance of Difference	← .37 ← 2.38 ← 5.69 ← 8.28			

(7) In general the degree of participation of the resident group is slightly greater than that of the non-resident group; that of the district group somewhat greater than that of the non-resident group; and that of either the district or non-resident group, somewhat more pronounced than that of the commuting group. (8) Although these data definitely favor the resident and district groups, the evidence is not so strong as in most other tables of the chapter.

Buying from Local Business Firms

Frequently teachers are criticised for buying out of town -

usually in larger near-by towns or cities. Local business men frequently consider this a serious offense which may militate against the teachers' chances of remaining in the community as teachers. The investigation has attempted to obtain a measure of the teachers' habits of buying locally. Only estimates could be obtained since teachers probably seldom keep accurate records of such transactions. Since these data are based on estimates, small differences should not be considered seriously; on the other hand, wide variations are probably good evidence of the existence of real differences in the buying habits of the groups of teachers.

In order to obtain this information teachers were asked to state the approximate percentage of the cost of their purchases made within the past year within the district in which they are teaching. Cost of board and rents are not included in the estimates. These data are shown in the form of mean percentages in Table LVIII and are summarized as follows: (1) All arrows of the table except two which are of little or no importance indicate that the larger average percentage of buying is done locally by the resident and district groups. (2) Eight of the twelve comparisons show significant differences, the indices ranging from 6.17 to 13.50. All of these significant comparisons indicate that more local buying is done by the resident and district groups than by non-resident and commuting teachers. (3) No significant differences are found at the administrative level. (4) District teachers on the average make about two-thirds of their purchases locally; the commuting and non-resident groups, approximately two-fifths. (5) In this instance, as in the case of membership in a local church unit, the non-resident administrators make a very much greater showing than is true of non-resident elementary and secondary teachers. The suggested explanation offered in the previous case is probably just as appropriate in this case. (6) It is evident that, on the basis of making purchases locally, the teachers fall into two distinct groups - (a) the district group and (b) the commuting and non-resident group.

Summary

The foregoing analysis of the data presented in this chapter warrants the following conclusions:

1. Teachers who live in the community in which they teach participate in the various activities of the community outside of the school to a much more significant degree than teachers who come into the community from elsewhere.

2. This greater degree of participation is evidenced by a greater continuity of residence in the community as shown by the

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TABLE LVIII

MEAN PERCENTAGE OF THE COST OF PURCHASES, EXCLUSIVE OF BOARD AND RENT, MADE DURING THE PAST YEAR WITHIN THE DISTRICT OF THE TEACHING POSITIONS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	Mp	62.7	67.3	43.1	39.9
	S.D.	33.6	32.0	35.4	35.2
	P.E.mp	1.23	1.30	2.98	2.67
	N.	338.	274.	64.	79.
	Index of Significance of Difference	7.75 9.22 80 7.44			
Secondary	Mp	57.8	67.1	-----	38.3
	S.D.	33.3	28.2	-----	31.5
	P.E.mp	2.54	2.52	-----	1.88
	N.	78.	57.	21.	128.
	Index of Sig. of Dif.	6.17 9.17			
Administrative	Mp	66.8	69.1	-----	60.0
	S.D.	34.1	34.3	-----	29.4
	P.E.mp	3.94	4.37	-----	2.60
	N.	34.	28.	6.	58.
	Index of Sig. of Dif.	1.44 1.79			
Total	Mp	62.2	67.4	41.4	43.5
	S.D.	33.6	31.6	35.2	33.4
	P.E.mp	1.07	1.12	2.49	1.38
	N.	450.	359.	91.	265.
	Index of Significance of Difference	10.68 13.50 73 9.52			

number of week-ends spent there, by a greater participation in the church life of the community, by a stronger affiliation with various community organizations, and by a tendency to make a greater part of their purchases from the local business firms. There is evidence of a pronounced tendency on the part of non-resident teachers to surpass local teachers with respect to the number of visits made to the homes of their pupils. However, as a whole, the evidence very strongly favors the local teachers as the greater community asset.

3. In most instances, on the basis of the proposed criteria, the non-resident teacher is decidedly superior to the commuting teacher, who as a rule returns to her home outside of the community each day after the close of the school work and who is

also absent from the community most of the week-ends. The low position of the commuting group is conspicuous throughout the chapter.

4. In some instances the groups from the three zones of residence - the district, the commuting, and the non-resident - fall into three distinctly different types of groups as community workers. However, in most cases they fall into two groups only, the averages and percentages of the commuting groups conforming in a striking way with those of the non-resident group - usually slightly lower than those of the non-resident.

5. The analysis of the data of this chapter points to an interesting harmony of relationship between the proportion of home teachers employed,¹ their length of service in the home school,² and the degree of their participation in and identification with the various community activities outside of the school itself. It will also be recalled that no such relationship was found, on the one hand, between the proportion of local teachers employed and their length of service and, on the other hand, between their training and professional attitude.

6. The suggestions growing out of these data point to the necessity of the non-resident teachers' becoming more closely identified with the community life outside of the school in the community in which they teach as a means of increasing their period of service and eventually the proportion of that group employed in the schools. This offers no suggestion for securing positions away from home but rather for holding them when they are once secured.

7. Finally, it may be suggested from the analysis of these and previous data of the study that participation in the community life of the district in which one teaches is a greater guarantee of a longer period of service than a superior amount of training plus a more pronounced professional attitude. Some of the hidden influences previously mentioned as possible explanations of the findings of Chapters II and III are apparently embodied in the data contained in this chapter.

¹Chapter II, ²Chapter III.

CHAPTER VII

RATING OF TEACHERS BY ADMINISTRATIVE OFFICERS IN RELATION TO LENGTH OF SERVICE

The analysis of certain data obtained from the superintendents and principals is presented in this chapter. The two forms on which these data were collected were mentioned and described in the introductory chapter.¹ Copies of the data sheets are shown in the Appendix.²

The purpose of this chapter is to study the administrators' judgments of their teachers as a possible factor influencing length of service. Information of two types was obtained as follows: (1) The administrators' selections of their best and poorest teachers, the selection being made on the basis of a score card for rating teachers. (2) The administrators' confidential reasons for vacancies which occurred during or at the close of the previous year. These data were then analyzed and used as the basis of comparisons between resident and non-resident teachers.

Information showing the authority delegated to administrators in the selection, recommendation, and nomination of teachers for election to or retention in teaching positions was obtained from 45 of the 65 school systems visited in the collection of data for the study. A tabulation of this information shows that the administrators (1) have full power to nominate teachers in thirty-two systems, (2) have power to nominate high-school teachers only in four systems, (3) have "limited" or "partial" power to nominate teachers in two systems, and (4) have no authority to nominate teachers in seven systems.

It is evident from these findings that on the basis of the administrators' own statements the administrators usually have some authority in the selection and retention of teachers. No effort was made to determine to what extent pressure is actually brought to bear by citizens and board members to have the administrator make certain nominations for positions, even though that power has been delegated to the administrators. Had such information been secured, it is probably not unlikely that the foregoing findings would be modified by a considerable shifting from

¹p. 4.

²Pp. 199-204.

item "1" to items "2" and "3".

The data of this chapter are not presented as evidence of the superiority of any group of teachers as teachers. Too much subjectivity enters into the data when considered from that point of view to make comparisons valid. However, as evidence bearing on the question of length of service, the judgments of administrators undoubtedly plays a part which may be reduced to objectivity in the form of the teachers' years of service and salary in a particular school system. From this point of view the data herein presented appear to deal with an important aspect of the study.

Answers to the following questions are proposed in the light of the analysis of these data:

1. Which groups of teachers now in service do the administrators, as a general rule, rank highest? Which, lowest?

2. From the same point of view, how do former teachers from the different zones compare?

3. Does the evidence contained in this chapter support that presented in Chapters II and III which show larger proportions of home teachers in positions and which also show the period of service of home teachers greater than that of non-resident teachers?

4. Finally, is the evidence conclusive that the administrators are actually free to select their teachers and that their selections are indorsed by the boards of education?

Administrators' Judgments of Qualities of Teachers Now in Service

If there were not more than ten teachers in the school system, the administrator was asked to select separately for each item of the teacher-rating sheet the teacher who in his judgment ranked highest on the basis of that item. The poorest teacher was selected for each item in the same manner. If there were from 10 to 20 teachers in the system, the two highest and the two lowest were selected, and so on. In this way the necessity for fine discrimination in making a full study of each teacher on a separate rating sheet was avoided. This plan could also be followed at a great saving of the administrators' time, a factor to be considered in securing returns from busy administrators. It is also thought that the plan used provides more objective data since fine discriminations with their greater degree of subjectivity are to some extent avoided.

Only elementary and secondary teachers are considered in these comparisons since administrators supplied the data used.

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Data were secured from 31 of the school systems through the co-operation of 41 administrators, most of whom were superintendents. Selections were made in each case from the total number of teachers coming under the supervision of the administrator making the ratings. If both the superintendent and principal or principals of a system supplied these data, the teachers were counted twice in determining the total number of teachers from whom ratings were made. Thus 534 teachers were included - 236 from the district group, 74 from the commuting group, and 224 from the non-resident group.

If a teacher were selected as a superior teacher on any item of the rating sheet, the zone in which that teacher was classified was given credit for one "merit"; if selected as an inferior teacher, one "demerit." The distribution of the number of teachers rated, of the number of "merits" awarded, and of the number of "demerits" given are shown in the appendix.¹ The three tables appearing in the body of this section of the chapter are of the type already used in Tables XIV-XVI of Chapter III. These are frequency percentage tables in which a comparison for each group is made between (1) the percentage of the total number of teachers considered in making selections and the percentage of the total number of "merits" awarded, (2) the percentage of the total number of teachers considered in making selections and the percentages of the total number of "demerits" given, and (3) the percentage of "merits" awarded and the percentage of "demerits" given. Thus comparisons are made between resident and non-resident groups indirectly, that is, by determining the extent to which each group of each zone falls short of, equals, or exceeds the expectancy in proportion to its numbers.

Comparisons with respect to "merit" ratios.- Table LIX contains a comparison within each group in which that group's percentage of the total number of teachers rated is compared to that group's percentage of the total number of "merits" awarded. Consideration is given to the zones in the order - total resident, district, commuting, and non-resident.

Two hundred forty-five (245) of the 534 teachers, or 45.88 per cent, are resident teachers holding elementary positions. However, the resident elementary group making up the 45.88 per cent of the teachers rated received only 39.50 per cent of the 3299 "merits" awarded to the 534 teachers. It is thus clear that the resident elementary group falls below its normal proportion of the "merits" awarded. The difference between the two percentages is

¹Table LXXXVII, p. 198.

TABLE LIX

PERCENTAGE OF THE TEACHERS OF EACH GROUP RATED BY ADMINISTRATORS AND OF "MERITS" AWARDED THEM

Group Considered		The (534) Teachers Rated ¹		The (3299) Merits Awarded ²
		f _p and P.E.f _p	Index of Significance of Difference	f _p and P.E.f _p
Tot. Res.	Elem.	45.88 1.46	← 4.06 →	39.50 .57
	Sec.	12.17 .95	→ 2.31 ←	14.55 .41
	Tot.	58.05 1.44	← 2.56 →	54.05 .59
Dist.	Elem.	35.96 1.40	← 3.18 →	31.19 .55
	Sec.	8.24 .80	→ .70 ←	8.85 .33
	Tot.	44.19 1.45	← 2.66 →	40.04 .57
Com.	Elem.	9.93 .87	← 1.74 →	8.81 .32
	Sec.	3.93 .57	→ 2.81 ←	5.70 .27
	Tot.	13.86 1.01	→ .13 ←	14.00 .40
Non- Res.	Elem.	15.17 1.05	← 3.34 →	11.46 .37
	Sec.	26.78 1.30	→ 5.48 ←	34.50 .56
	Tot.	41.95 1.44	→ 2.56 ←	45.95 .59

¹N = 534. ²N' = 3299.

statistically significant, the index being 4.06. The resident secondary group, constituting 12.17 per cent of the teachers, received 14.55 per cent of the "merits" awarded. The difference represents a strong trend in favor of the resident secondary group but the difference in the proportions is not statistically significant. However, the entire resident group, including 58.05 per cent of the teachers, received only 54.05 per cent of the total number of "merits" awarded. Thus with one exception in the secondary group, the resident teachers do not share in the distribution of the "merits" in proportion to their numbers. While this difference is not significant, it shows a trend strongly unfavorable to the resident group as a whole, the index being 2.56.

The proportion of the teachers, 35.96 per cent, who are classified in the district elementary group received only 31.19 per cent of the "merits" awarded. This difference shows a strong trend unfavorable to the district elementary group, the index

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being 3.18. The margin of difference is slightly in favor of the district secondary group since 8.24 per cent of the teachers represented by the district secondary group received 8.85 per cent of the awards. However, the advantage is only a slight one, the index being only .70. The "merits" of the district group as a whole fall below a normal proportion since the 44.19 per cent of the teachers constituting that group were awarded only 40.04 per cent of the "merits." The strong trend noted as unfavorable to the home teacher is indicated by an index of 2.66. It is noted that the arrow directions of the district groups are the same as those of the resident groups but that the indices of the district groups are less than the corresponding indices of the resident groups except for the groups as wholes.

The percentage of the teachers (9.93 per cent) constituting the commuting elementary group received only 8.31 per cent of the "merits" awarded, the comparison resulting in an index of 1.74 which is slightly unfavorable to the commuting elementary group. However, the percentage of the teachers (3.93 per cent) composing the secondary group received 5.70 per cent of the merits awarded. This comparison shows a strong trend - an index of 2.81 - favorable to the commuting secondary group. Evidently the trend favorable to the resident secondary group is due largely to the addition of the commuting secondary group to the district secondary group, the comparison in the latter showing an almost normal proportion of "merits." Although the indices in the comparisons of the resident and district totals give evidence of a trend favorable to local teachers, the index of .13 in the comparison of the commuting group as a whole indicates that the proportion of "merits" allocated to the commuting group is a normal one only. While there were strong trends favorable to the resident and district groups as wholes, the index in the comparison of the commuting group as a whole is reversed by a very slight margin.

Comparisons within the non-resident groups show one significant difference and two very strong trends toward significant differences. The percentage of the teachers, 15.17 per cent, classified as non-resident elementary teachers received only 11.46 per cent of the "merits." This indicates a trend unfavorable to the non-resident elementary group as revealed in the index of 3.34. This condition is very similar to conditions found in comparisons of the other elementary group of the table. However, the non-resident secondary group, composed of 26.78 per cent of the teachers rated, received 34.50 per cent of the "merits" awarded. This is a significant difference favorable to the non-resident secondary group, resulting in an index of 5.48. While trends favor the secondary groups in previous comparisons of the table,

the difference becomes a significant one in the comparison of the non-resident secondary group. Non-resident teachers as a whole are favored in the comparison by a strong trend since the non-resident group includes 41.95 per cent of the teachers rated and 45.95 per cent of the "merits" awarded. Of course, the index favorable to the entire non-resident group is exactly the same as the index unfavorable to the entire resident group.

A summary of the findings from these data shows the following striking characteristics: (1) Administrators usually consider the total resident and district groups inferior to the non-resident group. (2) Throughout the comparisons, elementary teachers are considered inferior to secondary teachers, the inferiority of the resident elementary group being significant while pronounced trends in that direction are found in the district, commuting, and non-resident groups. (3) The tendency of secondary teachers to excel elementary teachers is only slight in the district group, shows strong trends in the resident and commuting groups, and is significant only in the non-resident group. (4) Only two significant comparisons are found in the table - one indicating the shortcomings of the resident elementary group, the other indicating the superiority of the non-resident secondary group. (5) The trends and significant differences found in the comparisons indicate rather clearly that more non-resident than home teachers are found on the "merit" side of the balance sheet as rated by the administrators under whose supervision the teachers work.

Comparisons with respect to teacher and "demerit" ratios. Although the non-resident group is apparently in the lead with respect to the proportion of "merits" awarded them by the administrators, it is no guarantee that the home teachers have the greater proportions of the "demerits." The possibility of finding both the best and poorest teachers within the same regional group is recognized. For this reason, a table similar in form to the one just discussed was prepared in which comparisons are made between the teacher and "demerit" ratios. These data are contained in Table LX.

An examination of the data shows rather definite tendencies - even more pronounced than those found in the data of Table LIX. To the resident elementary group, which includes 45.88 per cent of the teachers rated, were given 54.58 per cent of the "demerits." A comparison of these percentages gives an index of 5.54, indicating the inferiority of the resident elementary group on the basis of the administrators' judgments. The condition in the resident secondary group is practically normal since the percentage of the teachers composing that group and the percentage of the "demerits" given them are about the same. The resident

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TABLE LX

PROPORTION OF THE TEACHERS OF EACH GROUP RATED BY ADMINISTRATORS AND "DEMERITS" RECEIVED¹

Group Considered		The (534) Teachers Rated		The (3199) Demerits Given	
		fp and P.E.fp	Index of Significance of Difference	fp and P.E.fp	
Tot. Res.	Elem.	45.88 1.46	5.54 →	54.58 .59	
	Sec.	12.17 .95	.02 →	12.19 .39	
	Tot.	58.05 1.44	5.63 →	66.77 .56	
Dist.	Elem.	35.96 1.40	4.85 →	43.33 .59	
	Sec.	8.24 .80	.91 →	9.03 .34	
	Tot.	44.19 1.45	5.20 →	52.36 .59	
Com.	Elem.	9.93 .87	1.39 →	11.25 .38	
	Sec.	3.93 .57	1.26 ←	3.16 .21	
	Tot.	13.86 1.01	.50 →	14.41 .42	
Non-Res.	Elem.	15.17 1.05	3.78 ←	10.97 .37	
	Sec.	26.78 1.30	3.25 ←	22.26 .50	
	Tot.	41.95 1.44	5.63 ←	33.23 .56	

¹N = 534; N = 3199

group as a whole, composed of 58.05 per cent of the teachers rated, was given 66.77 per cent of the "demerits." In this case, the difference is again significant, the index being 5.63. On the basis of the administrators' judgments, the resident teachers not only tend to fall below the standard on "merits" awarded but are significantly subnormal with respect to "demerits" received.

In the district group, the elementary teachers (35.96 per cent of all teachers used in these ratings) received 43.33 per cent of the "demerits." The index of 4.85 in this comparison is again indicative of the significant inferiority of a home group as judged by administrators. The comparison at the secondary level of the district group in which 8.24 per cent of the teachers are given 9.03 per cent of the "demerits" indicates a slight tendency toward inferiority in the district secondary group. The district group as a whole is definitely below standard since the proportion of the teachers (44.19 per cent) included in this group was given 52.36 per cent of the "demerits," the comparison

resulting in an index of 5.20. The pattern of the arrow-index portion of district comparisons is practically the same as that of the resident comparisons.

In the commuting groups, the elementary teachers fall below the normal since this group, composed of only 9.93 per cent of the teachers, received 11.25 per cent of the "demerits," the resulting index being 1.39. The commuting secondary group shows a slight advantage since this group, composed of 3.93 per cent of the teachers, received only 3.16 per cent of the "demerits," the resulting index being 1.26. This is the only comparison of the table favoring the local teachers and the advantage here is of no significance. As a whole, the commuting group is practically rated as normal since the percentage of "demerits" is only slightly in excess of the percentage of the teachers belonging to this zone - 14.41 and 13.86 per cents, respectively, the index being only .50.

In the non-resident group the condition is different. The arrows point in the opposite direction to those of the previous comparisons of the table. The elementary group, composed of 15.17 per cent of the teachers, was given only 10.97 per cent of the "demerits"; the secondary group, composed of 26.78 per cent of the teachers, only 22.26 per cent of the "demerits"; and the group as a whole, composed of 41.95 per cent of the teachers, only 33.23 per cent of the "demerits." Although the comparison of the group as a whole is the only one statistically significant, pronounced trends are found in the other two comparisons of non-residents - the index in the elementary comparison being 3.78 and that in the secondary comparison 3.25. These data indicate that administrators rate non-resident teachers higher than resident teachers since the non-residents received the lower percentages of "demerits."

The most interesting characteristics of the data contained in this table may be briefly summarized as follows: (1) With one slight exception, all arrows in the resident, district, and commuting comparisons point to the right, indicating that the home teachers receive larger proportions of the "demerits" than the proportions of the teachers in those groups would suggest. (2) In all three comparisons within the non-resident group the proportions of "demerits" are lower than the proportion of the teachers falling in this classification. (3) All the indices except one indicate either the weakness of the home teachers or the strength of the non-resident teachers. In the twelve comparisons, five of the indices which range from 4.85 to 5.63 are significant. (4) It appears from these data that superintendents and principals consider a greater proportion of their home teachers below normal;

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Comparison of "merit" and "demerit" ratios.- Table LXI is composed of the data contained in the right hand columns of the two preceding tables. By this means direct comparisons of the proportions of "merits" and "demerits" falling to each group of teachers are possible. Since the data of the two preceding tables show rather clearly that the home teachers have been given a comparatively low percentage of the "merits" and a comparatively high percentage of the "demerits," the outcome of a direct comparison of the "merit" and "demerit" percentages should be anticipated with a fair degree of accuracy.

The data in Table LXI show that the resident elementary group was awarded 54.58 per cent of the "demerits" but only 39.50 per cent of the "merits," a difference which is highly significant, an index unfavorable to the resident group being 18.09. The data also show that 14.55 per cent of the "merits" and only 12.19 per cent of the "demerits" are allocated to the resident secondary group. This is a significant difference in favor of the resident secondary group, the index being 4.14. However, the entire resident group was given 66.77 per cent of the "demerits" but only 54.05 per cent of the "merits," a difference unfavorable to the resident group and resulting in an index of significance of 15.70. In the administrators' judgments resident elementary teachers are far below standard, resident secondary teachers well above standard, and the resident group as a whole far below standard if studied on the basis of the proportion of "merits" and "demerits" awarded.

In the district group elementary teachers received 43.33 per cent of the "demerits" but only 31.19 per cent of the "merits," resulting in an index (14.99) definitely unfavorable to the group under consideration. The percentages of "merits" and "demerits" allocated to the district secondary group are practically equal - 8.85 and 9.03 per cent, respectively. The entire district group received 52.36 per cent of the "demerits" but only 40.04 per cent of the "merits." This comparison results in an index of 15.02 which is decidedly unfavorable to the district group as a whole.

In the commuting group the elementary teachers were given 11.25 per cent of the "demerits" and 8.31 per cent of the "merits." The resulting index - 6.00 - is thus unfavorable to the group under consideration. However, the secondary group received 5.70 per cent of the "merits" and only 3.16 per cent of the "demerits." This comparison is favorable to the group as shown by an index of 7.47. The percentage of "demerits" given the group as a whole is only slightly in excess of the "merits" awarded them - 14.41 and

TABLE LXI

PERCENTAGE OF THE "MERITS" AWARDED AND OF THE "DEMERITS" GIVEN
THE VARIOUS GROUPS BY THE RATINGS OF ADMINISTRATORS

Group Considered		The (3299) Merits Awarded fp and P.E.fp	Index of Significance of Difference	The (3199) Demerits Given fp and P.E.fp
Tot. Res.	Elem.	39.50 .57	18.09 →	54.58 .59
	Sec.	14.55 .41	4.14 ←	12.19 .39
	Tot.	54.05 .59	15.70 →	66.77 .56
Dist.	Elem.	31.19 .55	14.99 →	43.33 .59
	Sec.	8.85 .33	.38 →	9.03 .34
	Tot.	40.04 .57	15.02 →	52.36 .59
Com.	Elem.	8.31 .32	6.00 →	11.25 .38
	Sec.	5.70 .27	7.47 ←	3.16 .21
	Tot.	14.00 .40	.84 →	14.41 .42
Non-Res.	Elem.	11.46 .37	.94 ←	10.97 .37
	Sec.	34.50 .56	16.32 ←	22.26 .50
	Tot.	45.95 .59	15.70 ←	33.23 .56

14.00 per cent, respectively. Evidently administrators regard commuting secondary teachers superior to district secondary teachers.

In the non-resident groups the conditions are reversed. Although the elementary teachers received 11.46 per cent of the "merits," they were given only 10.97 per cent of the "demerits." This comparison slightly favors the non-resident elementary group, the index being only .94. The secondary group was awarded 34.50 per cent of the "merits" but only 22.26 per cent of the "demerits." This comparison results in a significant difference favorable to the non-resident secondary group, the index being 16.32. The entire non-resident group was awarded 45.95 per cent of the "merits" and was penalized by only 33.23 per cent of the "demerits," which comparison results in an index of 15.70 in favor of the non-resident group.

The outstanding features of the data contained in the table are summarized as follows: (1) The percentage of "merits" awarded each secondary group, except the district secondary group, exceeds the percentage of "demerits." (2) The good showing made

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by the resident secondary group is due to the strength of the commuting group rather than to that of the district group. (3) Only two comparisons are favorable to the home teachers but these are significant - the comparisons of the resident secondary and commuting secondary groups. (4) All elementary comparisons of home groups are unfavorable to them. In each case the differences are highly significant; a slight tendency favoring the elementary group is found in the case of non-residents. (5) In considering the regional totals, the percentage of "demerits" exceeds the percentage of "merits" in all comparisons of home teachers; the first two comparisons - those of the resident and district groups - show significant differences. The non-resident group as a whole shows a significantly larger percentage of "merits" than of "demerits." (6) Finally, on the basis of the judgment of administrators, non-resident teachers may be said to surpass in a significant way the resident teachers. The commuting secondary group and its influence on the resident secondary group are the only instances of the superiority of home teachers according to the judgment of the administrators.

Administrators' Judgment of Teachers Who Have Recently Left the System

In the collection of the data, the administrators were asked to give confidential reasons for recent withdrawals from the faculties of their school systems. These data were obtained personally by the investigator on the occasions of visits to the communities. The information was obtained from 61 of the 65 school systems visited.

The reasons for withdrawals were studied to determine the administrators' attitude toward the ex-teachers. The reasons were tabulated under three categories - desirable, undesirable, and doubtful. Finally, the percentage of each group considered desirable teachers was determined by dividing the number desirable by the total number in the group. These data are presented in Table LXII. There are 248 teachers included in these comparisons, 112 of which are resident teachers, and 136 of which are non-resident teachers. Of this number 129 were considered desirable, 62 of which are resident teachers and 67 of which are non-residents. The number marked "doubtful" was so small as to be practically negligible.

According to the judgment of the administrators 64.86 per cent of the resident elementary teachers who withdrew were satisfactory teachers. Non-resident elementary teachers were satisfactory in 52.83 per cent of the cases. The difference is not

TABLE LXII

PERCENTAGE OF EACH GROUP WITHDRAWN THE PREVIOUS YEAR WHO WERE
CONSIDERED SATISFACTORY BY ADMINISTRATORS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	fp	64.86	60.38	76.19	52.83
	P.E.fp	3.74	4.53	6.27	4.63
	N.	74.	53.	21.	53.
	Index of Signifi- cance of Difference	← 2.03 ← 1.17 ← 2.99 1.27 →			
Second- ary	fp	36.84	-----	-----	46.99
	P.E.fp	5.27	-----	-----	3.70
	N.	38.	23.	15.	83.
	Index of Sig. of Dif.	1.58 →			
Total	fp	55.36	53.95	58.33	49.26
	P.E.fp	3.17	3.86	5.54	2.89
	N.	112.	76.	36.	136.
	Index of Signifi- cance of Difference	← 1.42 ← .97 ← 1.45 .65 →			

significant but shows a trend favorable to the resident group, the index being 2.03. The largest percentage of elementary withdrawals considered as satisfactory teachers - 76.19 per cent - was in the commuting group; the lowest, in the non-resident group. None of the differences at the elementary level are statistically significant; a strong trend is found in the difference between the commuting and non-resident groups - an index of 2.99.

The comparison at the secondary level indicates that 46.99 per cent of those who withdrew were satisfactory teachers; 36.84 per cent of the withdrawals from the resident group were considered satisfactory. The difference, however, is not statistically significant, the index being only 1.58. While a greater percentage of the home teachers who have withdrawn from the elementary schools is considered satisfactory, a greater percentage of the non-resident secondary teachers is pronounced satisfactory. Differences, however, are not significant.

In comparison of the regional totals it is found that the pattern is similar to that of the elementary comparisons, except that the magnitudes of the trends as indicated by the smaller indices are less and therefore not significant.

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withdrawn from the system may be briefly summarized as follows:

(1) Administrators consider a greater percentage of the home teachers satisfactory at the elementary level, (2) At the secondary level a larger percentage of the non-resident teachers is considered satisfactory. (3) As a whole the home teachers are slightly favored in the comparisons. (4) In no comparisons of the table are the differences really significant.

Summary

Analysis of the data presented in this chapter warrant the following general conclusions:

1. On the basis of the judgments of administrators, non-resident classroom teachers now in service obtained in most comparisons the greater percentage of "merits" awarded; on the other hand, resident classroom teachers in most instances received the greater percentage of the "demerits." Many of these differences proved to be statistically significant.

2. On the basis of the judgments of administrators, no significant differences were found between resident and non-resident teachers who had recently withdrawn either voluntarily or involuntarily from their positions. Small differences found between former resident and non-resident teachers were slightly in favor of the local group in most cases.

3. On this basis, it appears that more teachers should be employed from the non-resident than from the resident group, if the administrators nominate their teachers, especially if nominations are made in the light of their judgments of teachers. The facts revealed in this study as to the comparative number of resident and non-resident teachers holding positions do not harmonize with the results of administrators' judgments of the teaching qualities of the resident and non-resident teacher as shown in this chapter. Evidently the judgments of administrators, if stated to the controlling boards, are probably not always honored by that body since a majority of all teachers employed are identified with the local zone. The foregoing conditions appear to apply more in the selection of elementary than in the selection of the entire group of teachers since a majority of secondary teachers come from the non-resident group.

CHAPTER VIII

RESIDENCE STATUS IN RELATION TO CERTAIN ECONOMIC FACTORS

Through comparisons of available data consideration is given in this chapter (1) to the tendency of resident and non-resident teachers to differ with respect to salary and income, (2) to the tendency of boards of education to pay teachers higher salaries in school systems employing more non-resident than district teachers, (3) to the relationships between salary and (a) sex, (b) marriage status, and (c) financial responsibility for dependents, and (4) to the agreement or disagreement between the foregoing economic factors and differences pointed out in the preceding chapters of the study.

Annual Salary

The average annual salary of each group of teachers for the school year during which these data were collected is given in Table LXIII.

In the elementary group, the average annual salary of the resident teachers is \$915. The average annual salary of the non-resident elementary teachers is \$120 more than that of the resident elementary teachers. The difference is statistically significant, the index being 8.00. The average annual salary of the non-resident elementary teachers is also significantly greater than that of either the district or the commuting teachers, the indices being 8.20 and 5.63, respectively. The difference between the annual salaries of commuting and district elementary teachers is negligible (\$16).

At the secondary level the average annual salary of the non-resident teachers is \$77 more than that of resident teachers, \$52 more than that of the district teachers, and \$138 more than that of the commuting teachers. None of the differences noted are significant, but there is a strong tendency for the larger salary to be paid to teachers in the non-resident group, the indices ranging from 2.08 to 3.15.

At the administrative level, the average annual salary of non-resident administrators is \$747 more than that of resident administrators, and \$800 more than that of district administrators. Both of these comparisons show significant differences.

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TABLE LXIII

MEAN ANNUAL SALARY OF EACH GROUP AT THE TIME
THE DATA WERE COLLECTED

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	915.	912.	928.	1035.
	S.D.	166.	159.	185.	245.
	P.E.m	4.9	5.3	12.3	14.3
	N.	512.	409.	103.	134.
	Index of Significance of Difference	8.00 8.20 5.63 .12			
Secondary	M.	1285.	1310.	1224.	1362.
	S.D.	307.	272.	363.	319.
	P.E.m	19.0	19.9	42.0	15.3
	N.	119.	85.	34.	198.
	Index of Significance of Difference	3.15 2.08 3.07 1.87			
Administrative	M.	1734.	1681.	-----	2481.
	S.D.	713.	766.	-----	971.
	P.E.m	71.7	87.3	-----	74.6
	N.	45.	35.	10.	77.
	Index of Sig. of Dif.	7.25 6.95			
Total	M.	1036.	1026.	1065.	1466.
	S.D.	359.	330.	389.	710.
	P.E.m	9.3	9.7	21.6	23.7
	N.	676.	529.	147.	409.
	Index of Significance of Difference	17.20 16.92 12.53 1.70			

the indices being 7.25 and 6.95, respectively.

In the comparisons of regional totals, the average annual salary of the non-residents is \$430 more than that of the residents, \$440 more than that of the individuals residing in the district, and \$401 more than that of the commuters. The average annual salary of the non-resident group is significantly greater than that of either of the other groups, the indices ranging from 12.53 to 17.20. The average salaries of the district and commuting groups are not significantly different, the index being only 1.70. The average annual salary tends to increase with the remoteness of the zone of residence.

A summary of the findings obtained from the data show:

(1) Non-resident teachers of all three levels are paid on the average more money than the local teachers. (2) The difference between the average salaries of the non-residents and the corresponding local teachers is significant in every comparison of the table except those at the secondary level. Even there the trend in that direction is very marked, the indices ranging from 2.08 to 3.15. (3) Differences between the zone totals are highly significant, the indices ranging from 12.53 to 17.20. (4) With the exception of the secondary group, there is a tendency for the average salary to increase with the remoteness of the zone of residence. And (5) it is evident that either the boards of education are willing to pay more for the better trained non-resident teachers or that the local teachers are willing to work for considerably smaller salaries than are paid non-resident teachers.

Relationship Between Salary and Prevailing Zone of Residence

It is frequently claimed that the practice of employing large numbers of local teachers tends to keep the salary schedule low. The accuracy of this statement of opinion is partly verified by determining the relationship between salary and zone of residence of the groups of teachers.

An examination of the original data sheets of teachers reveals the fact that in each of 39 school systems the number of strictly local teachers (the district group) equaled or exceeded the number of non-resident teachers. However, in each of 21 school systems, the number of local teachers was less than the number of non-residents. Three schools are omitted from this dual division of the schools because of the small proportions of their teachers co-operating in the study. If each teacher in the 60 school systems included had co-operated by furnishing their personal data, a shifting of a few schools from the group of 39 schools to the group of 21, or the reverse, might have resulted since the number of district teachers in four systems was the same as that in the non-resident group. The median percentage of district teachers in the 39 school systems employing more local than non-resident teachers is 66.6; the median percentage of district teachers in the 21 schools employing fewer local than non-resident teachers is 35.5.

Comparison of group totals.- In the second column of Table LXIV is found the mean salary of the 734 teachers of the 39 schools in which the number of district teachers exceeds the number of non-residents. In the fourth column of the table is found the mean salary of the 344 teachers of the 21 schools in which the number of non-resident teachers exceeds the number of district

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TABLE LXIV

MEAN ANNUAL SALARIES OF ALL TEACHERS IN THE 39 AND 21 SCHOOL SYSTEMS

Statistical Measures Used	Mean Annual Salary		
	In the 39 School Systems	Index of Significance of Difference of Means	In the 21 School Systems
M.	\$1164.	————— 2.80 —————→	\$1234.
S.D.	536.		583.
P.E.m	13.3		21.2
N.	734.		344.

teachers. For convenience the first group will hereafter be referred to as the 39 schools; the second, as the 21 schools. Thus the mean annual salary of the teachers of the 39 schools is \$1164; that of the teachers of the 21 schools, \$1234. The index of significance of difference is 2.80. The difference is not significant but a strong tendency is revealed for teachers to receive larger salaries in schools employing more non-resident than district teachers. The need for other comparisons is evident in order to determine where, if anywhere, differences between corresponding teacher groups of the 39 and 21 school systems are actually significant.

Comparisons within each regional group.— Since for all the zones combined a strong tendency has been found for the mean annual salary of teachers to be greater in schools employing more non-resident than district teachers, a comparison of the situation within each zone separately is now presented in Table LXV.

In the resident zone, teachers from the 39 schools receive an average annual salary of \$1019; those from the 21 schools, an average of \$1042. Since the index in this comparison is only .88, there is a very slight chance that the difference of \$23.00 between the annual salaries paid by the two groups of schools is significant. In other words, there is only a small chance that the average salary of resident teachers is higher if the number of non-resident teachers in the school exceeds the number of district teachers.

The annual salary of district teachers is on the average \$1017 in the 39 schools, and \$1012 in the 21 schools. Since the average annual salary of the district group is only \$5.00 higher in the 39 schools than in the 21 schools, it may be safely assumed that there is no relationship between the salary of the district teachers and the zone of residence of the majority of the teachers of a particular school.

The commuting teacher on the average receives an annual

TABLE LXV

MEAN PRESENT ANNUAL SALARY OF TEACHERS OF THE 39 AND 21 SCHOOL SYSTEMS OF EACH REGIONAL GROUP¹

Zone of Residence	Statistical Measures Used	Mean Annual Salary		
		In the 39 School Systems	Index of Significance of Difference of Means	In the 21 School Systems
Total Resident	M. S.D. P.E.m N.	\$1019. 331. 9.8 522.	——.88——→	\$1042. 425. 23.5 149.
District	M. S.D. P.E.m N.	1017. 326. 10.7 424.	←—.16——	1012. 426. 27.9 101.
Commuting	M. S.D. P.E.m N.	1029. 353. 24.1 98.	——1.58——→	1104. 425. 41.4 48.
Non-Resident	M. S.D. P.E.m N.	1522. 789. 34.2 212.	←—3.00——	1383. 647. 31.3 195.

¹Table LXIV is the total of Table LXV

salary of \$1029 in the 39 schools, and \$1104, or \$75 more, in the 21 schools. The difference shows a slightly greater trend toward a significant difference than is found in the resident group as a whole, the index being 1.58.

The average annual salary of non-resident teachers who teach in school systems having a majority of district teachers is \$1522; if a non-resident teacher is employed in a system in which there are more non-resident than district teachers, the average annual salary is only \$1383. This difference of \$139 suggests that the salary status of non-resident teachers is higher if the positions are in school systems employing a majority of their teachers from the local zone. Some statisticians would accept this difference as a significant one since the index is 3.00.

As a result of the analysis of the data contained in Table LXV, it appears that the average annual salaries of district teachers teaching in the groups of 39 and 21 school systems are practically the same; that those of the resident zone as a whole are slightly higher in the 21 systems; that those of the commuting zone are inclined to be still higher in the 21 systems; but that those of the non-resident zone are decidedly higher in

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the 39 systems. This situation may be influenced by the relation of salary to sex as well as to the residence of teachers since schools employing more local teachers employ more women and those employing more non-residents employ more men as is shown later in the chapter.

The difference between the average annual salaries of teachers in the groups of 39 and 21 school systems apparently tends to increase in importance with the remoteness of the zone of residence even though the difference in the non-resident group does not reach the point of statistical significance. It may be noted, however, that the average annual salary of the non-resident group in either the 39 or 21 systems is higher than that of the corresponding local group. The advantage of the non-resident group is more noticeable in the 39 systems than in the 21 systems. This may tend to increase the importance of sex as a factor in salary differences.

Comparisons at different levels of positions.- What are the chances that the salaries of elementary teachers will be higher or lower if the number of district teachers in the system is larger or smaller than the number of non-resident teachers? Of secondary teachers? Of administrators? An examination of the data contained in Table LXVI shows the existing conditions with respect to the foregoing questions.

Elementary teachers, on the average, who teach in systems employing more district than non-resident teachers receive an annual salary of \$920; those teaching in schools employing more non-resident than district teachers receive, on the average, \$959. The difference of \$39 between these two average salaries is evidence of a strong tendency to pay larger salaries in schools employing more non-resident than district teachers since the index in the comparison is 3.26.

This situation so far as secondary teachers are concerned is practically free from a trend toward higher salaries in either case. The secondary teachers in the 39 systems receive an average annual salary of \$1328; those in the 21 systems, an average of \$1333. The difference of only five dollars between the average salaries of these two groups of schools is practically negligible. There appears to be no relationship between salary and the zone of residence of the major portion of the teachers of a school so far as secondary teachers are concerned.

At the administrative level, teachers of the 21 systems receive an average annual salary of \$2202; those of the 39 schools, \$2175. Although the difference between these two average salaries is small (\$27), the tendency for a difference to exist is rather strong, the index being 2.80.

TABLE LXVI

MEAN ANNUAL SALARIES OF ALL ELEMENTARY, SECONDARY, AND ADMINISTRATIVE GROUPS OF THE 39 AND 21 SCHOOL SYSTEMS

Level of Position ¹	Statistical Measures Used	Mean Annual Salary		
		In the 39 School Systems	Index of Significance of Difference of Means	In the 21 School Systems
Elementary	M. S.D. P.E.m N.	\$920. 175. 5.6 451.	_____ 3.26 _____>	\$959. 222. 10.7 194.
Secondary	M. S.D. P.E.m N.	1328. 283. 13.3 207.	_____ .20 _____>	1333. 360. 23.6 106.
Administrative	M. S.D. P.E.m N.	2175. 963. 74.5 76.	_____ 2.80 _____>	2202. 931. 94.7 44.

¹Table LXIV contains the total of Table LXVI.

Although none of these comparisons show significant differences, the arrow in each case points toward a higher salary in those schools employing more non-resident than district teachers. This tendency is strong in the elementary and administrative positions.

Comparisons within the elementary groups of each zone.- Although it is not possible to make comparisons of salaries of secondary and administrative positions in the 39 and 21 systems of each zone on account of the limited number of cases involved, it is possible to present such an analysis of salaries of elementary teachers in each zone. These data appear in Table LXVII.

With the exception of the district zone, elementary teachers from each zone tend to get higher salaries if they teach in school systems in which there are more non-resident than district teachers. Although these tendencies are weak for any one zone, it was shown in Table LXVI to be a strong trend for regional totals. From these data it appears that elementary resident teachers tend to get larger salaries in schools employing more district than non-resident teachers, the reverse being true for the resident group as a whole, for the commuting group, and for the non-resident group.

Comparisons at each level of position of the non-resident group.- Data for separate comparisons at each level of position of the non-resident group are shown in Table LXVIII. Two compar-

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TABLE LXVII

MEAN ANNUAL SALARY OF ELEMENTARY TEACHERS OF
EACH REGIONAL GROUP¹

Zone of Residence	Statistical Measures Used	Mean Annual Salary		
		In the 39 School Systems	Index of Significance of Difference of Means	In the 21 School Systems
Total Resident	M. S.D. P.E.m N.	\$903. 163. 5.5 395.	—————.29—————→	\$907. 170. 10.6 116.
District	M. S.D. P.E.m N.	903. 157. 5.9 326.	←————.51—————	890. 330. 24.5 82.
Commuting	M. S.D. P.E.m N.	904. 180. 14.6 69.	—————1.55—————→	947. 203. 23.5 34.
Non- Resident	M. S.D. P.E.m N.	1029. 214. 19.3 56.	—————.26—————→	1036. 264. 20.2 78.

¹Table LXVI contains the total of Table LXVII.

isons of the table - elementary and total - have previously appeared in other tables of this section but are of special interest when considered as a part of the entire non-resident comparisons as shown in this table.

Comparisons of these data show certain definite trends more or less peculiar to the non-resident group: (1) With the possible exception of the elementary teachers, non-resident teachers show a tendency to receive larger salaries in schools employing more district than non-resident teachers. (2) The indices tend to increase from the elementary position, through the secondary and administrative positions, to the group as a whole. The indices are .26 (negative), .90, 1.80, and 3.00, respectively. Although none of these indices show significant differences, the evidence strongly points in that direction, the trend being stronger at higher levels of position. (3) The increases from position to position - elementary to secondary, and secondary to administrative - are larger in the 39 than in the 21 systems, the former being \$338 and \$1205, respectively, and the latter, \$306 and \$964. (4) Although the average annual salary of non-resident elementary teachers is \$7.00 more in the 21 systems, the averages for non-

TABLE LXVIII
MEAN ANNUAL SALARY OF NON-RESIDENT TEACHERS
AT EACH LEVEL OF POSITION

Level of Position	Statistical Measures Used	Average Annual Salary		
		In the 39 School Systems	Index of Significance of Difference of Means	In the 21 School Systems
Elementary	M. S.D. P.E.m N.	\$1029. 214. 19.3 56.	———— .26 —————→	\$1036. 264. 20.2 78.
Secondary	M. S.D. P.E.m N.	1367. 294. 18.7 113.	←———— .90 —————	1342. 336. 24.7 84.
Administrative	M. S.D. P.E.m N.	2572. 959. 98.6 43.	←———— 1.80 —————	2306. 938. 110.1 33.
Total	M. S.D. P.E.m N.	1522. 739. 34.2 212.	←———— 3.00 —————	1383. 647. 31.3 195.

resident secondary teachers and administrators are larger in the 39 systems - \$25 and \$206, respectively. For the groups as wholes, non-resident teachers receive annually \$139 more salary in the 39 school systems than in the 21 systems.

Other Sources of Income

There is evidence to show that many teachers have other sources of income in addition to the teaching salary. Data have been obtained showing the percentage of each group (1) having other sources of income, or (2) doing other work for pay during out-of-school hours.

Percentage having other sources of income.— The data contained in Table LXIX show the percentage of each group who have other sources of income than salary received for teaching. Throughout the table, the percentage of the local teachers having other sources of income appears to be greater than that of the non-resident teachers. This tendency is evident at every level of position but is not statistically significant except in the secondary school comparisons. In each zone, the percentage of teachers having other sources of income tends to increase from

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TABLE LXIX

PERCENTAGE OF EACH GROUP HAVING OTHER SOURCES OF INCOME

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	22.96	24.39	17.53	18.70
	P.E. fp	1.32	1.51	2.60	2.37
	N.	466.	359.	97.	123.
	Index of Significance of Difference	$\leftarrow 1.57 \rightarrow$ $\leftarrow 2.02 \rightarrow$ $\leftarrow 2.88 \rightarrow$ $\leftarrow .33 \rightarrow$			
Secondary	fp	32.46	36.59	-----	16.00
	P.E. fp	2.96	3.59	-----	1.87
	N.	114.	82.	32.	175.
	Index of Sig. of Dif.	$\leftarrow 4.70 \rightarrow$ $\leftarrow 5.08 \rightarrow$			
Administrative	fp	43.90	38.71	-----	32.00
	P.E. fp	5.23	5.90	-----	3.64
	N.	41.	31.	10.	75.
	Index of Sig. of Dif.	$\leftarrow 1.87 \rightarrow$ $\leftarrow .96 \rightarrow$			
Total	fp	26.09	27.39	21.58	20.11
	P.E. fp	1.19	1.37	2.35	1.40
	N.	621.	482.	139.	373.
	Index of Significance of Difference	$\leftarrow 3.27 \rightarrow$ $\leftarrow 3.71 \rightarrow$ $\leftarrow .54 \rightarrow$ $\leftarrow 2.13 \rightarrow$			

the elementary to the administrative level with the possible exception of that of the non-resident secondary group. For the zones as wholes there is a tendency for the percentages of the group having other sources of income to decrease in the more remote zone.

Other earnings during out-of-school hours.- The data of Table LXX show the percentage of each group who work for extra pay during out-of-school hours. These comparisons have the additional implication that the interests of some teachers are divided between their school work and other lines of work. However, it is not the purpose of the study to go into that aspect of the problem. Only passing mention of it is made at this time. While only a small percentage of each group use out-of-school hours for the purpose of supplementing their incomes, the evidence of this practice is slightly more pronounced among local than among non-resident teachers and the tendency is strongest at the administrative level. However, the differences are not significant. There

TABLE LXX

PERCENTAGE OF EACH GROUP DOING OTHER WORK FOR PAY
DURING OUT-OF-SCHOOL HOURS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	7.58	7.72	7.06	5.94
	P.E.fp	.88	1.00	1.88	1.59
	N.	409.	324.	85.	101.
Secondary	fp	12.50	16.18	-----	10.22
	P.E.fp	2.27	3.02	-----	1.75
	N.	96.	68.	28.	137.
Administrative	fp	18.42	17.24	-----	6.67
	P.E.fp	4.24	4.73	-----	2.17
	N.	38.	29.	9.	60.
Total	fp	9.21	9.74	7.38	8.05
	P.E.fp	.84	.98	1.60	1.06
	N.	543.	421.	122.	298.

Index of Significance of Difference		$\leftarrow .90 \rightarrow$ $\leftarrow .94 \rightarrow$ $\leftarrow .45 \rightarrow$ $\leftarrow .31 \rightarrow$			
Index of Sig. of Dif.		$\leftarrow .80 \rightarrow$ $\leftarrow 1.71 \rightarrow$			
Index of Sig. of Dif.		$\leftarrow 2.48 \rightarrow$ $\leftarrow 2.03 \rightarrow$			
Index of Significance of Difference		$\leftarrow .86 \rightarrow$ $\leftarrow 1.16 \rightarrow$ $\leftarrow 1.25 \rightarrow$ $\rightarrow .35 \rightarrow$			

is a tendency for the percentage of persons interested in other activities during out-of-school hours to increase from the elementary to the administrative level in the resident and district groups, but the highest percentage in the non-resident group is found at the secondary school level. It is probably natural to expect local teachers to have more outside interest of an income producing character, such as real estate and business holdings, than the non-resident teachers.

Relationship Between Salary and Sex

The relationship between salary and sex is studied by determining (1) the percentage of male teachers in each group and (2) the mean annual salary of male and female teachers at each level of position.

Percentage of male teachers.- The data presented in Table LXXI show the percentage of male teachers in each group. The relative desirability of men and women teachers is not a pertinent

TABLE LXI

PERCENTAGE OF MEN TEACHERS IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	3.78	2.99	7.00	8.20
	P.E.fp	.57	.57	1.72	1.67
	N.	502.	402.	100.	122.
	Index of Significance of Difference	2.51 →			
		2.95 →			
		.50 →			
		2.21 →			
Secondary	fp	21.24	20.51	22.86	32.98
	P.E.fp	2.60	3.08	4.79	2.29
	N.	113.	78.	35.	191.
	Index of Significance of Difference	3.39 →			
		2.24 →			
		1.91 →			
		.41 →			
Administrative	fp	48.84	42.42	-----	92.00
	P.E.fp	5.14	5.80	-----	2.11
	N.	43.	33.	10.	75.
	Index of Sig. of Dif.	7.76 →			
		8.03 →			
Total	fp	9.73	8.19	15.17	36.60
	P.E.fp	.78	.82	2.10	1.65
	N.	658.	513.	145.	388.
	Index of Significance of Difference	14.76 →			
		15.87 →			
		8.03 →			
		3.10 →			

question here. The question is considered only in its relation to salary.

The data show that in the elementary group 2.99 per cent of the district teachers, 7.00 per cent of the commuting teachers, and 8.20 per cent of the non-resident teachers are men. In the combined resident group, 3.78 per cent of the elementary teachers are men. Although none of the differences between these percentages are statistically significant, three of the indices show strong trends toward a larger number of men teachers in the more remote group; these indices vary from 2.21 to 2.95. The commuting and non-resident groups differ only slightly in this respect.

At the secondary level, 21.24 per cent of the resident group, 20.51 per cent of the district group, 22.86 per cent of the commuting group, and 32.98 per cent of the non-resident group are men teachers. These percentages in no cases are significantly different but at least two comparisons show trends stronger than

those in the elementary comparisons, the indices being 3.24 and 3.39. While all percentages at the secondary level are much larger than the corresponding percentages at the elementary level, those of the non-resident groups are considerably higher than those of the corresponding local groups at both levels.

At the administrative level, 48.42 per cent of the resident group, 42.42 per cent of the district group, and 92.00 per cent of the non-resident group are males. It is also evident that the percentage of male teachers in the small commuting group is well above 50.00. The percentage of male teachers in the non-resident group is almost double that in the resident group and is more than double that in the district group. The difference between the percentage of male teachers in the non-resident group and that in the resident or district group is statistically significant, the index in the former comparison being 7.76, in the latter, 8.03. Almost all the non-resident administrators are men (92.00 per cent) while slightly less than half of the resident administrators are men (48.84 per cent). The percentage of men at the administrative level is more than double that of men at the secondary level in both the resident and district groups; the percentage of men at the administrative level is almost three times that of men at the secondary level in the non-resident group. Comparatively few women leave their local communities for administrative positions.

In the comparisons of the regional totals, 9.73 per cent of the resident group, 8.19 per cent of the district group, 15.17 per cent of the commuting group, and 36.60 per cent of the non-resident group are male teachers. From the district group to the non-resident group the percentage of men in the next regional group is approximately double that of the preceding regional. Although the difference between the percentages of the district and commuting groups is not statistically significant, a trend in favor of the latter is pronounced, the index being 3.10. In the non-resident group the percentage of men is significantly greater than that in either the resident, district, or commuting group, the indices being 14.76, 15.87, and 8.03, respectively. The percentage of men in the entire non-resident group is approximately four times the percentage of men in the total resident group.

Mean annual salary of male and female teachers.- Data presented in Table LXXIII show the mean salaries of men and women at each level of position and the degree of significance of the difference between the salaries of the two sexes at each level.

It is noted that the average annual salary of the 32 men holding elementary positions is \$947; that of the 587 women,

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TABLE LXXII

MEAN SALARIES OF MALE AND FEMALE TEACHERS AT EACH LEVEL OF POSITION IN ALL REGIONS COMBINED

Statistical Measures Used	Mean Salary of Teachers					
	Elementary		Secondary		Administrative	
	Men	Women	Men	Women	Men	Women
M.	\$947.	\$923.	\$1495.	\$1267.	\$2491.	\$1307.
S.D.	404.	171.	367.	268.	908.	326.
P.E.m	48.1	4.8	26.5	12.4	64.9	41.6
N.	32.	587.	87.	211.	89.	28.
Index of Sig. of Dif.	← .50		← 7.81		← 15.24	

\$923. The difference of \$24 in the comparison is not statistically significant. At the secondary level the average salary of male teachers is \$1495; that of female teachers, \$1267. In this comparison the difference of \$228 is statistically significant, the index being 7.81. Men holding administrative positions receive on the average \$2491; women, only \$1307. The difference (\$984) is highly significant, the index being 15.24.

It is, therefore, evident that sex is a significant factor above the elementary level in determining the average annual salary of teachers, men receiving higher salaries than women. Since the percentages of men employed are higher in the non-resident than in the resident groups, and since the average annual salaries are higher among men than among women, it may be concluded that sex as well as zone of residence is a factor in determining the higher average salaries of non-resident teachers. The influence of residence on salary is thus apparently accelerated by the influence of sex on salary, a condition due in part to the higher average salaries of men and in part to the higher percentages of men among non-residents with average salaries higher than for residents.

Relationship Between Salary and Marriage Status

The relationship between salary and marriage status of teachers is presented in Tables LXXIII and LXXIV, which show (1) the percentages of unmarried teachers in each group, and (2) the average annual salaries of married and unmarried teachers at each level of position.

Percentage of teachers unmarried.- The data of Table LXXIII show the percentage of unmarried teachers in each group. The percentages of unmarried teachers are shown because unmarried women are usually more acceptable as teachers throughout the country than married women. However, marital status of teachers

TABLE LXXIII

PERCENTAGE OF UNMARRIED RESIDENT AND NON-RESIDENT
TEACHERS IN EACH GROUP

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	fp	70.28	70.68	68.69	83.97
	P.E.fp	1.38	1.54	3.14	2.17
	N.	498.	399.	99.	131.
	Index of Signifi- cance of Difference	5.32 5.00 4.15 .57			
Second- ary	fp	55.93	54.76	58.82	79.69
	P.E.fp	3.08	3.36	5.69	1.96
	N.	118.	84.	34.	192.
	Index of Signifi- cance of Difference	6.51 6.01 3.46 .60			
Adminis- trative	fp	44.45	48.57	-----	19.74
	P.E.fp	4.90	5.70	-----	3.08
	N.	45.	35.	10.	76.
	Index of Sig. of Dif.	4.27 4.24			
Total	fp	65.96	66.60	63.64	69.67
	P.E.fp	1.24	1.40	2.71	1.55
	N.	661.	518.	143.	399.
	Index of Signifi- cance of Difference	1.87 1.47 1.93 .97			

is considered here only in its relation to salary.

At the elementary level, 70.28 per cent of the resident teachers are unmarried while 83.97 per cent of the non-resident teachers are unmarried. The difference between the percentages of these groups is significant, the index being 5.32. The percentages of unmarried teachers in the district and commuting groups are practically the same - 70.68 and 68.69, respectively - and each is significantly less than the percentages of the non-resident group, the indices in the two comparisons being 5.00 and 4.15, respectively. The difference between the percentages of unmarried district and commuting teachers is not significant, the index being only .57.

At the secondary level, 79.69 per cent of the non-resident teachers are unmarried, whereas only 55.93 per cent of the resident teachers are unmarried. The number of unmarried teachers is

approximately 4 per cent higher in the commuting group than in the district group. The differences between the percentages of unmarried teachers in the resident and non-resident groups and between the district and the non-resident groups are significant. The indices in these two comparisons are 6.51 and 6.01, respectively. The difference between the percentages of unmarried teachers in the commuting and non-resident groups is not statistically significant but shows a very strong trend toward a significant difference, the index being 3.46. The difference between the district and commuting groups is very slight, the index being only .60. Even at the secondary level married teachers are more numerous among local than among non-resident teachers.

The two comparisons of administrators show a different relationship from that just described. While 44.45 per cent of the resident group and 48.57 per cent of the district group are unmarried, only 19.74 per cent of the non-resident group are unmarried. Both of these comparisons of local and non-resident administrators show significant differences, the indices being 4.27 and 4.24, respectively. This situation is due principally to the fact shown in a previous table, namely, the percentage of men in the non-resident administrative group is practically double that in the local group. Most of the non-resident administrators are married men, while many of the local administrators - especially women in elementary principalships - are unmarried.

In comparisons of regional totals, no significant differences between the groups appear. The larger percentages of unmarried resident administrators have operated to neutralize the influence of the larger percentage of unmarried elementary and secondary teachers of the non-resident zone. However, in the comparisons with the resident, district, and commuting zones, a trend toward a larger percentage of unmarried teachers in the non-resident zone is noticeable, the indices being 1.87, 1.47, and 1.93, respectively.

A much higher percentage of local than of non-resident unmarried administrators is employed in these school systems. This is due largely to the high percentage of men in the non-resident group and to the high percentage of women elementary principals in the local groups.

Mean salaries of married and unmarried teachers. - The data of Table LXXIV show the mean salaries of married and unmarried teachers at each level of position. The significance of the difference between the average salaries at each level is also given in the table.

At the elementary level the 148 married teachers receive an average annual salary of \$939; the 477 unmarried teachers,

TABLE LXXIV

MEAN SALARIES OF MARRIED AND UNMARRIED TEACHERS AT EACH LEVEL OF POSITION FOR ALL ZONES COMBINED

Statistical Measures Used	Mean Salary of Teachers					
	Elementary		Secondary		Administrative	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
M.	\$939.	\$927.	\$1416.	\$1290.	\$2448.	\$1672.
S.D.	205.	182.	390.	260.	944.	602.
P.E.m	11.4	5.6	28.5	11.7	69.4	67.7
N.	148.	477.	85.	223.	84.	36.
Index of Sig. of Dif.	← .94 →		← 4.09 →		← 8.01 →	

\$927. This small difference of \$12 is not significant. At the secondary and administrative levels, married teachers receive considerably more money than unmarried teachers. The 85 married secondary teachers are paid an average annual salary of \$1416; the 223 unmarried secondary teachers, \$1290. This difference of \$126 is significant, the index being 4.09. The 84 married administrators receive an annual salary of \$2448; the unmarried administrators, \$1672. This difference of \$776 is significant, the index being 8.01.

The average annual salary of the married teachers is pre-
vailingly higher than that of the unmarried teachers at the same
level of position; the difference tends to increase in amount and
significance with an increase in the level of position. The per-
centages of married teachers as shown in Table LXXIII are higher
in the resident groups than in the non-resident group at each
level, except the administrative. In Table LXXIV married teachers
are shown to receive higher salaries. However, it has been pre-
viously shown in Table LXIII that non-resident teachers receive
the higher average salary at each level. Non-resident teachers
are apparently able to command higher salaries than resident
teachers even though marriage, except at the administrative level,
tends to lower the salaries of non-residents.

Relationship Between Salary and Financial Responsibility for Dependents

A study of the economic status of any group of salaried
persons should take into account the relationship between salary
and financial responsibility for dependents. Data dealing with
this relationship are found in the following sections.

Percentage having dependents.- From the data of Table
LXXV it is found that from 40.70 to 43.90 per cent of local ele-
mentary teachers are financially responsible for one or more

TABLE LXXV

PERCENTAGE OF TEACHERS OF EACH GROUP HAVING
ONE OR MORE DEPENDENTS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elementary	fp	43.26	43.90	40.70	30.63
	P.E.fp	1.61	1.81	3.29	2.95
	N.	430.	344.	86.	111.
Elementary	Index of Signifi- cance of Difference	$\leftarrow 3.76$ $\leftarrow 3.84$ $\leftarrow 2.28$ $\leftarrow .85$			
Secondary	fp	46.30	48.65	41.18	29.81
	P.E.fp	3.24	3.92	5.69	2.43
	N.	108.	74.	34.	161.
Secondary	Index of Signifi- cance of Difference	$\leftarrow 4.07$ $\leftarrow 4.09$ $\leftarrow 1.83$ $\leftarrow 1.08$			
Adminis- trative	fp	74.42	72.73	-----	83.56
	P.E.fp	4.49	5.23	-----	2.93
	N.	43.	33.	10.	73.
Adminis- trative	Index of Sig. of Dif.	$\leftarrow 1.71$ $\leftarrow 1.81$			
Total	fp	46.13	46.78	43.85	41.45
	P.E.fp	1.40	1.59	2.93	1.79
	N.	581.	451.	130.	345.
Total	Index of Signifi- cance of Difference	$\leftarrow 2.06$ $\leftarrow 2.23$ $\leftarrow .70$ $\leftarrow .88$			

dependents, while only 30.63 per cent of the non-resident elementary teachers have dependents. The percentage having dependents tends to increase with the nearness of the zone of residence. Although none of the comparisons of elementary teachers show significant differences, there are strong trends toward real differences in all comparisons between the non-resident group and the various resident groups, the indices ranging from 2.28 to 3.84. Only a slight difference is found between the percentages of the district and commuting groups.

The tendencies found in comparisons between groups of secondary teachers are very much like those in comparisons between elementary groups. From 41.18 to 48.65 per cent of the local teachers support one or more dependents; only 29.81 per cent of the non-resident teachers have dependents. Differences between the percentages of non-residents and percentages of resident and

district groups are statistically significant, the indices being 4.07 and 4.09, respectively. The percentage of commuting teachers who have dependents lies between the percentages of the district and non-resident groups but the difference is not significant in either case. The percentage of the group having dependents tends to be greater in the more remote zone of residence.

The situation relative to dependents at the administrative level tends to be the reverse of that in the elementary and secondary groups. The percentages of administrators having dependents are much larger than those of elementary and secondary teachers with dependents - 74.42 per cent in the resident group, 72.73 per cent in the district group, and 83.56 per cent in the non-resident group. However, it will be recalled that the percentages of male teachers at this level are also much higher than those of the corresponding elementary and secondary levels. The two comparisons at the administrative level show weaker tendencies toward significant differences than were found at the elementary and secondary levels, the indices being only 1.71 and 1.81. The percentage of administrators having dependents thus shows a noticeable tendency to increase with the remoteness of residence.

In comparisons of regional totals, from 43.85 to 46.78 per cent of the local teachers have one or more persons financially dependent upon them; 41.45 per cent of the non-resident group have one or more dependents. Although the local teachers as a whole tend to have more dependents than non-resident teachers, the differences are not significant, the indices ranging from .70 to 2.23. There is a slight tendency for the percentage having dependents to become higher with a decrease in the remoteness of the zone of residence.

Tendencies found in these data are the opposite of those found in the data of Table LXXIII which show the percentages of unmarried and married resident and non-resident teachers in each group, except the differences in Table LXXV are of less significance. A strong positive relationship between the percentage of a group married and the percentage of that group financially responsible for dependents is suggested by these data.

Mean salary of teachers with or without dependents.- In Table LXXVI data showing the average salary of teachers with or without dependents at each level of position are presented. At the elementary level, the 214 teachers with dependents receive an average annual salary of \$995 while the 314 teachers with no dependents are paid only \$917 for the same length of service. Although the difference of \$38 in the comparison is not statistically significant, a pronounced trend to pay elementary teachers with dependents a slightly larger average annual salary than is

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TABLE LXXVI

MEAN ANNUAL SALARY OF TEACHERS WITH OR WITHOUT DEPENDENTS
AT EACH LEVEL OF POSITION

Statistical Measures Used	Mean Salary of Teachers					
	Elementary		Secondary		Administrative	
	With Dependents	Without Dependents	With Dependents	Without Dependents	With Dependents	Without Dependents
M.	\$955.	\$917.	\$1440.	\$1282.	\$2327.	\$(1545.)
S.D.	233.	161.	387.	277.	976.	(548.)
P.E.m	10.3	6.1	26.8	14.4	68.3	78.8)
N.	214.	314.	95.	169.	93.	(22.)
Index of Sig. of Dif.	← 3.17 →		← 5.20 →		← 7.50 →	

paid those without dependents is evident, the index being 3.17.

The average annual salary of 95 secondary teachers with dependents is \$1440; that of 169 secondary teachers without dependents is \$1282. The difference of \$158 is statistically significant, the index being 5.20. At the administrative level, 93 administrators with dependents receive an average annual salary of \$2327 while the 22 administrators with no dependents are paid an average salary of \$1545. Even though the number of administrators without dependents is small, an index of 7.50 is obtained in the comparison.

Responsibility for dependents appears to be stronger than the factor of sex or marriage status as a determinant of salary at the elementary level. It should be recalled that (1) the percentage having dependents is higher in the resident than in the non-resident group, except at the administrative level, and (2) that the average annual salary is higher among those with than among those without dependents, with the one exception. Thus the influence of financial responsibility for dependents at the two lower levels of positions tends to restrict, rather than to accelerate, the average salary of the non-resident teachers. Since the average annual salaries of non-resident teachers have been previously shown to be higher than those of the local teachers, it is clear that residence is a stronger factor than financial responsibility for dependents in determining salary.

Combined Influence of Sex, Marriage Status, and Dependents
in Determining Salary

In theory and on the basis of the preceding data, married men with dependents should receive the highest salaries while single women with no dependents should be paid the lowest salaries.

Data for such restricted classifications are too meager for reliable comparisons except at the secondary level as shown in Table LXXVII. At the elementary level, the average annual salary of 12 married men with dependents was found to be \$1067; that of 233 single women with no dependents, \$910. At the secondary level 26 married men with dependents were paid an average annual salary of \$1619; 99 single women without dependents, an average of \$1218. This difference of \$401 is statistically significant, the index being 7.74. At the administrative level 72 married men with dependents received an average annual salary of \$2554; 7 single women with no dependents, \$1200. Apparently married men with dependents actually receive the highest average salaries; unmarried women without dependents, the lowest.

In Table LXXVIII is given a summary of differences at each level between the mean annual salaries of men and women teachers, of married and unmarried teachers, of teachers with and without dependents, and of married men with dependents and single women without dependents. These data show both the separate and combined influences of these three factors on salary at each level of position. As has been previously shown, men at every level receive higher salaries than women and the factor of sex at every level accelerates the factor of residence since men and non-residents receive the higher salaries. Although married teachers receive the higher average salaries at each level, a greater percentage of the married teachers is from the resident group, except at the administrative level. Thus marriage tends to accelerate the factor of residence in its positive influence on salary among administrators but to restrict to some degree the influence on salary at the elementary and secondary levels.

So far as financial responsibility for dependents is concerned, the situation agrees substantially with that shown for the influences of marriage. However, it should be noted that the factor of residence in its positive influence on salary is more powerful at each level than that of either marriage status or financial responsibility for dependents since the average annual salary of non-residents is greater than that of residents at each level as shown in the first table of this chapter. It is also apparent that the same trends are found to operate when influences of the factors of sex, marriage, and dependents are combined as when each was considered separately, except that differences in salary at all levels are very much accelerated. Evidently the influence of residence is greater than that of the other three factors combined in determining salary at the secondary level and probably also at the elementary and administrative levels.

The degree to which the differences in salary on the

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TABLE LXXVII

MEAN SALARY OF MARRIED MEN WITH DEPENDENTS AND OF SINGLE WOMEN WITHOUT DEPENDENTS AT EACH LEVEL OF POSITION

Statistical Measures Used	Mean Salary of Teachers					
	Elementary		Secondary		Administrative	
	Married Men + Dependents	Single Women - Dependents	Married Men + Dependents	Single Women - Dependents	Married Men + Dependents	Single Women - Dependents
M.	\$1067.	\$910.	\$1619.	\$1218.	\$2556.	\$1200.
S.D.	----	---	449.	234.	----	----
P.E.m	----	---	59.3	15.9	----	----
N.	12.	233.	26.	99.	72.	7.
Index of Sig. of Dif.	← 7.74 →					

basis of sex, marriage, and dependents are statistically significant is marked throughout the comparisons except at the elementary level where strong trends toward significant differences are found in some cases.

Annual Savings

The data of Table LXXIX show the average amounts of the annual savings of resident and non-resident teachers during the year preceding the time these data were obtained. Money invested in life insurance, additional training, real estate, bonds, etc., as well as cash savings, are included under this category. Since these data are based on the teachers' estimates of their savings, small differences cannot be regarded as important. Probably only those differences which are statistically significant should be considered indicative of trends.

The average annual savings of elementary teachers vary from \$245 in the district group to \$261 in the commuting group. The average annual amounts saved by the resident and non-resident elementary teachers are exactly the same. At the secondary level, the average amounts vary from \$332 in the commuting group to \$378 in the non-resident group. The maximum index is 1.31. The average annual savings of secondary teachers is from \$71 to \$130 higher than the average savings of the elementary group in the same zone of residence. The average annual savings of administrators is from \$74 to \$312 higher than the average savings of the secondary group of the same zone, the amounts varying from \$432 in the district group to \$690 in the non-resident group. Indices in the two comparisons of administrators are 1.66 and 3.68 both of which favor the non-resident group.

TABLE LXXVIII

SUMMARY OF DIFFERENCES BETWEEN MEAN ANNUAL SALARIES AT EACH LEVEL ON BASIS OF SEX, MARRIAGE, AND DEPENDENTS IN RELATION TO ZONE OF RESIDENCE¹

Basis of Comparison and Statistical Measures of Significance of the Comparison	Difference in Mean Annual Salary at Each Level		
	Elementary	Secondary	Administrative
Sex	<u>\$24.</u>	<u>\$228.</u>	<u>\$1184.</u>
Index of Significance of Difference	.50	7.81	15.24
Marriage Status	<u>\$12.</u>	<u>\$126.</u>	<u>\$776.</u>
Index of Significance of Difference	.94	4.09	8.01
Personal Responsibility for Dependents	<u>\$38.</u>	<u>\$158.</u>	<u>(\$782.)</u>
Index of Significance of Difference	3.17	5.20	(7.50)
Sex, Marriage Status, and Personal Responsibility for Dependents Combined	<u>(\$157.)</u>	<u>\$401.</u>	<u>(\$1356.)</u>
Index of Significance of Difference		7.74	

¹It should be recalled that higher average annual salaries at each level are paid to men, to married persons, and to those with dependents. Numbers underscored indicate classifications in which a majority of those whose salaries are compared are non-residents. Parentheses indicate classifications in which one of the samplings is composed of less than 25 cases (N).

It is only in the comparisons of regional totals that significant differences are found. The average annual amount of savings of the resident group is \$282; that of the district group, \$277; that of the commuting group, \$309; and that of the non-resident group, \$409. The first three comparisons show significant differences favorable to the non-resident group, the indices being 8.47, 8.57, and 6.62, respectively. The fourth comparison - that between the district and commuting groups - gives an index of 3.02 favorable to the latter group. The data of this table show (1) no appreciable differences between the savings of the groups at the elementary level, (2) only slight trends favorable to the non-resident group at the secondary and administrative levels, and (3) significant differences favorable to the non-resident group only when regional totals are compared.

Thus it is only when the entire group is considered that

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TABLE LXXIX

MEAN ANNUAL SAVINGS OF EACH GROUP FOR THE YEAR PRIOR TO THAT FOR WHICH THE DATA WERE COLLECTED

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	248.	245.	261.	248.
	S.D.	185.	185.	179.	176.
	P.E.m	6.4	9.2	13.4	11.9
Elementary	N.	385.	304.	81.	100.
	Index of Significance of Difference	$\leftarrow 0.00 \rightarrow$ $\rightarrow .20 \leftarrow$ $\leftarrow .72 \rightarrow$ $\rightarrow .99 \rightarrow$			
Secondary	M.	351.	358.	332.	378.
	S.D.	261.	270.	240.	249.
	P.E.m	18.9	23.3	32.3	13.9
Secondary	N.	86.	61.	25.	147.
	Index of Significance of Difference	$\rightarrow 1.15 \rightarrow$ $\rightarrow .75 \rightarrow$ $\rightarrow 1.31 \rightarrow$ $\leftarrow .65 \leftarrow$			
Administrative	M.	496.	432.	-----	690.
	S.D.	415.	428.	-----	510.
	P.E.m	48.0	57.7	-----	40.0
Administrative	N.	34.	25.	9.	74.
	Index of Sig. of Dif.	$\rightarrow 1.66 \rightarrow$ $\rightarrow 3.68 \rightarrow$			
Total	M.	282.	277.	309.	409.
	S.D.	233.	229.	234.	354.
	P.E.m	7.0	7.8	7.2	13.3
Total	N.	505.	390.	115.	321.
	Index of Significance of Difference	$\rightarrow 8.47 \rightarrow$ $\rightarrow 8.57 \rightarrow$ $\rightarrow 6.62 \rightarrow$ $\rightarrow 3.02 \rightarrow$			

the average annual savings of the non-resident group can be said to be significantly greater than those of the local groups. This condition suggests that unmarried local teachers may save the cost of board and room by teaching at home; that the married local woman teacher, because of her husband's income, may be able to save a greater portion of her teaching salary; and that many boards of education welcome the opportunity to secure such teachers at a lower salary. The savings made by boards of education through the employment of local teachers at lower salaries may be due to the willingness of parents to contribute the value of board and room in order to have their sons and daughters at home. Many of these home teachers would probably have difficulty in securing

positions away from home, since their average training is considerably below that of the non-resident teachers employed in these school systems as was previously shown.

Summary

The foregoing analysis of data bearing on the economic status of resident and non-resident teachers warrants the following general conclusions:

Significantly higher average annual salaries are paid non-resident teachers at every level except the secondary, and even there the same tendency is strong. The salary tends to increase with the remoteness of the zone of residence at most levels and to increase more consistently from level to level in the non-resident than in the local zone. Thus higher salaries, higher training, and better professional spirit appear to be more characteristic of non-resident than of resident teachers. It is doubtful, however, whether the average total annual income of non-resident teachers is greater than that of resident teachers since a greater percentage of the latter has other sources of income, a tendency strong at every level and significant at the secondary level. Further evidence supporting this suggestion is found in the tendency to earn extra money by working during out-of-school hours; this is slightly more evident, though not significant, in the case of resident groups at each level.

Analysis of the relationship found between salary and the accident of ratio between the numbers of district and non-resident teachers employed in the school system shows certain trends even though none of them are statistically significant: (a) For the teachers as a group the higher average annual salaries are paid in those school systems which employ more non-resident than district teachers; the difference represents a strong trend rather than a significant difference. (b) Teachers of the district and non-resident groups as wholes tend to receive higher salaries in those schools employing more district than non-resident teachers, but the reverse is true for the total resident and commuting groups. (c) The average annual salary of the combined elementary, secondary, or administrative groups of all zones tends to be greater in those schools employing more non-resident than district teachers. (d) With the exception of the district group, the average annual salary of the elementary teachers tends to be higher in those schools employing more non-resident than district teachers. (e) Non-resident teachers at each level, except the elementary, tend to secure the larger salaries in those schools employing more district than non-resident teachers, the tendency

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increasing with the level of the position and being strongest in the regional totals. (f) The tendencies pointed out in the preceding statements (a-e) indicate that the salaries of elementary teachers are about the same under the two conditions, that otherwise there is a tendency for the salaries to be higher in schools employing more non-resident than district teachers, except in the case of non-resident teachers themselves who tend to secure higher salaries in schools employing more district than non-resident teachers. (g) All of these tendencies suggest that wherever non-residents are employed their higher standards of training and professional attitude are reflected in the salaries paid. And (h) the differences pointed out may after all be due more to the factors of sex, marriage status, and financial responsibility for dependents, than to residence.

There is a slight tendency at each level for the average annual savings of non-resident teachers to be greater than those of the resident groups; this tendency becomes stronger from the elementary to the administrative level and is significant for the differences between the zones as wholes where the amount of savings tends to increase in the more remote zone. Attention is called to the relationship between this fact and the facts with respect to standards of training and professional attitude pointed out in previous chapters.

A summary of the influences of sex, marriage status, and financial responsibility for dependents in determining salaries shows certain important relationships which supplement the relationship between salary and residence.

The percentages of male teachers are smaller in elementary positions than in secondary positions in each zone. The percentages in the secondary positions are in turn smaller than those in the administrative positions. The tendency for the percentage of male teachers to increase in the more remote zone of residence is strong. Differences between the percentages of male teachers in resident and non-resident groups are significant in comparisons of administrators and of regional totals and even show strong trends toward significant differences in comparisons at elementary and secondary levels. The larger percentage of men is found in the non-resident group. It is evident that the question of the "male teacher" is closely related to the question of the "local teacher," since the smallest percentages of men teachers are found in the elementary positions which also contain the largest proportion of local teachers.

It has been shown that the average annual salaries of male teachers are always higher than those of women teachers, and that the differences are significant at the secondary and administra-

tive levels. Evidently sex as well as residence is a factor in determining the higher average annual salaries of non-resident teachers. It should be recalled (a) that the average salaries of men are higher than those of women, (b) that a greater percentage of men are non-residents, and (c) that the average salaries of non-residents are higher than those of residents. The influence of residence on salary is therefore accelerated by the influence of sex on salary.

The largest percentage of unmarried teachers is found in the non-resident group at each level of position, except the administrative. Contrary to the trend of percentage of male teachers, the percentage of unmarried teachers decreases with the higher level of the position, being highest in the elementary group. Differences at each level are significant. For the regional totals only, a strong trend indicates larger percentages of unmarried teachers in the non-resident group; in the local groups are found larger percentages of married teachers. The average annual salary of the married teachers is higher than that of the unmarried teachers at the same level of position; differences between salaries tend to increase in amount and significance with the level of position. It is evident that the percentage of married teachers is higher in the resident than in the non-resident group at each level, except the administrative, and that married teachers receive the higher salaries. However, it has also been shown that non-resident teachers are paid the higher average salary at each level. It then follows that as a general rule marriage tends to restrict the positive influences of sex and residence on salary since the non-resident teachers receive the larger average salaries.

With the exception of the administrative group, a greater proportion of resident than of non-resident teachers have one or more persons financially dependent on them for a livelihood. These differences tend to decrease in the more remote zone but are not significant except at the secondary level. These trends are sufficiently strong to suggest that having dependents is perhaps one reason why fewer teachers leave home to take training and to teach; financial responsibility for others, lower standards of training, and lower professional attitude seem to be associated. Financial responsibility for dependents appears to be a stronger factor than sex or marriage in determining salary, especially at the elementary level. Since the percentage of the group having dependents tends to be higher in the resident than in the non-resident group and since the average annual salary tends to be higher among those with dependents than among those without dependents, it is evident that the influence of financial responsi-

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bility for dependents at the elementary and secondary levels tends to restrict, rather than to accelerate, the average salary of the non-resident teachers. However, since the average annual salaries of non-resident teachers are higher than those of the local teachers, it is clear that residence is a stronger factor than financial responsibility for dependents in determining salary levels.

The combined influence of sex, marriage, and dependents in determining salary is greater at each level than that of either factor alone. This is shown by comparisons between the salaries of married men with dependents and the salaries of single women without dependents at each level of position. The evidence on this question appears to be very conclusive even though secured in part from a small number of cases in two classifications. However, it is also apparent that the influence of residence is greater than the combined influence of the other three factors in determining salary at the secondary level and probably also at the elementary and administrative levels.

Finally, it may be said that differences between average annual salaries of resident and non-resident teachers are in harmony with differences in training, professional attitude, and administrators' ratings of teachers since non-resident teachers tend to rank higher in these respects. Income from sources other than salary is the only disturbing factor relative to the foregoing statement. However, salary differences tend to be unfavorable to the resident teachers (a) who are employed in larger numbers in school positions, (b) who have served in their present position for a longer period of years, and (c) who participate to a larger degree in the life of the community outside of the school. The factors of training, professional attitude, and ratings (of teachers by administrators) appear to be stronger factors than sex, marriage, and dependents which in some cases appear to accelerate differences in salaries while in other cases they tend to decrease the differences between the salaries of the groups.

CHAPTER IX

CONCLUSIONS

The foregoing comparisons of certain characteristics and qualities of 1097 resident and non-resident teachers in the village and small city school systems of Kentucky warrant the following conclusions with respect to the questions stated in the introductory chapter.

1. Proportions of Resident and Non-Resident Teachers Employed

More resident than non-resident teachers are employed (62.55 per cent) in the village and small city school systems of Kentucky if the elementary, secondary, and administrative positions are considered collectively. However, if these three levels of positions are considered separately, it is found (1) that a much greater percentage of the elementary group (79.39 per cent) comes from the local communities, and (2) that approximately two-thirds of the secondary and administrative positions (62.19 and 63.11 per cent, respectively) are held by non-residents.

Differences between the percentages of resident and non-resident teachers employed at the elementary and secondary levels are statistically significant, the indices being 15.58 and 9.22, respectively. It is thus practically certain that other similar samplings of teachers in the village and small city school systems of Kentucky would reveal differences much the same as those found in this sampling. At the administrative level, the difference is not statistically significant but shows a strong tendency in the same direction as that disclosed for the elementary and secondary levels, the index being 3.12. The percentages of district and commuting teachers employed are not statistically different at any level. Evidently there is a positive relationship between the level of position held and the zone of residence, since a correlation (of Contingency) of .593 .015 is found.

2. Characteristic Differences Between Resident and Non-Resident Teachers

Length of service.- The average length of the total serv-

ice of the resident teachers is decidedly greater than that of the non-resident teachers; the difference is due largely to length of service in present positions rather than to length of service in previous positions.

The generalization is supported by the data presented in the third chapter of the study. At every level and in the regional totals, the average total teaching experience of the resident teachers is significantly greater than that of the non-resident teachers, the indices varying from 4.24 to 10.51. At each level the average length of teaching experience is less in the more remote zone of residence.

Comparisons restricted to average length of teaching experience in present systems show significant differences at each level and in the regional totals; these differences prove to be even more significant than those of total teaching experience, the indices ranging from 7.27 to 19.90. The average length of service decreases, at each level, as the remoteness of the zone of residence increases to such an extent that the averages of the regional totals fall into three significantly different types of groups - the district, the commuting, and the non-resident.

The average number of years of teaching experience in all other school systems combined tends to increase with the remoteness of the zone of residence but the difference between the resident and non-resident groups is not significant except in the comparison of regional totals. By eliminating those who have had no experience in previous systems, no significant differences are found between the amounts of previous experience of resident and non-resident teachers, the trends slightly favoring the non-resident group in the regional totals. Non-resident teachers have held a larger average number of previous positions than have resident teachers but the differences are not statistically significant except in comparisons of regional totals, the average number of positions increasing with the remoteness of the zone of residence. No significant differences are found between resident and non-resident teachers on the basis of the average length of service in previous school systems. The tendency for the average length of such service to be greater among resident teachers at the elementary level and among non-residents at the secondary level is strong, the index being 3.73 in each case.

The percentage of teachers who have had all their teaching experience in their present systems is significantly greater among resident than among non-resident teachers. The differences are significant in comparisons at the elementary level and in those of regional totals, the indices being 5.05 and 5.49, respectively.

The percentage at each level decreases with the remoteness of the zone of residence. By comparing the percentages of resident and non-resident teachers who have recently withdrawn from these school systems and by comparing the percentages of those from the zone who have been recently added to the faculties of these systems, it is found that the proportions now employed from each zone of residence tend to remain about the same.

Scholarship and college and university attendance.- As a general rule, the non-resident teacher has had a significantly greater amount of training at institutions of higher learning than has the resident teacher. Non-resident teachers are outstanding in attendance during the regular year; resident teachers are more inclined to resort to summer school attendance and extension courses as means of increasing their preparation for teaching. The superiority of training as a general rule tends to increase as the remoteness of the zone of residence increases.

Abundant evidence in support of the foregoing conclusions is presented in Chapter IV of the study. Of the 411 non-residents employed, 306 have the Bachelor's degree and 42 have the Master's degree; of the 686 resident teachers employed, only 171 have the Bachelor's degree and only 11 the Master's degree. At the elementary level, 52 Bachelor's degrees are found among the 135 non-resident teachers; only 55 Bachelor's degrees are found among the 520 resident teachers. At the secondary level, 187 teachers out of 199 in the non-resident group hold the Bachelor's degree, while only 96 resident teachers out of 121 hold the Bachelor's degree. At the secondary level, 86 master's degrees are found among non-residents and only 39 among the resident teachers. At the administrative level, 67 individuals out of 77 in the non-resident group hold the Bachelor's degree, and 31 out of that number hold the Master's degree; only 20 resident administrators out of 45 hold the Bachelor's degree, and only 7 of that number hold the Master's degree.

Differences between the percentages of resident and non-resident teachers holding the Bachelor's degree are significant at every level and in the regional totals, the indices ranging from 5.36 to 27.21; the percentages increase with the remoteness of the zone of residence, the percentage of the non-residents being three times that of the resident group in the comparison of regional totals.

A significantly larger proportion of college graduates among the non-resident administrators take graduate work, the index being 6.71; in the comparison of regional totals, the percentage of non-resident college graduates taking graduate work is four times as large as that of the resident group, the index

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in the comparison being 15.53. The percentage increases in size in the more remote zone of residence. Of those taking graduate work, the percentage of non-residents holding the Master's degree is approximately six times as large as the percentage of resident teachers in corresponding resident groups. The most significant differences between resident and non-resident teachers with respect to degrees obtained are due mostly to differences in the relative proportions of each group obtaining the Bachelor's degree.

On the basis of the average number of semester hours of college and university training combined, the non-resident group is significantly superior to the resident group at every level and in the regional totals, the indices varying from 6.50 to 30.74. The non-resident teacher on the average has approximately one and one-half years of training more than the resident teacher. In this respect the district, commuting, and non-resident teachers fall into three distinct groups in the comparisons of regional totals and the amounts of training tend to be greater in the more remote zone at each level. The average number of semester hours of graduate work of the non-resident teachers as a whole is significantly greater than that of the resident group, the index being 5.46.

On the basis of the average number of semester hours of training in major subjects, the non-resident group excels the resident group at every level and in the regional totals. In each case the amount of training increases as the remoteness of the zone of residence increases. With respect to the amount of training in minor subjects, the non-resident group excels in a significant way in every case except at the administrative level. The amount of professional training is greater for the non-resident than for the resident group at each level and for the regional totals, and the difference is significant in each case except at the administrative level. The amount of professional training also tends to increase with the remoteness of the zone of residence.

The length of time since graduation from a standard four-year college tends to be greater among resident than among non-resident teachers, but the differences are not significant in any comparisons. The average amount of college and university attendance of non-resident teachers is significantly longer at each level than that of the average of resident teachers, the indices ranging from 5.69 to 27.07. The average non-resident has attended college and university 53 weeks longer than the average resident teacher. The length of attendance tends to increase with the remoteness of the zone of residence at each level.

Greater percentages of the resident than of the non-resi-

dent groups attend summer school but the differences are not significant, the largest index being 2.13. A slight but important tendency for non-residents who attend summer school to attend longer than the resident teacher is found. However, on the basis of the proportion of college work obtained in residence by summer school attendance, the resident group surpasses the non-resident group. The differences are significant in each case except at the secondary level where the index is 3.83. The proportion of college attendance thus obtained definitely decreases as the remoteness of the zone of residence increases; the district, commuting, and non-resident groups fall into three distinctly different groups in the comparisons of regional totals.

The percentages of the groups who have earned some credit by extension are greater among resident than among non-resident teachers, the differences being significant at the elementary level and in the regional totals; the highest percentages are found in the commuting group. Comparisons based on the mean number of semester hours of credit earned by extension show strong trends for the resident to exceed the non-resident group at each level. Even resident secondary teachers surpass the non-resident secondary teachers in a significant way, if the comparisons are restricted to those who have actually had training by the extension method. On the basis of the proportion of the total training which was obtained by extension courses, the resident group exceeds the non-resident at each level and in regional totals, the differences being highly significant in each comparison except that of the secondary groups, which is 3.63.

Professional attitude.- Non-resident teachers in general rank higher than resident teachers with respect to professional attitude; in most instances the differences are statistically significant and in most cases the superiority increases as the remoteness of the zone of residence increases.

Data presented in Chapter V in which comparisons of professional attitude are based on the criteria of (1) recent college and university attendance and credit obtained, (2) membership in professional clubs, fraternities, and associations, (3) attendance and participation in educational meetings, and (4) creative scholarship - production and publication of professional articles - provide abundant evidence of the significant superiority of the non-resident group.

Comparisons based on the percentage of the teachers who have attended an institution of higher learning within the past five years result in significant differences between resident and non-resident teachers at the elementary level and in the regional totals, the indices being 5.98 and 6.51, respectively. Strong

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tendencies toward significant differences are also found in comparisons at the secondary and administrative levels. In each case, the percentages increase in the more remote zone of residence. Comparisons based on the average number of weeks of attendance within the past five years are even more significant than those of the percentages of the groups attending. Significant differences between the resident and non-resident groups are found at the elementary and secondary levels but not at the administrative level although the index for the latter level is 3.72.

The percentage of the non-resident elementary teachers who have earned some credit within the past five years is significantly greater than that of the resident elementary group, the index being 4.68, and there is a strong tendency for the percentages of the non-resident group to exceed those of the resident group at the secondary and administrative levels and in the regional totals. The mean number of semester hours earned at the elementary and secondary levels and in the regional totals is significantly greater in the non-resident than in the resident group.

Comparisons of the mean number of semester hours of professional credit earned within the past five years definitely show those of the non-resident group greater at the elementary and administrative levels and in the regional totals. At the secondary level only a strong trend (3.46) favorable to the non-resident group is revealed. In general the amount of professional credit tends to increase as the remoteness of the zone of residence increases.

On the basis of the average number of memberships in professional organizations, the non-resident group exceeds the resident group in a significant way in the comparison of regional totals and shows a strong tendency in that direction at the administrative level, the indices being 5.29 and 2.67, respectively. A significantly larger percentage of the non-resident group has attended an educational meeting within the past year, if the regional totals are considered, the index being 4.64; a strong trend in the same direction is also shown by the index of 3.28 at the elementary level. The percentage of teachers attending educational meetings tends to increase in the more remote zone of residence. The average number of professional meetings attended within the past year is significantly greater in the non-resident total than in the resident total, the index being 6.00.

A significantly greater proportion of the non-resident than of the resident teachers has assisted in the preparation of programs for educational meetings within the past five years, the

indices being 9.00 at the elementary level and 4.48 in the regional totals. In comparisons of regional totals, it is also found that the percentage of non-resident teachers who have appeared on the programs of educational meetings within the past year is significantly greater than that of the resident group, the index being 6.91; a similar, but not significant, trend is noted at the elementary level by the index of 3.24. The average number of appearances on educational programs is also significantly greater in the non-resident than in the resident group, the index being 5.56 in the comparison of the regional totals.

A significantly larger percentage of the non-resident group has written and published professional articles within the past five years, the index in the comparison of the regional totals being 6.28. The percentages increase with the remoteness of the zone of residence. Thirty of the non-resident teachers have written and published 48 articles; 9 of the resident group have written and published 16 articles.

Participation in the life of the community outside of the school.- On the average the degree to which the resident teachers are affiliated with and participate in the life of the community outside of the school is much greater than that of the non-residents.

The study provides adequate proof of the foregoing conclusion. In the first place, the number of week-ends per month spent in the teaching community determines to a great degree the extent to which one may participate in the life of the village and small city outside of the school itself. In this respect there is a general tendency for the resident groups to participate more than the corresponding non-resident groups. These differences are significant at the elementary level and in the comparisons of regional totals, the indices being 7.98 and 5.42, respectively. The commuting group ranks lowest in most cases and the district, commuting, and non-resident groups fall into three distinctly different groups in the comparison of the regional totals.

Non-resident teachers tend to make more visits than resident teachers to homes of pupils but the differences are not significant at any level or in the regional totals.

A detailed analysis of the church activities of the teachers shows that a slightly greater percentage of the resident than of the non-resident teachers are members of some religious organization but that the differences are in no cases significant. With respect to the percentage of the teachers who are members of a local unit of the church, the resident teachers are decidedly superior to the non-resident teachers in every case. The percent-

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ages tend to decrease as the remoteness of the zone of residence increases, being almost three times as great in the resident group as in the non-resident group in the regional totals. The district group in each case participates to a greater degree in local church activities than does the commuting group. Non-residents compare more favorably with residents at the administrative level than at any other levels.

Comparisons of the average number of church attendances by teachers per month within the community show a general tendency for the resident group to surpass the non-resident group; this difference is significant at the elementary level and in the regional totals, the indices being 7.66 and 5.16, respectively. The district group on this basis usually also excels in a significant way the commuting group. Comparisons of the percentages of the teachers making the major portion of the church financial contribution to a local unit of the church show the percentages for the resident group greater than those for the non-resident group in the regional totals and at each level of position except the administrative.

A greater proportion of resident than of non-resident teachers hold office in local units of the church and more resident teachers attend or participate in a larger number of church auxiliary organizations than non-resident teachers. Differences between district and commuting groups are more significant than between resident and non-resident groups.

The average number of other community activities engaged in by teachers tends to be higher among resident than among non-resident teachers but the differences are not significant. Differences between the means of the commuting group and those of either the district or non-resident group are statistically significant, indices of 8.28 and 5.67 being obtained in comparisons of regional totals.

At each level except in the administrative group and in the regional totals, the percentage of the teachers' purchases made locally is greater in the resident than in the non-resident group.

Salary and related factors.- The average salary of the non-resident teachers is greater than that of resident teachers at each level of position and is significant in each comparison except that of the secondary teachers; even at the secondary level there is evidence of strong trends in that direction. The average total income available to the non-resident teacher may not exceed greatly, if at all, that of the resident teacher since a greater percentage of the local teachers have other sources of income. A slightly greater percentage of the resident group do other types

of work for pay during out-of-school hours.

Residence, training, sex, marriage, and dependents appear to be factors closely related to salary. It should be recalled that non-resident teachers who receive the larger salaries also have reached higher standards of preparation for their professional activities. Although no significant differences are found between the salaries of teachers in school systems employing a majority of their teachers from local or from non-resident zones, there is a marked tendency for the salaries in most instances to be higher in those school systems employing more non-resident than district teachers. However, the salaries of non-resident teachers appear to be higher, especially above the elementary level, in any school system regardless of the ratio of the number of district to non-resident teachers employed. This difference is undoubtedly influenced to some extent by sex, marriage, and responsibility for dependents.

The percentage of male teachers is found to be higher at each level of position among non-resident than among resident teachers; in every comparison the percentage of men is greater in groups from the more remote zone and in most instances the differences are statistically significant. At each level the average salary of male teachers is greater than that of female teachers. The difference in the average salaries of men and women increases with the level of position and is significant at the secondary and administrative levels. Since the larger percentages of men teachers are found among non-residents, since the salaries of men are higher than those of women, and since non-resident teachers receive higher salaries than resident teachers, it is evident that the influence of residence on salary is accelerated by the influence of sex.

Greater percentages of married teachers are found among resident teachers at the elementary and secondary levels and among non-residents at the administrative level, the differences being significant at each level. The average salary of married teachers is higher at every level than that of the unmarried teacher, the difference increasing with the level of position and being significant at the secondary and administrative levels. Since the percentage of unmarried teachers is greater in the non-resident group, except at the administrative level, since the unmarried teacher receives the lower salary, and since the non-resident teacher receives the higher salary, it appears that residence is influenced in a negative way by marriage except at the administrative level.

A greater percentage of resident than of non-resident teachers have dependents except at the administrative level; the

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differences are significant only at the secondary level with strong trends toward significant differences at other levels. The average salary of teachers having dependents is higher than that of those without dependents at each level; the differences in average salaries increase from level to level and are significant at the secondary and administrative levels, the index being as high as 3.17 at the elementary level. With larger percentages of teachers with dependents among resident than among non-resident teachers except at the administrative level, with salaries of teachers with dependents higher than those of teachers without dependents at all levels, and with the salaries of non-resident teachers higher than those of resident teachers, it is evident that financial responsibility for dependents tends to influence in a negative way, except at the administrative level, the influence of residence on salary.

The combined influence of the factors of sex, marriage, and dependents in determining salary is more favorable to non-resident than to resident teachers in determining salaries as shown by the comparisons of married men with dependents and single women with no dependents. It is noteworthy that the influence of training, residence, sex, and other unmeasured factors is sufficient to overcome the negative influence of marriage and dependents at the elementary and secondary levels.

One other factor is offered because of its salary implications, namely, the rating of teachers by administrators. If used as a basis for election or retention of teachers through board action, rating may become a matter of considerable economic importance. The administrator's judgment of the quality of service rendered by the teacher may become the criterion for favorable or unfavorable action by the electing body.

Evidence in support of this factor has been offered in the study through a comparison of the "merits" and "demerits" given teachers of each regional group by the ratings of administrators. It was found that non-resident teachers received greater proportions of the "merits" than of the "demerits" at the elementary and secondary levels, separately or combined, the differences being significant at the secondary level and in the totals as indicated by indices of 16.32 and 15.70, respectively. On the other hand two of the nine comparisons within the resident, district, and non-resident groups show a tendency for the proportion of "merits" awarded to the local groups to exceed the proportion of "demerits" given them. Both of these differences - that of the secondary portion of the total resident group and that of the secondary portion of the commuting group - are significant, the indices being 4.14 and 7.47, respectively. Undoubtedly the sig-

nificant difference between the total resident groups is due to the difference between the commuting groups, since data concerning the latter are included in the former, the district group being practically normal in this respect. Five of the remaining seven comparisons within the local groups show significant differences unfavorable to the local teachers, the indices ranging from 6.00 to 18.09. It may therefore be concluded that salaries of non-resident teachers should tend to be higher than those of resident teachers in so far as the judgments of administrators are used by the boards of education as a basis of selection and retention of teachers.

The non-resident group as a whole tends to make the larger annual savings from their salaries, the index being 8.47 in the comparison of regional totals. This is no doubt due to the combined influence of training, residence, sex, marriage, dependents, and other factors influencing earnings as well as savings.

Consistency of Agreement

Other differences between resident and non-resident teachers do not always agree with differences in the relative proportions of each group employed.

On the one hand, it has already been shown that the percentage of local teachers employed is significantly greater than that of non-resident teachers, that the average length of service of the local teachers in present positions is significantly longer than that of the non-resident teachers, and that the average degree of identification with and participation in the life of the community outside of the school itself is greater among resident than among non-resident teachers.

On the other hand, it has also been shown that from various angles the training of the non-resident teachers is significantly greater than that of the resident teachers, that the amount of college and university attendance of the non-resident teachers is significantly greater than that of the resident group, that the non-resident group is less inclined than the resident group to resort to summer school attendance and extension courses as means of improving their training, that the professional attitude, spirit, or ambition of the non-resident group is decidedly superior to that of the resident group, that the rating of classroom teachers by administrators is more favorable to the non-resident than to the resident group, and that the economic status of the two groups probably do not differ materially, even though the average salaries of the non-resident groups are higher than those of the corresponding resident groups. It has been shown in most cases

that the status of the non-resident group, with respect to any criterion, has a tendency to increase or decrease as the remoteness of the zone of residence increases or decreases, respectively.

Educational Implications

The following educational implications are warranted from the foregoing conclusions:

Although the selection of the majority of the teachers from the immediate territory of the employing school may from one point of view appear logical, certain existing conditions show inconsistencies in the practice. First, the practice is not uniform for all levels of positions since a majority of the elementary teachers only is selected from the local zone, a majority of the secondary and administrative positions being held by non-residents. Second, the commuting zone supplies the lowest proportion of the total number employed.

Since local teachers excel non-residents with respect to participation in the activities of the community outside the school but are surpassed by the non-residents in training, professional attitude, and administrators' ratings, it appears highly probable that the former characteristic has been a stronger factor than the latter qualities in securing positions in the local school system.

Again, it may appear logical to find the average period of service of the local teachers longer than that of the non-residents. However, an element of inconsistency is found here. Although the average total teaching experience and average period of service in present positions are greater in the case of the resident teachers than in the case of non-resident teachers, the difference is due almost wholly to differences in their length of service in present positions only. The average number of previous positions held and the average period of service in these positions are practically equal for resident and non-resident teachers. It is the home position only that is held longer.

Evidently, the greater number of community contacts is a strong factor in holding as well as in securing a position, since the training, professional attitude, and administrators' judgments are more favorable to the non-resident group in each case.

The conditions suggest that the explanation for the situation is most likely as follows. As soon as local teachers have attained the minimum standards for teaching, they seek to secure positions in the home school. In most cases the positions are at the elementary level, in which the lowest standards for admission

are maintained. When the position is once secured it is usually held. The teacher soon lapses into a feeling of security of tenure and the controlling board is unlikely to risk arousing the resentment of the teacher's influential local friends by dropping her from the pay roll. In the case of elementary and secondary teachers, the ratings of administrators indicate that a greater percentage of weaker teachers are probably retained from the resident than from the non-resident groups.

The selection of local teachers on this basis plus the feeling of security of tenure resulting therefrom tend toward professional stagnation not unlike that sometimes resulting from permanent tenure. The seriousness of this implication is evidenced by the small percentage of the local elementary teachers who continue their training and become secondary teachers and administrators. Even local individuals who reach the higher levels rank decidedly lower than their contemporaries of the non-resident groups, especially at the administrative level.

From the point of view of the teacher, it is apparent that in securing and holding positions local contacts are more important factors than training and professional attitude. This is a condition of considerable disadvantage to the non-residents, especially in the securing of positions. From the point of view of the electing body, it is a simple way of harmonizing the various factions of the community. If the board prefers to select teachers because of residence in the community, the administrator is restricted to selection from local applicants.

Differences in economic conditions can scarcely account for differences in the training and professional characteristics of resident and non-resident teachers. Although the average salary of the non-resident teachers tends to be higher than that of the local teachers at each level, it is uncertain that on the average the total income of the non-resident teachers is greater than that of the resident teachers. Other sources of income are more often found among resident than among non-resident teachers. Considerable evidence thus points to the conclusion that the basic cause of differences between these groups is not economic.

Problems growing out of the employment of married teachers are closely allied with those growing out of the employment of local teachers. The difficulty experienced by those dealing with the problem of the married teacher is probably due largely to the fact that most married women teachers are local teachers. A solution of one of these problems cannot be made without proper consideration of the other.

Important educational implications grow out of the fact that the salary tends to be higher in school systems employing

more non-resident than resident teachers and that the salary of the non-resident teacher tends to be higher than that of the resident teacher even in schools employing more of the latter than of the former. On the other hand, the cost of board and room saved by many who teach at home is apparently considered as a legitimate reason for lower pay for resident teachers. It is also evident that many boards recognize the superior training and professional outlook of non-resident teachers and are willing to pay extra to secure them. Since the improvement of local teachers tends to be arrested at the elementary level of employment through security of tenure, a scarcity of local teachers for secondary and administrative positions apparently results. It then becomes necessary to go into the more remote zones to find qualified persons for these positions.

Not only is the average amount of training of resident teachers considerably less than that of non-resident teachers, but it is likely that the quality of such training is also poorer. This condition is due to the greater tendency of the resident teachers to acquire training through extension courses and by summer school attendance rather than through attendance during the regular collegiate year. Although non-resident teachers appear to have recognized in advance the necessity of offering a greater amount of training as an offset to local contacts in the securing of positions, they do not seem to have fully realized the importance of making such contacts as a method of holding positions to which they are once appointed. Administrators have probably realized the importance of this factor to a greater extent than have classroom teachers. The analysis indicates that this social factor is very significant.

Schools employing more non-resident than resident teachers are more likely to profit from recent experimentation in education, since the teachers from that zone have shown a greater tendency to attend institutions of higher learning within recent years. Better methods of teaching, supervision, and administration should be expected in such school systems. This condition is further emphasized by the more pronounced way in which the non-resident group attends educational meetings where the most recent progress in educational method, supervision, and administration are discussed by specialists and leaders in these fields.

A serious implication is found in the failure of many boards of education to seek the advice of their chosen executive officer - the superintendent or principal - in the selection of the teacher personnel. Although administrators rank elementary and secondary teachers of the non-resident group higher than those of the resident group on the basis of "merits" and "demerits"

given each group, boards of education continue to employ year after year a large proportion of their teachers from the local territory in a majority of the school systems studied. In some cases it is likely that the administrators may not have the courage of their convictions in the nomination of teachers; conditions in many systems are such that the exercise of such courage may actually imperil the security of the administrator's tenure. Either quality of leadership is lacking or the controlling board is unintelligent or willful in its failure to consider seriously the recommendations of its chosen executive.

It is noted throughout the study that the secondary teachers from the resident and non-resident groups are more alike than the elementary or even the administrative groups. This is undoubtedly due to the influence of the various accrediting agencies and state laws governing secondary teachers. Some type of standardizing agency for elementary schools similar to those now existing for the improvement of secondary schools might exercise a powerful influence in correcting the various defects pointed out.

The findings suggest another method of improving the defects of resident teachers revealed in the study, namely, an organized method of making employing boards of education more intelligent with respect to their official responsibilities. Difficulties do not usually exist where boards of education really select the best available teachers. No doubt this improved condition in many instances is the result of the education of board members and communities brought about by the efforts of superior school executives. Since many communities suffer from the lack of such leadership, an organized method of aiding boards of education to become more intelligent with respect to their official responsibilities is urgent. This would probably tend to improve many other undesirable conditions as well as those pointed out in the foregoing analysis of these data. Since the board exists before the teacher is employed, it is important that the board proceed in an intelligent way to select its chief executive who should then be permitted - with full support of the board - to select his staff on the basis of merit. The existing defects in the motives and methods sometimes involved in the employment and retention of teachers are probably due more to the lack of understanding of boards of education as to the real purpose of the school than to any fault of the teachers employed by them.

The employment of one or more persons by the state department of education to co-operate with boards of education in the improvement of the conditions indicated might result in the changes needed. Such persons might well be thought of as consultants to boards of education throughout the state. Their services should

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be available to boards of education at all times. Through them the boards may be made more intelligent as to their responsibilities with respect to the selection of teachers as well as in other matters, the needs of which have been discovered by means of carefully planned investigations of conditions. The consultants should prepare and distribute to the individual trustees appropriate information to aid the trustees in the wise discharge of their official responsibilities as board members. Definitely planned meetings with individual boards or groups of boards would probably prove an effective means of stimulating a more professional attitude in board members, since similar conferences are thought to be worthwhile for teachers. Through the leadership and influence of a board of education whose members have the proper concept of the true purpose of the schools and of their administration, the community is more likely to demand the best available teachers and will thus not be satisfied with inferior services.

APPENDIX

LIST

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TABLE LXXX

LIST OF CO-OPERATING SCHOOL SYSTEMS AND NUMBER OF TEACHERS
CO-OPERATING IN EACH CASE¹

Key to Map	Name of Co-operating School System	Size of Co-operating Personnel
1.	Anchorage	19
2.	Barbourville	16
3.	Bardstown	12
4.	Beaver Dam	6
5.	Bevier-Cleaton	3
6.	Brodhead	7
7.	Burgin	12
8.	Burnside	10
9.	Caneyville	6
10.	Carrollton	14
11.	Catlettsburg	36
12.	Central City	28
13.	Corbin	44
14.	Corinth	9
15.	Crestwood	6
16.	Crittenden	7
17.	Danville	45
18.	Drakesboro	11
19.	Dry Ridge	8
20.	Eminence	11
21.	Erlanger	27
22.	Elizabethtown	17
23.	Eubank	6
24.	Ferguson	13
25.	Frankfort	39
26.	Georgetown	22
27.	Grayson	14
28.	Greenville	16
29.	Harlan	20
30.	Hartford	1
31.	Hopkinsville	48
32.	Hughes-Kirkpatrick	7
33.	Junction City	12
34.	La Grange	9
35.	Lancaster	17
36.	Lawrenceburg	11
37.	Leitchfield	13
38.	London	4
39.	Madisonville	46
40.	Middlesboro	36

¹Numbers to left of names of schools indicate geographical location on the map.

TABLE LXXX (continued)

Key to Map	Name of Co-operating School System	Size of Co-operating Personnel
41.	Midway	11
42.	Mt. Sterling	24
43.	Mt. Vernon	10
44.	Nicholasville	19
45.	Olive Hill	13
46.	Owingsville	9
47.	Paintsville	29
48.	Pineville	29
49.	Prestonsburg	21
50.	Russell	31
51.	Science Hill	8
52.	Shelbyville	28
53.	Shepherdsville	8
54.	Somerset	56
55.	Stanford	16
56.	Taylorsville	10
57.	Versailles	14
58.	Walton	7
59.	Waynesburg	7
60.	Williamstown	10
61.	Wilmore	8
62.	Winchester	41
	Total	1, 097

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TABLE LXXXI

PERCENTAGE OF TEACHERS IN EACH GROUP NOT ABSENT
DURING THE SCHOOL DAY WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	f _p	47.59	49.52	40.48	44.09
	P.E.f _p	1.69	1.92	3.61	3.47
	N.	395.	311.	84.	93.
	Index of Signifi- cance of Difference	$\leftarrow \text{.91} \text{-----}$ $\text{-----} \leftarrow 1.36 \text{-----}$ $\text{-----} \text{.72} \rightarrow$ $\leftarrow 2.21 \text{-----}$			
Second- ary	f _p	48.31	49.23	-----	51.82
	P.E.f _p	3.57	4.18	-----	2.88
	N.	89.	65.	24.	137.
	Index of Sig. of Dif.	$\text{-----} \text{.76} \rightarrow$ $\text{-----} \text{.51} \rightarrow$			
Adminis- trative	f _p	30.77	32.26	-----	30.65
	P.E.f _p	4.98	5.67	-----	3.95
	N.	39.	31.	8.	62.
	Index of Sig. of Dif.	$\leftarrow \text{.02} \text{-----}$ $\text{-----} \text{.23} \text{-----}$			
Total	f _p	46.46	48.16	40.52	44.86
	P.E.f _p	1.47	1.67	3.08	1.96
	N.	523.	407.	116.	292.
	Index of Signifi- cance of Difference	$\leftarrow \text{.65} \text{-----}$ $\text{-----} \leftarrow 1.28 \text{-----}$ $\text{-----} \text{1.19} \rightarrow$ $\leftarrow 2.18 \text{-----}$			

TABLE LXXXII
MEAN NUMBER OF DAYS ABSENT FROM TEACHING
WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	2.26	2.23	2.37	1.88
	S.D.	3.81	3.94	3.34	3.15
	P.E.m	.129	.15	.25	.220
	N.	395.	311.	84.	93.
	Index of Significance of Difference	$\leftarrow 1.51$ $\leftarrow 1.32$ $\leftarrow 1.47$ $\rightarrow .05$			
Secondary	M.	2.57	2.52	-----	2.59
	S.D.	4.78	4.64	-----	6.76
	P.E.m	.34	.39	-----	.40
	N.	89.	65.	24.	137.
	Index of Sig. of Dif.	$\rightarrow .04$ $\rightarrow .13$			
Administrative	M.	4.97	5.42	-----	3.52
	S.D.	12.49	13.90	-----	3.99
	P.E.m	1.35	1.68	-----	.34
	N.	39.	31.	8.	62.
	Index of Sig. of Dif.	$\leftarrow 1.04$ $\leftarrow 1.11$			
Total	M.	2.52	2.52	2.50	2.56
	S.D.	5.20	5.54	3.76	5.36
	P.E.m	.15	.19	.24	.21
	N.	523.	407.	116.	292.
	Index of Significance of Difference	$\rightarrow .15$ $\rightarrow .14$ $\rightarrow .18$ $\leftarrow .06$			

TABLE LXXXIII

PERCENTAGE OF TEACHERS OF EACH GROUP OBTAINING PROFESSIONAL TRAINING WITHIN THE PAST FIVE YEARS

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	fp	93.42	93.10	94.62	94.17
	P.E.fp	.80	.92	1.58	1.44
	N.	441.	348.	93.	120.
Elementary	Index of Significance of Difference	.45 .63 .21 .83			
Secondary	fp	84.00	79.41	93.75	84.43
	P.E.fp	2.48	3.30	2.89	1.90
	N.	100.	68.	32.	167.
Secondary	Index of Significance of Difference	.14 1.32 2.70 3.27			
Administrative	fp	86.11	81.48	-----	86.96
	P.E.fp	3.89	5.05	-----	2.73
	N.	36.	27.	9.	69.
Administrative	Index of Sig. of Dif.	.18 .95			
Total	fp	91.33	90.29	94.78	88.20
	P.E.fp	.79	.95	1.30	1.15
	N.	577.	443.	134.	356.
Total	Index of Significance of Difference	2.24 1.40 4.63 2.79			

TABLE LXXXIV

PERCENTAGE OF TEACHERS IN EACH GROUP HOLDING MEMBERSHIPS
IN PROFESSIONAL CLUBS, FRATERNITIES, AND ASSOCIATIONS

Level of Position	Statistical Measures Used	Resident Group			Non- Resident Group
		Total	District	Commuting	
Elemen- tary	fp	86.90	88.54	79.72	89.19
	P.E.fp	1.14	1.09	3.15	1.99
	N.	397.	323.	74.	111.
	Index of Signifi- cance of Difference	1.00 .29 2.54 2.65			
Second- ary	fp	85.86	87.32	82.14	87.43
	P.E.fp	2.36	2.66	4.88	1.73
	N.	99.	71.	28.	167.
	Index of Signifi- cance of Difference	.54 .03 1.02 .93			
Adminis- trative	fp	97.56	96.77	-----	100.00
	P.E.fp	1.63	2.14	-----	-----
	N.	41.	31.	10.	72.
	Index of Sig. of Dif.	1.50 1.51			
Total	fp	87.52	88.94	82.14	90.57
	P.E.fp	.95	1.03	2.44	1.56
	N.	537.	425.	112.	350.
	Index of Signifi- cance of Difference	1.67 .87 2.91 2.57			

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TABLE LXXXV

MEAN NUMBER OF PROFESSIONAL PROGRAMS WHICH TEACHERS OF EACH GROUP HELPED TO PREPARE WITHIN THE PREVIOUS FIVE YEAR PERIOD

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	M.	1.33	1.36	-----	2.27
	S.D.	4.38	4.45	-----	4.50
	P.E.m	.177	.20	-----	.35
	N.	278.	217.	61.	75.
	Index of Sig. of Dif.	2.41 2.28			
Secondary	M.	.76	.76	-----	.55
	S.D.	1.91	1.97	-----	1.20
	P.E.m	.152	.188	-----	.076
	N.	72.	50.	22.	112.
	Index of Sig. of Dif.	1.24 1.04			
Administrative	M.	3.70	-----	-----	1.69
	S.D.	7.79	-----	-----	1.61
	P.E.m	1.011	-----	-----	.146
	N.	27.	19.	8.	55.
	Index of Sig. of Dif.	1.97			
Total	M.	1.39	1.35	1.53	1.34
	S.D.	4.43	4.09	5.38	2.93
	P.E.m	.154	.16	.38	.127
	N.	377.	286.	91.	242.
	Index of Significance of Difference	.25 .05 .48 .44			

TABLE LXXXVI

PERCENTAGE OF TEACHERS OF THE ELEMENTARY LEVEL AND OF THE REGIONAL TOTALS PRESIDING OVER ONE OR MORE EDUCATIONAL MEETINGS WITHIN THE PAST YEAR

Level of Position	Statistical Measures Used	Resident Group			Non-Resident Group
		Total	District	Commuting	
Elementary	f_p	2.45	2.77	-----	5.26
	P.E. f_p	.57	.69	-----	1.54
	N.	327.	253.	74.	95.
	Index of Sig. of Dif.	1.71			→
		1.47			→
Total	f_p	3.61	4.18	1.85	6.43
	P.E. f_p	.60	.74	.88	.95
	N.	443.	335.	108.	311.
	Index of Significance of Difference	2.52			→
		1.88			→
		3.52			→
		← 2.03			

TABLE LXXXVII

DISTRIBUTION OF THE (534) ELEMENTARY AND SECONDARY TEACHERS RATED, OF THE (3299) MERITS AWARDED, AND OF THE (3199) DEMERITS GIVEN¹

Level of Position	Number of Teachers Rated			Number of "Merits" Awarded			Number of "Demerits" Given		
	Dist.	Com.	Non-Res.	Dist.	Com.	Non-Res.	Dist.	Com.	Non-Res.
Elem.	192	53	81	1029	274	378	1386	360	351
Sec.	44	21	143	292	188	1138	289	101	712
Tot.	236	74	224	1321	462	1516	1675	461	1063

¹Used as basis for percentages of Tables LIX - LXI inclusive of Chapter VII.

FORM I

TEACHER DATA SHEET

Teacher's Name _____ School _____

PART I - TRAINING

A. COLLEGE RECORD (undergraduate only):

1. Name of colleges attended and 2. Number of weeks in each

3. Major subject? 4. Two minor subjects?
5. Total semester hours of credit earned to date:
a. Tot. sem. hrs. in Education?
b. Tot. sem. hrs. in all Academic Subjects?
6. Tot. no. weeks in Residence (total of No. 2)?
a. During summer schools? b. During regular yr?
7. Tot. sem. hrs. in Major (3)? 8. Tot. sem. hrs. in Minors?
9. Tot. sem. hrs. of credit earned to date (ans. as in 5)?
a. Tot. sem. hrs. earned in Residence?
b. Tot. sem. hrs. earned in Absentia, i.e., by extension and home-study courses.
10. Are you a graduate of a standard four year college?
11. Year of graduation? 12. Degree received?

B. GRADUATE SCHOOL RECORD:

13. Names of graduate schools attended and 14. Weeks in each

15. Major subject? 16. Minor subject?
17. Tot. sem. hrs. to date?
a. Tot. sem. hrs. in Education?
b. Tot. sem. hrs. in all Academic subjects?
18. Tot. weeks in attendance?
a. During summers? b. During regular year?
19. Tot. sem. hrs. in Major (15)? 20. In Minor subjects (16)?
21. Do you hold an advanced (graduate) degree?
22. Year of graduation? 23. Degree received?

C. ITEMS CONCERNING BOTH UNDERGRADUATE AND GRADUATE RECORD:

24. What Honorary Scholastic Fraternities were you a member of while in college, or later?

25. State approximate per cent of the cost of your college and graduate training, which you yourself have paid for or yet owe.
26. Did you earn part or all your expenses by working during residence at college or university?

PART II - EXPERIENCE, SALARY, AND FINANCE

27. Tot. no. yrs. experience in educational position (on salary) inclusive of the present year?
a. No. previous to the first year in this system?
b. No. in this system?

FORM I (continued)

28. If you are now teaching in Grades 1-8 inclusive, indicate grade taught.
29. If your work is partly in grades 1-8 and partly in grades 9-12, state to which group the majority of your time is devoted.
30. In how many different schools or systems have you taught before coming into this school system? (Consider each school in a county system as separate positions but each city system as one school only, where work has been in different buildings in the city).
31. No. of school months taught first year of total experience?
32. No. of school months taught last year before coming into this system?
33. No. of school months taught first year in this system?
34. No. of school months to be taught this year?
35. \$ Annual salary this year? 36. \$ Annual salary of first year in this system?
37. \$ Annual salary last year taught before coming into this system?
38. \$ Annual salary first year of total experience?
39. No. of persons, exclusive of yourself, wholly or partly dependent upon your salary?
40. \$ Total savings during the past year from your teaching salary (inclusive of money invested in life insurance, additional training, real estate, bonds, etc.)?
41. Do you have other sources of income?
42. Do you do other work for pay in out-of-school hours?
43. Are you married or single?

PART III - RESIDENCE

NOTE: ZONES OF RESIDENCE are: (A) DISTRICT, meaning within the boundary of this school district in which you now teach; (B) COMMUTING ZONE, sufficiently convenient because of distance and means of transportation to make it possible to board at home and to "commute" daily to and from home and school whether or not this is actually practiced by you; (C) REMOTE, beyond the commuting zone, making it necessary for you to board in this district at least during school days of week. Check each of the following questions for your residence in the proper column.

	Zones of residence		
	A	B	C
44. In which zone were you born?			
45. In which did you get your elem. ed.?			
46. In which did you get your H.S. ed.?			
47. Which did you consider your actual home at time of election to first year's position in this system?			
48. Which did you consider as your actual home during your first year's teaching in this system?			
49. Which do you now consider as your actual home?			

FORM I (continued)

50. If you should teach elsewhere next year, would you then consider this district where you are now teaching or its commuting zone as your actual home?
51. If you have moved into this district from the remote or commuting zones since you were first elected here, state number of years you have lived here?
52. If you have moved into the commuting zone from the remote zone since your first election here, state number of years you have lived there.
53. If you have married a person who considered this district or commuting zone his or her actual home, state number of years since marriage.
54. Do you board in this district (away from home)?

PART IV - PROFESSIONAL ACTIVITIES

55. Total number professional clubs, fraternities, and associations in which you now hold membership?
56. Exclusive of those within your own school, give the number of educational meetings attended by you during the past year.
57. No. of talks made or papers read by you before educational meetings within the past year, exclusive of those within your own school?
58. No. of educational meetings over which you have presided during the past year, exclusive of those within your own school?
59. No. of professional articles written by you and published in professional journals within the past five years?
60. No. of programs for professional meetings which you have helped to prepare within the last five years?
61. No. of days absent from your teaching work within the past year from any causes?
62. No. of weeks you have attended college or university during the last five years?
a. During summers?
b. In regular year?
63. Tot. no. sem. hrs. earned during last five years?
a. While in residence? b. In absentia?
64. Total no. sem. hrs. (same as 63)?
a. No. in Ed.? b. No. in Academic subjects?
65. No. of visits to homes of your pupils within the past year?

PART V - COMMUNITY ACTIVITIES

66. Are you a church member?
67. In which zone of residence?
68. Average no. of times per month you attend church in this district (or in the one in which you taught last, if new to this system)?
69. Av. no. of times in commuting area?
70. If you make financial contributions to the church, state zone in which most of contribution is made.
71. Are you an officer in the church in this district?

FORM I (continued)

NOTE: In the following table, show the number and zone of attendance in each of the following: (If you are now in this system, keep in mind your previous position in checking this list rather than your present one. State answers in terms of number of times per month. Add to the list if necessary).

- | | | | |
|-----------|--|-----------|------------------------|
| 72. _____ | Sunday School | 83. _____ | Community drives |
| 73. _____ | Prayer Meeting | 84. _____ | Community Fairs |
| 74. _____ | Choir Service | 85. _____ | P.T.A. |
| 75. _____ | Other Church Auxiliaries | 86. _____ | Woman's Club |
| 76. _____ | Service or Luncheon Clubs | 87. _____ | Boys' and Girls' Clubs |
| 77. _____ | Music Clubs | | |
| 78. _____ | Literary Clubs | | |
| 79. _____ | Social Clubs | | |
| 80. _____ | Secret Fraternities | | |
| 81. _____ | Entertainment Clubs,
(Lyceum, Chautauqua, etc.) | | |
| 82. _____ | Educational Contests | | |

88. _____ No. (per month) of week-ends spent in this district, (average)?

89. _____ Approximate percentage of the cost of your purchases beyond the cost of board and rent, made in this district during the past year.

NOTE: PLEASE CHECK TO SEE THAT ALL SPACES HAVE BEEN FILLED OR CHECKED. I wish to thank you as one of the 1000 Kentucky teachers who are assisting me in the collection of these data for my dissertation at the University of Chicago Graduate School of Education.

E. E. Bratcher

Name
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Address

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A.
Appearance
Health
Voice
Enthusiasm
Initiative
Adaptability
Reliability
Sympathy
Tact
Industry
Intellectu
B.
Organizational
Preparation
Selection
Clear pres

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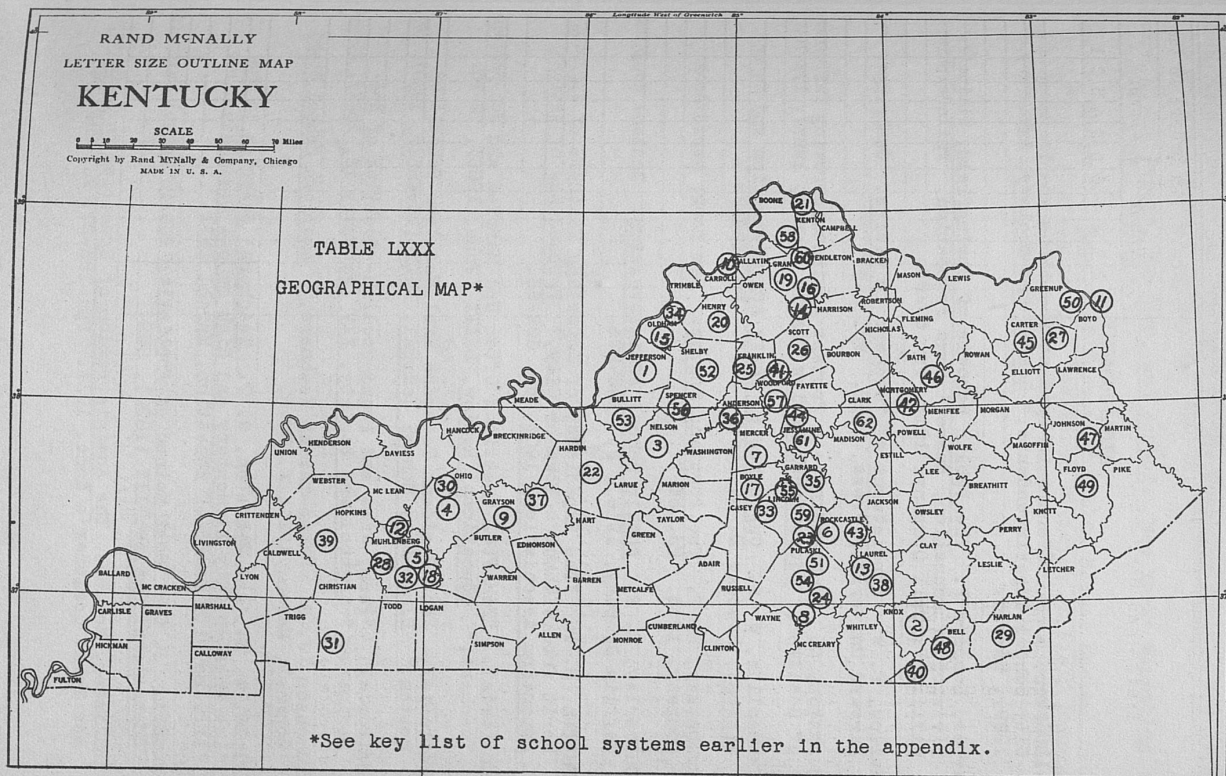
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FORM III (continued)

Traits and Characteristics	Teachers (in order) in the											
	Upper						Lower					
	1	2	3	4	5	6	6	5	4	3	2	1
Stimulation of thought												
Formation of habits												
Stimulating enjoyment												
Training in Expression												
Skill in "conversation" lesson												
Securing pupil participation												
Skill in assignment												
Assistance during study												
Selection and organization of projects												
Utilization of interests												
Adaptation to individual interests												
Skill in questioning												
Use of standard scores												
Use of tests and examinations												
Skillful in motivation of reviews												
C. Routine and Physical Conditions												
Routinized passing and marching												
Enough simple signals												
Careful use of supplies, materials, etc.												
Care of program, register, reports												
Care of heat, light, ventilation												
D. Discipline												
Through good teaching and routine												
Proper means in extreme cases												
Objective attitude												
E. As a Unit in the System												
Co-operation with superiors												
Co-operation with other teachers												
Attitude toward criticism												
F. Professional Growth												
Use of professional books, magazines												
Other books and magazines												
Summer school, correspondence, etc.												
Institutes, conventions, associations, etc.												
Contribute to teachers' meetings												
Experimentation with methods												
Co-operate in directed visitation												
G. Social Efficiency												
Interest and co-operation in community affairs												
Co-operation with parents												
Selection of friends												
Follow the crowd or self-reliant												
Social affairs secondary to work												
Provision for necessary play and recreation												
Social judgment - "manners"												
Conversation, poise, meeting people												



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