1955

The relationship between the professional status of certificated personnel and the size of the elementary school districts in San Joaquin and Stanislaus Counties

Jack Robert Hyman
University of the Pacific

THE RELATIONSHIP BETWEEN THE PROFESSIONAL STATUS OF CERTIFICATED PERSONNEL AND THE SIZE OF THE ELEMENTARY SCHOOL DISTRICTS IN SAN JOAQUIN AND STANISLAUS COUNTIES

A Thesis

Presented to

the Faculty of the Department of Education

College of the Pacific

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

---

by

Jack Robert Hyman

June 1955

TABLE OF CONTENTS

LIST OF TABLES

PAGE

TABLE

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Introductory statement. The most basic and pressing problem for the continuance and maintenance of a sound educational program is the presence of a well-qualified teacher in every classroom. Individuals rise no higher educationally and culturally than the environment and experiences of their daily living, and since youngsters spend such a large amount of their time in daily contact with teachers, it is extremely important to maintain a teaching staff of well-qualified teachers with high social and cultural qualities. This has always been one of the greatest educational problems; it is even greater now because of the alarming shortage of qualified teachers in the State of California as well as in the entire nation.[1]

For many years teaching was not a regular occupation, certification requirements were nominal and locally administered, and the economic reward of teachers was small. Some of these conditions have continued to prevail.[2]

---

[1] See Table I, p. 18.

[2] Edgar W. Knight, Education in the United States (Boston: Ginn and Company, 1941), p. 346.

The task of equalizing educational opportunity in the rural areas has become increasingly difficult, because of the depletion of rural life and the concentration of population and wealth in the industrial and municipal centers.[3]

Today many school districts are faced with almost insurmountable problems in securing for their schools the services of a well-qualified teaching staff. Salary, location of the school plant, available living accommodations, the classroom situation in terms of size and supervisory assistance, local climatic conditions, possible social advantages, and the opportunity for further professional training, are among the factors weighed by every teacher who seeks employment.

I. STATEMENT OF THE PROBLEM

This study was conducted for the purpose of determining whether the size of school districts (in terms of the number of teachers they employ) affects the employment of the instructional staff with regard to their academic preparation, experience, and professional interest. In

---

[3] Ibid., p. 25.

question form the problem may be stated: What is the relationship of the professional status of the teacher to the size of the district in the elementary schools of San Joaquin and Stanislaus Counties?

Delimitation of the study. This study of the relationship between the professional status of teachers and the size of the school district was delimited as follows:

1. The study was limited to the 105 public elementary school districts in San Joaquin and Stanislaus Counties.

2. In the case of the teachers' academic and professional status, the study was limited to 514 teachers in the previously mentioned school districts, and their status as of the 1953-54 school year.

3. Part-time and special instruction teachers were excluded.

4. Administrators were excluded except in schools employing from one to five teachers. Principals of such schools are not required by law to possess administrative credentials.[4]

---

[4]Education Code of California (Sacramento, California: State Department of Education, 1951), p. 367.

II. SOURCES OF DATA

Data for the study were obtained from the following sources; (1) public records of the California State Department of Education, (2) statutes and amendments to the California Education Code, (3) related studies and critical literature, (4) questionnaire responses of selected teachers in San Joaquin and Stanislaus Counties, and (5) personal interviews with a number of educators including Drayton B. Nuttall, Chief, Bureau of School District Organization, State of California Department of Education, Herschel S. Morgan, Supervising Credentials Technician, State of California Department of Education, and James C. Stone, Specialist in Teacher Education, California State Department of Education.

III. METHOD OF PROCEDURE

Procedures used in the development of the study. This study involved the use of the following procedures:

1. The development of an hypothesis.
2. A thorough investigation of related studies.
3. Examination and review of current literature.
4. Delimitation of the study.
5. Classification of the school districts.
6. Development of the questionnaire.

7. Sampling of the questionnaire.
8. Mailing of the questionnaire.
9. Tabulation of the results.
10. Correlation of the tabulated results.
11. Summarization of the results.
12. The drawing of conclusions.
13. The formulation of recommendations.

IV. DEFINITION OF TERMS

The following terms need definition:

School district. A school district is the smallest unit of public school administration in the United States.[5]

Credentials. The term "credentials" refers to the types of "certificates" issued by the state of California authorizing a teacher to instruct, and held by the various teachers of San Joaquin and Stanislaus Counties as specified in the Education Code of the State of California.[6]

Associate degree, bachelor's degree, college unit, doctor's degree, and master's degree. The definitions for

---

[5]Knight, op. cit., p. 11.

[6]Education Code of California, op. cit., pp. 342-46.

the terms "associate degree," "bachelor's degree," "college unit," "doctor's degree," and "master's degree," were obtained in part from their alphabetical listing in the Dictionary of Education.[7]

"Associate degree" is the type of degree and title usually conferred upon the completion of two years of college beyond the high school, or for the completion of the curriculum of a junior college.

"Bachelor's degree" is the first degree in arts and sciences or in certain professional and technical fields, the requirements usually including four years of work of college grade.

"College unit" is the amount of credit given for one hour of class per week during one term or semester of college study.

"Master's degree" is an academic degree of advanced character, usually a second degree, ranking above a bachelor's degree and below the Ph.D., Ed.D., or other doctor's degree.

"Doctor's degree" is the highest academic degree for attainment in graduate study.

---

[7]Carter V. Good (ed.), Dictionary of Education (New York: McGraw-Hill Book Company, Inc., 1945), pp. 1-495.

The meanings of the abbreviated professional organizations were obtained in part from the Encyclopedia of Educational Research[8] and in part from members or officers of the organizations mentioned.

"A.C.E." is the Association for Childhood Education, an association of elementary teachers joined together in their common interest in children, especially those in the primary grades.

"A.F. of T." is the American Federation of Teachers. This organization consists of twenty state federations of teachers' unions and 375 local unions.

"C.E.R.A." is the California Educational Research Association and consists of educators interested in research.

"C.T.A." is the California Teachers' Association. It is a state-wide association, and its members must be engaged in or interested in education.

"D.K.G." is Delta Kappa Gamma, a professional sorority of women in education.

"Local" designated local organizations, the oldest, the most varied in character, and the most numerous in the

---

[8]Walter S. Monroe (ed.), Encyclopedia of Educational Research (New York: The Macmillan Company, 1950), pp. 1442-60.

United States. They are usually affiliated with the state organization.

"N.E.A." is the National Education Association of the United States and the largest professional organization in the world, organized in 1857.

"P.D.K." is Phi Delta Kappa, a professional fraternity for men whose aim is the promotion and improvement of free public education through a continuing interpretation of the ideals of research, service, and leadership.

CHAPTER II

RELATED STUDIES AND CURRENT LITERATURE

Purpose of the chapter. The purpose of this chapter is to present a brief summary of related studies and current literature available upon the undertaking of this study. A small number of directly related studies and numerous indirectly related reports, studies, and articles were reviewed.

Summaries of the materials investigated as they pertain to the study are presented in this chapter.

The elementary teacher. The elementary teacher accepts as one of his responsibilities the task of teaching children those democratic values of service to the group, opportunity for all, freedom, justice, cooperation, happiness and security; not only an intellectual understanding of these values but the development of loyalties and emotional responses which are essential to their safeguarding.

He further accepts responsibility for a comprehensive study of the present--the realities of the contemporary world. These realities include such major social functions as production and distribution of goods and services, protection and conservation of life and

natural resources, transportation and communication, education, recreation, extension of freedom, expression of aesthetic impulses, expression of religious impuleses, and the integration of the individual.

Hanna suggests that in organizing a school to achieve such purposes as have been mentioned, it is essential to consider first the selection, training and professional attitude of its teachers.[1]

This is a reasonable assumption, since the teacher is almost solely responsible for directing and guiding the child's growth in learning. He must be prepared to channel each child's interests in the direction of intellectual consciousness. It is impossible for the school's administration to compensate for the lack of an adequately trained teacher in each classroom. This is as true on the elementary level as on any other. Hanna has emphasized this point as follows:

> Once the comprehensiveness of the task of elementary teachers is understood in terms of professional knowledge and skill required in dealing with the psychological and physiological maturation of children, understood in terms of the complexity of modern society and teachers' ability to assist children to sense the important relationships therein, once we grasp the

---

[1]Paul R. Hanna, "Master Teachers and Modern Education," California Journal of Elementary Education, 4:101, (November, 1935).

> full significance of teachers in the lives of elementary children in contemporary America, we shall require just as much native and acquired competence of elementary teachers as of teachers of any level.[2]

The board of trustees of a school district should feel duty bound to supply for the children of its district the very best in education that the area can afford. The initial step in alleviating injustice to elementary school children is the presence of a well-qualified teacher in every classroom.

The improvement of the teaching staff is a problem that constantly confronts every school administrator. Writers of leading books on school administration consider this problem so important that they almost universally devote one or two chapters to its discussion. Cubberley suggests that the addition of a few young, well-trained teachers to the staff each year is one way of improving the work of the entire staff.[3] This continued emphasis on the necessity for "well-trained" teaching personnel indicates something of the need on the part of schools to vie for teachers. This study was undertaken to determine whether the larger or the smaller district is the more successful in this competition.

---

[2]Ibid., p. 101.

[3]Ellwood P. Cubberley, Public School Administration (Boston: Houghton Mifflin Company, 1929), p. 225.

One study indirectly related to this question is based on the effect of the adoption of a single salary schedule by a large school district, and concludes that such a salary schedule results in a better trained staff because almost twice as many units were taken after its inception as compared to before.[4] Such a plan might, therefore, be one of the most important factors in attracting and maintaining a better qualified teaching staff.

What the educators say. State Superintendent of Public Instruction, Roy E. Simpson, in his recent article on "Growth Through Unification,"[5] made these statements:

> Recent studies and reports consistently concluded that certain changes were needed if California's pupils were to receive the maximum education for the energy and finances expended. . . . The administrative unit should be sufficiently large that it can effeciently and economically provide the educational program and services that are needed by the children within the area.
>
> Seventeen recently organized unified school districts reported changes which have been effected. Among the changes reported /was/ reduction in the number of one-teacher schools. . . .The consolidations

---

[4]James Mathews Bryan, "The 1928 Salary Schedule of the City of Alameda and its Effect Upon the Improvement of Teachers in Service" (unpublished Master's thesis, College of the Pacific, Stockton, California, 1936), p. 84.

[5]Roy E. Simpson, "Growth Through Unification," California Teachers Association Journal, 50:22-4, April, 1954.

> which took place enabled teachers to work with a smaller number of grades per classroom and made possible a significantly improved educational program.
>
> . . . . . .
>
> The districts as a group were able, even in a declining supply of trained teachers, to increase the general training level of the teachers employed.[6]

In 1920 there were 3,792 operating school districts in California. The number has progressively decreased since that time to 1,971 districts which were operating in 1953-54.[7]

In one small area, Martin Cabalzar, according to his thesis, Factors Relating to Unification in the Galt Area, found four elementary schools with enrollments significantly less than fifty, which, he claimed, substantiated the recognized shortcomings of small schools: "small classes, poorly trained teachers. . ."[8]

Only two of these elementary schools were found offering graded instruction. Forty-four per cent of the teaching staff did not have an A.B. degree; 30 per cent possessed emergency credentials. In addition, he found

---

[6]Ibid., p. 22.

[7]Ibid., pp. 23-24.

[8]Martin Anthony Cabalzar, "Factors Relating to Unification in the Galt Area" (unpublished Master's thesis, College of the Pacific, Stockton, California, 1950), pp. 102-103.

one school attempting to maintain a salary schedule and tenure plan which were inoperative and other than that offered by permissive legislation.

Other educators, in addition to Cabalzar, are of the opinion that the larger schools attract the better qualified teacher.

Herschel S. Morgan, Supervising Credentials Technician with the State Department of Education, was quoted in a personal interview as saying:

> Bigger schools will get the better qualified teachers--in general. Well qualified teachers can choose their locale of employment--their age in regard to tenure being the only contrary factor.[9]

Drayton B. Nuttall, Chief of School District Organization with the State Department of Education, said:

> A point for the reorganization of school districts is the better educational program they can offer. Newly unified districts show a better ability to attract higher quality teachers than prior to unification.[10]

Dawson believes that elementary should, among other things, have a desirable minimum of seven teachers, or an

---

[9]From a personal interview with Herschel S. Morgan, June 25, 1954.

[10]From a personal interview with Drayton B. Nuttall, June 24, 1954.

absolute minimum of six teachers.[11]

It appears that the consensus of opinion among many educators is that the larger schools attract the better trained teachers.

Problem of teacher supply on the national level. Naturally the available supply of teachers has a marked effect on the selection of teachers. When supply exceeds demand administrators in both large and small districts can choose staffs with care. When demand exceeds supply, competition to obtain the better trained teacher is keen. This last situation exists today.

Henry J. Taylor, noted economist, author and journalist, made a recent investigation of the teacher shortage and found that all experts agree that the teacher shortage is even more immense than generally supposed.[12] There are in the United States 128,225 elementary schools. Last year, Taylor's findings show, there was an estimated shortage of 72,000 teachers in the elementary schools. His investigation shows further that our population is

---

[11]Howard A. Dawson, "Satisfactory Local School Units," Field Study Number Seven, Division of Surveys and Field Studies, George Peabody College for Teachers, Nashville, Tennessee, 1951.

[12]Henry J. Taylor, "Your Unlimited Opportunities in the Teaching Profession." Reprint of a broadcast given May 31, 1954. (General Motors, Detroit, Michigan.)

growing at the astounding rate of 250,000 people a month.

According to Taylor, quoting the Thirty-third Annual Report of the American Medical Association, 3,307,182 babies were born last year; therefore, as the population expands, schools must expand. School construction this year is setting an all time high. Last year, Taylor states, school districts built one billion three hundred million dollars' worth of schools. Currently, construction is running 34 per cent beyond that. Every classroom means a need for a new teacher. Yet, for example, the city of Detroit is opening six hundred new classrooms this fall for which, so far, there are no teachers.

Ray C. Maul says that in 1947 the elementary school enrollment, after many years of stability, began to expand.[13] Modest at first, this growth proceeded at an accelerating pace. Each September brought a larger addition than the preceding one, with the 1953 contingent numbering more than one million boys and girls. In all, the elementary schools are now struggling to educate some five million more children today than in 1946. This

---

[13]Ray C. Maul, "The Teacher Shortage is Reaching the High School," National Education Association Journal, 5:301, May, 1954.

problem is further aggravated by the constantly growing demand of American industry and business for college trained men and women, which continues to siphon off many potential teachers. In addition, the prior need of manpower for national defense claims more than 20 per cent of the men as they graduate from college with preparation for teaching.[14] High schools, as seen from Maul's study, are also competing with the elementary school for the available qualified teachers since their number of potential teachers has fallen in the past four years from 86,690 to 50,624, as shown in Table I.

Problem of teacher supply in California. The problem facing administrators in California is extremely acute. In this state, according to Stone,[15] there are 100,929 certificated personnel employed in all types of positions; of this number, 6,047, or 6 per cent, are employed on the basis of emergency credentials.[16] The number serving on emergency credentials represents an unmet need, here and now, for fully qualified personnel. Of

---

[14] Ibid., p. 302.

[15] James C. Stone, "Who Will Teach Our Children and Youth--1954-1960?" Reprinted from California Journal of Secondary Education, 29:200, April, 1954.

[16] Ibid., p. 200.

TABLE I

GRADUATES PREPARED TO TEACH IN ELEMENTARY SCHOOLS AND HIGH SCHOOLS, 1950-54*

	Elementary School		High School	
Year	Number of Candidates	Per cent change from 1950	Number of Candidates	Per cent change from 1950
1950	28,587		86,890	
1951	33,782	+ 18.2	73,015	-16.0
1952	37,649	+ 31.7	61,510	-29.2
1953	37,430	+ 30.9	54,013	-37.8
1954	35,088	+ 22.7	50,624	-41.7

*Ray C. Maul, "The Teacher Shortage is Reaching the High School," National Education Association Journal, 5: 301, May, 1954.

the 6,047 serving on emergency credentials, 4,428 were reported in the elementary schools.

Demand for teachers varies with the ability of communities to attract fully qualified personnel. This variation in the attractiveness of teaching in various regions of California is shown in Table II in which the counties are listed in the order in which the proportion of their certificated personnel are serving on emergency credentials.

A measure of demand for teachers is the number of teachers needed each year to replace those now serving in the schools who must be replaced because of death, retirement, resignation, and the number of new teachers needed because of the increased school population. Based upon the averages of previous years' studies, the number of replacements needed in California because of death, retirement, and resignation for the school year, 1954-1955 is 10,009, as shown in Table III, page 23. The number of new teachers needed because of resignation is four times greater for elementary teachers than for those at other levels.

Also shown in Table III, page 23, is the number of new teachers needed by September, 1954, in California because of increasing school enrollment. The number of pupils expected to be enrolled in the fall of 1954 will

TABLE II

NUMBER OF CREDENTIALED PERSONNEL EMPLOYED in EACH CALIFORNIA COUNTY, WITH PER CENT EMPLOYED ON THE BASIS OF EMERGENCY CREDENTIALS, OCTOBER 31, 1953

	1953			1952		
	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials
San Francisco	4,129	48	1.16	4,419	31	0.7
San Mateo	2,694	75	2.78	1,973	60	3
Santa Clara	3,318	114	3.44	2,881	99	3
Los Angeles	37,408	1,318	3.52	34,249	1,191	3
Santa Barbara	1,102	39	3.54	996	72	7
Marin	845	35	4.14	735	23	3
San Diego	5,310	237	4.46	4,925	217	4
Orange	2,624	121	4.61	2,179	105	5
Santa Cruz	547	30	5.48	588	51	9
Inyo	126	7	5.55	124	19	15
Alameda	6,070	339	5.58	6,292	231	4
Contra Costa	3,144	177	5.63	3,238	180	6
Butte	643	41	6.38	542	27	5
Nevada	148	10	6.76	163	16	10
Kern	2,726	201	7.37	2,632	165	6
San Bernardino	3,210	247	7.69	3,098	272	9
Sonoma	1,012	79	7.81	986	71	7
San Luis Obispo	543	46	8.47	534	45	8

TABLE II (continued)

	1953			1952		
	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials
Monterey	1,316	115	8.74	1,111	104	9
Sacramento	3,321	292	8.79	2,902	260	9
Fresno	3,036	273	8.99	2,892	239	8
Yuba	365	33	9.04	288	21	7
Sutter	377	35	9.28	382	26	7
Napa	387	37	9.56	376	38	10
Tehama	237	24	10.13	155	16	8
Ventura	1,421	144	10.13	1,172	115	10
Lake	127	13	10.24	128	12	9
Yolo	418	43	10.29	374	31	8
San Joaquin	1,858	192	10.33	1,597	159	10
Riverside	1,833	199	10.86	1,490	170	11
Placer	455	51	11.21	440	47	11
Glenn	194	22	11.34	166	18	11
Solano	1,031	118	11.45	948	72	8
Amador	111	13	11.71	110	18	16
Plumas	161	19	11.80	156	17	11
Modoc	91	11	12.08	93	19	20
Tulare	1,698	208	12.25	1,624	181	11
Shasta	500	62	12.40	461	60	13
Calaveras	96	12	12.50	92	19	21
El Dorado	182	23	12.64	175	34	19

TABLE II (continued)

	1953			1952		
	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials	Total Number Credentialed Personnel Employed	Total Employed on Emergency Credentials	Per cent of Total Personnel Employed on Emergency Credentials
Stanislaus	1,426	181	12.69	1,311	157	12
Humboldt	790	102	12.91	705	98	14
Merced	670	93	13.88	706	142	20
Siskiyou	322	46	14.29	285	35	12
Imperial	651	97	14.90	587	76	13
Mariposa	53	8	15.09	57	10	18
Del Norte	111	17	15.32	96	10	10
Lassen	223	35	15.70	214	41	19
San Benito	145	23	15.86	137	15	11
Kings	526	86	16.35	549	96	17
Colusa	158	27	17.09	127	21	17
Mendocino	413	77	18.64	348	43	12
Tuolumne	132	27	20.46	128	24	19
Madera	369	80	21.68	161	59	37
Alpine	3	1	33.33	3	1	33
Trinity	57	19	33.33	56	15	27
Sierra	40	15	37.50	41	7	17
None	26	10	38.46	24	6	25
Total	100,928	6,047	5.99	93,873	5,407	6

* James C. Stone, "Who Will Teach Our Children and Youth--1954-1960?" Reprinted from California Journal of Secondary Education, 29:202-203, April, 1954.

TABLE III

ESTIMATE OF NEW TEACHERS NEEDED
BY SEPTEMBER, 1955*

Level	Death	Re-tire-ment	Re-sig-nation	Increased Enroll-ment	Total
Elementary	202	837	5,054	3,916	10,009

* Ibid., p. 206.

be an increase of 170,000 (8 per cent) over the number reported on October 31, 1953. Based upon a pupil-teacher ratio of thirty-four to one for the elementary school, enrollment increase alone accounts for a demand of 3,916 more elementary teachers for the 1954-55 school year.

From these facts, a picture of a critical teacher shortage emerges.

There can be no doubt that school districts are vying for the small number of available teachers. Is the size of the school district a principal factor in the competition?

Supply of teachers. A primary source of supply for California teachers is the number expected to graduate this year who will qualify for teaching credentials. The thirty-six colleges and universities in California which are accredited by the State Board of Education to prepare teachers, report a total of 6,983 certificated persons who will qualify as elementary teachers.[17]

This total of 6,983 is approximately the same number reported as qualifying for teaching credentials in 1953, but it is 25 per cent less than the number reported

---

[17] Ibid., p. 209.

as qualifying to teach in 1951. Thus, while the curve of teacher supply has decreased 25 per cent since 1951, the demand for teachers has increased 55 per cent since 1951.[18]

A second source of teacher supply is those prepared in other states. In previous studies, this number has accounted for half the number of teachers certificated in California each year. The difficulty now is that most other states also are facing a teacher shortage. Many states which have heretofore been California's reservoir of teachers have recently taken steps to make teaching more attractive in their states in an effort to ward off the competition from California superintendents.

A third source of supply is those persons who once prepared to teach but are not now teaching. That there is a vast supply of such qualified teachers throughout the state is evidenced by the fact that there is an active file of 200,000 credentialed persons in the Credentials Office of the State Department of Education. Approximately half of this number is now teaching.

Perhaps many others can be "re-recruited" to teaching if the financial incentives and conditions of living and employment are made attractive enough.

---

[18] Ibid., p. 205.

A fourth source of supply is the more than six thousand teachers serving in the schools on substandard credentials, and many others like them whose services will be required for the next decade.[19]

The year by year demand is shown in Table IV. The peak year will be 1958-59. The estimate of 67,078 elementary teachers needed is based on those needed as replacements because of:

1. Death, 0.4 per cent per year
2. Retirement, 1.66 per cent per year
3. Resignation, 6.26 per cent per year
4. Anticipated school enrollment.[20]

On August 4, 1954, the California State Department of Education issued a statement saying, "California's already overcrowded schools will have 2,333,471 pupils this October, a 7.8 per cent increase over the previous school year."

In a special report by the department it is revealed there will be 131,583 more students by October, 1954 at the elementary level.

---

[19] Ibid., p. 211.

[20] Ibid., p. 212.

TABLE IV

NUMBER OF NEW ELEMENTARY AND SECONDARY TEACHERS NEEDED EACH YEAR, 1954-55 THROUGH 1960-61*

School Year	Elementary	Secondary	Total
1954-55	10,009	3,773	13,782
1955-56	9,736	4,019	13,755
1956-57	9,281	4,576	13,857
1957-58	9,471	4,603	14,074
1958-59	9,923	4,336	14,259
1959-60	9,911	3,908	13,819
1960-61	8,747	4,785	13,532
Total for seven years	67,078	30,000	97,078
Average per year	9,582	4,286	13,868

*James C. Stone, "Who Will Teach Our Children and Youth--1954-1960?" Reprinted from California Journal of Secondary Education, 29:212, April, 1954.

Meanwhile, the teacher and classroom shortage grows more acute. By October the state will need 10,009 teachers in elementary classes. The number of teachers graduating from California colleges has decreased 25 per cent in the past three years.[21]

---

21 "Schools Face More Crowding in Fall," Stockton Daily Record [California], August 4, 1954, p. 7, col. 1.

CHAPTER III

TEACHER ORGANIZATIONS

Purpose of the chapter. The purpose of this chapter is to present a brief summary of the history of teacher organizations and of the values to be derived from membership therein.

The growth of teacher organizations. There are hundreds of educational associations.[1] The terms "teachers' associations" and "educational associations" are used interchangeably in referring to organizations consisting primarily of teachers and other workers in the field of education. Such organizations, according to The Encyclopedia of Educational Research,[2] came into existence during the Middle Ages in Europe. The first voluntary teachers' association was the Brethren of the Common Life, founded during the latter part of the fourteenth century, and others followed. Since these early organizations were primarily religious in both origin and motive, they

---

[1] The Educational Directory, published by the United States Office of Education, contains fifty pages listing educational organizations.

[2] Walter S. Monroe (ed.), Encyclopedia of Educational Research (New York: The Macmillan Company, 1950), pp. 1442-46.

differed a great deal from our present day professional groups; however, these latter groups owe their existence to the former.

According to the Encyclopedia of Educational Research the first teachers' association in the United States was the Society of Associated Teachers, which was organized in New York City in 1794. There were other early groups of the same nature, including Western Literary Institute and College of Professional Teachers, organized in Cincinnati in 1829; American Institute of Instruction, established in Boston in 1830; and National Teachers' Association, organized in Philadelphia in 1857 (later the National Education Association).

Since the middle of the nineteenth century teachers' organizations in the United States have multiplied rapidly and become both more definite in purpose and more permanent in form. Nearly twenty-five hundred local associations are affiliated with the National Education Association.[3] Whatever the character of these organizations may be, practically all of them exist for two main reasons: to better the conditions under which teachers labor, and to improve the service which teachers render.

---

[3] Ibid., p. 144.

One criterion of a well-qualified teacher is his interest and participation in professional organizations. One authority comments, "A teacher ambitious to advance himself and his profession will be found active in educational organizations."[4]

The professional family. The idea that the teacher's responsibility ends with teaching in the classroom was discarded long ago. It is now recognized that all members of the profession have at least a four-fold responsibility in their service to society:

1. Continuous personal and professional growth toward maximum competency and toward greater service to children.

2. Cooperative work with fellow teachers toward well-rounded educational services throughout the school system.

3. Participation in community activities to the end that each teacher may carry his share as a member of the community.

4. Participation in the work of the organized teaching profession so that the standards of the profession may be raised, the quality of the services of its members

---

[4]Velorus Martz and Henry L. Smith, An Introduction to Education (New York: Charles Scribner's Sons, 1941), p. 378.

increased, and the welfare of all members may be enhanced.[5]

Membership in a professional organization makes one understand the importance of having all teachers link themselves together for the purpose of working cooperatively and powerfully for the elevation of the profession.

Teacher-education curricula might well include carefully planned units of study about the professional organizations, and such units should stress that both the future teacher and the present teacher ought to hold memberships in local, state, national, and world associations, as well as in the special-interest associations serving his particular teaching field.

"The future of teaching," according to Martz and Smith, "is largely in the keeping of individual teachers. Opportunities for growth and advancement exist. Only as teachers make use of these opportunities can they place their calling upon an equal footing with recognized professions."[6]

---

[5]Albert W. Edgemon, "Part of the Professional Family," National Education Association Journal, 5:306, May, 1954.

[6]Martz and Smith, op. cit., p. 390.

CHAPTER IV

SELECTION AND CLASSIFICATION OF TEACHERS AND SCHOOLS

Purpose of the chapter. The purpose of this chapter is to explain to the reader why certain schools were selected, how they were classified, and which teachers were queried.

Selection of the schools. In an effort to broaden this study as far as possible, all of the public elementary schools in San Joaquin and Stanislaus Counties were included in this study. The total number of elementary schools thereby included numbered 105, sixty-seven in San Joaquin County and thirty-eight in Stanislaus.

Classification of the schools. The 105 elementary schools of the two counties were arbitrarily divided into two groups and were titled Group A and Group B according to the number of teachers employed.[1] Group A schools are those employing twenty-one or more teachers, and for the purpose of this report are considered as "large" schools. Group B are those employing from one to twenty teachers, and for the purposes of this report they are considered "small" schools.

---

[1]Appendix A.

Table V shows the grouping of the schools as used in the study. Group A, twenty-one or more teachers, had only thirteen schools, or 12.39 per cent; while Group B, one to twenty teachers, had 92 schools, or 87.61 per cent of the elementary schools in San Joaquin and Stanislaus Counties. The above figures are illustrated graphically in Figure 1, page 36.

Selection of the teachers. In an effort to obtain as much information on teacher status in San Joaquin and Stanislaus Counties as possible, it was decided to submit questionnaires to one thousand of the 1,770 regular elementary teachers in the two counties. This was approximately 56 per cent of the total certificated staff.

It was decided to divide the mailing equally between the "large" and "small" schools. However, Group B, with 503 teachers, was mailed 503 questionnaires, while Group B was mailed 497 questionnaires, for a total of one thousand.

Table IX, page 49, shows the total number of teachers in each group, and the per cent of teachers in each group. Group A, twenty-one plus teachers, employs 71 per cent of the total teachers; while Group B, one to twenty teachers, with 87.61 per cent of the schools, employs only 28.42 per cent of the teachers. Figure 2, page 45, shows the comparisons in teacher size.

TABLE V

NUMBER AND PERCENTAGE OF SCHOOLS AND TEACHERS IN GROUP A, LARGE SCHOOLS, AND GROUP B, SMALL SCHOOLS

Group	Group Size	Number of Schools	Per cent of Schools	Total Number of Teachers	Per cent of Teachers
A	Large 21 plus teachers	13	12.39	1,267	71.58
B	Small 1 - 20 teachers	92	87.61	503	28.42
Totals		105	100.0	1,770	100.0

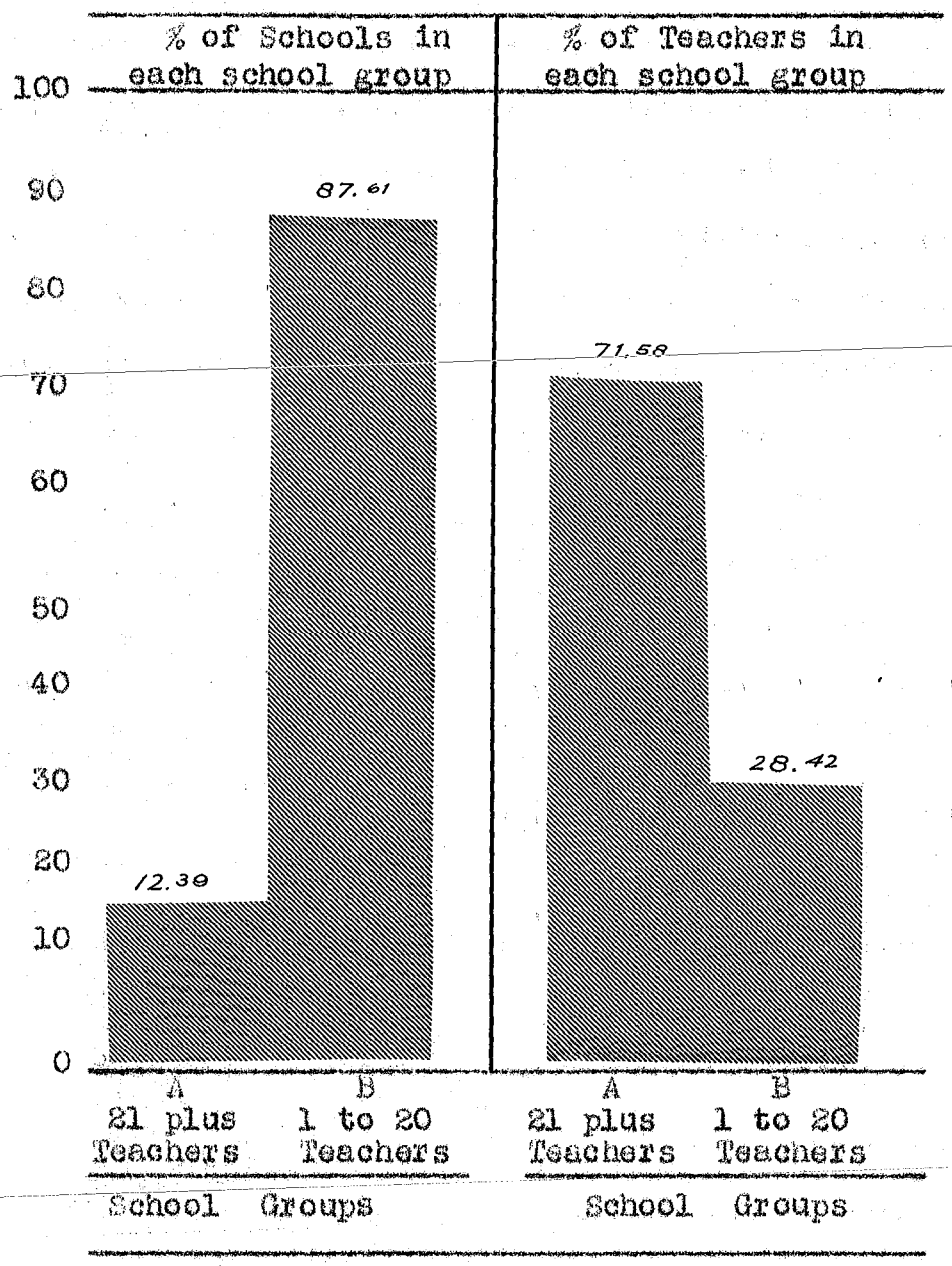


FIGURE 1

PERCENTAGE OF SCHOOLS AND TEACHERS
IN EACH CLASSIFIED GROUP

CHAPTER V

THE QUESTIONNAIRE

Purpose of the chapter. The purpose of this chapter is to describe the questionnaire which was used to gather information for the study, the methods used in distributing the questionnaire, and the means by which the accumulated information was tabulated.

Planning for the questionnaire. The information being sought from the selected teachers of San Joaquin and Stanislaus Counties concerned their academic preparation, college degrees, experience, tenure, and participation in professional organizations.

Faculty members of the College of the Pacific's School of Education, administrators and teachers in the field were consulted prior to construction of a questionnaire. A survey of similar studies and relevant literature was made. The opinions rendered and investigations showed that a brief, direct, and impersonal questionnaire would best serve the purpose.

Construction of the questionnaire. A preliminary questionnaire was constructed and readied for sampling. Samplings were obtained by forwarding the questionnaire

by mail to a number of teacher acquaintances. Those receiving the samplings were asked to complete them and make any comments they wished. The samplings were completed with written instructions only. Upon the return of the samples, revisions were made in an effort to produce further clarity and comprehension.

Approval of the questionnaire and of an attached letter of explanation was secured from the thesis committee. Upon the approval of the letter and the questionnaire, they were ready for distribution.

A copy of the questionnaire, as revised and approved, and the attached letter of explanation bearing the author's name and the approval of J. Marc Jantzen, Dean, School of Education, College of the Pacific, were mailed to each of the teachers selected for the study.[1]

Distribution of the questionnaire. From the San Joaquin County School Directory, 1953-1954,[2] from the Stanislaus County School Directory, 1953-1954,[3] and from the Directory of the Stockton Unified School District,

---

[1]Infra, Appendix B.

[2]San Joaquin County School Directory (Stockton, California: Division of Education, 1953-1954).

[3]Stanislaus County School Directory (Modesto, California: Division of Education, 1953-1954).

1953-1954,[4] the names and addresses of the one thousand selected elementary school teachers were obtained. The questionnaire and the letter were printed, addressed, and coded as to the size of the school, on double, detachable, self-addressed, and stamped United States postal cards. The questionnaires were then mailed to the selected teachers.

Tabulation of the data. A master sheet was established by coding each school according to its size. Master sheets for each group of schools were designed showing number of units and diploma or degree, total years' experience, tenure in district, and membership in professional organizations.[5]

Upon the master sheets was recorded the information received from the schools, and from the teachers as a group. No attempt was made to break down the information as to any individual school nor as to any particular teacher. The master sheets were used to record all the information vital to the study, and the information was

---

[4] Directory, Stockton Unified School District (Stockton, California: 1953-1954).

[5] Infra, Appendix C.

thereupon recorded as the questionnaires were received.

Each school district was given a letter designation, A or B, depending upon its size. After the initial letter, either an "S," designating San Joaquin County, or an "O," designating Stanislaus County, was used. The coded letters used told only the size of the school and the county in which it was located. The "S" and "O" designations were used in the event that a further study or a future study on the individual counties might be desired.

It was intended to base this study on five hundred returns. Five hundred and fourteen questionnaires were received. June 30, 1954 was established as the closing date for all questionnaire returns.

Tabulation of the results. As of the closing date of June 30, 1954, the returns of the questionnaire were as follows: 51.4 per cent, or a total of 514 teachers in the selected schools, responded to the questionnaire of the total one thousand queried.

CHAPTER VI

THE PROFESSIONAL STATUS OF THE TEACHERS REPORTING IN SAN JOAQUIN AND STANISLAUS COUNTIES

Purpose of the chapter. The purpose of this chapter is to present the findings tabulated from the returns of the questionnaire. The data are presented by the use of tables and graphs. Tables and graphs were constructed to present the professional status of the teachers with regard to college semester units, academic degrees, total years of experience, tenure in present position, and membership in professional organizations. This study is based upon these criteria.

Presenting the findings. The tabulation of the findings of the questionnaire is presented in the following chapter tables. Discussion of the table is made with each presentation. The tables of this chapter are computed on the basis that the total per cent of reply constitutes an entire answer.

Table VI shows that of a total of 1,267 teachers in Group A, 497, or 39.2 per cent, were contacted. Teachers responding were 267, or 53.7 per cent. Group B, with a total of 503 teachers, was contacted 100 per cent. Of this group, 247, or 49.6 per cent, responded. Thus, one

TABLE VI

NUMBER AND PERCENTAGE OF TEACHERS CONTACTED AND RESPONDING IN EACH SCHOOL GROUP

Group	Group Size	Total No. of Teachers	No. of Teachers Contacted	Per cent Teachers Contacted	No. of Teachers Responding	Per cent of Teachers Responding
A	Large 21 plus teachers	1,267	497	39.2	267	53.7
B	Small 1-20 teachers	503	503	100.0	247	49.6
Totals		1,770	1,000	56.4	514	51.4

thousand teachers, or 56.4 per cent of the total number, 1,770 were contacted. In both groups combined, 514, or 51.4 per cent, responded.

Preparation for teaching. Table VII shows the number of college semester units completed by the teachers responding. Of a total of 514 teachers, 2, or .4 per cent, had completed over 210 units. The highest number by far, 269, or 52.3 per cent, were in the 120-149 unit range. Figure 2, page 45, presents graphically additional conclusions drawn from these facts. On this graph, 16.1 per cent of Group A teachers and 36.8 per cent of Group B teachers have completed a maximum of 119 units. In the 120-179 unit range, there were 76.4 per cent of Group A teachers and 59.9 per cent of Group B teachers. Completing over 180 units were 7,4 per cent of Group A teachers and 3.3 per cent of Group B,

Academic degrees. The academic degrees of the responding teachers is shown on Table VIII, page 46. Doctor's degrees were held by .2 per cent, master's by 3.1 per cent, bachelor's by 69.8 per cent, and 26.9 per cent had less than a bachelor's degree. Figure 3, page 47, depicts the percentage of teachers in each group possessing the various degrees. Masters or doctorates are held by 4.9 per cent of Group A and 1.6 per cent of Group B

TABLE VII

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND COLLEGE SEMESTER UNITS COMPLETED

School Group	0 to 29	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to 209	210 plus	To-tal	Per cent
A 21 plus Teachers	0	6	13	24	153	51	13	7	267	51.9
B 1 to 20 Teachers	2	10	29	50	116	32	7	1	247	48.1
Totals	2	16	42	74	269	83	20	8	514	100.
Per cent	.4	3.1	8.2	14.4	52.3	16.1	3.9	1.6	100.	

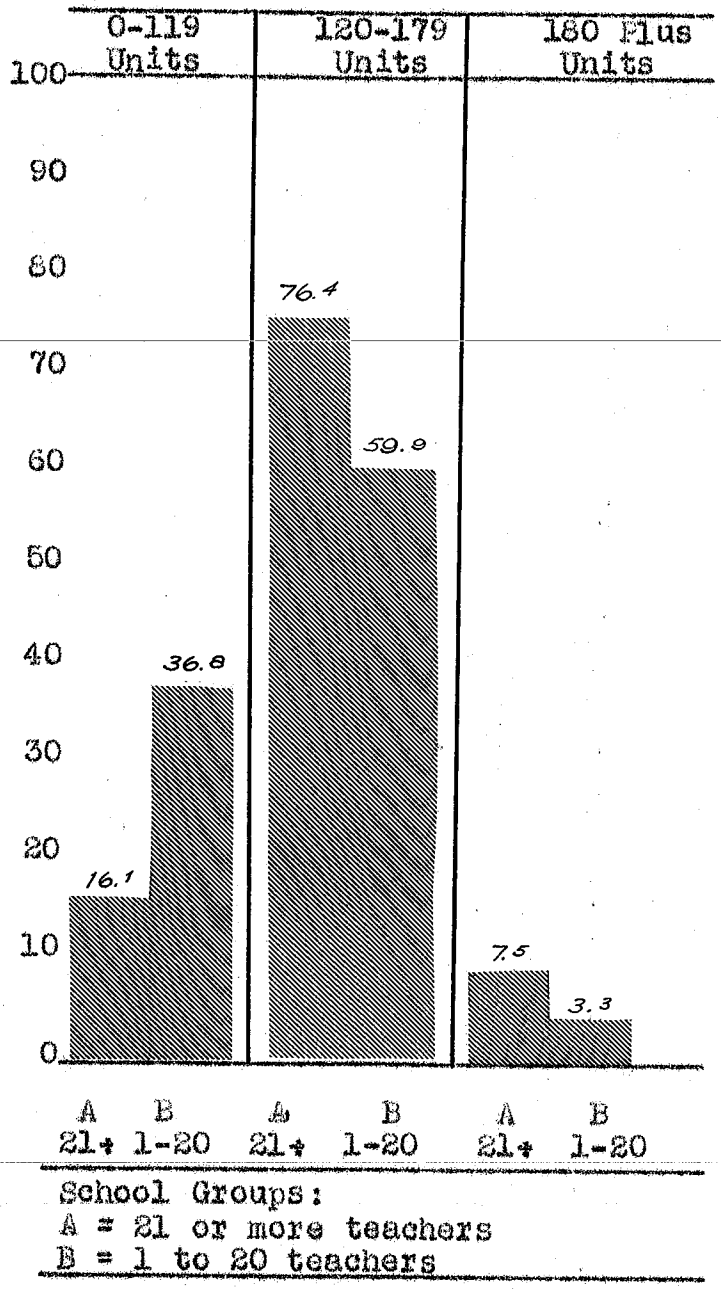


FIGURE 2

PERCENTAGE OF TEACHERS IN EACH SCHOOL GROUP AND THEIR COLLEGE SEMESTER UNITS COMPLETED

TABLE VIII

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR ACADEMIC DEGREES

School Groups	Doctor's Degree	Master's Degree	Bachelor's Degree	Less Than Bachelor's Degree	Total	Per cent
A 21 plus Teachers	1	12	210	44	267	51.9
B 1 to 20 Teachers	0	4	149	94	247	48.1
Totals	1	16	359	138	514	100.
Per cent	.2	3.1	69.8	26.9	100.	

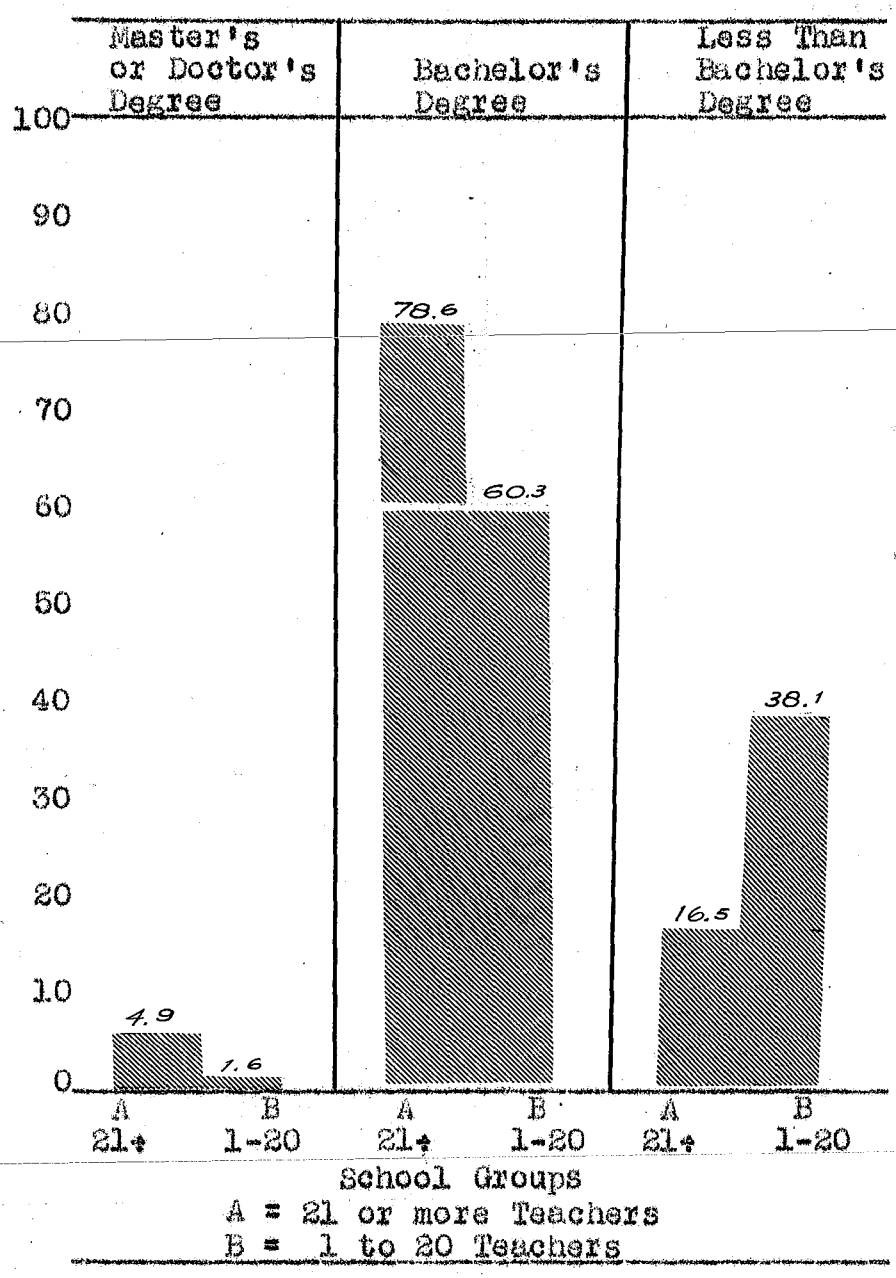


FIGURE 3

PERCENTAGE OF TEACHERS IN EACH SCHOOL GROUP AND THEIR ACADEMIC DEGREES

teachers, bachelors by 78.6 and 60.3 per cent, respectively, and 16.5 per cent of Group A and 38.1 per cent of Group B have less than a bachelor's degree.

Total teaching experience. The presentation of the findings for the number of teachers responding to the questionnaire and their total years of teaching experience is set up in Table IX and presented picture form in Figure 4. For the facilitation of this study the years of teaching experience were arbitrarily arranged in five-year periods. The number of teachers responding in the various experience classifications are tabulated and totaled vertically with the corresponding per cent and figure shown. Table IX reveals that the totals and per cent of teachers responding in each experience classification range from a low of 1 teacher, or .2 of 1 per cent in the 36-40 year range, to a high of 235 teachers, or 45.7 per cent, in the 1-5 classification of years' teaching experience.

Tenure in present position. Table X, page 51, presents the findings for the total number of teachers responding to the questionnaire and their years of tenure in their present position. The total years of tenure in present position are arbitrarily arranged in five-year classifications. The number of teachers responding in the various tenure classifications are tabulated and totaled

TABLE IX

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR TOTAL YEARS TEACHING EXPERIENCE

School Groups	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	Total	Per cent
A 21 plus Teachers	116	60	36	27	7	14	6	1	267	51.9
B 1 to 20 Teachers	119	58	38	14	7	7	4	0	247	48.1
Totals	235	118	74	41	14	21	10	1	514	100.
Per cent	45.7	23.	14.4	8.	2.7	4.1	1.9	.2	100.	

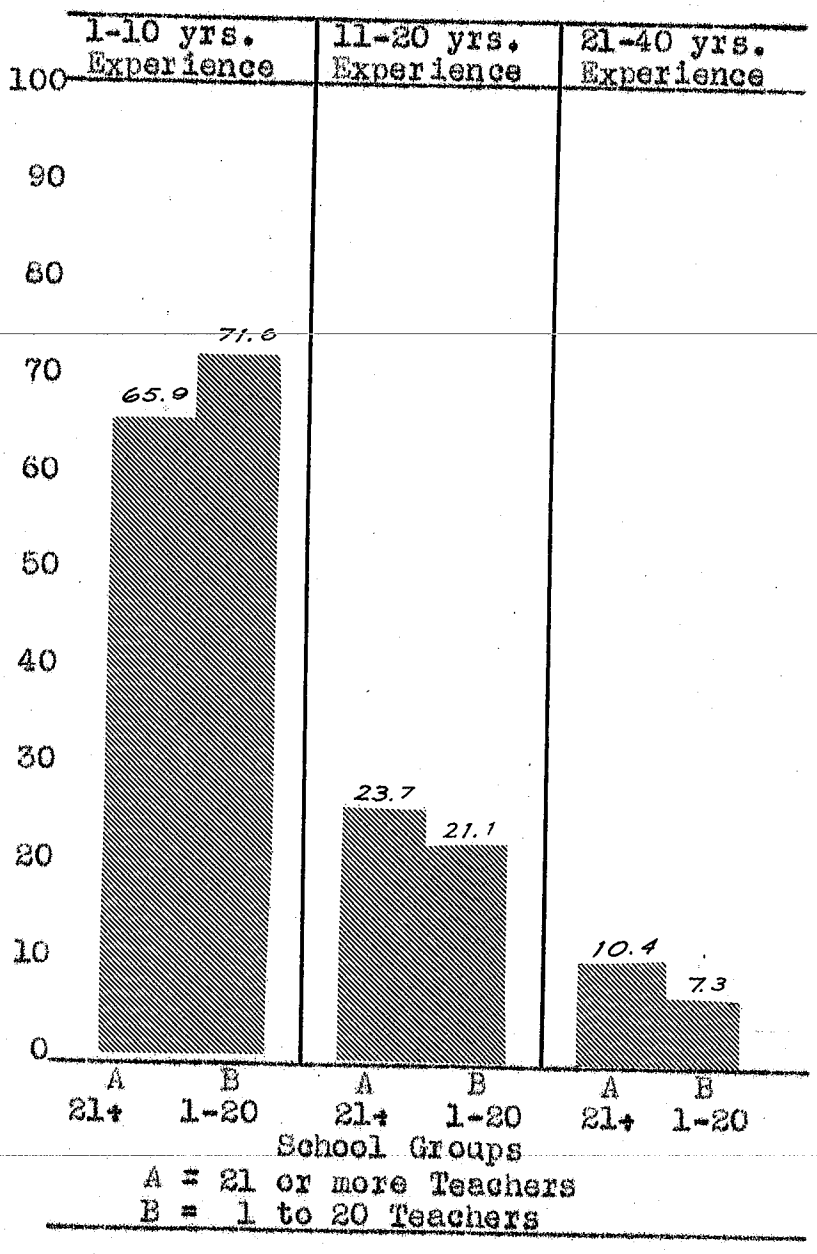


FIGURE 4

PERCENTAGE OF TEACHERS RESPONDING TO QUESTIONNAIRE IN EACH SCHOOL GROUP AND THEIR TOTAL YEARS OF TEACHING EXPERIENCE

TABLE X

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR YEARS OF TENURE IN PRESENT POSITION

School Group	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	Total	Per cent
A 21 plus Teachers	180	59	15	6	1	5	1	267	51.9
B 1 to 20 Teachers	196	42	7	2	0	0	0	247	48.1
Totals	376	101	22	8	1	5	1	514	100.
Per cent	73.1	19.6	4.3	1.6	.2	1.	.2	100	

vertically with the corresponding per cents given. The number of teachers responding in each teacher-size classification is inserted on the table horizontally with the totals and per cents of the total number of teachers responding given. The findings show that the total and per cent of teachers replying in each tenure classification, range from a low of 1 teacher, or .2 per cent in the 21-25 and 31-35 year classifications, to a high of 376 teachers, or 73.1 per cent, in the 1-5 classification. Figure 5, page 53, depicts graphically the information shown in Table X, page 51.

Professional organizations and participation. To ascertain the professional attitude and status of the teachers questioned, they were asked to list the professional organizations in which they held membership and the number of years they had retained membership. These findings are presented in Tables XI, XII, XIII, and XIV and graphically pictured in Figure 6, page 65.

Table XI, page 54, shows the number and per cent of those teachers reporting who belong to local organizations, and their total years of membership. In school Group A, average years of membership was 5.6 and Group B, average years of membership was 4.5.

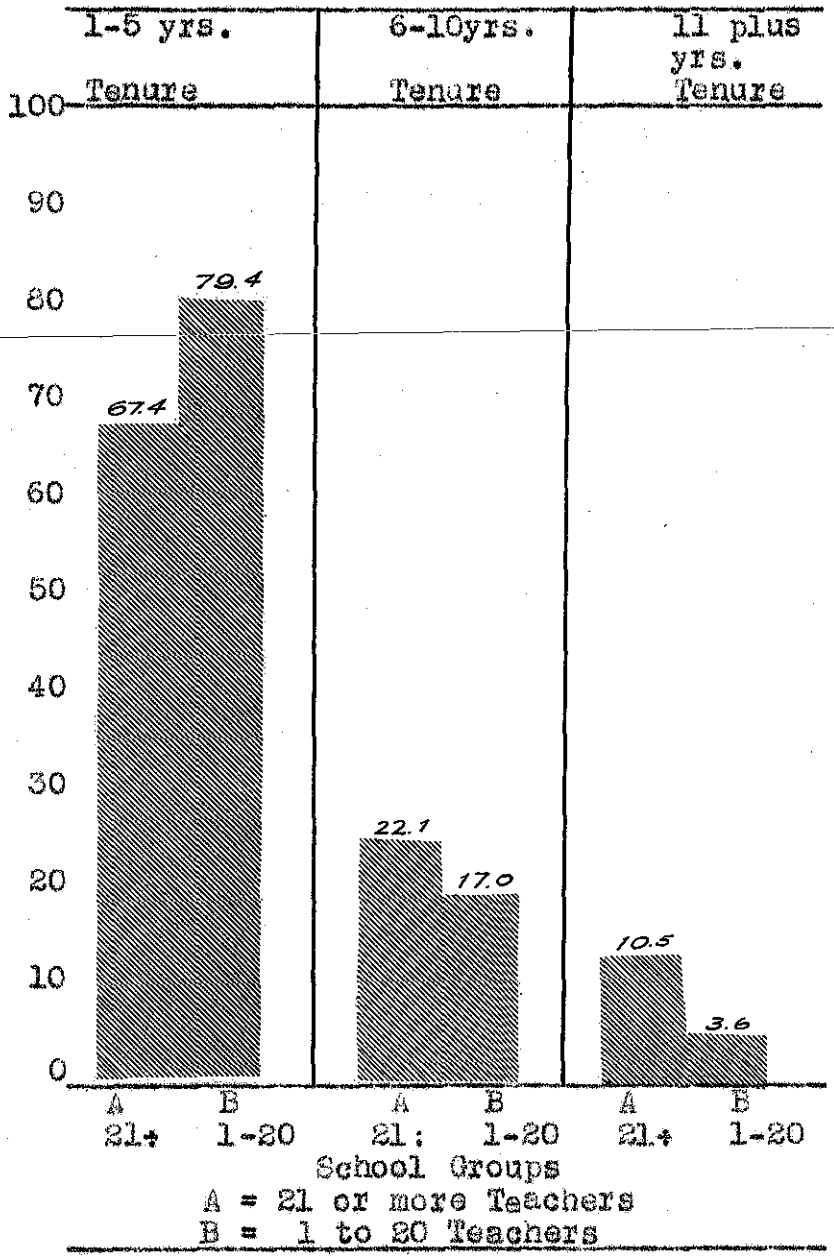


FIGURE 5

PERCENTAGE OF TEACHERS RESPONDING IN EACH SCHOOL GROUP AND THEIR YEARS OF TENURE IN PRESENT POSITION

TABLE XI

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR MEMBERSHIP IN LOCAL* PROFESSIONAL ORGANIZATIONS

School Group	Number of Teachers Reporting	Per cent of Teachers Reporting	No. in Local Orgs.	Per cent in Local Organizations	Total Years of Membership	Average Years of Membership
A 21 plus Teachers	267	51.9	188	70.4	1,060	5.6
B 1 to 20 Teachers	247	48.1	136	55.1	608	4.5
Totals	514	100.0	324	63.0	1,668	5.1

* Local organizations, for purposes of this study, are those which are exclusive to a particular school district; i.e. Stockton Teachers' Association, Modesto Teachers' Association, etc.

Table XII reveals that Group A teachers had an average of 7.2 years' membership in the California Teachers' Association, while Group B teachers had an average membership of 5.4 years.

The findings in Table XIII, page 57, pertain to membership in the National Education Association and reveal that reporting teachers of Group A had 6.6 average years of membership and members of Group B had an average of 5.2 years.

Table XIV, page 58, shows membership in other professional organizations. Of the teachers reporting in Group A, 132 had an average membership of 5.6 years, while those in Group B had an average membership of 4.8 years.

TABLE XII

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR MEMBERSHIP IN THE CALIFORNIA TEACHERS' ASSOCIATION

School Group	No. of Teachers Reporting	Per cent of Teachers Reporting	No. in C.T.A.	Per cent in C.T.A.	Total Years of Member-ship	Average Years of Member-ship
A 21 plus Teachers	267	51.9	245	91.8	1,776	7.2
B 1 to 20 Teachers	247	48.1	221	89.5	1,189	5.4
Totals	514	100.	466	90.7	2,965	6.3

TABLE XIII

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR MEMBERSHIP IN THE NATIONAL EDUCATION ASSOCIATION

School Group	No. of Teachers Reporting	Per cent of Teachers Reporting	No. in N.E.A.	Per cent in N.E.A.	Total Years of Membership	Average Years of Membership
A 21 plus Teachers	267	51.9	167	62.1	1,113	6.6
B 1 to 20 Teachers	247	48.1	124	50.2	639	5.2
Totals	514	100.	291	56.6	1,752	5.9

TABLE XIV

NUMBER OF TEACHERS RESPONDING TO QUESTIONNAIRE AND THEIR MEMBERSHIP IN OTHER* PROFESSIONAL ORGANIZATIONS

School Group	No. of Teachers Reporting	Per cent of Teachers Report-ing	No. in other Organ-izations	Per cent in other Organ-iza-tions	Total Years of Member-ship	Average Years of Member-ship
A 21 plus Teachers	267	51.9	132	49.4	743	5.6
B 1 to 20 Teachers	247	48.1	96	34.8	464	4.8
Totals	514	100.	228	44.4	1,207	5.2

*Other professional organizations, for the purpose of this study, include special field organizations (Music, P.E., etc.), the Association of Childhood Education, and others, including Phi Delta Kappa, Delta Kappa Gamma, etc.

CHAPTER VII

ANALYSIS OF THE FINDINGS

Purpose of the chapter. It is the purpose of this chapter to present an analysis of the findings of this study. Through the use of statistical calculations, conclusions were drawn as to whether there is a relationship between the size of a school district and the academic preparation, experience, and professional participation of teachers in the selected elementary school districts.

Methods for analyzing the findings. To show the relationship in the three areas of the teachers to the size of the district, two types of correlations were used. To relate the college semester units completed, total years of teaching experience, years of tenure in present position, and the professional status of the teacher to the size of the district, the bi-serial correlation was used as taken from Edwards' Statistical Analysis for Students in Psychology and Education.[1] This method shows the correlation by the bi-serial (r).

---

[1] Allen E. Edwards, Statistical Analysis for Students in Psychology and Education (New York: Rinehart & Company, 1946), pp. 113-16.

The second type of computation used is found in Garrett's book, Statistics in Psychology and Education,[2] and shows the calculation of the tetrachoric (r). The tetrachoric (r) was used to relate the degrees held to the size of the district.

The bi-serial calculations for college semester units, total years of experience, tenure in present position, and professional participation, are shown in Appendices D, E, F, G, H, I, and J, pages 86 through 98.

The calculation of the tetrachoric (r) for degrees is shown in Appendix K, page 100.

Analysis and interpretation of the findings. The purpose of this study was to determine if the teacher size of school districts affects the employment of the instructional staff with regard to their academic preparation, experience, and professional interest; or, to restate the problem in question form as set down in Chapter I:

What is the relationship of the professional status of the teacher to the size of the district in the elementary schools of San Joaquin and Stanislaus Counties?

---

[2]Henry E. Garrett, Statistics in Psychology and Education (New York: Longmans, Green and Company, 1947), pp. 362-67.

An answer to this problem will be set down herewith through a summarization of the correlation coefficients:

1. College semester units completed: The coefficient of correlation between teacher size and college semester units completed was found to be +.051, which is not significant at either the 5 per cent or 1 per cent level of significance.

2. Degrees held: The tetrachoric (r) relationship between degrees held and teacher size was found to be +.77. This is large enough to indicate some relationship between the size of school districts and the degrees held by the teachers, as the 5 per cent level of significance was .088 and the 1 per cent level of significance was .115.

3. Total years teaching experience: The coefficient of the correlation between teacher size and total years of teaching experience was +.095. This was significant at the 5 per cent level, but not at the 1 per cent level.

4. Tenure in present position: The correlation of the coefficient between teacher size and tenure in present position was +.203, which indicates some relationship between the two as this figure proved significant at both the 5 per cent and the 1 per cent levels.

5. Local professional organizations: The biserial (r) between teacher size and membership in local

professional organizations was found to be +.143, an indication of some relationship, as it proved significant at both the 5 per cent and the 1 per cent level of significance.

6. California Teachers' Association: The relationship between teacher size and membership in the California Teachers' Association as shown through the utilization of the bi-serial (r) proved to +.138, showing a small but positive relationship, and proving significant at the 5 per cent and 1 per cent levels.

7. National Education Association: The correlation coefficient of teacher size to membership in the National Education Association was found to be +.164, a small, positive relationship. Significance at the 5 per cent level is .115 and at the 1 per cent level, .151.

8. Other professional organizations: The correlation coefficient of teacher size to membership in other professional organizations as shown through the use of the bi-serial (r) was +.103. This figure is not significant of any relationship between the two.

CHAPTER VIII

CONCLUSIONS AND RECOMMENDATIONS

Purpose of the chapter. The purpose of this chapter is to present a brief review of the most significant information found by the study, to draw conclusions from this information, and to make recommendations on the basis of this information.

Conclusions. Assuming that the person who is the better teacher will have a greater number of college semester units, a bachelor's degree or more, a number of years of experience, at least five years of tenure in his present position, and participation, through membership, in a number of professional organizations, the results of the study must then be viewed in this light to determine whether the greater number of teachers falling into these categories is found in the large schools (Group A) or the smaller schools (Group B). To consider each category separately:

1. College semester units above 120 completed.
   Group A 83.9 per cent
   Group B 63.2 per cent

2. Bachelor's degree or more held.
   Group A 83.5 per cent
   Group B 61.9 per cent

3. Five years or more teaching experience.
   Group A 56.6 per cent
   Group B 51.8 per cent

4. Tenure in district amounting to five years or more.
   Group A 32.6 per cent
   Group B 20.6 per cent

5. Memberships held in local professional organizations.
   Group A 70.4 per cent
   Group B 55.1 per cent

6. Memberships held in the California Teachers' Association.
   Group A 91.8 per cent
   Group B 89.5 per cent

7. Memberships held in the National Education Association.
   Group A 62.5 per cent
   Group B 50.2 per cent

8. Memberships held in other professional organizations.
   Group A 49.4 per cent
   Group B 38.9 per cent

According to the comparison of percentages which has been made, teachers in the Group A districts rank higher in each designated category than those in Group B. In some instances there is a much greater difference than in others.

The greatest variations are found in the percentage of teachers holding a bachelor's degree or better, where Group A teachers outranked Group B teachers by 21.6 per cent, and in college semester units completed above 120 where the difference was 20.7 per cent for the Group A teachers.

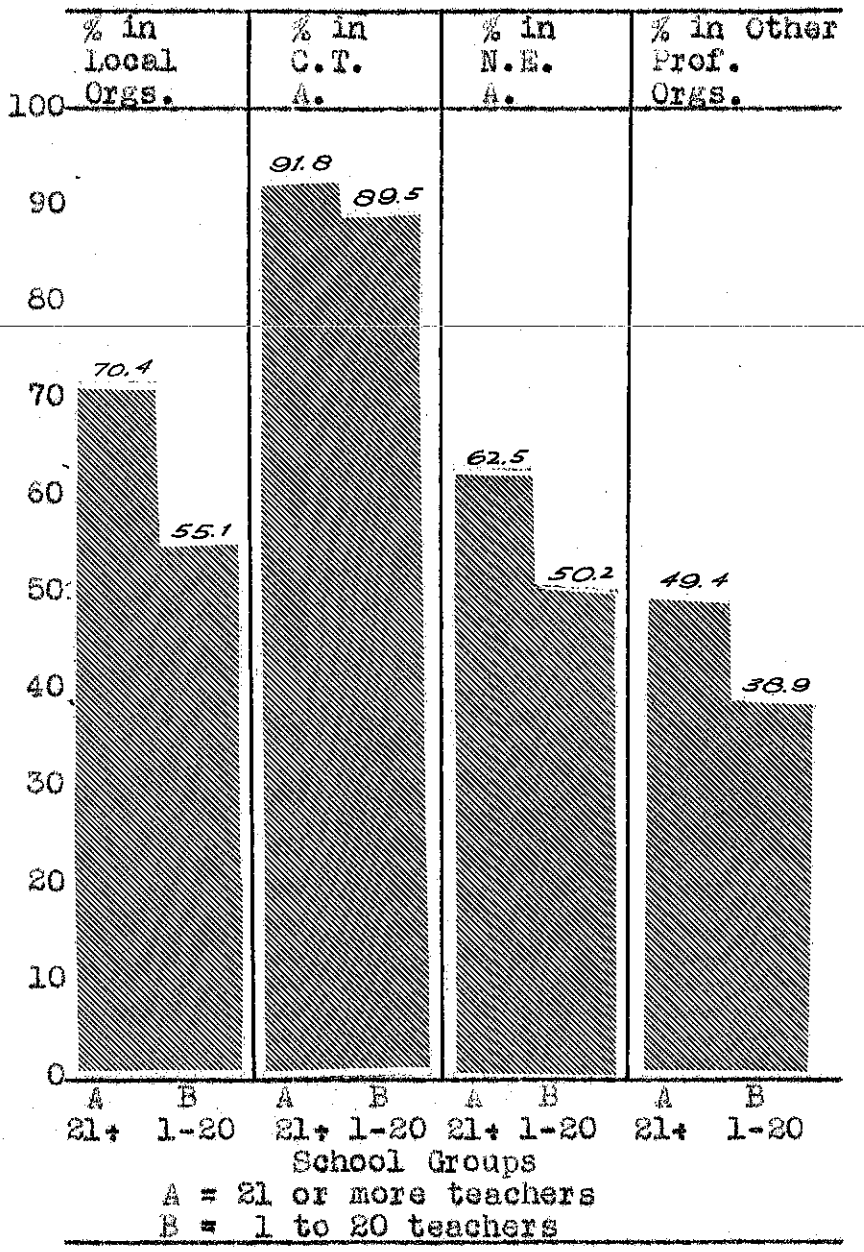
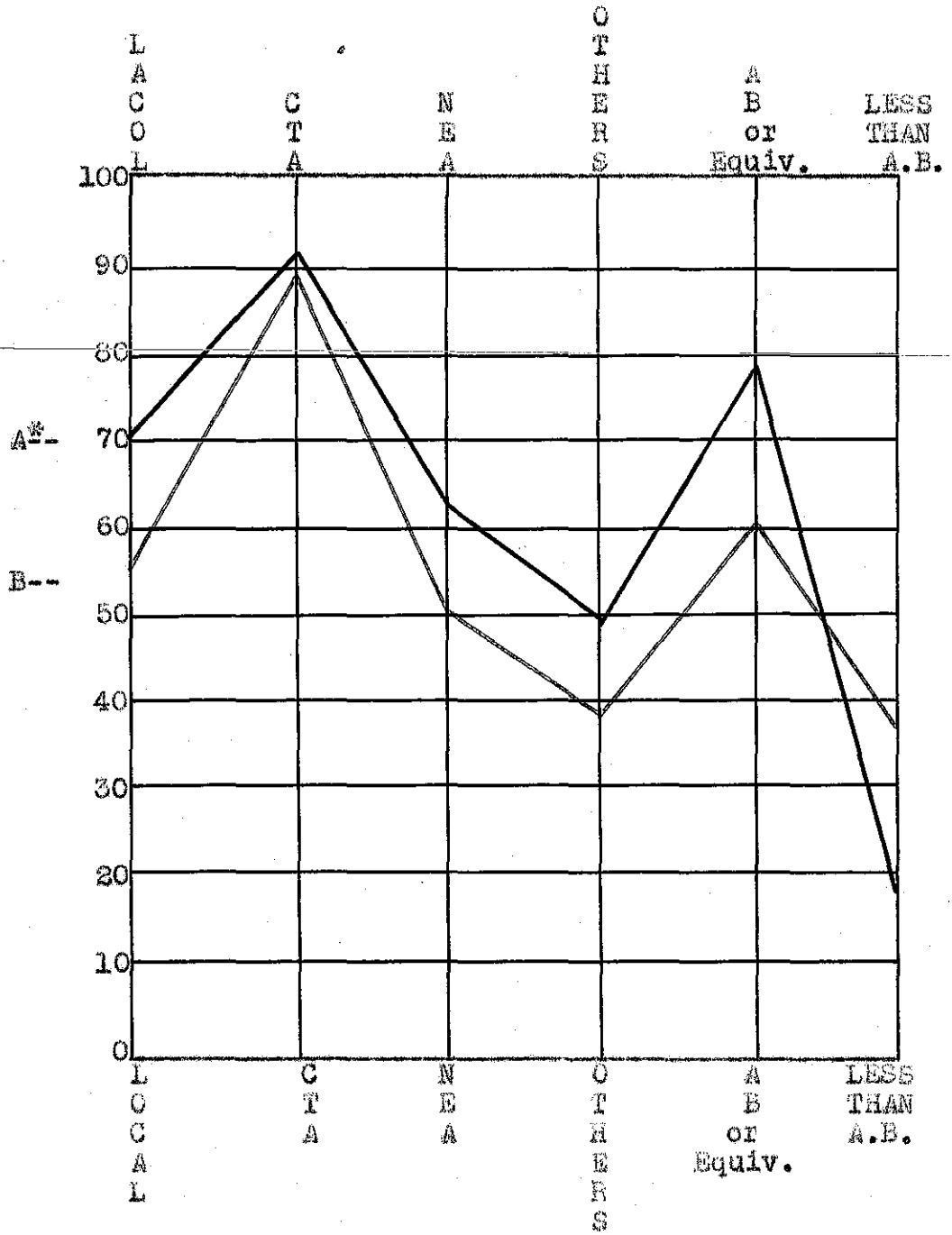


FIGURE 6

PERCENTAGE OF TEACHERS IN EACH SCHOOL GROUP HOLDING MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS



* A = Large schools, 21 or more teachers
B = Small schools, 1 to 20 teachers

FIGURE 7

COMPARISON OF GROUP A AND GROUP B
IN AREAS INVESTIGATED

Percentage-wise the two groups came closest in their total membership in the C.T.A. and in their years of experience exceeding five. Group A led by 2.3 per cent in C.T.A. memberships, and by 4.8 per cent in experience exceeding five years.

Recommendations. The following recommendations are based on the foregoing findings and conclusions. It is recommended:

1. That the State Department of Education require all teachers on other than regular credentials to continue their academic training, while actively engaged in teaching, until they qualify for a college degree and/or a bonafide teaching credential.

2. That the State Department of Education do everything in its power, be it through unfication, consultation, or other assistance, to aid the smaller school districts to obtain the best qualified teachers available.

3. That a study be made to investigate the possibility of a countywide single salary schedule to offer an advantage obtainable to teachers in the larger districts.

4. That a study be made to investigate the possibility of extending tenure status to teachers in smaller districts.

5. That all professional organizations should attempt a more concentrated drive to interest teachers in their group in an effort to promote greater professional understanding.

6. That a further study be made to determine methods by which better qualified teachers could be encouraged to seek employment in the smaller districts.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. BOOKS

Batterworth, Julian E., and Howard A. Dawson. The Modern Rural School. New York: McGraw-Hill Book Company, Inc., 1952. 330 pp.

Carley, Verne A. Qualities Essential for Successful Teaching in the Modern School. New York: McGraw-Hill Book Company, 1937. 369 pp.

Chamberlain, Leo M., and Leslie W. Kindred. The Teacher and School Organization. New York: Prentice-Hall, Inc., 1950. 665 pp.

Cooper, Shirley, and Charles O. Fitzwater. County School Administration. New York: Harper and Brothers, Publishers, 1954. 569 pp.

Cubberley, Elwood P. Public School Administration. Boston: Houghton Mifflin Company, 1929.

Dougherty, James H., Frank H. Gorman, and Claude A. Phillips. Elementary School Organization and Management. New York: The Macmillan Company, 1950. 364 pp.

Edwards, Allen L. Statistical Analysis for Students in Psychology and Education. New York: Rinehart and Company, Inc., 1946. 360 pp.

Edwards, Newton, and Herman G. Richey. The School in the American Social Order. Boston: Houghton Mifflin Company, 1947. 743 pp.

Garrett, Henry E. Statistics in Psychology and Education. New York: Longmans, Green and Company, 1947. 465 pp.

Good, Carter V. (ed.). Dictionary of Education. New York: McGraw-Hill Book Company, Inc., 1945. 495 pp.

Jacobson, Paul B., William C. Reavis, and James D. Logsdon. Duties of School Principals. New York: Prentice-Hall, Inc., 1951. 791 pp.

Knight, Edgar W. Education in the United States. New York: Ginn and Company, 1941. 669 pp.

Martz, Velorus, and Henry L. Smith. An Introduction to Education. New York: Charles Scribner's Sons, 1941. 495 pp.

Mode, Elmer G. The Elements of Statistics. New York: Prentice-Hall, Inc., 1946. 375 pp.

Monroe, Walter S. (ed.). Encyclopedia of Educational Research. New York: The Macmillan Company, 1950. 1520 pp.

Reeder, Ward G. The Fundamentals of Public School Administration. New York: The Macmillan Company, 1941. 788 pp.

B. PERIODICALS

Clark, Selvy G. "Eighty Institutions Produce Doctors," Phi Delta Kappan, 9:387-89, June, 1954.

Edgemon, Albert W. "Part of the Professional Family," National Education Association Journal, 5:306-307, May, 1954.

Hancock, Willard. "More Facts About Our County," Superintendent's Newsletter, 5:2, March, 1954.

Hanna, Paul R. "Master Teachers and Modern Education," California Journal of Elementary Education, 4:97-103, November, 1935.

Johnson, Albert M. "The Tide Has Turned," National Education Association Journal, 5:302-305, May, 1954.

Maul, Ray C. "The Teacher Shortage is Reaching the High School," National Education Association Journal, 5:301, May, 1954.

Simpson, Roy E. "Growth Through Unification," California Teacher's Association Journal, 4:22-4, April, 1954.

Yeager, William A. "We Are Getting Better Ones To Teach," Phi Delta Kappan, 9:385-86, June, 1954.

C. PUBLICATIONS OF LEARNED SOCIETIES, AND THE GOVERNMENT

American Association of School Administrators, "Public Relations for America's Schools," Twenty-Eighth Yearbook. Washington, D.C.: The Association and Department of the National Education Association, 1950. Pp. 496.

California Elementary School Administrators' Association, "The Future Elementary School Administrator," Twenty-Fifty Yearbook. Los Angeles, California, 1953. Pp. 268.

Department of Rural Education, "The County Superintendent of Schools in the United States," 1950 Yearbook. Washington, D.C.: A Department of the National Education Association, 1950.

Education Code of California. Sacramento: California Department of Education, 1953. 941 pp.

National School Public Relations Association, It Starts in The Classroom. Washington, D.C.: A Department of the National Education Association, 1951. Pp. 64.

Nuttal, Drayton B., Chief, Bureau of School District Organization. Functions of Governmental Units in Reference to Education. Sacramento: California State Department of Education, February, 1953. 21 pp.

San Joaquin County School Directory. Stockton, California: Division of Education, 1953-1954. 66 pp.

Stanislaus County School Directory. Modesto, California: Division of Education, 1953-1954. 49 pp.

Stockton Unified School District Directory. Stockton, California, 1953-1954. 114 pp.

Stone, James C., Specialist in Teacher Education. Who Will Teach our Children and Youth--1954-1960? Sacramento: California State Department of Education, April, 1954. 15 pp.

"Teacher Supply and Demand," Report to Teacher Education Institutions. Sacramento: California State Department of Education, Credentials Office, April 25, 1952. 5 pp.

D. UNPUBLISHED MATERIALS

Bryan, James Mathews. "The 1928 Salary Schedule of the City of Alameda and Its Effect Upon the Improvement of Teachers in Service." Unpublished Master's thesis, College of the Pacific, Stockton, California, 1936. 84 pp.

Cabalzar, Martin Anthony. "Factors Relating to Unification in the Galt Area." Unpublished Master's thesis, College of the Pacific, Stockton, California, 1950. 112 pp.

Custer, O. Mearl. "School District Reorganization in Yolo County." Unpublished Master's thesis, College of the Pacific, Stockton, California, 1948. 76 pp.

Hartnett, John William, Jr., "A Study of the Relationship Between the Financial Status and the Certificated Personnel of Selected Elementary School Districts of San Joaquin County." Unpublished Master's thesis, College of the Pacific, Stockton, California, 1952. 84 pp.

Taylor, Henry J. "Your Unlimited Opportunities in the Teaching Profession." One of a Series of Radio Talks, General Motors, Detroit, Michigan, May 31, 1954. 22 pp.

E. NEWSPAPERS

"Schools Face More Crowding in Fall," Stockton Daily Record, August 4, 1954, p. 7, col. 1.

APPENDIX A

AN ALPHABETICAL LIST OF THE ELEMENTARY SCHOOLS OF SAN JOAQUIN COUNTY, 1953-1954, EMPLOYING FROM ONE TO TWENTY TEACHERS AND CLASSIFIED AS GROUP B

School District	Number of Teachers	School District	Number of Teachers
Alpine-Victor	6	Jefferson	6
Atlanta	4	Lafayette	3
Banta	9	Lammersville	3
Bellota	2	Lathrop	11
Bruella Union	4	Linden	6
Burwood	4	Live Oak	8
Calaveras	1	Lockeford	6
Calla	3	Lone Tree	3
Castle	3	Madison	1
Chartville	5	Moore	1
Clements Union	3	Mossdale	2
Collegeville	3	Naglee	2
David-Bixler	2	New Hope	10
Davis	9	New Jerusalem	3
Delphi	3	Oakview Union	5
Dent Union	17	Ray Union	2
Elkhorn	3	Rindge	2
Everett	2	Ripon	14
Fairchild	2	River	4
Farmington	4	Rustic	2
Four Tree	2	San Joaquin	2
French Camp	13	Summer	3
Garden	1	Terminous	3
Glenwood	4	Tokay Colony	2
Grant	3	Turner	2
Greenwood	3	Van Allen	4
Harmony Grove	3	Venice	3
Henderson	4	Veritas	3
Holt Union	4	Waverly	10
Houston	10	Woods	15
Independent	1		

AN ALPHABETICAL LIST OF THE ELEMENTARY SCHOOLS OF STANISLAUS COUNTY, 1953-1954, EMPLOYING FROM ONE TO TWENTY TEACHERS AND CLASSIFIED AS GROUP B

School District	Number of Teachers	School District	Number of Teachers
Bonita	9	Newman	17
Central	3	Paradise	4
Denair Unified	11	Rising Sun Joint	3
Empire Union	20	Roberts Ferry	2
Gratton	3	Rosedale	1
Grayson	9	Roselawn Joint	2
Hart-Ransom Union	11	Salida Union	17
Hickman	5	Shiloh	4
Keyes Union	20	Stanislaus Union	10
Knights Ferry	2	Sylvan Union	18
La Grange	1	Tegner	3
Lowell	3	Valley Home	4
Milnes	3	Washington	4
Mitchell Union	5	Waterford	15
Monte Vista	2	Westport Union	11
Montain View	4		

AN ALPHABETICAL LIST OF THE ELEMENTARY SCHOOLS OF SAN JOAQUIN COUNTY, 1953-1954, EMPLOYING TWENTY-ONE OR MORE TEACHERS AND CLASSIFIED AS GROUP A

School District	Number of Teachers
Lincoln	34
Lodi	57
Manteca	38
Montezuma	29
Tracy	65
Stockton Unified	443

AN ALPHABETICAL LIST OF THE ELEMENTARY SCHOOLS OF STANISLAUS COUNTY, 1953-1954, EMPLOYING TWENTY-ONE OR MORE TEACHERS AND CLASSIFIED AS GROUP A

School District	Number of Teachers
Ceres	71
Hughson	29
Modesto	326
Oakdale	48
Patterson	22
Riverbank	38
Turlock	67

APPENDIX B

DOUBLE POST CARD CONSISTING OF EXPLANATORY LETTER AND QUESTIONNAIRE MAILED TO TEACHERS INCLUDED IN SURVEY

Dear Teacher:

A graduate study is being conducted at the College of the Pacific to determine the professional status of teachers in the public schools of San Joaquin and Stanislaus Counties.

Please fill in and return the attached card at your earliest convenience. In so doing, consider this applicable to your teaching position as of the 1953-1954 school year.

Sincerely yours,

Jack R. Hyman

Approved:

J. Marc Jantzen
Dean, School of Education

DOUBLE POST CARD (continued)

Please check in the spaces provided the number of college units you have completed, the degrees you now hold and the professional organizations of which you are a member.

**Semester Units Completed

0- 29 _____
30- 59 _____
60- 89 _____
90-119 _____
120-149 _____
150-179 _____
180-209 _____
Above 210 _____

Degrees Held

_____High Sch. Diploma
_____A.A. Degree
_____A.B. Degree
_____B.S. Degree
_____B.M. Degree
_____B. Ed. Degree
_____M.A. Degree
_____M.S. Degree
_____Ed. D.Degree
_____Ph. D.Degree

Others
_____
_____

**30 Units Equal One College Year: An A.B. Equals 120 Units

Please indicate your total number of years teaching experience_____

Please indicate the total number of years in your present district_____

Please indicate number of years in professional organizations which you hold membership. If you have held office in any please check also.

Local _____ P.D.K. _____ D.K.G. _____ N.E.A. _____ A.C.E. _____ C.E.S.A. _____ A.F.of T. _____

C.T.A. _____

Other State Organizations (i.e. Wash., N.Y., etc.)_____
Others:_____
Special Field Orgs._____(i.e.Music, P.E. Etc.)

APPENDIX C

TABULATION OF DATA--MASTER SHEET
GROUP A--21 PLUS TEACHERS

NUMBER OF QUESTIONNAIRES SENT: 497

Units Completed	Totals
0- 29	
30- 59	
60- 89	
90-119	
120-149	
150-179	
180-209	
Above 210	

Degrees Held	Totals
High School Diploma	
A.A. Degree	
A.B. Degree	
B.S. Degree	
B.M. Degree	
B. Ed. Degree	
M.A. Degree	
M.S. Degree	
M.M. Degree	
Ed. D. Degree	
Ph. D. Degree	
Others	

TABULATION OF DATA--MASTER SHEET
GROUP A

Total Years of Experience Years	Number of Teachers	Total Teachers	Total Years
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			

TABULATION OF DATA--MASTER SHEET
GROUP A

Tenure in Present District Years	Number of Teachers	Total Teachers	Total Years
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

TABULATION OF DATA--MASTER SHEET
GROUP A

	MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
Years	Local Organizations	C.T.A.	N.E.A.	Others**
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

**Other organizations include P.D.K., D.K.G., C.E.R.A., A.F. of T., etc.

APPENDIX D

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE COLLEGE SEMESTER UNITS COMPLETED BY THE TEACHERS EMPLOYED

No. of Units	Mid Value	School Size 20-	20-	f	x	m	12.9	fx	fx^2
0- 29	14.5	0	2	2	4	o	31.80	8	32
30- 69	44.5	6	10	16	3	m_p	135	48	144
60- 89	74.5	13	29	42	2	m_q	122	84	168
90-119	104.5	24	50	74	1	p	.514	74	74
120-149	134.5	153	116	269	0	q	.486	0	0
150-179	164.5	51	32	83	1	z	.399	-83	83
180-209	194.5	13	7	20				-40	80
		260	246	506					

		fx
o	29	29
267	445	712
968.5	2160.5	3129
2508	5225	7733
20598.5	15602	36200.5
8389.5	5264	13653.5
2526.5	1361.5	3890
35252.0	30087.0	65339

$$\sigma = i\sqrt{\frac{\Sigma fx'^2}{N} - e^2}$$

$$\sigma = 30\sqrt{\frac{581}{506} - .0324}$$

$$\sigma = 30\sqrt{1.12}$$

$$\sigma \quad 30 \quad (1.06) \qquad 31.80$$

$$r = \frac{Mp - Mq}{o} \times \frac{Pq}{z}$$

$$r = \frac{135-122}{31.80} \cdot \frac{.25}{2}$$

$$r = \frac{13}{31.8} \times .125$$

$$r = .409 \times .125 \qquad r = .051$$

APPENDIX E

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE TOTAL YEARS TEACHING EXPERIENCE OF THE TEACHERS EMPLOYED

Groups - Stat.	Mid Value	21+	20-	f	x^1	fx^1	fx^2
36-40	38	1	0	1	6	6	36
31-35	33	6	4	10	5	50	250
26-30	28	14	7	21	4	84	336
21-25	23	7	7	14	3	42	126
16-20	18	37	14	41	2	82	164
11-15	13	36	38	74	1	74	74
6-10	8	60	58	118	0	0	0
1- 5	3	116	119	235	-1	-235	+ 235
		267	247	514		+103	+1221

$m = 9.001$

$\sigma = 7.60$

$m_p = 9.628$

$m_q = 8.476$

$p = .521$

$q = .48$

$z = .397$

$$r = \frac{Mp - Mq}{\sigma} \times \frac{p\,q}{z}$$

$$r = \frac{9.628 - 8.476}{7.60} \times \frac{(.52)(.48)}{.397}$$

$$r = \frac{1.152}{7.6} \times \frac{.250}{.397}$$

$$r = .52 \times .628 \qquad r = .095$$

APPENDIX F

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE YEARS OF TENURE IN PRESENT POSITION OF THE TEACHERS EMPLOYED

Group	Mid-value	21+	20-	f	x'	fx'	fx'^{2}
31-35	33	1	0	1	5	5	25
26-30	28	5	0	5	4	20	90
21-25	23	1	0	1	3	3	9
16-20	18	6	2	8	2	16	32
11-15	13	15	7	22	1	22	22
6-10	8	59	42	101	0	0	0
1- 5	3	180	196	376	-1	-376	376
		267	247	514		-310	554

m =

σ = 4.220

m_p = 5.659

m_q = 4.290

p = .52

q = .48

z = .397

r =

$$r = \frac{5.659 - 4.290}{4.220} \times \frac{(.52)(.48)}{.397}$$

$$r = \frac{1.369}{4.220} \qquad .628$$

r = .324 x .628

r = .203

APPENDIX G

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICT AND THE MEMBERSHIP IN LOCAL PROFESSIONAL ORGANIZATIONS OF THE TEACHERS EMPLOYED

group	Mid-value	21+	20-	f'	x'	fx'	fx'2
31-35	33	1	0	1	5	5	25
26-30	28	3	0	3	4	12	48
21-25	23	1	0	1	3	3	9
16-20	18	9	4	13	2	26	52
11-15	13	12	7	19	1	19	19
6-10	8	37	28	65	0	0	0
1- 5	3	125	97	222	-1	-222	222
		188	136	324		-157	375

$\sigma = 4.795$

$m_p = 6.015$

$m_q = 4.985$

$p = .58$

$q = .42$

$z = .366$

$$r = \frac{6.015 - 4.985}{4.795} \times \frac{(.58)(.42)}{.361}$$

$$r = \frac{1.030}{4.795} \times \frac{.244}{.366}$$

$$r = .214 \times .666$$

$$r = .143$$

APPENDIX H

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE MEMBERSHIP IN THE CALIFORNIA TEACHERS' ASSOCIATION OF THE TEACHERS EMPLOYED

group	mid-value	21+	20-	f	x'	fx'	fx'^{2}
31-35	33	2	0	2	5	10	50
26-30	28	5	2	7	4	28	112
21-25	23	3	3	6	3	18	54
16-20	18	14	5	19	2	38	76
11-15	13	18	12	30	1	30	30
6-10	8	61	56	117	0	0	0
1- 5	3	142	143	285	-1	-285	285
		245	221	466		-161	607

$\sigma = 5.435$

$m_p = 6.840$

$m_q = 5.65$

$p = .53$

$q = .47$

$z = .394$

$$r = \frac{6.84 - 5.65}{5.435} \times \frac{(.53)(.47)}{.394}$$

$$r = \frac{1.19}{5.435} \times \frac{.2491}{.394}$$

$$r = .219 \times .632$$

$$r = .138$$

$$\sigma = i\sqrt{\frac{\Sigma fx^2}{n} - e^2}$$

$$e = \frac{fx'}{n}$$

$$e = \frac{-161}{466} = .34$$

$$\sigma = 5\sqrt{\frac{607}{466}} - .12$$

$$\sigma = 5\sqrt{1.303} - .12$$

$$\sigma = 5\sqrt{1.183}$$

$$\sigma = 5\ (1.087) = 5.435$$

APPENDIX I

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE MEMBERSHIP IN THE NATIONAL EDUCATION ASSOCIATION OF THE TEACHERS EMPLOYED

group	mid-value	21-	20-	f	x'	fx'	fx'^{2}
31-35	33	1	0	1	5	5	25
26-30	28	2	0	2	4	8	32
21-25	23	2	1	3	3	9	27
16-20	18	14	3	17	2	34	68
11-15	13	18	11	29	1	29	29
6-10	8	36	30	66	0	0	0
1- 5	3	94	79	173	-1	-173	173
		167	124	291		- 88	353

$\sigma = 6.020$

$m_p = 7.131$

$m_q = 5.621$

$p = .57$

$q = .43$

$z = .374$

$$r = \frac{7.131 - 5.621}{6.020} \times \frac{(.43)(.57)}{.374}$$

$$r = \frac{1.51}{6.02} \times \frac{.2451}{.374}$$

$$r = -.251 \times .655$$

$$r = .164$$

$$\sigma = i\sqrt{\frac{\Sigma fx^2}{n} - o^2}$$

$$\sigma \quad 5\sqrt{\frac{353}{291} - .009} =$$

$$5\sqrt{1.213 - .009}$$

$$5\sqrt{1.204}$$

$$5 \times 1.204 = 6.020$$

$$\sigma = 6.020$$

APPENDIX J

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE MEMBERSHIP IN OTHER PROFESSIONAL ORGANIZATIONS OF THE TEACHERS EMPLOYED

group	mid-value	21+	20-	f	x'	fx'	fx'2
31-35	33	0	0	0	5	0	25
26-30	28	3	0	3	4	12	48
21-25	23	1	2	3	3	9	27
16-20	18	6	0	6	2	12	24
11-15	13	6	8	14	1	14	14
6-10	8	28	17	45	0	0	0
1- 5	3	87	69	156	-1	-156	156
		131	96	227		-109	294

$m_p = 5.938$

$m_q = 5.135$

$p = .58$

$q = .42$

$z = .366$

$$r = \frac{5.938 - 5.135}{5.16} \times \frac{(.58)(.42)}{.366}$$

$$r = \frac{.803}{5.16} \times \frac{.2436}{.366}$$

$$r = .155 \times .666$$

$$r = .103$$

$$\sigma = \frac{fx'}{f}$$

$$\frac{-109}{227} =$$

$$\sigma = 5\sqrt{\frac{294}{227}} - .2304$$

$$\sigma = 5\sqrt{1.295} - .2304$$

$$\sigma = 5\sqrt{1.065} = (1.032)$$

$$\sigma = 5.16$$

APPENDIX K

CORRELATION OF THE SIZE OF THE SELECTED ELEMENTARY SCHOOL DISTRICTS AND THE ACADEMIC DEGREES HELD BY THE TEACHERS EMPLOYED

	AB-	AB+	
21+	44 (b)	210 (a)	254 p= .51
20-	94 (d)	149 (c)	243 q= .49
	138 q' = .28	359 p' = .72	497

p = .51	p' = .72
q = .49	q' = .28
γ = .02	λ = .44
x = -.050	x' = 1.555
z = .398	z' = .119

For P = .51, q = .49, x = .02 $\quad\quad$ For p' = .72, q' = .28, x = .44

$$\frac{ad-bc}{N^2 zz'} = r + \frac{xx'r^2}{2}$$

$$\frac{19740-6556}{(274009)(.398)(.119)} = r + \frac{(-.050)(-1.555)r^2}{2}$$

TETRACHORIC

$$\frac{13184}{11698.84} = r + \frac{.07775\, r^2}{2}$$

$$.887 = r + .039\, r^2$$

$$.039r^2 + r - .887 = 0$$

$$r = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$r = \frac{-1 \pm \sqrt{1-4(.039)(-.887)}}{2(.039)}$$

$$r = \frac{-1 \pm \sqrt{1 + .138}}{.078}$$

$$r = \frac{-1 \pm \sqrt{1.138}}{.078}$$

$$r = -1 \pm 1.06$$

$$r = \frac{-1 + 1.06}{.078} \quad = \quad r = \frac{.06}{.078} = .77$$