# THE SUPPLY AND DEMAND OF PUBLIC SCHOOL TEACHERS IN OKLAHOMA

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# CHAPTER I

## INTRODUCTION

### Statement of the Problem

The postwar baby boom of the late forties left in its wake an influx of students into the public school classrooms of the fifties and sixties. Accompanying this increase in enrollment was a predictable shortage of teachers. Teacher-training institutions were simply not producing at a rate sufficient to staff the classrooms which were bursting at the seams. However, as the United States entered the seventies, a new era emerged. The postwar babies had been graduated, couples were opting to have fewer or no children, abortions were on the rise, and school enrollment increases reversed and became enrollment declines. Many large school districts, hit especially hard by the enrollment declines, lost more than 40 percent of their enrollment.[1]

By 1970 a teacher shortage no longer existed. The message of declining enrollments was apparently slow to reach the teacher-training institutions. At the least, the institutions were slow to respond to the reverse of enrollment trends and were graduating an all-time high of 322,000 students qualified to enter the teaching field in the

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[1]"City Superintendents Talk About Declining Enrollments," Phi Delta Kappan, LX, 1 (September, 1978), p. 20.

academic year 1973-74.[2] By the 1973-74 school year the excess number of students being taught by a shortage of teachers had changed to an excess number of teachers vying for fewer and fewer teaching positions. The statistics of 1978 were no more encouraging.

> Today, meeting the teacher shortage is one goal that has been successfully accomplished. Unfortunately, the awareness that this goal had been accomplished is only now reaching the teacher preparatory institutions. Teachers colleges are caught in the vise of changing times: declining enrollments, previous over-production, and low turnover among teachers who have jobs have all combined to create a tight job market for teachers.[3]

In 1976 Seifert expressed the problem in these words:

> The overabundance of school teachers in the past decade has changed the economic status of educators from a scarcity market to a market which reflects an oversupply of individuals holding valid teaching certificates in contrast to the number of available positions.[4]

Statistics do indicate a response to this oversupply in the teacher job market. Although this response may not be sufficient to bring supply and demand for teachers into alignment, the number of students preparing to enter the teaching field has decreased by 30 to 50 percent since the early seventies. It is even possible that, if such a trend should continue, a teacher shortage conceivably could develop again. In fact, some experts now predict such a teacher shortage by 1985.[5]

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[2]Robert W. Herman, "Now Inevitable: A Substantial and Lengthy Teacher Shortage," Phi Delta Kappan, LIX, 10 (June, 1978), p. 693.

[3]William F. Keough, Jr., Declining Enrollments: A New Dilemma for Educators, Phi Delta Kappa Educational Foundation, 1978, p. 19.

[4]Edward H. Seifert, "The Suppy and Demand of Public School Administrators in Oklahoma," unpublished doctoral dissertation, Oklahoma State University, Stillwater, Oklahoma, 1976, p. 2.

[5]Herman, p. 693.

## Need for the Study

That an oversupply of teachers existed in 1978 seemed certain. That a shortage of teachers may exist during the decade of the eighties was a conjecture. In spite of the available data concerning supply and demand of teachers, very little has been done to adjust the supply of teachers to the number of teaching positions available, particularly in the state of Oklahoma. In Oklahoma the only apparent control of the supply of teachers entering the job market is the economic control which occurs when too many college graduates aspire to teach in relationship to the number of teaching positions available. This incongruency between number of graduates and number of jobs available is naturally more pronounced in some teaching fields than it is in others; it is easy to find jobs in some fields while others are consistently oversupplied. Aspiring teachers who do not get jobs often become discouraged, change professions, or drop out of the job market entirely. Undergraduates hear these stories, and many reconsider their job choice. In these ways the supply of teachers does adjust to the demand.

However, not only should the State or an appropriate agency assume some responsibility to monitor supply and demand of teachers--or at the very least to publicize information concerning supply and demand--it is highly desirable that the State provide information concerning options for teacher trainees concerning alternative employment. Some state universities, such as Oklahoma State University, already assist teacher trainees by (1) providing them with information from companies who desire to hire education majors or certificated teachers, (2) providing general lists of jobs that are compatible with teacher training, and (3) publicizing specific individuals with teacher training who were hired for

some other type of employment.

If the State or appropriate agency would publicize options for those interested in education, a better utilization of manpower would exist. In short, demand for teachers is not the only factor a state should consider in monitoring teacher supply.

Although it should not be assumed that all individuals who receive a degree in education or even apply for certification intend to become a part of the teacher job market, some attention should be given to the numbers receiving such degrees and certification. It may very well be true that a student who completes such a program has no intention to teach at all, but views the degree as a basic education applicable to many occupations. It may also be that the individual plans to teach at some time, but is not interested in teaching at the time of graduation. In addition, some individuals realize, after an unhappy student teaching experience, that they really do not want to teach. Some are willing to be hired as teachers, but only on their own precise terms concerning school district, building and grade assignments, and extra duty assignments. Therefore, it should not be concluded that every individual with an education degree or teaching certificate is a true contender for a teaching job. Nonetheless, the bulk do intend to teach, and students entering the teacher education program deserve to know with some degree of accuracy just what their chances are of getting a teaching job. Colleges need to know what their chances are of placing teachers. Administrators need to know what the true teacher-supply picture is so they may avoid making assumptions based only on the number of applications in the file.

It is true that some informal counseling is used as a method of influencing an individual to choose or reject teaching or to choose one teaching field over another. However, no reliable system of control of the teaching job market exists in Oklahoma. This was a criticism leveled at the State in 1969, when Hobbs, then a doctoral student at the University of Oklahoma, criticized that there was no agency to monitor the supply and demand of teachers in Oklahoma. He predicted that, because of this lack of monitoring, Oklahoma would probably increase teacher production by 80 percent by 1977-78, resulting in 7500 to 8500 new teachers being produced annually, a projected surplus of 4000 to 6000.[6] As of 1978, there was still no agency which monitored the supply and demand of teachers in the State. Although it is possible that the supply had adjusted to the demand by some other method, the most probable method of adjustment would be unemployment.

## Purpose of the Study

It is impossible to verify an oversupply or undersupply of teachers unless some accurate measure can be made of supply and demand. To determine supply and demand, it is necessary to have an accurate count of teachers available to take teaching positions and an accurate count of available jobs in teaching. This study was designed to reflect the job market as it existed at the beginning of the 1978-79 school year.

The primary purpose of this study was to ascertain the supply of teachers and demand for teachers of grades K-12 (kindergarten through

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[6]Dan Stewart Hobbs, "A Study of Teacher Supply and Demand in Oklahoma," unpublished doctoral dissertation, University of Oklahoma, Norman, Oklahoma, 1969, p. 153.

twelfth grade) in the state of Oklahoma. An effort was also made to determine if too many teachers were being produced to meet the teaching needs of Oklahoma, or if too few were being produced.

The second purpose of this study was to analyze specific teaching areas to determine the supply and demand for teachers within each area. In this analysis elementary and secondary teachers were considered separately, and detailed analyses according to major teaching fields were made for secondary teachers. The supply and demand for specialized areas such as counseling and special education were also considered.

A third purpose of this research was to determine what factors caused teaching position openings for the 1978-79 school year. A fourth purpose was to determine what kind of individuals were hired to fill the positions and to create a profile of the typical new employee of 1978-79. Factors to be examined included age, sex, race, degree, college, number of years of teaching experience outside the state, number of years of teaching experience within the state, military experience, and total years experience.

## Research Questions

This study, then, was designed to answer the following questions:

(1) Is the supply of teachers being produced in Oklahoma greater than, less than, or equal to the demand for teachers in Oklahoma?

(2) Is the supply of teachers in specific teaching areas being produced in Oklahoma at the present time greater than, less than, or equal to the demand for teachers in those specific areas in Oklahoma?

(3) For what reasons do teaching positions become available in Oklahoma?

(4) What is the demographic profile of the new teachers of Oklahoma?

## Significance of the Study

If the results of the study indicate that teacher supply in Oklahoma has adjusted to demand without being monitored in such a way that the adjustment has not created a hardship on the individual or the State, it will imply that apparently a monitoring method is not needed. If, on the other hand, teacher supply outweighs teacher demand to the extent that many of the individuals actively seeking a teaching job cannot find one, the negative results of this situation should be examined. If the latter statement is true, it is obvious that some of the brighter, more highly educated youth of Oklahoma are being trained for fields in which they cannot work. They must then turn to other jobs, drop out of the job market, or possibly move to a state that is not yet oversupplied with teachers. These negative results of oversupply would indicate a need for statewide planning including teacher-training institution planning. The same conclusions can be reached on a smaller scale in studying specific areas of teacher preparation.

In analyzing reasons for job openings, several factors could be found that would need further study by the State. For example, it might be found that a large percentage of teachers go to other states for employment. This would indicate a need for further study of the reasons behind these moves. If a large percentage of teachers go into other employment, the reasons should be examined. If the factors given are

monetary, the significance is obvious.

In examining individuals hired for teaching positions, many significant questions could be answered:

(1) Are Oklahoma schools hiring Oklahoma-trained teachers (and thus depending upon them largely for a labor supply)?

(2) Are Oklahoma schools hiring inexperienced teachers or are they expecting them to get their experience elsewhere and hiring only experienced teachers?

(3) Does having a master's degree seem to be a desirable qualification?

(4) Does training at a particular teacher-training institution seem to be more valuable than training at some other institution?

(5) Are Oklahoma schools indicating by their hiring practices that they are discriminating by race, sex, or age?

The answers to all of these questions can be used by teacher-training institutions in preparing individuals for the job market and by superintendents to evaluate their own hiring practices in light of the findings. As a further possibility, the State Department of Education might use the findings to suggest changes in hiring practices to keep in line with relevant legislation and regulations.

# CHAPTER II

# REVIEW OF THE LITERATURE

## The National Job Situation

Public school enrollments in the United States began their decline in approximately 1970, and projected enrollments based on demographic analyses indicated that the declining enrollment would continue, at least through 1986. The nationwide statistics for 1970 to 1986, with enrollment reflected in thousands, are presented in Table I.[1] These figures reflected that elementary enrollment would steadily increase after 1980, but declining secondary enrollment would offset the increase. The enrollment of 1986 was projected to be more than five million less than the 1970 enrollment.

At the same time that pupil enrollments started their long-term decline, teacher production remained high. It was true that teacher production continued a steady decline from its high of 322,000 during 1973-74; in fact, it was almost 30 percent lower in 1976-77. Nevertheless, the backlog of teachers still existed. The aggregate surplus of beginning teachers not needed in the job market has been estimated at approximately 200,000 in 1973, the year the surplus hit an all-time

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[1]Mary Golladay and Jay Noell, Editors, The Condition of Education, 1978 Edition, Washington, D.C., U.S. Government Printing Office, 1978, p. 66.

high.[2] Although that teacher surplus declined and the number of beginning teachers not being absorbed into the job market had dropped to 100,00 by 1976, the number was still sufficiently large to cause concern.

TABLE I

STUDENT ENROLLMENT (IN THOUSANDS)

| Grade | 1970 | 1974 | 1978 | 1980 | 1986 |
|---|---|---|---|---|---|
| Elementary | 27,501 | 26,382 | 24,575 | 24,002 | 24,932 |
| Secondary | 18,408 | 18,671 | 18,265 | 17,092 | 15,312 |
| Total | 45,909 | 45,053 | 42,840 | 41,094 | 40,244 |

How the teacher surplus was measured varies from one source to another. One of the problems was determining whether or not a person qualified to teach had any intention at all of entering the teaching field. The National Education Association noted that

> Typically, many persons completing preparation to enter public school teaching do not obtain positions during the subsequent year. The unmeasured and interrelated effects of many factors make it impossible to estimate the precise number who will actively seek employment in teaching immediately after graduation. Some of these factors include status of teaching jobs compared to other positions open to qualified college graduates, attractiveness of working

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[2]The State of Teacher Education 1977, National Center for Education Statistics, U.S. Department of Health, Education, and Welfare, Washington, D.C., 1977, p. 9.

> conditions in teaching positions compared to other jobs open to qualified college graduates, and [the] extent that publicity about the job shortage for teachers may reduce the number of graduates willing to invest time and resources in applying for a scarce position-vacancy.[3]

The National Center for Education Statistics, in examining factors concerning supply and demand of teachers, considered supply in two ways: newly qualified teachers and newly qualified teachers who applied for a job. They viewed demand in two ways: total additional teachers and those additional teachers who were newly qualified teachers. According to these statistics, which are shown in Table II,[4] 1969 was the first year in which more newly qualified teachers applied for jobs than were hired for a job (198,000 to 187,000). By 1971 there were more newly qualified teachers applying for jobs than the total number of teachers hired for that year, meaning that even if every position had been filled by a beginning teacher, there would still have not been enough jobs for those beginning teachers actively seeking jobs.

By the pivotal year of 1973, 78 percent of the 322,000 newly qualified teachers applied for a teaching job. Not only was the 322,000 an all-time high, the 251,000 who actively sought employment was also an all-time high. However, the total additional teachers needed for that year was only 178,000, and only 125,000 of those hired were newly qualified teachers. In other words, less than half of the newly qualified teachers of 1973 who applied for a teaching position were hired. By 1976 the percentage of the new teachers actively seeking employment

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[3] Teacher Supply and Demand in Public Schools 1977, National Education Association, Washington, D.C., pp. 4-5.

[4] Golladay and Noell, p. 176.

who were hired had risen slightly to 56 percent, but new serious applicants still outnumbered all vacancies by 36,000.

TABLE II

SUPPLY AND DEMAND OF TEACHERS
BY STATUS

| | Supply | | Demand | |
|---|---|---|---|---|
| Year | Newly Qualified | Newly Qualified Who Applied for a Job | Total Additional Teachers | Newly Qualified Teachers |
| 1967 | 220,000 | 165,000 | 223,000 | 167,000 |
| 1968 | 233,000 | 175,000 | 243,000 | 182,000 |
| 1969 | 264,000 | 198,000 | 250,000 | 187,000 |
| 1970 | 284,000 | 213,000 | 221,000 | 164,000 |
| 1971 | 314,000 | 239,000 | 184,000 | 132,000 |
| 1972 | 317,000 | 244,000 | 182,000 | 127,000 |
| 1973 | 322,00 | 251,000 | 178,000 | 125,000 |
| 1974 | 305,000 | 241,000 | 170,000 | 119,000 |
| 1975 | 259,000 | 207,000 | 181,000 | 118,000 |
| 1976 | 227,000 | 182,000 | 146,000 | 102,000 |
| 1977* | | | 134,000 | 94,000 |
| 1978* | | | 128,000 | 90,000 |
| 1979* | | | 121,000 | 85,000 |
| 1980* | | | 117,000 | 82,000 |

*Projected (based on six percent turnover rate)

According to this same source, 21 percent (approximately 261,000) of all college graduates of 1975-76 received degrees making them eligible to teach for the first time. Of those, 23 percent (60,000) had not applied

for a teaching job within one year. Of those who did apply, however, only approximately 54 percent (109,000) had a full-time teaching job for the 1975-76 year. The rest created a surplus for the year of approximately 92,000 new teachers.[5]

The labor reserve of teachers has continued to increase, with more and more teachers being produced than were needed. The number in the labor reserve was estimated to be 523,000 in 1970, compared with a projected estimate of 650,000 for 1977. Many of these individuals were experienced teachers, some of whom would seek employment later. In fact, it was estimated that more than 100,000 experienced former teachers sought employment in public schools in 1977.[6]

The New York State Employment Service has stated the situation as follows:

> In these days of declining enrollments and tight school budgets, former teachers have become the largest category of unemployed professionals in New York State, and the majority are women. . . . Thousands of women who turned to teaching have found--often after some years off to raise children--that they are a surplus commodity.[7]

According to Teacher Supply and Demand in Public Schools 1977, areas most oversupplied with teachers included physical education, art, social sciences, music, business education, language arts, foreign languages. These areas had an estimated national supply which was at least twice the estimated demand. Areas in which demand exceeded supply included agriculture, trade and industrial subjects, vocational and technical subjects,

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[5]Ibid., p. 162.

[6]Teacher Supply and Demand in Public Schools 1977, p. 6.

[7]Frances Cerra, "Women Teachers Become Surplus Commodity," Stillwater News-Press, Stillwater, Oklahoma, February 24, 1980.

and some specified elementary subjects, although all elementary teachers, added together, did represent a surplus.[8] Another study which examined teachers who applied for a teaching job for the 1975-76 school year reflected that art teachers are least likely to be employed, followed by social science and English.[9]

Viewed more optimistically, there is some indication that new teachers were as successful in getting jobs as were most other graduates. One statistical report revealed that the underemployment of teachers was only 18 percent, compared with 26 percent for all other graduates. Furthermore, even though a surplus did exist on the overall national level, there were approximately 9200 teaching positions that could not be filled in the fall of 1977; qualified teachers were not available. A part of the problem was the selectivity of teachers concerning location of open positions and subject area of open positions. Ralph Flynn, executive director of the California Teachers Association noted

> . . . that 20 percent of new teachers graduating from college do not intend to teach at all, and another 20 percent or so will take a teaching job in only one geographic area or academic field. He observes: 'That leaves a much smaller pool from which to choose, and many simply find the salaries and career opportunities more attractive in private industry.'[10]

According to research conducted by the National Education Association, spot shortages of teachers began to emerge by 1977 and have been followed by more recent reports that teaching jobs are plentiful in selected

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[8]Teacher Supply and Demand in Public Schools 1977, p. 5.

[9]Golladay and Noell, pp. 170, 172.

[10]"From Surplus to Shortage of Teachers," U.S. News and World Report, LXXXV (November 27, 1978), p. 68.

fields and locations.[11] By 1978 shortages in special education totalled 3300 teachers; mathematics and bilingual education needed 1200 more teachers; and science was short 400 teachers.[12]

Other data reported in the article supported this difference in various teaching fields, but still indicated a sizable surplus of teachers. Seventy percent of special education teachers found employment, 64 percent of vocational education teachers and 62 percent of physical education teachers found employment, but in no other field did even 60 percent find a job. Sixty-seven percent of those with master's degrees found employment, as compared with 53 percent of those with a baccalaureate degree.

The outlook for the future included projected school enrollment declines through 1983. Enrollments were then projected to increase, at least through 1986. It has been anticipated that if the teacher supply continued to decrease, there might be fewer teachers produced than the number needed for the years immediately following 1984, especially in light of the "baby boom echo," children of the fifties' baby boom, predicted to be born in the 1980's.[13] However, the reserve pool of teachers in the United States who were actively seeking jobs was estimated to be nearly 200,000 in 1978. Therefore, the prediction of a true shortage appears to be overrated. If the turnover rate, estimated to be six percent in 1974, remains fairly stable and if teacher supply does not decrease sharply, no teacher shortage should be anticipated for the

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[11]Ibid.

[12]Golladay and Noell, p. 163.

[13]"Ways of Dealing With Enrollment Decline," Phi Delta Kappan, LX, 1 (September, 1978), pp. 20-25.

1980's. In fact, unless teacher production continues its decline, the teacher surplus should continue on through the years of projected increased enrollment.[14] As concluded from a National Education Association study,

> . . . there is little chance that there will be a teacher shortage in the next ten years. . . . For the school year 1978-79, teacher supply as a percent of demand was approximately 194 percent or almost twice as many available teachers as there were positions. This was projected to increase in the 1980-81 school year to approximately 213 percent and then gradually decrease until 1984-85 when the percentage would be 125.[15]

Although a teacher surplus was projected to continue into the 1980's, the future was also expected to bring increased demand for teachers in certain specific areas within the next five years. Those areas included teachers for the learning disabled, the gifted and talented, mathematics, industrial arts, science, agriculture, and nonspecified special education.[16] In fact, even states already reflecting significant decreases in school-age population reported shortages in science, math, vocational agriculture, and special education and were forced to issue emergency teaching certificates in order to fill teaching positions in these areas. The Kansas State Board of Education proposed emergency provisional certificates as an answer to the problem, and Kentucky proposed a state regulation for easy certification which was attacked by the Kentucky Education Association.[17] The conclusion which must be drawn from these

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[14]Golladay and Noell, p. 163.

[15]Russ Vlaanderen, "Teacher Supply and Demand: Shortage or Mismatch?" The Interstate Compact for Education, XIII, No. 4 (Winter, 1980), p. 32.

[16]Golladay and Noell, p. 174.

[17]Vlaanderen, p. 32.

circumstances is that, in the midst of plenty, many famines exist.

Shortages in specific locations and subject areas may be of little comfort to teachers already employed in other locations and teaching other subjects; the condition of the job market resulted in teacher lay-offs in numerous cities. Many well-qualified teachers had to settle for part-time jobs or substitute teaching, if they were lucky enough to get a job at all.

Adding to the inconsistencies surrounding the surplus-shortage paradox, the rate of teacher turnover remained high in many areas, despite job scarcity. It might be expected that employed teachers would be reluctant to leave secure positions. The truth is

> . . . many teachers are leaving the profession. Some experts contend that those departing are among the most skilled. . . . Some reasons given for leaving the profession are pressure to promote students, constant disciplinary problems, and principals who were afraid of students and their parents. . . . Many teachers mention wages as a drawback.[18]

Some areas and some specific school districts had a turnover rate much higher than the six percent noted above. For many people, the scarcity of jobs did not compensate for the disadvantages of the job. The casualty was often the experienced teacher who was most valuable to the district.

Specific subject shortages and high turnover rate had little impact on generalized statistics reflecting the number of unemployed teachers, and the oversupply of teachers which did exist during the 70's resulted in a 30-percent decline in the number of people preparing to teach. As a consequence, some higher education institutions discontinued

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[18]Alvin P. Sanoff, "Why Teachers Are Under Fire," U.S. News and World Report, LXXXIII (December 12, 1977), p. 51.

their teacher preparation programs.[19] Other institutions began monitoring the number of students entering education. The state of Utah established regulations limiting the number of people who could enter the teacher education program.[20]

It would appear likely that, in order to balance supply and demand for teachers--both in general and in specific areas--the teacher-training institutions in other states would have to gauge their production according to demand. In spite of the instability of the job market, however, only one-fifth of the institutions based their enrollment size on an analysis of the job market. Nearly half of the institutions, a group which produced more than 60 percent of the recent graduates, regulated their enrollment simply on the basis of student choice.[21]

In a related study, Baird[22] analyzed the teacher surplus in Nebraska. His basic question was, "What are the perceptions of graduating student teachers and faculty about the need to institute changes in selected variables influencing teacher supply and demand in Nebraska?"

His objectives involved determining if graduating student teachers perceived four things:

(1) The difficulty they might encounter in getting jobs

(2) A need to seek employment outside the profession

(3) A need for continuing education

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[19] The State of Teacher Education, 1977, p. 37.

[20] Ibid., p. 6.

[21] Ibid., p. 17.

[22] Gerald W. Baird, "Teacher Supply and Demand: Implications for Nebraska Teacher Education Institutions With Recommendations for Policy Change and Program Development," unpublished doctoral dissertation, University of Nebraska, Lincoln, Nebraska, 1974.

(4) Whether the continuing education would be well received.

Baird also sought to determine how well students and teachers perceived the need to do the following six things:

(1) Limit the number of people accepted into teacher-education programs

(2) Change practices of selecting students for admission

(3) Change practices of deciding who continues

(4) Obtain preemployment counseling

(5) Change certification requirements

(6) Develop employment opportunities in teacher-related fields.

Major findings of the Baird study were as follows:

(1) The students and faculty saw a need to increase employment opportunities.

(2) Students felt a need for and were receptive to continuing education.

(3) Students perceived a need to limit enrollments and review selection and retention practices, but the faculty saw no such need.

(4) Both students and faculty saw a need for improved preemployment counseling.

Baird's recommendations were these:

(1) Teacher education institutions should increase employment opportunities for graduates.

(2) Continuing education programs should be established to benefit the unemployed and the underemployed.

(3) Nebraska teacher education schools should develop plans to improve communications with constituents.

(4) Selection and retention policies should reflect harmony between the need for quantity of teachers and the need for well-qualified teachers.

(5) Research and development projects were recommended in

(a) Manpower planning models

(b) Predicting teaching success.

Bacdayan analyzed teacher supply and demand with respect to the human capital theory. His conclusions were significant. He recommended that measures be designed to ease supply-demand adjustment processes. For instance, he concluded that during a shortage it was possible to make better use of manpower. He recommended up-to-date information on the current and prospective teacher market situations, career counseling, and voluntary limitations on student admissions by teacher education institutions. Bacdayan concluded that these programs would help to prevent the development of teacher manpower surpluses.[23]

## The Oklahoma Situation

There was little previous research conducted in the area of teacher supply which was limited to the state of Oklahoma. However, one dissertation concerning this subject was "A Study of Teacher Supply and Demand in Oklahoma," written by Hobbs.[24] His study revealed that school enrollment in Oklahoma increased by 20 percent (90,000) from 1957 to 1967. During that time professional school employees increased by 30 percent and reached 27,979 people by 1967-68. However, the number of births in

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[23]Andrew W. Bacdayan, "The Supply of Public School Teachers in the United States: A Study in Human Capital Theory," unpublished doctoral dissertation, Utah State University, 1973.

[24]Hobbs, pp. 151-153.

Oklahoma dropped from more than 50,000 in 1962 to 40,000 in 1967. Projections based on past ratios of births to enrollment, as interpreted by Hobbs, served as the basis for a predicted decline of the first-grade enrollment from approximately 55,000 in 1968 to approximately 46,700 in 1977. Total Oklahoma enrollment was projected to decline steadily from 590,000 to less than 530,000 by 1977-78.

From these enrollment figures, Hobbs projected Oklahoma teacher needs for each year. To make projections as accurate as possible, an assumption was made that pupil-teacher ratios would continue to decrease, but at a decreasing rate. He predicted a high of 27,406 teachers needed in 1972-73, followed by steady decreases to 26,620 needed in 1977-78. Administrators and specialized personnel were expected to increase in number from 2,550 to 3,834. Overall, the need for professionals would increase by ten percent, as compared with a 30 percent increase for the previous decade.

Unknown quantities which Hobbs knew could affect these projections included special education and kindergarten enrollments. Kindergarten enrollments were expected to double as the State provided matching funds to school districts in support of kindergarten programs. Another unknown quantity involved migration of students into and out of the State. Whether the rate would remain the same as in the past could not be foreseen. Student retention in upper grades was another unknown. All of these things were expected to affect projected teacher needs.

Although 1000 additional professionals were hired each year from 1963 to 1968, projected needs until 1972-73 were 470 additional professionals each year. Following that year, no additional personnel needs were anticipated. Teacher turnover rate was predicted to create the

largest demand for Oklahoma teachers during the 70's. Turnover rate was at a high of 20 percent at the time of Hobbs' study, with 6.5 percent of the total teaching force being replaced by beginning teachers. Hobbs predicted that, by 1977, nine percent of the teaching force would be replaced by beginning teachers. Reasons given for termination during the five years from 1962 to 1967 revealed that 28 to 33 percent of those leaving gave as their reason that they were going to teach at another school in Oklahoma.

Hobbs concluded that there would be an estimated need for 6500 to 7000 new teachers annually through 1977-78; Hobbs predicted 60 percent of these jobs would be filled by experienced teachers and the remaining 40 percent (2600 to 2800) would be filled by beginning teachers and that the number of beginning teachers produced by Oklahoma during these years would exceed the number needed by a significant amount. He projected that the supply of elementary teachers produced would increase from 1400 to 1700 in 1967 to 2600 to 3100 in 1977. With a demand for 1000 to 1200 teachers, a projected surplus of 1500 to 2000 elementary teachers would be produced in the year 1977. He predicted that the supply of secondary teachers produced would increase from approximately 3000 to nearly 5400 annually by 1977. With a demand for that year of 1200 to 1450, a surplus of 3600 to 4000 teachers would be produced at the secondary level.

He concluded as follows:

> First, Oklahoma will have a substantial surplus of teachers within the next two or three years, a surplus which will reach major proportions by the middle of the 1970's. . . . Also, the production of teachers by the state's colleges and universities will continue upward, increasing by at least 80 percent over present levels by the end of the 1970's. It is almost certain that there will be a surplus

> on the order of 4000 to 6000 teachers annually by the year 1977, assuming the continuation of present trends.[25]

Seifert's study[26] of administrators in Oklahoma provided some conclusions that may be applicable to teachers in general. One such conclusion was that the number of minority administrators should be increased. A second conclusion was that Oklahoma institutions for school administrator preparation had produced more administrators than the job market demanded. He recommended that an orderly and systematic reevaluation of administrator output in Oklahoma be undertaken. In the discussion of this recommendation, Seifert drew attention to one criticism of comparing Oklahoma output of educators to Oklahoma assimilation of educators. The criticism was that the State is part of a highly mobile society, wherein educators moved with ease from one state to another. Seifert noted that, not only did Oklahoma prepare educators for out-of-state positions, but other states provided educators for Oklahoma. Unfortunately, not only did these factors together create an oversupply, the oversupply consisted of, at least in part, minimally prepared teacher-administrators, causing a need for better institution selection processes, a more rigid credential policy, and counseling for prospective educators concerning supply and demand.[27]

Hobbs, in his study of 1969, found that Oklahoma was producing twice as many teachers as its per capita needs demanded. Having long produced more than its fair share of teachers, Oklahoma had traditionally supplied some teachers for out-of-state jobs. However, with the demand for

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[25]Ibid., p. 153.

[26]Seifert.

[27]Ibid., pp. 74-86.

teachers decreasing, overproduction to any great extent was being questioned.[28]

## Current Oklahoma Trends

An analysis of Oklahoma school enrollment figures and reports on numbers of teachers hired by Oklahoma in recent years revealed that some predictions concerning Oklahoma enrollment and teacher demands have not materialized. An examination of the years from 1967-68 to 1978-79 revealed that enrollment in Oklahoma over the past twelve years, rather than decreasing, has shown a slight increase overall. The biggest decrease was in 1972-73, and the year 1976-77 brought with it a slight increase in enrollment. The 1977-78 enrollment of 626,519 is approximately 100,000 more than the figure predicted by Hobbs in his study (Table III).

The number of teachers in Oklahoma during the same twelve year period was increased in all but one year, as shown in Table IV. Although there has been a decline in the number of teachers being hired in the United States as a whole, Oklahoma, as shown in Table IV, has hired more teachers each year, except for a slight decrease in the 1972-73 school year. This increase in teacher demand is at least partly a result of improved teacher-pupil ratio. In 1970 the teacher-pupil ratio was 21.3 to one; by 1973 it had been improved to 19.6 to one; and by the fall of 1977 it had been further improved to 17.6 pupils per teacher.

Since 1967-68 to the present, the need for personnel in specific teaching and administrative areas has changed, with demand increasing in

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[28]Hobbs.

some areas and decreasing in others. The changes over that ten-year period are reflected in Table V. Note that the demand for superintendents had decreased, while demand for other nonteaching administrators had generally increased. On the other hand, the demand for teaching administrators had decreased, and demand for most regular classroom teachers had increased.

TABLE III

OKLAHOMA PUBLIC SCHOOL ENROLLMENT

| Year | Enrollment | % Increase or Decrease |
|---|---|---|
| 1967-78 | 619,017 | |
| 1968-69 | 630,108 | +1.8 |
| 1969-70 | 642,295 | +1.9 |
| 1970-71 | 644,853 | + .4 |
| 1971-72 | 644,841 | - .002 |
| 1972-73 | 636,820 | -1.2 |
| 1973-74 | 630,437 | -1.0 |
| 1974-75 | 625,800 | - .74 |
| 1975-76 | 625,568 | - .04 |
| 1976-77 | 628,230 | + .43 |
| 1977-78 | 626,519 | - .27 |
| 1978-79 | 620,167 | -1.01 |

Source: Oklahoma State Department of Education, 1978-79 Annual Report, p. 151.

As indicated in Table V, page 27, the position with the greatest percentage of increased demand for teachers was the visiting teacher. However, even with 380 percent additional demand, the number employed was only 24 in 1977-78. The next largest increase in demand came in the

area of special education, which required 325 percent additional teachers in 1977 as compared to 1967. Counselors were members of the third largest-growing group, followed by the supervisors and consultants area, and kindergarten teachers.

TABLE IV

NUMBER OF OKLAHOMA TEACHERS

| Year | Number of Teachers |
|---|---|
| 1967-68 | 27,979 |
| 1968-69 | 28,567 |
| 1969-70 | 29,355 |
| 1970-71 | 30,272 |
| 1971-72 | 31,231 |
| 1972-73 | 31,186 |
| 1973-74 | 32,191 |
| 1974-75 | 32,861 |
| 1975-76 | 33,738 |
| 1976-77 | 34,577 |
| 1977-78 | 35,510 |
| 1978-79 | 36,551 |

Source: Oklahoma State Department of Education, 1977-78 and 1978-79 Annual Reports.

How well Oklahoma teacher-training institutions have responded to the change in rate that new teachers have been needed is revealed in Table VI. Figures presented are numbers of new certificates issued each year. The number of new certificates is approximately 20 to 25 percent larger than the actual number of new people who became certificated, since some certificates were earned by individuals who were previously certificated in another area. Figures available for the 1976-77 and

TABLE V

CHANGE IN DEMAND FOR SPECIFIC TEACHER AND ADMINISTRATOR POSITIONS 1967-68 TO 1977-78*

| Position | Number Employed in 1967-68 | Number Employed in 1977-78 | Percent Increase |
|---|---|---|---|
| Superintendent | 509 | 460 | (-10) |
| Assistant Superintendent | 39 | 84 | 115 |
| Administrative Assistant | 75 | 92 | 23 |
| Elem. Nonteaching Principal | 389 | 548 | 41 |
| Jr. High Nonteaching Prin. | 99 | 189 | 91 |
| H.S. Nonteaching Principal | 165 | 248 | 50 |
| Asst. Elem. Nonteaching Prin. | 19 | 16 | (-16) |
| Asst. J. H. Nonteaching Prin. | 40 | 89 | 123 |
| Asst. H. S. Nonteaching Prin. | 58 | 140 | 141 |
| Elementary Teaching Principal | 759 | 438 | (-42) |
| Jr. High Teaching Principal | 97 | 97 | 0 |
| H. S. Teaching Principal | 386 | 219 | (-43) |
| Asst. Elem. Teaching Prin. | 15 | 28 | 86 |
| Asst. J. H. Teaching Prin. | 22 | 20 | (- 9) |
| Asst. H. S. Teaching Prin. | 20 | 27 | 35 |
| Kindergarten Teacher | 488 | 935 | 92 |
| Nursery School | 26 | 6 | (-77) |
| Elementary Teacher | 11,868 | 12,788 | 8 |
| Jr. High Teacher** | 4,002 | 5,509 | 38 |
| High School Teacher | 6,026 | 7,587 | 26 |
| H. S. Vo. Ag. Teacher | 380 | 443 | 17 |
| H. S. Vo. Home Ec. Teacher | 310 | 405 | 31 |
| H. S. Other Vocational Teacher | 399 | 476 | 19 |
| Supervisor or Consultant | 182 | 355 | 95 |
| Counselor | 421 | 912 | 117 |
| Librarian | 293 | 461 | 57 |
| Nurse | 122 | 146 | 20 |
| Census-Attend. Supervisor | 9 | 17 | 89 |
| Television Teacher | 18 | 3 | (-83) |
| Psychologist | 20 | 35 | 75 |
| Visiting Teacher | 5 | 24 | 380 |
| Special Education Teacher | 631 | 2,681 | 325 |
| Adult Education | 19 | 2 | (-91) |
| Area Vocational School Teacher | 33 | 26 | (-21) |

*Information from the Annual Reports of the Oklahoma State Department of Education

**Junior high totals include middle school figures

1977-78 school years reflected the 20-25 percent ratio of new certificates over new teachers.

TABLE VI

TOTAL NEW TEACHER CERTIFICATES ISSUED

| Year | 1971-72 | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 |
|---|---|---|---|---|---|---|---|
| Number | 10,929 | 10,509 | 7,113 | 7,532 | 10,930 | 8,362 | 9,466 |

Source: Teacher Education Section, State Department of Education

As can be seen by an examination of Table VI, there is apparently no trend in number of certificates issued. The two-year period of 1971 to 1973 reflected more than 10,000 new certificates each year. The two year period 1973-75 indicated a decrease to slightly more than 7,000 for each year, but the following year, 1975-76, reflected an increase to almost 11,000. The year 1976-77 had a decline of more than 2,000 new certificates, and 1977-78 had an increase of more than 1,000.

The Teacher Education Section of the State Department of Education did a follow-up report of college graduates who completed their preparation for standard teaching certificates in 1976-77. The total number completing such preparation during that year was 3524. The follow-up report was dated November 1, 1977, and dealt with those persons completing their preparation in the previous year. Their findings are reported in Table VII. It is notable that 46 percent of newly certificated teachers in elementary education found a job in Oklahoma for the school year

1977-78; 44 percent of secondary teachers, and 42 percent of special education teachers found teaching positions. Special education is an area in which a teacher shortage has been reported in recent national statistics. Yet 17 percent of Oklahoma special education teachers were still seeking a teaching position as of November 1, compared to 13 and 10 percent of the teachers in the other two areas.

TABLE VII

OCCUPATION OF GRADUATES COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES

| Occupation of Nov. 1, 1977 | Elementary | % of Total | Secondary | % of Total | Special Educ. | % of Total |
|---|---|---|---|---|---|---|
| Teaching in state | 527 | 46 | 859 | 44 | 177 | 42 |
| Teaching out of state | 140 | 12 | 212 | 11 | 39 | 9 |
| Otherwise gainfully employed | 68 | 6 | 177 | 9 | 12 | 3 |
| Continuing formal study | 30 | 3 | 117 | 6 | 4 | 1 |
| Military service | 1 | 0 | 11 | 1 | 13 | 3 |
| Homemaking | 36 | 3 | 52 | 3 | 9 | 2 |
| Seeking a teaching position | 146 | 13 | 199 | 10 | 71 | 17 |
| Seeking nonteaching position | 0 | 0 | 8 | 0 | 0 | 0 |
| No information | 208 | 18 | 312 | 16 | 96 | 23 |
| Total | 1156 | 101* | 1947 | 100 | 421 | 100 |

Source: 1977-78 Annual Report, Oklahoma State Department of Education.

*Percentages are rounded off

## Descriptive Analyses of New Teachers

According to The State of Teacher Education 1977, nearly 75 percent of recent graduates from education programs were women, many of whom were more than 24 years of age. Eleven percent were from minority groups, a percentage that had remained more or less constant since 1973. The number of people in teacher preparation had decreased by approximately 30 percent.[29]

The authors of an Oklahoma study completed during 1970, perhaps the pivotal year of the teacher shortage-surplus, described the typical teachers being hired in Oklahoma at that time. They "were a young group. Although more than half of them had previous classroom experience, most of them had only one or two years of classroom teaching."[30] At that time the rate of teacher turnover was so high that administrators could expect to hire enough new teachers in seven years to replace their entire staff. Whether or not this turnover was due to low salaries, disenchantment with the teaching profession, family obligations, or some other reason was not clear. The teacher turnover rate had decreased from the time of the Hobbs study to the time of the Kowitz study, so it could be speculated that as the difficulty in finding teaching jobs increased, the turnover rate decreased.

Further information concerning the new teachers hired during 1970 revealed that females were hired at a rate twice as great as men. Fifty-

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[29]The State of Teacher Education 1977, pp. 71 and 37.

[30]Gerald T. Kowitz et al., Mobility in the Education Profession, monograph of the Oklahoma Public School Research Council, University of Oklahoma, College of Education, 1970, p. 28.

six percent of the females had previous experience, as compared to 65 percent of the males. However, only 18 percent of the females had more than two years experience, while almost 50 percent of the males had more than two years experience.

The average age of the men hired was 32; the average age of the women hired was 30. The typical teacher hired was under 30. It was concluded that Oklahomans entered the teaching field directly after college, but left for other occupations rather than making teaching a career.

Behnke examined the new teachers hired in six large cities of the United States: Buffalo, Dallas, Detroit, Los Angeles, Philadelphia, and San Francisco. The typical new employee of 1967-68 was female, married, 22-25, white, with some previous teaching experience, an urban, middle-class background, a graduate of a university in the state where she applied, and a baccalaureate-degreed person with C+ to B work.[31]

In comparing those hired to those not hired, it was noted that those hired were less experienced than those not hired. Those applying who were in the age bracket of 18-21 were less likely to be hired than older applicants. Negroes who applied were more likely to be hired than white applicants.

## Summary

Student enrollment began to decline at the beginning of the 1970 decade, but teacher production continued to increase for approximately three more years. Although teacher production declined by 30 percent by

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[31]Donald J. Behnke, "Selected Characteristics of the Teacher Supply for Six Large Cities of the United States in 1967," unpublished doctoral dissertation, Columbia University, 1969.

1978, more teachers than were needed were being produced each year, and the backlog of unemployed teachers increased to more than half a million.

Two exceptions to the overall teacher surplus existed. One, there were many subject areas and locations in which a teacher shortage, rather than a teacher surplus, existed. Second, Oklahoma student enrollments did not reflect the decline in enrollment evidenced in some other parts of the nation, and the number of teachers hired each year continued to increase.

Research findings regarding characteristics of new teachers were sketchy; however, some generalizations could be made. Sixty to 70 percent of those hired were female; the average age was approximately 30, but the modal age was younger. New teachers were predominately white. Approximately 10 percent of those hired were minorities. Slightly more than half of those hired had previous experience, and a majority had only a baccalaureate degree.

Teacher turnover rate in the United States was 6 percent in 1974. Oklahoma teacher turnover rate was 20 percent during 1967. Of that 20 percent, nearly one-third cited acceptance of another teaching position in the State as their reason for leaving. By 1970 turnover rate in Oklahoma was approximately 14 percent.

In spite of the fluctuation of teacher demand, few teacher-training institutions had developed plans for controlling teacher production in relation to demand.

# CHAPTER III

## METHODOLOGY

The purpose of this study was two-fold. First, it was an attempt to evaluate the supply and demand of public school teachers in the state of Oklahoma for the school year 1978-79 by (a) a general overview of supply and demand, (b) a specific analysis of supply and demand, and (c) a presentation of reasons teaching positions were open in Oklahoma. Second, it presents a descriptive analysis of the public school teachers newly hired for that school year.

### Definitions

The following definition of terms is given in order to clarify the language of this paper. Some of the terms utilized in the study are more delimited than popular use of the terms would suggest.

Oklahoma public school teacher: Any teacher licensed by the state of Oklahoma and hired to teach in a public school in Oklahoma. This includes all K-12 teachers, counselors, librarians, nurses, and teaching-administrators.

Teacher supply: The quantity of persons qualified to fill a teaching position at any given time. This study is limited to supply of those able to assume a vacant job at any given time.

Teacher demand: The number of teaching positions available at any given time. This study limits teacher demand to teachers needed to fill vacant or newly created positions.

New teachers: In this study the term new teachers refers to teachers hired by a school district for the 1978-79 school year who were not employed by that district in the previous school year.

Beginning teachers: Teachers with no previous teaching experience.

## Design

The design of this study was a statistical one based largely on percentages. It covered the following areas:

(1) A general comparison of teacher supply to teacher demand. Results are shown in percentages and rank order.

(2) A comparison of teacher supply and demand in specific subject areas. Number of teachers needed in specific subject areas and number produced in specific subject areas are shown in percentages and rank order.

(3) An analysis of the reasons teaching jobs were available in Oklahoma. These reasons are presented as a percentage of the total number.

(4) A demographic analysis of the new teachers hired. Percentages are used to indicate portions of individuals of various races; portions of those hired with bachelor's degrees, master's degrees, and doctorates; portions with no experience as compared to those with experience; comparisons by percentages of the total years of experience; and percentage of teachers graduated from each of the Oklahoma teacher-training institutions and those receiving their teacher training out of state. The median age of all the new teachers hired is presented in graphic form.

(5) A comparison of hiring practices and teacher characteristics in dependent and independent school districts.

(6) A descriptive comparison of new inexperienced teachers and new experienced teachers.

(7) An examination of previous predictions concerning supply and demand in light of the current findings.

## Scope and Limitations of the Study

This study included all 622 school districts of Oklahoma but was limited to the school year 1978-79. This limitation was necessary in order that the analysis of the supply-demand situation and description of newly hired teachers could be comprehensive. The description of newly hired teachers was limited to demographic variables available through the State Department of Education and included age, sex, race, degree, teaching certificate, years of experience, preparatory college, and position for which hired.

## Collection of Data

In order to determine the number of teachers added to the teacher supply of Oklahoma for the school year 1978-79, a letter was sent to all teacher-preparation institutions in Oklahoma (see Appendix A). They were requested to submit data concerning their students receiving certification between September 1, 1977 and September 1, 1978. The schools were asked for (1) number of teachers certificated by the state of Oklahoma in each subject area, (2) those certificated by other states, and (3) the total number of students receiving a bachelor's degree in education during that period (see Appendix B).

In order to determine demand for teachers in the state of Oklahoma for the 1978-79 school year, the Oklahoma Annual Personnel Report for each school district in the State was examined. These reports had been requested by and filed in the Personnel Office of the State Department of Education, Oklahoma City, Oklahoma (see Appendix C). In order to determine information concerning number of outgoing staff and the reasons for their leaving, as well as determining which teachers were new to the district, it was necessary to work with the Personnel Reports referred to as "Pre-Prints." These are copies of the previous year's Personnel Reports, which had been sent to the school districts at the beginning of the school year. On this report the administrator had drawn a line through the name of each teacher who was not returning and indicated the reason for the teacher's leaving. Then, at the bottom of the report, the names of new teachers were added. The final Personnel Report for the year would exclude those marked-through names and would include in appropriate alphabetical position the names of new teachers. Further information concerning supply and demand has been obtained from the Teacher Education Section of the State Department of Education and from the Annual Report of the State Department of Education.

It is difficult to determine, with precision, the supply and demand of teachers within the State. Numbers reflecting supply and demand can be obtained by contacting the State Department of Education and the teacher-training institutions. However, it is possible to get a different number from almost every source contacted. One major reason for such inconsistencies is that supply can be determined in many different ways. For example, supply could mean number of new certificates issued--both standard and provisional, number of new people receiving certificates--

not including persons getting a second certificate, or number of new standard certificates issued--not including provisional certificates. Another difficulty concerning demand is the fact that most school districts are growing in staff size--although many are decreasing staff size--and the number of teachers in the State changes monthly, if not daily. Furthermore, demand varies from region to region and subject to subject. In order to overcome as many of these difficulties as possible, this study examined supply and demand in several ways.

Most information available concerning demand for teachers dealt with the larger classifications of elementary teachers, secondary teachers and specialized personnel. Information concerning specific subject areas is not always included in personnel data. Three sources of information for teacher demand were used in this study: (1) information available from the Personnel Reports, (2) information available from the teachers' certificates, and (3) demand reflected in university placement offices. With a broad look at supply and demand, it should be likely that findings will reflect the present Oklahoma situation accurately.

Most information concerning reasons jobs were open and characteristics of newly hired teachers was obtained from the Oklahoma Annual Personnel Report. To answer the question of why teaching positions become available in Oklahoma, the "Pre-Prints" of the Personnel Reports were examined. On these "Pre-Prints" a reason was stated as to why each teacher who was employed the previous year did not return to the school. The possible answers listed on the form were as follows:

(1) retiring

(2) another school in state

(3) teach out of state

(4) other employment

(5) health reasons

(6) marriage

(7) other reasons

(8) deceased

(9) no reason given.

In addition to considering these reasons, it was assumed that, in situations wherein more new teachers were hired than were leaving the district, such positions were new positions. Therefore, there were ten possible reasons for the existence of an available teaching job in Oklahoma.

In analyzing the group of teachers hired to fill existing vacancies, the following characteristics which were available from the Personnel Reports were examined:

Race

Black

Indian

Spanish American

Oriental

Caucasian and others

Sex

Male

Female

College Attended

20 Oklahoma schools are listed, along with a category for out-of-state colleges and universities

Degree held

70 hours and under

Over 70 hours but under bachelor

Bachelor

Master

Educational Specialist or Professional Diploma

Doctor

Years experience

Years in this district

Years in other Oklahoma districts

Years experience out of state

Years military service

Total years experience.

All of the above areas were tallied for inclusion in the study.

Another item of information desired for this study and not available from the Personnel Report was the specific teaching assignment of some teachers. Some teaching assignments were precisely stated on the Personnel Report, such as vocational agriculture teacher or counselor, but other assignments listed on the Personnel Report, such as high school teacher, did not indicate subject matter to be taught. Positions listed on the Personnel Report which were applicable to this study were as follows:

Elementary teaching principal

Junior high teaching principal

High school teaching principal

Assistant elementary teaching principal

Assistant junior high teaching principal

Assistant senior high teaching principal

Middle school teaching principal

Middle school assistant teaching principal

Kindergarten teacher

Nursery schools

Elementary teacher

Middle school teacher

Junior high teacher

High school teacher

Vocational agriculture teacher

Vocational home economics teacher

Other vocational teacher

Supervisor, consultant or director

Counselor

Librarian

Nurse

Census and attendance supervisor

Psychologist

Visiting teacher

Special education teacher

Adult education teacher

Teacher in area vocational-technical schools operated by district. Other areas listed on the Personnel Report but not considered in this study were positions which were entirely administrative. These included such positions as superintendents, assistant superintendents, and non-teaching principals.

One characteristic of teachers which was desired for this study but was not available from the Personnel Reports was age of the teachers. In order to determine age of newly hired teachers, a systematic sampling technique was employed in which every tenth person listed as a new teacher was selected for the sample. The teaching certificate of each person in this ten-percent sample was then examined in order to determine the age of the teachers.

In order to gain more information about specific subject areas taught, the same ten percent sample described above was utilized. An examination of each certificate revealed teaching areas of the individual. These teaching areas were used to determine teaching assignment of each person in the ten-percent sample.

The Oklahoma Annual Personnel Reports are housed in the Teacher Personnel Office of the State Department of Education. Although most of the information included in these reports is coded in computer language, the State Department of Education has not programmed their computer for retrieving this information, and additional computer time is not available at the State Department. The reports are used to verify certification, years of experience, and other items related to salary for individual teachers, but very little has been done in the past to utilize the information on the reports for comprehensive data. Therefore, in order to obtain the information needed from the State Department, it was necessary to examine each of the 622 Personnel Reports submitted by the Oklahoma school districts individually and to copy by hand all information relating to positions open and individuals hired for those positions. Number of positions vacated, number of positions filled, reasons for vacant positions, growth or decline of teaching staff, and descriptive

data concerning those hired was noted. Later, the information was keypunched for analysis.[1] Most of the information was keypunched in the same language supplied by the Personnel Reports. However, some additional information concerning individuals and district growth was added. A card was keypunched for each new teacher hired by the State, giving pertinent information concerning that teacher. Computer analysis results were then obtained concerning measures of central tendency and percentages of populations.

Information not available from Personnel Reports, age, type of certificate, and teaching area or speciality, was tallied by hand. Data concerning independent school districts and dependent school districts were collected separately and computed separately before they were combined for analysis. Thus, information from the two types of districts could be compared. Cards were later separated into two groups, inexperienced teachers and experienced teachers, for further comparative analyses.

## Analysis of the Data

Information concerning teacher supply and demand was reported in interval data. Thus, results of the research could be reported in terms of all three measurements of central tendency: mean, median, and mode. Since most of the distributions studied would tend to be skewed, the median rather than the mean was preferred as a measure of central tendency. Some of the information concerning teacher characteristics was on an interval scale, but some was nominal information. Where only nominal information was available, the results were presented in percentages,

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[1] Analysis utilized the Statistical Package for the Social Sciences.

as was some of the information concerning supply and demand.

Several tables and four figures were used to report the data. Most results were limited to statewide statistics. Some exceptions are (1) comparisons made by county, (2) comparisons between independent school districts and dependent school districts and (3) comparisons of new inexperienced and new experienced teachers.

# CHAPTER IV

## PRESENTATION OF DATA

The presentation of the data is divided into the following areas: (1) general information concerning supply and demand of Oklahoma teachers, (2) supply and demand for Oklahoma teachers in specific subject areas, (3) reasons teaching positions became available in Oklahoma, (4) a demographic analysis of new Oklahoma teachers, and (5) comparisons between (a) dependent and independent school districts, (b) new inexperienced and new experienced teachers, and (c) previous predictions and the present situation of supply and demand.

## Supply and Demand of Oklahoma Teachers, General Information

### Supply and Demand by Oklahoma Teacher-Training Institutions

In order to determine supply of Oklahoma teachers for 1978-79, a letter was sent to all 20 teacher-training institutions in the State. Responses were received from 16 of those institutions. In considering total number of teachers certificated, it should be noted that some individuals receiving a certificate during this time period already held a teaching certificate, namely administrators, counselors, psychologists, reading specialists, audio-visual specialists, and distributive education teachers. This means that the totals included some individuals

who were not beginning teachers. Also, some individuals obtain two certificates at one time, i.e., teachers in vocational home economics and general home economics, vocational agriculture and general agriculture. Consequently, these figures from teacher-training institutions are roughly comparable with, but not identical with, exact numbers of new people in the field as published by the State Department of Education. In addition, most figures available from the State Department of Education dealt only with teachers earning a standard certificate. Figures used in this study include teachers with both standard and provisional certificates, since many teachers with provisional certificates are hired within the State.

There were 5424 new teachers hired in the independent school districts of Oklahoma in 1978 and 325 hired in the dependent school districts, for a total of 5749 new hirees. Because the total number of teachers hired for the year was 36,551, the 5749 new teachers represented 16 percent of the teachers practicing in 1978. The total number of teachers in the State for the 1977-78 school year was 35,510. Of that number, 4855 vacated their jobs, thus resulting in a teacher turnover rate of 14 percent, a rate much greater than the six percent turnover rate reported to be the national average. Further analysis revealed that the turnover rate was 25 percent in the dependent school districts, but the turnover rate within independent districts remained at the same percentage as all districts combined, 14 percent.

The total number of teachers certificated by each of the colleges and universities surveyed is presented in Table VIII. Also presented in Table VIII is the number of new teachers hired during 1978-79 who received their training from each of the Oklahoma institutions. The comparison between these two figures is only relative, since teachers

# TABLE VIII

## SUPPLY AND DEMAND OF OKLAHOMA TEACHERS BY TEACHER-TRAINING INSTITUTION

| Institution | Number of Teachers Certificated in Oklahoma 1977-78 | Rank | Number of Teachers Hired in Oklahoma 1978 | Rank | Number of Inexperienced Teachers Hired | Rank | Number of Teachers Certificated for Out-of-State Jobs* | Rank |
|---|---|---|---|---|---|---|---|---|
| Oklahoma State University | 947 | 1 | 711 | 2 | 340 | 1 | 212 | 1 |
| Central State University | 882 | 2 | 672 | 3 | 262 | 3 | 83 | 4 |
| Northeastern Oklahoma State University | 828 | 3 | 792 | 1 | 303 | 2 | 115 | 3 |
| University of Oklahoma | 616 | 4 | 512 | 4 | 229 | 4 | 152 | 2 |
| Southwestern Oklahoma State University | 543 | 5 | 478 | 5 | 170 | 5 | 58 | 7 |
| Southeastern Oklahoma State University | 431 | 6 | 385 | 6 | 164 | 6 | 34 | 9 |
| East Central Oklahoma State University | 381 | 7 | 334 | 7 | 115 | 7 | 39 | 8 |
| Northwestern Oklahoma State University | 260** | 8 | 161 | 9 | 61 | 10 | NA | |
| University of Tulsa | 144** | 9 | 169 | 8 | 75 | 8 | NA | |
| Oral Roberts University | 116 | 10 | 52 | 15 | 31 | 14 | NA | |
| Bethany Nazarene College | 109 | 11 | 35 | 18 | 11 | 19 | 69 | 5 |
| Cameron University | 108 | 12 | 120 | 10 | 65 | 9 | 8 | 12 |
| Oklahoma Baptist University | 71** | 13 | 68 | 12 | 36 | 11 | NA | |
| University of Sciences and Arts of Oklahoma | 69 | 14 | 88 | 11 | 35 | 12 | NA | |
| Langston University | 61** | 15 | 30 | 19 | 19 | 18 | NA | |
| Oklahoma Christian College | 52 | 16 | 38 | 17 | 21 | 17 | 20 | 10 |
| Panhandle State University | 49 | 17 | 44 | 16 | 25 | 15 | 2 | 14 |
| Oklahoma City University | 46 | 18 | 63 | 13 | 22 | 16 | 67 | 6 |
| Phillips University | 34 | 19 | 57 | 14 | 33 | 13 | 14 | 11 |
| Barltesville Wesleyan | 15 | 20 | 6 | 20 | 6 | 20 | 3 | 13 |
| Out-of-State Institutions | | | 898 | | | | | |

*Figures available concerning teachers certificated for out-of-state teaching were available for only 14 schools.

**Information supplied by the State Department of Education and does not include provisional certificates.

NA = Not Available

hired for the year did not necessarily receive their training and resulting certification during the year 1977-78; 60 percent of those teachers had previous teaching experience. The third component of the table is a presentation of the inexperienced teachers hired, listing them by their college or university. These figures would come very close to revealing exactly how many prospective teachers seeking jobs within the State were actually hired within the State. Exceptions would be individuals who received training in past years but had never taught. Also included in this table is the number of new Oklahoma teachers who received their teacher training from an out-of-state school. This number, 898, is slightly less than 16 percent of the new teachers. All data from the 20 schools are ranked according to preponderance of teachers. This ranking reveals which universities produced the most teachers for Oklahoma, which had more of their graduates hired in Oklahoma, which had more of their inexperienced teachers hired in Oklahoma, and which recommended certification for more teachers out of state. For the school year 1978, 16 Oklahoma schools recommended certification for a total of 876 teachers for out-of-state positions. This number is very nearly the same as those new Oklahoma teachers with out-of-state training. Unless otherwise indicated, numbers in the table include standard and provisional certificates.

It can be seen by the figures given in Table VIII that the number of teachers produced by the teacher-training institutions of Oklahoma and the number of their graduates hired as teachers are ranked very similarly. For example, Oklahoma State University recommended the most teachers for certification in Oklahoma during the year 1977-78 and had the second largest number of teachers hired by the State in comparison.

to other teacher-training institutions. Northeastern Oklahoma State University produced the third largest number of teachers that year but had more of their graduates hired by the State than did any of the other schools. However, in examining the figures of those teachers certificated to teach out of state, one may note that Oklahoma State University led with 212, and that Northeastern ranked third behind the University of Oklahoma. Those schools that produced significantly more teachers in comparison to the number of their teachers who were hired by the State tended to be church-related schools. Oral Roberts University produced the tenth largest number of teachers but had the fifteenth largest number hired within the State. Bethany Nazarene ranked eleventh place in number of teachers certificated but ranked eighteenth in number of teachers hired. In contrast, Bethany Nazarene certificated teachers for out of state in a number almost twice that of their graduates who were hired to teach in Oklahoma. Their rank of producing teachers for out-of-state certificates was fifth.

Table IX presents a further comparison of supply and demand by teacher-training institutions. It shows the number of beginning teachers hired from each of the 20 schools of the State, and presents that number as a percentage of those prepared for teaching that year. It should be noted that very few institutions placed 50 percent of their beginning teachers in teaching positions in 1978. In fact, 11 of the 20 schools could not claim placement of 40 percent. The two extreme situations are both church-related schools; Bethany Nazarene placed 10 percent of its teachers and Phillips University placed a very high 97 percent.

TABLE IX

A COMPARISON OF BEGINNING TEACHERS PREPARED AND BEGINNING TEACHERS HIRED BY TEACHER-TRAINING INSTITUTIONS

| Institution | Number of Beginning Teachers Recommended for Oklahoma Certification 1977-78 | Number of Beginning Teachers Hired in Oklahoma 1978-79 | Number Hired as Percentage of Number Prepared |
|---|---|---|---|
| Oklahoma State University | 947 | 340 | 36 |
| Central State University | 882 | 262 | 30 |
| Northeastern Oklahoma State University | 828 | 303 | 37 |
| University of Oklahoma | 616 | 229 | 27 |
| Southwestern Oklahoma State University | 543 | 170 | 31 |
| Southeastern Oklahoma State University | 431 | 164 | 38 |
| East Central Oklahoma State University | 381 | 115 | 30 |
| Northwestern Oklahoma State University* | 260 | 61 | 23 |
| University of Tulsa* | 144 | 75 | 52 |
| Oral Roberts University | 116 | 31 | 27 |
| Bethany Nazarene College | 109 | 11 | 10 |
| Cameron University | 108 | 65 | 60 |
| Oklahoma Baptist University* | 71 | 36 | 51 |
| University of Sciences & Arts of Oklahoma | 69 | 35 | 51 |
| Langston University* | 61 | 19 | 31 |
| Oklahoma Christian College | 52 | 21 | 40 |
| Panhandle State University | 49 | 25 | 51 |
| Oklahoma City University | 46 | 22 | 48 |
| Phillips University | 34 | 33 | 97 |
| Bartlesville Wesleyan | 15 | 6 | 40 |

*Figures for Northwestern Oklahoma State University, Oklahoma Baptist University, Langston University, and University of Tulsa may be misleading since number of teachers prepared include only standard certificates, and not standard and provisional, which are included in the totals from the other schools.

A further analysis of teacher-training institutions revealed that 5175 (90 percent) of the new teachers received their training in a public school, while 587 (10 percent) received training from a private school. In comparison, of those hired with a degree from an Oklahoma school, 4327 (90 percent) were from public schools, and 488 (10 percent) were from private schools.

Supply and Demand by Counties

The counties in which the new Oklahoma teachers were being hired can be determined by an examination of Table X. This tables lists the 77 counties of the State and gives the number of new teachers hired in each county in 1978. The 325 new teachers of the dependent school districts were not included in the data of this table.

As can be determined by examining Table X, jobs are most likely to be found in Oklahoma and Tulsa Counties, with Oklahoma County providing approximately 10 percent more new jobs than Tulsa County. Combined, the two counties hired 25 percent of the new teachers who were hired. The counties with very little demand for new teachers were Beaver, Cimarron, Harmon, Harper, Johnston, Love, and Roger Mills, most of which are located in western Oklahoma. Each of these counties hired 14 or fewer new teachers in the independent school districts within the county. Although these districts had fewer positions available, these numbers do not reflect lower turnover rates, but lower enrollments and smaller teaching staffs.

An in-depth analysis was made of each county within the State concerning the number of new teachers in the county. First of all, the 1977-78 figures for total teachers within the county were obtained

TABLE X

DEMAND FOR OKLAHOMA TEACHERS BY COUNTY

| County | Number of Teachers Hired | Percentage of Total |
|---|---|---|
| Adair | 53 | 1.0 |
| Alfalfa | 25 | .5 |
| Atoka | 20 | .4 |
| Beaver | 13 | .2 |
| Beckham | 63 | 1.2 |
| Blaine | 51 | .9 |
| Bryan | 61 | 1.1 |
| Caddo | 95 | 1.8 |
| Canadian | 141 | 2.6 |
| Carter | 104 | 1.9 |
| Cherokee | 40 | .7 |
| Choctaw | 38 | .7 |
| Cimarron | 14 | .3 |
| Cleveland | 296 | 5.5 |
| Coal | 19 | .4 |
| Comanche | 152 | 2.8 |
| Cotton | 24 | .4 |
| Craig | 45 | .8 |
| Creek | 118 | 2.2 |
| Custer | 52 | 1.0 |
| Delaware | 56 | 1.0 |
| Dewey | 25 | .5 |
| Ellis | 22 | .4 |
| Garfield | 132 | 2.4 |
| Garvin | 36 | .7 |
| Grady | 89 | 1.6 |
| Grant | 25 | .5 |
| Greer | 18 | .3 |
| Harmon | 10 | .2 |
| Harper | 11 | .2 |
| Haskell | 28 | .5 |
| Hughes | 40 | .7 |
| Jackson | 54 | 1.0 |
| Jefferson | 25 | .5 |
| Johnston | 10 | .2 |
| Kay | 67 | 1.2 |
| Kingfisher | 45 | .8 |
| Kiowa | 40 | .7 |
| Latimer | 19 | .4 |
| Leflore | 55 | 1.0 |
| Lincoln | 66 | 1.2 |
| Logan | 43 | .8 |
| Love | 10 | .2 |

TABLE X (Continued)

| County | Number of Teachers Hired | Percentage of Total |
|---|---|---|
| Major | 23 | .4 |
| Marshall | 26 | .5 |
| Mayes | 52 | 1.0 |
| McClain | 72 | 1.3 |
| McCurtain | 55 | 1.0 |
| McIntosh | 32 | .6 |
| Murray | 17 | .3 |
| Muskogee | 134 | 2.5 |
| Noble | 41 | .8 |
| Nowata | 37 | .7 |
| Okfuskee | 45 | .8 |
| Oklahoma | 713 | 13.1 |
| Okmulgee | 77 | 1.4 |
| Osage | 44 | .8 |
| Ottawa | 69 | 1.3 |
| Pawnee | 28 | .5 |
| Payne | 94 | 1.7 |
| Pittsburg | 79 | 1.5 |
| Pontotoc | 48 | .9 |
| Pottawatomie | 106 | 2.0 |
| Pushmataha | 24 | .4 |
| Roger Mills | 9 | .2 |
| Rogers | 92 | 1.7 |
| Seminole | 75 | 1.4 |
| Sequoyah | 57 | 1.1 |
| Stephens | 75 | 1.4 |
| Texas | 37 | .7 |
| Tillman | 29 | .5 |
| Tulsa | 652 | 12.0 |
| Wagoner | 60 | 1.1 |
| Washington | 87 | 1.6 |
| Washita | 29 | .5 |
| Woods | 22 | .4 |
| Woodward | 34 | .6 |

from the Oklahoma Educational Directory, 1977-78. The number of new teachers hired in each of the counties was then examined to determine if the teachers were replacing other teachers, and thus filling an already existing position, or if they were additions to staff size. The number of new teachers filling an already existing position was determined by an examination of the Personnel Reports. This number was compared to size of the county teaching staff in order to determine teacher turnover within the county. Figure 1 shows the findings. Since 14 percent was the average turnover rate in the State, counties with 12 to 16 percent turnover rate were considered average in their turnover rates; counties with more than 16 percent turnover rate were considered to have a high turnover rate; and counties with 11 percent or less turnover rate were considered to have low turnover. With this method of categorization, 34 counties had average teacher turnover, only 11 had low turnover, and 32 had high turnover. This lopsided distribution was possible since some counties had much larger teacher populations. It is notable that 13 counties had turnover rates of more than 20 percent. The map in Figure 1 indicates counties with high turnover rate by dark, solid color. Unmarked counties had low turnover rates, and diagonal hatched counties had average turnover rates. As can be seen, there is no definite pattern to where high or low turnovers occur.

Figure 2 indicates the counties showing the most growth in number of teachers. The counties indicated by a solid dark color increased their teaching staff number by at least five percent from the 1977-78 school year to the 1978-79 school year. Only ten counties showed a decline in teacher staff, and most of these were declines of only one or two percent. Therefore, they were not included on the figure.

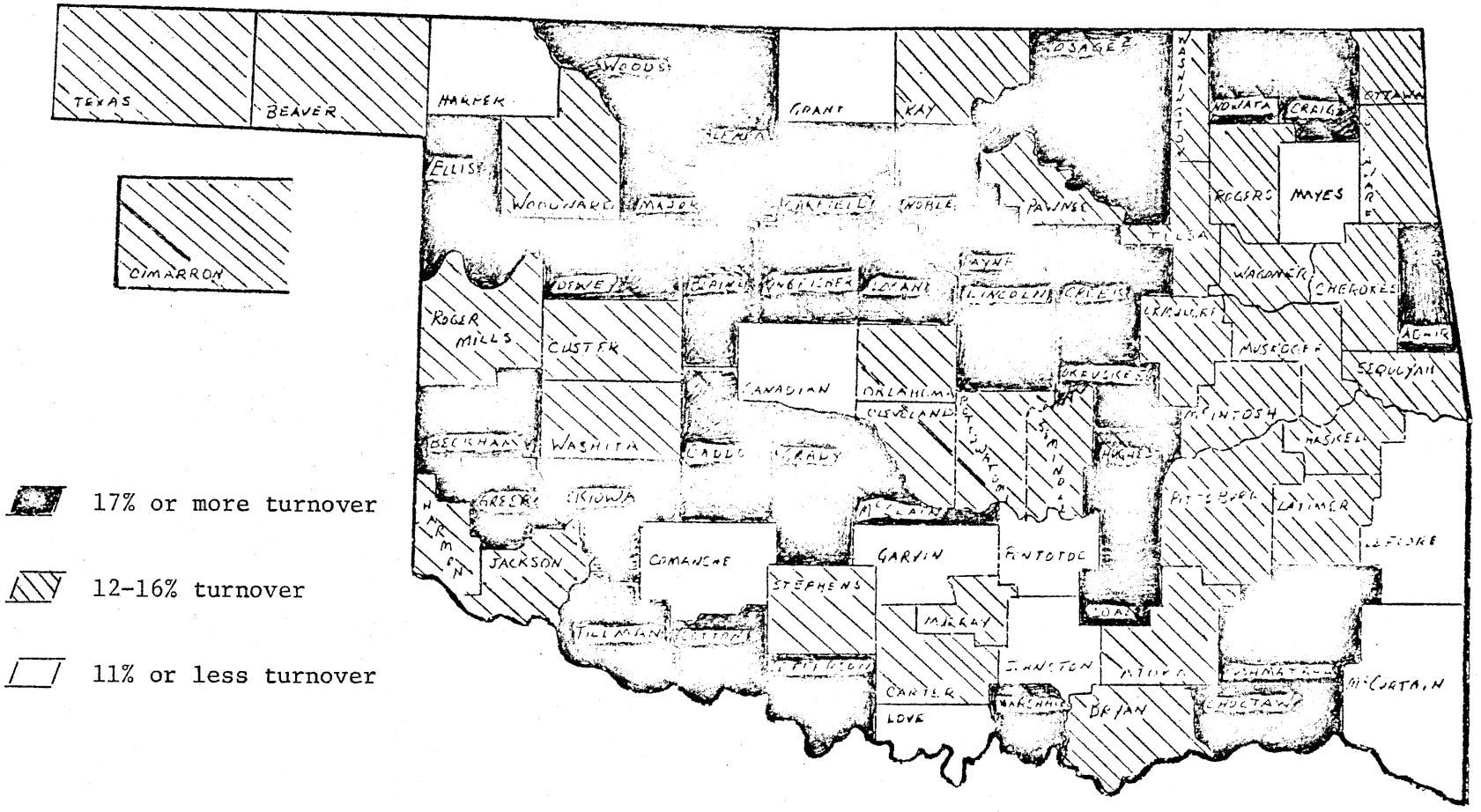


Figure 1. Teacher Turnover by County


5% or higher increase in teacher personnel

Less than 5% increase in teacher personnel

Figure 2. Increase in Teacher Staff by County

Definite patterns can be found in examination of the counties with five percent or more growth in staff. First, the lake areas of eastern Oklahoma reflect that growth; second, western Oklahoma shows such growth; and third, the counties surrounding the metropolitan areas of Tulsa and Oklahoma City reflect the growth. Oklahoma County and Tulsa County, while contributing to a growth in surrounding areas, did not have the same growth, since declines in staff size of Oklahoma City School District and Tulsa School District offset the growth of the surrounding districts within the counties.

Supply as Analyzed by Sex

The Teacher Education Section of the State Department of Education had data regarding students completing their preparation for a standard teaching certificate for the first time during 1977. The figures from that office, which are shown in Table XI, are lower than those numbers found through analysis of school personnel reports. Most of the discrepancy results from the fact that the State Department report is limited to individuals being certificated for the first time. This eliminates the overlap, mentioned earlier, of individuals receiving certification in an area in which a previous certificate was required and the overlaps of double-certification. Furthermore, it does not include provisional certificates, which are included in some estimates of teacher supply.

Forty-five percent of those applying for certification in secondary schools were men. However, only approximately 12 percent of those applying for certification in elementary schools and approximately ten percent of those in special education were men. The combined percentage of newly prepared teachers who were men was 30 percent.

TABLE XI

NEW SUPPLY OF INSTRUCTIONAL PERSONNEL BY SEX

| Type of Preparation | Number and Percentage of Students Completing Preparation for the First Time | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1978 | | | | | 1977 | | | | |
| | Men | % | Women | % | Total | Men | % | Women | % | Total |
| Elementary | 136 | 12 | 1011 | 88 | 1147 | 132 | 11 | 2020 | 89 | 1152 |
| Secondary | 865 | 45 | 1058 | 55 | 1923 | 872 | 45 | 1061 | 55 | 1933 |
| Special Education | 40 | 10 | 359 | 90 | 399 | 41 | 10 | 390 | 90 | 431 |
| Total | 1041 | 30 | 2428 | 70 | 3469 | 1045 | 30 | 2471 | 70 | 3516 |

Source: Oklahoma State Department of Education, 1977-78 Annual Report, p. 296 and 1978-79 Annual Report, p. 122.

## Supply and Demand of Oklahoma Teachers by Teaching Specialty

Provided in Table XII is a specific analysis of teaching fields pursued by the new certificate holders. It can be noted that more certificates were issued by the State in the area of elementary education than in any other area. Special education accounted for the second largest group, and health/physical education was third. The fourth highest area was school administration. The next four areas, according to number of certificates issued were social studies, counseling, language arts, and

TABLE XII

SUPPLY OF TEACHERS BY SUBJECT AREA

| Type of Certificate Issued | Number of Certificates Issued* | | |
|---|---|---|---|
| | Standard | Provisional | Total |
| Administration | 134 | 230 | 364 |
| Counselor | 106 | 159 | 265 |
| Librarian | 49 | 18 | 67 |
| Psychologist | 21 | 0 | 21 |
| Psychometrist | 56 | 16 | 72 |
| Nurse | 2 | 0 | 2 |
| Elementary Education | 1139 | 201 | 1340 |
| Health/Physical Education | 396 | 34 | 430 |
| Art | 80 | 12 | 92 |
| Music | 125 | 15 | 140 |
| Language Arts | 178 | 66 | 244 |
| Social Studies | 207 | 79 | 286 |
| Science | 128 | 48 | 176 |
| Math | 81 | 28 | 109 |
| Foreign Language | 35 | 10 | 45 |
| Home Economics | 191 | 8 | 199 |
| Agriculture | 66 | 0 | 66 |
| Industrial Arts | 57 | 8 | 65 |
| Business Education | 113 | 17 | 130 |
| Bookkeeping/Clerical | 28 | 4 | 32 |
| Speech/Theatre | 56 | 8 | 64 |
| Journalism | 17 | 5 | 22 |
| Early Childhood Education | 90 | 4 | 94 |
| Driver/Safety Education | 40 | 40 | 80 |
| Special Education | 621 | 157 | 778 |
| Distributive Education | 17 | 4 | 21 |
| Vocational/Technical Education | 24 | 1 | 25 |
| Trade and Industrial Education | 16 | 12 | 28 |
| Vocational Business/Office Education | 38 | 0 | 38 |
| Reading Specialist | 189 | 44 | 233 |
| Audio-Visual Specialist | 26 | 10 | 36 |
| Deaf Education | 2 | 0 | 2 |
| Speech Pathology | 5 | 0 | 5 |
| Total | 4333 | 1238 | 5571 |

*Figures reflect recommended certification by 16 of the 20 teacher-training institutions

Source: Responses to questionnaire mailed to teacher-training institutions

reading specialists. Totals in the table included administration and other areas in which a previous certificate was probably already issued. The grand total includes standard and provisional certificates.

A more specific comparison of supply and demand of teachers is presented in Table XIII. The specific areas for which teachers were hired, as far as could be determined from the Personnel Reports, are compared to the number of teachers certificated by the State in those specific areas. Totals of those certificated include both provisional and standard certificates.

According to information in Table XIII the only areas in which teachers were being produced at a much faster rate than they were being hired was vocational home economics (general home economics certificates were also included in this number), other vocational, counselor, and psychologist. Vocational agriculture and special education were the only areas covered by the Personnel Reports in which more jobs were available than the number of new teachers prepared in that field. However, it should be remembered that not all of the positions available were filled by beginning teachers. In fact, only about 40 percent of the open jobs were filled by beginning teachers during 1978.

The demand for teachers in specific areas as demand related to numbers employed by the State in those specific areas is shown in Table XIV. The figures for the number of teachers employed by specific assignment were taken from the Annual Report of 1977-78 and give the number of full-time equivalency employees in each of the positions. The number hired in those areas are a part of the data of this study and reflect the number hired in the fall of 1978.

TABLE XIII

SUPPLY AND DEMAND IN SPECIFIED SUBJECTS*

| Area | Number Produced in Oklahoma | Number Hired in Oklahoma | Percentage of Total Hired |
|---|---|---|---|
| Elementary Teaching Principal | | 26 | .5 |
| Jr. High Teaching Principal | | 7 | .1 |
| High School Teaching Principal | | 21 | .4 |
| Asst. Elementary Teaching Principal | | 6 | .1 |
| Asst. Jr. High Teaching Principal | | 4 | .1 |
| Asst. Sr. High Teaching Principal | | 2 | .0 |
| Mid. School Asst. Teaching Principal | | 1 | .0 |
| Kindergarten Teacher | 94** | 130 | 2.3 |
| Nursery Schools | | 2 | .0 |
| Elementary Teacher | 1340 | 1899 | 33.0 |
| Middle School Teacher | | 281 | 4.9 |
| Jr. High Teacher | | 617 | 10.7 |
| High School Teacher | | 1478 | 25.7 |
| Vocational Agriculture Teacher | 66 | 80 | 1.4 |
| Vocational Home Economics Teacher | 199 | 51 | .9 |
| Other Vocational | 87 | 49 | .9 |
| Supervisor, Consultant, Director | | 29 | .5 |
| Counselor | 265 | 109 | 1.9 |
| Librarian | 67 | 62 | 1.1 |
| Nurse | 2 | 20 | .3 |
| Psychologist | 21 | 11 | .2 |
| Visiting Teacher | | 2 | .0 |
| Special Education Teacher | 778 | 851 | 14.8 |
| Adult Education | | 1 | .0 |
| Area Vo-Tech Schools Operated by District | 25 | 5 | .1 |

*In some general areas no attempt is made to equate numbers with an area of certification

**Early Childhood Education

As can be seen, new teachers were most likely to be found in the positions of assistant elementary teaching principal, assistant junior high teaching principal, nursery school teacher, psychologist, and

special education teacher. New teachers were least likely to be found in the positions of elementary teaching principal, junior high teaching principal, assistant senior high teaching principal, supervisor or consultant, television teacher, and visiting teacher.

TABLE XIV

DEMAND FOR TEACHERS IN SPECIFIC AREAS AS RELATED TO NUMBER EMPLOYED IN THOSE POSITIONS

| Position | Total Number of Employees 1977-78 | Number Newly Hired to Position for 1978-79* | Number Hired as Percent of Total Employees |
|---|---|---|---|
| Elementary Teaching Principal | 438 | 26 | 5.9 |
| Jr. High Teaching Principal | 97 | 7 | 7.2 |
| High School Teaching Principal | 219 | 21 | 10.0 |
| Asst. Elementary Teaching Prin. | 28 | 6 | 21.4 |
| Asst. Jr. High Teaching Prin. | 20 | 4 | 20.0 |
| Asst. Sr. High Teaching Prin. | 27 | 2 | 7.4 |
| Kindergarten Teacher | 935 | 130 | 13.9 |
| Nursery School Teacher | 6 | 2 | 33.0 |
| Elementary Teacher | 12,788 | 1899 | 14.8 |
| Jr. High Teacher** | 5,509 | 898 | 16.3 |
| High School Teacher | 7,587 | 1478 | 19.5 |
| High School Vo. Ag. Teacher | 443 | 80 | 18.0 |
| High School Vo. Home Ec. Teacher | 405 | 51 | 12.6 |
| High School Other Voc. Teacher | 476 | 49 | 10.3 |
| Supervisor-Consultant | 355 | 29 | 8.2 |
| Counselor | 912 | 109 | 12.0 |
| Librarian | 461 | 62 | 13.4 |
| Nurse | 146 | 20 | 13.7 |
| Census-Attendence Supervisor | 17 | 2 | 11.8 |
| Television Teacher | 3 | 0 | 0 |
| Psychologist | 35 | 11 | 31.4 |
| Visiting Teacher | 24 | 2 | 8.3 |
| Special Education Teacher | 2,681 | 851 | 31.7 |
| Area Vocational School Teacher | 26 | 5 | 19.2 |

*These figures reflect teacher turnover and additional positions added together.

**Includes middle school figures.

Table XV deals with supply and demand of teachers in areas not recorded specifically on the Personnel Reports. The number of teachers hired in these specific areas is based on an examination of the teaching certificates of 10 percent of all new teachers for the year.

TABLE XV

SUPPLY AND DEMAND OF BEGINNING TEACHERS IN SPECIFIC SUBJECT AREAS

| Subject Area | Estimated Number of Teachers Hired With This Certificate* | Estimate of Additional Teachers Teaching as Second Subject** | Number of Teachers Certificated in Area | Estimate of Beginning Teachers Hired for These Positions*** |
|---|---|---|---|---|
| Health/P.E. | 550 | 100 | 430 | 220 |
| Art | 100 | 10 | 92 | 40 |
| Music | 270 | 10 | 140 | 108 |
| Language Arts | 410 | 40 | 244 | 164 |
| Social Studies | 380 | 40 | 286 | 152 |
| Science | 280 | 30 | 176 | 112 |
| Math | 290 | 30 | 109 | 116 |
| Foreign Language | 40 | 0 | 45 | 16 |
| Journalism | 10 | 0 | 22 | 4 |
| Industrial Arts | 120 | 0 | 65 | 48 |
| Business Education | 140 | 20 | 130 | 56 |
| Bookkeeping | 30 | 10 | 130 | 12 |
| Speech/Drama | 40 | 0 | 64 | 16 |

*Based on ten percent sample

**Based on new teachers hired who were certificated in more than one area

***Based on the overall average of 40 percent of the new teachers hired for 1978 being beginning teachers

An examination of Table XV shows that in almost every subject area presented more teachers were produced than were estimated to be hired. Areas in which approximately 50 percent or fewer received jobs were health/physical education, art, social studies, foreign language, journalism, business education, bookkeeping, and speech and drama.

Another way of examining the relationship of supply to demand in specific subject areas is to compare the number of people certificated in each area to the number of vacancies in those areas reported to the Oklahoma State University Placement Office. Since the reporting is only for a three-month period, actual numbers are not as valuable as the rank indicating prevalence of jobs. It should be noted that the Placement Officials stress the fact that a large percentage of these job listings is for a combination of two teaching fields. Consequently, teachers are encouraged to have a second or minor teaching field. Table XVI shows the comparison in strength of supply and demand in specific subject areas. This data indicates an apparent shortage of industrial arts teachers was indicated in the State, an apparent shortage of math teachers, and a possible shortage in science and language arts. Oversupplies of physical education teachers and social studies teachers were indicated.

In conclusion, it was difficult to place actual figures on supply and demand in specific subject areas, but an oversupply of teachers was still being produced in physical education and social studies, while math, science, industrial arts, language arts, and vocational agriculture seemed to be the subjects with the greatest shortage.

TABLE XVI

A COMPARISON OF CERTIFICATION FIELDS AND REPORTED VACANCIES

| Field | Number Certificated | Rank | Vacancies Reported | Rank |
|---|---|---|---|---|
| Art | 92 | 8 | 107 | 9 |
| Business Education | 130 | 6 | 111 | 8 |
| Foreign Languages | 45 | 10 | 88 | 10 |
| Industrial Arts | 65 | 9 | 238 | 4 |
| Language Arts | 244 | 3 | 499 | 1 |
| Math | 109 | 7 | 443 | 2 |
| Physical Education | 430 | 1 | 185 | 6 |
| Reading | 233 | 4 | 178 | 7 |
| Science | 176 | 5 | 271 | 3 |
| Social Studies | 286 | 2 | 205 | 5 |

Source: "Report of Activities and Services." Annual Report, October 1, 1977 to September 30, 1978. Stillwater, Oklahoma: University Placement Service, Oklahoma State University, 1978.

## Reasons That Positions Were Open in Oklahoma

The 14 percent turnover rate among teachers in Oklahoma seemed quite high in comparison to the turnover rate throughout the United States. Furthermore, reasons expressed for leaving teaching positions were often vague. The State Department of Education asked in its Personnel Report for a reason concerning every teacher who was employed the previous year but did not return. The system had three types of weaknesses. First,

the list was limited to eight reasons, two of which ("no reason given" or "other reasons") revealed very little. The second weakness was the fact that, even if a teacher gave a reason for leaving--such as health or other employment--the response given may not have revealed the real problem. For instance, the question of why the teacher sought other employment was seldom revealed. The third weakness was that the responses were supplied by administrators, not teachers. Nevertheless, despite weaknesses in the data source, there was some information which could be gained by examining this section on the Personnel Report. Indicated in Table XVII are the reasons appearing on the Personnel Report and the number of teachers using the reason for terminating a job.

The total number of 4855 appearing in Table XVII reflects the number of jobs vacated in 1978. Of this 4855, a total of 311, or six percent, were not filled. Although the most used statement was "other reasons," the second most reported reason was to take another teaching job in the State. This is notable for two reasons. One, a very large number of teachers were changing from one position to another similar position somewhere else in the State. Two, as far as true openings in the State were concerned, there were at least 1325 openings--probably more--that were not really available to anyone currently not employed as a teacher in Oklahoma; Oklahoma teachers were, in a sense, just trading jobs with one another (see third item in Table XVII). It can probably be assumed that the number was even larger than the 1325 reported, since some teachers may not have revealed their plans to teach elsewhere when they resigned.

The statistics change slightly when examined in light of positions available or open. First, 311 of the jobs listed in Table XVII were not

filled--many districts were decreasing the size of their staff and not replacing all teachers leaving. Nevertheless, even more districts were increasing the size of their staff and hiring additional teachers. In fact, 1205 new positions were created. The new positions which opened up (1205) compared to positions not filled (311) leaves a net increase in teachers in the State of 894. Therefore, 21 percent of the jobs which were open were new positions. A statistical comparison can be seen in Table XVIII.

TABLE XVII

REASONS TEACHERS LEFT JOBS IN 1978

| Reason | Number of Teachers Using This Reason | Percentage of Total | Rank of Reason |
|---|---|---|---|
| No reason given | 523 | 11 | 5 |
| Retiring | 545 | 11 | 4 |
| Teaching at another school in state | 1325 | 27 | 2 |
| Teaching out of state | 249 | 5 | 6 |
| Other employment | 575 | 12 | 3 |
| Health | 155 | 3 | 7 |
| Marriage | 86 | 2 | 8 |
| Other reasons | 1378 | 28 | 1 |
| Deceased | 19 | 0 | 9 |
| Total | 4855 | | |

TABLE XVIII

REASONS TEACHING POSITIONS WERE OPEN IN 1978

| Reason | Number of Jobs Open for This Reason | Percentage of Total Openings | Rank of Reason |
|---|---|---|---|
| No reason given | 497 | 8.6 | 5 |
| Retiring | 496 | 8.6 | 6 |
| Teaching at another school in state | 1263 | 22.0 | 2 |
| Teaching out of state | 240 | 4.2 | 7 |
| Other employment | 544 | 9.5 | 4 |
| Health | 135 | 2.3 | 8 |
| Marriage | 84 | 1.5 | 9 |
| Other Reasons | 1269 | 22.1 | 1 |
| Deceased | 16 | .3 | 10 |
| New Position | 1205 | 21.0 | 3 |

## Demographic Analysis of New Teachers of Oklahoma

The profile of a new teacher in Oklahoma during the fall of 1978, as described by the mode in each category, was a 23-year-old white female with no teaching experience and with a bachelor's degree from Northeastern State University. She was certificated in elementary education and was hired as an elementary teacher to teach somewhere in Oklahoma county.

The typical new teacher, as described by the median in each category, was a 27-year-old white female with 1.7 years of teaching experience--experience gained in another Oklahoma school. She had a bachelor's degree from Northeastern. A more complete analysis of these descriptive items is given in the tables which follow.

Information concerned with the race of the new employees is contained in Table XIX. It can be noted that 95 percent of the teachers who were hired in 1978 were Caucasian. Even though the Oklahoma City School District's hiring policy includes a quota system whereby approximately 30 percent of their teachers are Blacks, that factor was not enough to raise the overall average appreciably. This hiring practice--hiring only five percent minorities--is not necessarily a reflection of discrimination in hiring practices. The question of the number of qualified minority applicants is not answered in this study. It is possible that hiring practices reflect the tendency of other school districts revealed by a study of the literature--hiring a higher percentage of minorities that apply than Caucasians.

In regard to the sex of the new teachers hired, the Personnel Reports revealed that 71 percent of those hired were female, and 29 percent were male. This number parallels very closely the demographic data regarding sex of those certificated in 1977 and 1978, as reported by the State Department of Education, when 70 percent female and 30 percent males were certificated. If the administrators hired during the year of the study had been included in the figures, the percentage of males who were hired would have been increased noticeably. As Seifert found

in his study of 1976, administrators hired in Oklahoma for that year were almost entirely male.[1]

TABLE XIX

RACE OF NEW TEACHERS

| Race | Frequency | Percentage of Total |
|---|---|---|
| Black | 158 | 2.7 |
| Indian | 103 | 1.8 |
| Spanish American | 12 | .2 |
| Oriental | 16 | .3 |
| Caucasian and others | 5459 | 95.0 |

Figure 3, a histogram, is an analysis of the age of new teachers. The youngest teachers hired were only 21 years of age; approximately one percent of all teachers hired were of this age. Five hundred ten of the new teachers hired were 22 years old; 550 were 23 years old; 490 were 24 years old; and 430 were 25 years old. The number hired in each age group decreased rather steadily with each additional year of age. Many teachers in their forties and fifties were hired, indicating that there was apparently no reluctance to hire older teachers. There were even approximately fifty teachers hired who were more than 60 years of age.

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[1]Seifert.

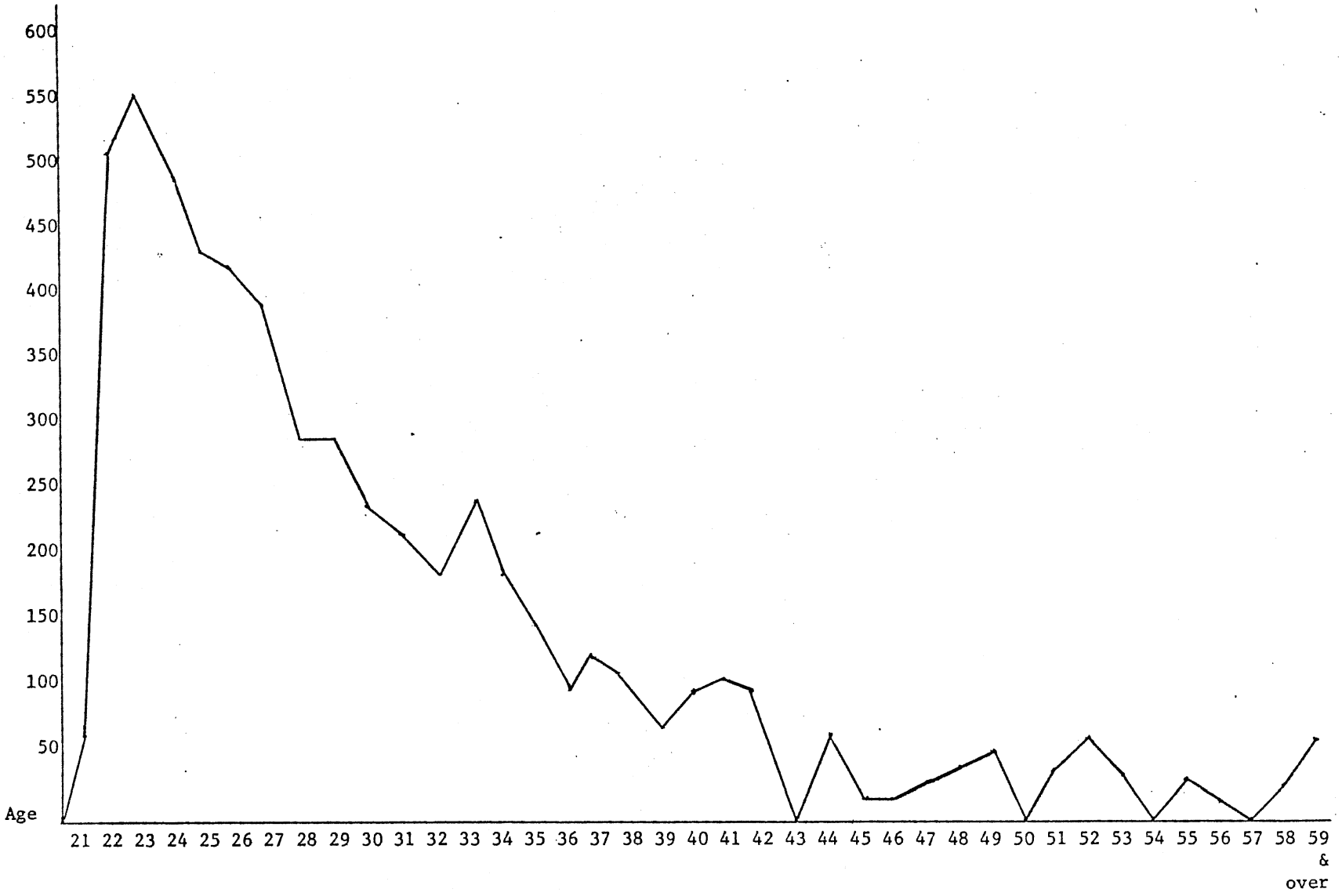


Figure 3. Age of New Teachers Hired in Oklahoma for the 1978-79 School Year

Another way of analyzing the age of the new teachers hired in 1978 is presented in Table XX. It shows that more than one-third of the new teachers (36 percent) were 25 years old or younger. In the next five-year age bracket, ages 25 to 30, there were 28 percent of the new teachers, resulting in a cumulative total of 64 percent of the new teachers being 30 or younger. Each five-year group thereafter included approximately half as many teachers as the previous group. Those teachers who were 50 years of age or older were included in one group and represented four percent of the new teachers.

TABLE XX

CLASSIFICATION OF NEW TEACHERS
BY AGE GROUP

| Age Group | Number of New Teachers* | Percentage of Total |
|---|---|---|
| 25 and under | 2040 | 36 |
| 26-30 | 1590 | 28 |
| 31-35 | 940 | 17 |
| 36-40 | 470 | 8 |
| 41-45 | 250 | 4 |
| 46-50 | 100 | 2 |
| 50 and over | 220 | 4 |

The fact that most new teachers held only a bachelor's degree is not surprising. However, a large enough number had a master's degree or a doctorate to indicate that there was apparently no reluctance to hire the person with an advanced degree. There were 4492 teachers hired with a bachelor's degree, as compared with 1195 hired with a master's degree. As indicated in Table XXI, this represented 78.1 percent and 20.8 percent of the population respectively. One percent of the population held less than a bachelor's degree, held a doctorate, or had no degree listed on the Personnel Report.

TABLE XXI

DEGREE HELD BY NEW TEACHERS

| Degree | Number Holding Degree | Percentage of Total |
|---|---|---|
| 70 hours and under | 30 | .5 |
| Over 70 hours but under bachelor | 3 | .1 |
| Bachelor's | 4492 | 78.1 |
| Master's | 1195 | 20.8 |
| Doctor's | 21 | .4 |
| Not given | 8 | .1 |

In order to determine the type of teaching certificate held by the new teachers, the ten-percent sample mentioned above was utilized. The

certificate of each of the ten-percent sample was examined in order to determine if the teacher held a standard, provisional, or temporary certificate. Provisional certificates indicate that some required course or courses have not yet been taken by the applicant, but the applicant has been recommended for certification by his teacher-training institution. The certificate is good for three years and is nonrenewable.

A temporary certificate is also known as an emergency certificate, and teachers holding this certificate are not necessarily recommended by their teacher-training institution. A superintendent, with approval by the State Board of Education, can hire an individual who has not met the requirements for certification by signing a statement that the applicant is the most qualified person available for the job. Temporary certificates are renewable on a yearly basis. The holder of this certificate must complete eight hours of college credit in his teaching field in order to have the certificate renewed each year, but it is possible, through the temporary certificate system, that a teacher can receive certification without a student-teaching experience. Although some teacher-training institutions consider the temporary certificate less than adequate, many administrators view it as the only available means of completing their teaching staff, either because the school district cannot attract enough teachers or because enough teachers are simply not available for some subjects. The number of new teachers hired with temporary certificates is presented in Table XXII.

More than 300 new teachers held a temporary certificate in 1978-79, and almost half of those held no other certificate. Some of those hired with a temporary certificate represented teachers in areas of shortages, i.e., vocational agriculture or math, but many were apparently used to

certificate teachers in a second area so that a teacher could teach in two areas instead of one. Most prevalent was a temporary certificate in social studies for an individual who held a standard certificate in health/physical education.[2]

The previous experience of new teachers was examined by looking at different kinds of experience separately. The findings were reported in Table XXIII. Many new teachers had taught previously in the same district, according to the data available. It could not be determined by this study how many years had passed since they had taught in the district. Furthermore, it could not be determined if a teacher had held any position in teaching during the year previous to the one studied, unless, of course, the teacher had no previous experience. Teachers who had experience in both in-state and out-of-state schools may have come to the new district directly from an in-state school, directly from an out-of-state school, or may have been temporarily without a teaching job. Information obtained indicated only how much experience had been accumulated, not the order in which it had been accumulated. Another limitation of the findings was that many school districts reported only the five years for which salary credit was given in reporting years of teaching out-of-state or years of military service. Thus, actual figures may be somewhat higher than those available for this study.

As indicated in Table XXIII, approximately 40 percent of all teachers hired during 1978 had no experience, and another nine percent had

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[2]Telephone interview with Bill Siler, Administrator, Teacher Certification Section, State Department of Education, May 6, 1980, and personal interviews with Ken King, Associate Director of Teacher Education and Certification, Oklahoma State University, spring, 1979-spring, 1980.

only one year of experience. Nevertheless, five percent of those hired had twelve or more years of teaching experience.

TABLE XXII

NEW TEACHERS HOLDING A TEMPORARY CERTIFICATE*

| Teaching Fields | Number Holding No Other Certificate | Teachers Holding Standard Certificate in Area Other Than One Being Taught | Teachers Teaching in More Than One Area, With Temporary Certificate for One of These** |
|---|---|---|---|
| Elementary Education | 30 | 50*** | |
| Special Education | 50 | 30 | 50**** |
| Math | 10 | | |
| Vocational Agriculture | 10 | | 10 |
| Music | 10 | | |
| Math/Physical Education | 10 | | |
| Other Vocational | | 10 | |
| Home Economics General | | 10 | |
| Home Economics Vocational | | 10 | |
| Language Arts | | 10 | 10 |
| Librarian | | | 10 |
| Social Studies | | | 30 |
| Driver's Education | 10 | | 10 |
| Nurse | 10 | | 10 |

*Based on a ten-percent sample of all new teachers of 1978-79

**Based on number of teachers hired with a standard certificate in one field and a temporary certificate in another

***Most were hired in dependent school districts

****Teachers who held standard certificates in some special education area and temporary certificates in some other area

TABLE XXIII

PREVIOUS EXPERIENCE OF NEW TEACHERS

| Years Experience | Same Dist. | % | Other Okla. | % | Out-of State | % | Mili-tary | % | Total | % |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 5275 | 91.8 | 3300 | 57.4 | 4541 | 79.0 | 5356 | 93.2 | 2292 | 39.9 |
| 1 | 129 | 2.2 | 524 | 7.1 | 285 | 5.0 | 31 | .5 | 517 | 9.0 |
| 2 | 74 | 1.3 | 439 | 7.6 | 212 | 3.7 | 141 | 2.5 | 476 | 8.3 |
| 3 | 62 | 1.1 | 310 | 5.4 | 177 | 3.1 | 86 | 1.5 | 427 | 7.4 |
| 4 | 57 | 1.0 | 284 | 4.9 | 113 | 2.0 | 81 | 1.4 | 407 | 7.1 |
| 5 | 52 | .9 | 200 | 3.5 | 346 | 6.0 | 53 | .9 | 486 | 8.5 |
| 6 | 24 | .4 | 151 | 2.6 | 16 | .3 | | | 241 | 4.2 |
| 7 | 25 | .4 | 125 | 2.2 | 14 | .2 | | | 196 | 3.4 |
| 8 | 13 | .2 | 110 | 1.9 | 8 | .1 | | | 148 | 2.6 |
| 9 | 5 | .1 | 69 | 1.2 | 9 | .2 | 1 | .0 | 134 | 2.3 |
| 10 | 5 | .1 | 37 | .6 | 7 | .1 | | | 79 | 1.4 |
| 11 | 4 | .1 | 37 | .6 | 4 | .1 | | | 58 | 1.0 |
| 12 or more | 24 | .4 | 165 | 2.8 | 15 | .3 | | | 288 | 5.0 |

There were four areas listed on the Personnel Report in which teachers could receive credit for previous experience. Those areas were as follows:

(1) experience in the same district

(2) experience in another Oklahoma school district

(3) out-of-state experience, and

(4) military experience.

It was possible that a teacher was given credit for experience in more than one of these areas, although salary credit was often limited to five years in military and out-of-state experience. Therefore, data regarding those having experience in each of these areas totalled more than 60 percent, the percentage of the teachers having some previous experience, since many of them did have experience in two, three, or four areas. Forty-three percent of those hired had some experience at another school in the State; 21 percent had some experience in another state; 8 percent had previous experience in the district in which they were hired for 1978, and 7 percent had some military experience. The median figures for years of experience in each of the areas were 1.7 years total experience.

## A Comparison of Independent and Dependent Districts

Of the 622 school districts in Oklahoma, 457 of them were independent districts, and 165 were dependent districts. Dependent school districts did not have a high school and were under the jurisdiction of a county superintendent. Most were much smaller than the average independent school district. An analysis of the teachers hired for the two types of districts indicated that there was a difference in the type of teacher hired. Table XXIV is a comparison of these teacher characteristics.

As can be seen, teachers hired for dependent school districts were younger and less experienced than their counterparts in independent school districts. Independent school districts hired almost ten percent more experienced teachers than did the dependent schools.

Dependent school districts hired more women, more Indians, and fewer Blacks. The fact that a much higher percentage of teachers in dependent school districts were female is probably related to the fact that more females are hired in elementary positions as compared to secondary positions.

TABLE XXIV

A COMPARISON OF NEW TEACHERS IN DEPENDENT AND INDEPENDENT DISTRICTS

| | Dependent District | Independent District |
|---|---|---|
| Median age | 25 | 28 |
| Median years teaching experience | .7 | 1.7 |
| Percentage with master's degree (or above) | 16.4 | 21.5 |
| Percentage with out-of-state experience | 15.4 | 21.3 |
| Percentage with experience in other Oklahoma schools | 41.2 | 42.7 |
| Percentage with teaching experience | 51.4 | 60.7 |
| Race | | |
| Black | 1.5 | 2.8 |
| Indian | 2.2 | 1.8 |
| Spanish American | .6 | .2 |
| Oriental | .6 | .3 |
| Caucasian & other | 94.8 | 95.8 |
| Sex | | |
| Men | 22.5 | 29.5 |
| Women | 77.5 | 70.5 |

## A Comparison of New Experienced and New Inexperienced Teachers

On the average, when school districts within the State hired new employees for 1978-79, 40 percent of those hired were beginning teachers, and 60 percent were experienced teachers. By examining the new hirees of each county, it can be seen that the percentage of experienced teachers hired ranged from 43 percent in Texas County to 89 percent in Greer County, with only nine counties hiring less than 50 percent experienced teachers. Data concerning each county are found in Table XXV.

Pictoral data concerning counties in which 50 percent or less of the new teachers were experienced are shown in Figure 4. The three counties hiring 50 percent experienced and the nine counties hiring less than 50 percent experienced teachers are shown on the figure. Although the counties are somewhat scattered throughout the State, the four counties along the panhandle are all included in those counties which tended to hire less experienced teachers.

A detailed analysis of the teaching areas for which new teachers were hired in 1978 is given in Table XXVI. It includes a comparison of inexperienced and experienced teachers hired in each area. Most, but not all, of the individuals hired to teaching principalships were experienced. The only areas in which more inexperienced teachers than experienced teachers were hired were assistant elementary teaching principal, vocational agriculture teacher, vocational home economics teacher, nurse, and vocational-technical teacher.

TABLE XXV

NUMBER OF NEW INEXPERIENCED AND EXPERIENCED TEACHERS BY COUNTY*

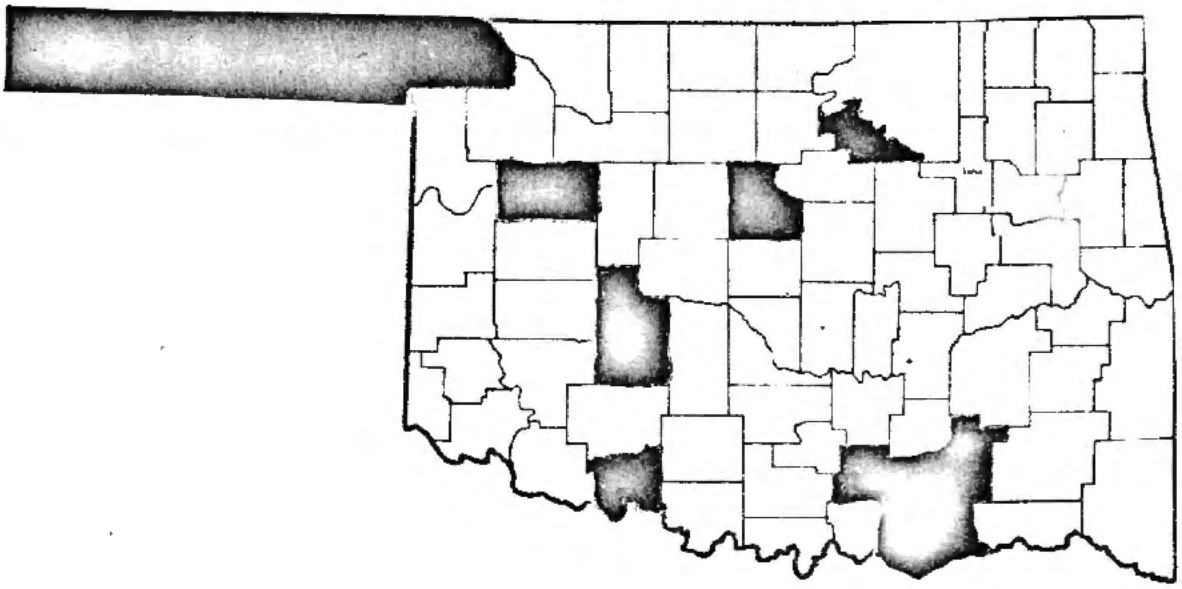
| County | Number of New Inexperienced Teachers Hired | Number of New Experienced Teachers Hired | Percentage of New Teachers With Previous Experience |
|---|---|---|---|
| Adair | 19 | 34 | 64 |
| Alfalfa | 5 | 20 | 80 |
| Atoka | 10 | 10 | 50 |
| Beaver** | 7 | 6 | 46 |
| Beckham | 21 | 42 | 67 |
| Blaine | 24 | 27 | 53 |
| Bryan** | 33 | 28 | 46 |
| Caddo** | 49 | 46 | 48 |
| Canadian | 53 | 88 | 62 |
| Carter | 48 | 56 | 54 |
| Cherokee | 15 | 25 | 63 |
| Choctaw | 18 | 20 | 53 |
| Cimarron** | 9 | 5 | 36 |
| Cleveland | 112 | 184 | 62 |
| Coal | 9 | 10 | 53 |
| Comanche | 59 | 93 | 61 |
| Cotton** | 13 | 11 | 46 |
| Craig | 14 | 31 | 69 |
| Creek | 50 | 68 | 58 |
| Custer | 20 | 32 | 62 |
| Delaware | 20 | 36 | 64 |
| Dewey** | 14 | 11 | 44 |
| Ellis | 9 | 13 | 59 |
| Garfield | 61 | 71 | 54 |
| Garvin | 17 | 19 | 53 |
| Grady | 41 | 48 | 54 |
| Grant | 11 | 14 | 56 |
| Greer | 2 | 16 | 89 |
| Harmon | 4 | 6 | 60 |
| Harper** | 6 | 5 | 45 |
| Haskell | 9 | 19 | 68 |
| Hughes | 14 | 26 | 65 |
| Jackson | 21 | 33 | 61 |
| Jefferson | 8 | 17 | 68 |
| Johnston | 5 | 5 | 50 |
| Kay | 23 | 44 | 66 |
| Kingfisher | 10 | 35 | 78 |
| Kiowa | 17 | 23 | 58 |
| Latimer | 7 | 12 | 63 |
| Leflore | 20 | 35 | 64 |

TABLE XXV (Continued)

| County | Number of New Inexperienced Teachers Hired | Number of New Experienced Teachers Hired | Percentage of New Teachers With Previous Experience |
|---|---|---|---|
| Lincoln | 26 | 40 | 61 |
| Logan** | 23 | 20 | 47 |
| Love | 3 | 7 | 70 |
| Major | 7 | 16 | 70 |
| Marshall | 11 | 15 | 58 |
| Mayes | 24 | 28 | 54 |
| McClain | 20 | 52 | 72 |
| McCurtain | 22 | 33 | 60 |
| McIntosh | 12 | 20 | 63 |
| Murray | 8 | 9 | 53 |
| Muskogee | 56 | 78 | 58 |
| Noble | 13 | 28 | 68 |
| Nowata | 14 | 23 | 62 |
| Okfuskee | 17 | 28 | 62 |
| Oklahoma | 299 | 414 | 58 |
| Okmulgee | 29 | 48 | 62 |
| Osage | 18 | 26 | 59 |
| Ottawa | 20 | 49 | 71 |
| Pawnee | 14 | 14 | 50 |
| Payne | 32 | 62 | 66 |
| Pittsburg | 25 | 54 | 68 |
| Pontotoc | 19 | 29 | 60 |
| Pottawatomie | 50 | 56 | 53 |
| Pushmataha | 6 | 18 | 75 |
| Roger Mills | 2 | 7 | 78 |
| Rogers | 42 | 50 | 54 |
| Seminole | 27 | 48 | 64 |
| Sequoyah | 22 | 35 | 61 |
| Stephens | 27 | 48 | 64 |
| Texas** | 21 | 16 | 43 |
| Tillman | 13 | 16 | 55 |
| Tulsa | 215 | 433 | 67 |
| Wagoner | 23 | 37 | 62 |
| Washington | 36 | 51 | 59 |
| Washita | 8 | 21 | 72 |
| Woods | 10 | 12 | 55 |
| Woodward | 12 | 22 | 65 |
| Dependent Schools | 157 | 167 | 52 |

*County totals include independent school districts only. Dependent schools are listed separately at the bottom of the table.

**These counties hired more inexperienced teachers than experienced teachers as new teachers for 1978-79.



Counties include: Cimarron, Texas, Beaver, Harper, Dewey, Cotton, Bryan, Johnston, Atoka, Pawnee, Logan, and Caddo

Figure 4. Counties in Which 50 Percent or More of New Teachers Were Inexperienced

One factor revealed in this analysis was that, even though there is an oversupply of elementary teachers, a beginning teacher was more likely to get a job in that field than any other, and a larger percentage of the new inexperienced teachers were hired as elementary teachers than the percentage of experienced teachers hired for that position. Specifically, 36.3 percent of the new inexperienced teachers and 30.9 percent of the new experienced teachers were hired as elementary teachers. In contrast, 22.6 percent of the inexperienced teachers were hired as secondary teachers, and 27.8 percent of the experienced teachers were hired for that position.

TABLE XXVI

NUMBER OF NEW INEXPERIENCED AND EXPERIENCED TEACHERS BY POSITION

| Position | Number of New Inexperienced Teachers Hired | Percentage of Total Inexperienced Teachers | Number of New Experienced Teachers Hired | Percentage of Total Experienced Teachers |
|---|---|---|---|---|
| Elem. Teaching Principal | 1 | .0 | 25 | .7 |
| Jr. High Teaching Principal | 1 | .0 | 6 | .2 |
| H. S. Teaching Principal | 1 | .0 | 20 | .6 |
| Asst. Elem. Teaching Principal | 4 | .2 | 2 | .1 |
| Asst. Jr. High Teaching Prin. | 1 | .0 | 3 | .1 |
| Asst. Sr. High Teaching Prin. | 1 | .0 | 1 | .0 |
| Kindergarten Teacher | 55 | 2.4 | 74 | 2.1 |
| Elementary Teacher | 831 | 36.3 | 1066 | 30.9 |
| Middle School Teacher | 111 | 4.8 | 170 | 4.9 |
| Jr. High Teacher | 237 | 10.3 | 380 | 11.0 |
| High School Teacher | 518 | 22.6 | 959 | 27.8 |
| Vocational Agric. Teacher | 42 | 1.8 | 38 | 1.1 |
| Vocational Home Econ. Teacher | 30 | 1.3 | 21 | .6 |
| Other Vocational Teacher | 24 | 1.0 | 25 | .7 |
| Supervisor, Consultant or Director | 5 | .2 | 24 | .7 |
| Counselor | 11 | .5 | 98 | 2.8 |
| Librarian | 26 | 1.1 | 36 | 1.0 |
| Nurse | 16 | .7 | 4 | .1 |
| Psychologist | 2 | .1 | 9 | .3 |
| Visiting Teacher | 1 | .0 | 1 | .0 |
| Special Education Teacher | 366 | 16.0 | 485 | 14.0 |
| Vo. Tec. Teacher District Employed | 4 | .2 | 1 | .0 |

Differences between experienced and inexperienced teachers according to selected characteristics is shown in Table XXVII. Very little difference is revealed concerning the race of the beginning and the experienced teachers, but when sex of the new teachers is examined, differences are found. Only 24 percent of beginning teachers were male, while 32.6 percent of new experienced teachers were male.

In examining the degrees held by each of these two groups, less than six percent of new inexperienced teachers held a master's degree, but 30.6 percent of the experienced teachers had such a degree. One beginning teacher held a doctor's degree, and 20 new experienced teachers held such a degree.

In reference to the preparatory college of the new teachers, only 240 inexperienced teachers received their training out of state, while 656 of the experienced teachers did. Out-of-state preparation accounted for only 10.5 percent of the new inexperienced teachers, but accounted for 19.0 percent of the experienced teachers hired. Notable differences in in-state training in comparing the two groups can be seen in that Oklahoma State University training accounted for 14.8 percent of beginning teachers, but only 10.7 percent of the experienced teachers. Panhandle State University supplied 1.1 percent of the inexperienced teachers and only .6 percent of the experienced teachers. Teacher training institutions which supplied more inexperienced teachers than experienced teachers included Panhandle State University, Langston University, Oklahoma Baptist University, Oklahoma Christian College and Cameron University.

TABLE XXVII

DIFFERENCES BETWEEN NEW INEXPERIENCED AND NEW EXPERIENCED TEACHERS

| Teacher Characteristic | New Inexperienced Teachers | Percent of Total Inexperienced | New Experienced Teachers | Percent of Total Experienced |
|---|---|---|---|---|
| Race | | | | |
| Black | 74 | 3.2 | 84 | 2.4 |
| Indian | 39 | 1.7 | 64 | 1.9 |
| Spanish American | 6 | .3 | 6 | .2 |
| Oriental | 6 | .3 | 10 | .3 |
| Caucasian and others | 2165 | 94.5 | 3290 | 95.3 |
| Sex | | | | |
| Male | 549 | 24.0 | 1126 | 32.6 |
| Female | 1741 | 76.0 | 2328 | 67.4 |
| Degree | | | | |
| Bachelor's | 2128 | 92.9 | 2362 | 68.4 |
| Master's | 136 | 5.9 | 1057 | 30.6 |
| Doctor's | 1 | .0 | 20 | .6 |
| Preparatory College | | | | |
| Out-of-state Inst. | 240 | 10.5 | 656 | 19.0 |
| Univ. of Okla. | 229 | 10.0 | 283 | 8.2 |
| Okla. State Univ. | 340 | 14.8 | 371 | 10.7 |
| Central State Univ. | 262 | 11.4 | 409 | 11.8 |
| East Central State Univ. | 115 | 5.0 | 219 | 6.3 |
| Northwestern State Univ. | 61 | 2.7 | 100 | 2.9 |
| Northeastern State Univ. | 303 | 13.2 | 487 | 14.1 |
| Southeastern State Univ. | 164 | 7.2 | 221 | 6.4 |
| Southwestern State Univ. | 170 | 7.4 | 308 | 8.9 |
| Panhandle Univ. | 25 | 1.1 | 19 | .6 |
| Univ. of Science and Arts | 35 | 1.5 | 53 | 1.5 |
| Langston Univ. | 19 | .8 | 11 | .3 |
| Bethany Christian Col. | 11 | .5 | 24 | .7 |
| Okla. Baptist Univ. | 36 | 1.6 | 32 | .9 |
| Okla. City Univ. | 22 | 1.0 | 41 | 1.2 |
| Phillips Univ. | 33 | 1.4 | 24 | .7 |
| Univ. of Tulsa | 75 | 3.3 | 94 | 2.7 |
| Okla. Christian Col. | 21 | .9 | 17 | .5 |
| Cameron Univ. | 65 | 2.8 | 55 | 1.6 |
| Oral Roberts Univ. | 6 | .3 | 21 | .6 |
| Wesleyan Col. | 6 | .3 | 0 | .0 |

## A Comparison of Previous Predictions and the Present Situation of Supply and Demand

In 1969, Hobbs wrote a dissertation entitled "A Study of Teacher Supply and Demand in Oklahoma." In it he made predictions as to the supply-demand situation in the school year 1977-78. His predictions were based on the present trends or predicted changes in trends. Although the present study concerns the year 1978-79 instead of 1977-78, it is interesting to look back at the predictions made by Hobbs and see if, indeed, they did come true. A further comparison is made of the situation at the time his dissertation was written and the situation of 1977 or 1978.

Hobbs predicted the future of the Oklahoma education situation based on what trends were in effect at the time of his study and changes in trends that he expected, based on available data. In general, he underestimated future enrollments, as can be seen in Table XXVII. He expected elementary school enrollment to decline from the 1967 figure of 313,000 to a 1977 figure of 252,000. In reality, 275,214 students were enrolled during that year, ten percent more than predicted. His prediction for secondary school enrollment was a slight decline of 2000. Actually, secondary enrollment increased by 16,000. The two figures combined resulted in an increase in total school enrollment of 6519 over the ten-year period instead of the projected decline of 40,000. Teacher turnover rate did decline, as Hobbs predicted, but declined only to 14 percent instead of 9 percent, as predicted. The number of teachers needed for staffing the schools of Oklahoma has increased beyond the projected figure of 30,500 to 35,510 in 1977.

TABLE XXVII

A REVIEW OF HOBBS' FINDINGS AND PREDICTIONS

| The Educational Item | Hobbs' Findings (The Situation in 1967) | Hobbs' Predictions (for 1977-78 School Year) | The Current Situation (1978-79 Unless Otherwise Indicated) |
|---|---|---|---|
| Average number of pupils per professional employee | 22.1 | 19 | 17.6 |
| First-grade enrollments | 56,000 | 46,500 | 51,926 (1977) |
| Elementary school enrollment | 313,000 | 252,000 | 275,214 (1977) |
| Secondary school enrollment | 278,000 | 276,000 | 294,244 (1977) |
| Total enrollment | 620,000 | 580,000 | 626,519 (1977) |
| Teacher turnover rate (comparing number of teachers who resigned with total number of teachers | 5645/27062= 21% | 9% | 4855/35510 = 14% (1978) |
| Percentage replaced by beginning teachers | 6.5% | | 6% |
| Number of professional employees | 27,979 | 30,500 | 35,510 (1977) |
| Number of teachers produced in Oklahoma for the year | | increase of 81% | number has decreased |
| Number of teachers needed each year to fill vacancies | | 6500 to 7000 annually | slightly less (5749 in 1978-79 school year) |
| Percentage of positions to be filled by experienced teachers | | 60% | 60% |

TABLE XXVII (Continued)

| The Educational Item | Hobbs' Findings (The Situation in 1967) | Hobbs' Predictions (for 1977-78 School Year) | The Current Situation (1978-79 Unless Otherwise Indicated) |
|---|---|---|---|
| Number of pupils | | Decrease by 40,000 | Increase by 6519 (1977) |
| Supply of elementary teachers produced in Oklahoma | 1400 to 1700 | 2600 to 3100 | 1200 to 1500 (1978) |
| New elementary teachers needed for the market | | 1000 to 1200 per year | 700-800 |
| Supply of secondary teachers produced | 2800 to 3000 | 4900 to 5400 | 2000 app. (1977 and 1978) |
| New secondary teachers needed | | 1200 to 1450 | 800 to 1200 |
| Special education teachers | 631 | number would double 1977-78 | number quadrupled to 2681 in |

The number of teachers produced yearly in Oklahoma was projected to increase 81 percent; in actuality the number has decreased. In short, Hobbs overstated projected supply and understated projected demand.

Hobbs interpreted the data available at the time of his study by precise, mathematical measures. His projections failed to materialize in some areas. The three areas he could not project accurately were (1) enrollment, (2) teacher production, and (3) changes in rates of teacher assimilation into the market.

Enrollment was not predicted accurately because of factors such as student migration into the State, which are almost impossible to predict. Also, teacher production rates are almost impossible to predict when there is no monitoring system in existence. Lack of a monitoring system was one of the main criticisms of Hobbs. He based his figures on production rates existing in a time of teacher shortage. Probably the teacher surplus situation which developed in the 1970's caused the rate of teacher production to drop, even though the decrease was slight.

In reference to changes in rates of teacher assimilation into the market, Hobbs expected teacher-turnover rate to decline due to the difficulty of getting another teaching position in a time of teacher surplus; the turnover rate declined very little. The reason so many teachers left jobs in 1977 and 1978 is beyond the scope of this study, but possible reasons suggested by the research of the literature are low salaries, difficulties encountered in working with administrators, students, and the community, and disillusion with teaching as a vocation. The pupil-teacher ratio, as predicted by Hobbs, was to drop to 19 to one in 1977; the observed drop was to 17.6 to one. Again, the

reason for the additional decline is not available in the data of this study. Probable reasons are changes in educational philosophy or failure to adjust teaching assignments to match declining enrollments. The percentage of teaching positions which would be filled by beginning teachers was accurately predicted by Hobbs to be 40 percent.

# CHAPTER V

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## Summary

One purpose of this research was to measure the supply and demand of Oklahoma public school teachers and to make comparisons of such data. The measurement of supply and demand was accomplished in both general terms and specific, subject-related areas. In analyzing the demand for teachers in the State, an additional analysis was conducted on the reasons for job openings. A second purpose of this study was to determine the characteristics of the new teachers being hired within the State. The results of such research should be of value to teacher-training institutions in their guidance of prospective teachers. It should be of value to the State Department of Education as an indication of the need for monitoring supply and demand. Finally, this inquiry should be of value to Oklahoma school administrators, providing them feedback concerning their hiring needs and practices of the immediate past.

A review of the literature concerning teacher supply and demand was presented in Chapter II. Information concerning national supply and demand of teachers reflected declining enrollments, declining demand for teachers, and resultant oversupply of teacher personnel. Data concerning declining enrollments and oversupply of teachers indicated that school enrollments peaked about 1970, but the teacher supply continued

to increase until 1973. In that year less than half the teachers seeking employment were able to get a teaching job. After 1973 the annual production rate of teachers declined but continued to add to the teacher labor reserve.

In Oklahoma, school enrollment had declined steadily from 1970 to 1974. Enrollment since that time had remained fairly stable, and the total number of teachers hired by the State increased each year, with the exception of a slight decline in 1972-73. The number of beginning teachers entering the labor pool in Oklahoma each year seemed to follow no pattern, with the number fluctuating between increase and decline.

The research methods utilized in this study to determine supply and demand were as follows:

(1) The supply of teachers in the State in 1978 was determined by gathering information from the teacher-training institutions of the State concerning individuals recommended by them for certification during the previous year.

(2) The demand for teachers was determined by examining the Personnel Report of each school district in the State to ascertain how many teachers were leaving their jobs, how many of those positions were filled by a new teachers, and how many additional jobs were available in the State.

(3) Supply and demand data was compared in terms of percentages.

(4) Demographic characteristics of new teachers were determined by examining the Personnel Reports of individual school districts and the teaching certificates of ten percent of the new teachers.

The findings were reported as percentages and measures of central tendency in Chapter IV in the form of tables and figures.

## Findings

The results of the study were categorized into five sections: (1) general information concerning supply and demand of Oklahoma teachers, (2) supply and demand for Oklahoma teachers in specific subject areas, (3) reasons teaching positions became available in Oklahoma, (4) characteristics of new Oklahoma teachers, and (5) comparisons between (a) dependent and independent school districts, (b) new inexperienced and new experienced teachers, and (c) previous predictions and the present supply-demand situation.

### General Information Concerning Supply and Demand of Oklahoma Teachers

This study included recipients of both standard and provisional teaching certificates as a part of the supply. Demand was examined in terms of actual number of jobs available in general and in specific areas, percentage of teachers being replaced in a specific area, and comparison of numbers of certificated teachers in a specific area to the number of those getting a job. In addition, supply and demand were examined in such demographic ways as production by teacher-training institutions, hires by counties, and sex of applicants.

The total number of teachers hired in the State for the 1977-78 school year was 35,510. Of that number, 4855 positions were vacated, resulting in a teacher turnover rate of 14 percent. New positions added to those vacated positions which were filled resulted in a total

5749 teaching positions open in the State for the fall of 1978, bringing the total number of teachers employed for the year to 36,551. Therefore, 16 percent of the teachers employed for the year were new teachers. This rate varied according to specific teaching fields; 14.8 percent of elementary teachers were new; 16.3 percent of junior high teachers, 19.5 percent of high school teachers, and 31.7 percent of special education teachers were new.

The supply for those positions was considered to be the graduates of the various teacher-training institutions in Oklahoma. The number of teachers leaving the State (those recommended for out-of-state certification) was slightly less than the 898 new Oklahoma teachers from out-of-state colleges. According to data supplied by Oklahoma colleges and universities, nearly 6000 new teachers with a standard or provisional certificate were prepared that year to enter the job market. The largest number was produced by Oklahoma State University, followed by Central State University and Northeastern State University. Of the teachers hired in 1978, however, only 40 percent came from the supply of new teachers being produced by Oklahoma and other states; 60 percent were experienced teachers. In other words, although Oklahoma prepared nearly 6000 additional teachers for the 1978-79 school year, only 2292 first-year teachers were employed by the State that year. The remaining teachers hired were experienced teachers who were changing jobs or reentering the job market after an absence. At least 1325 of the open positions were filled by individuals who were employed as teachers in Oklahoma the previous year and had accepted a job in a different school district. National figures indicated that 45 percent of the newly qualified teachers obtained a teaching position in 1976; less than 40 percent

of new Oklahoma teachers obtained a job teaching in Oklahoma in the fall of 1978.

The number of new teachers hired in each county ranged from nine in Roger Mills County to 713 in Oklahoma County; Oklahoma and Tulsa Counties together accounted for 25 percent of the jobs open in 1978. More than half the teachers hired in the State received their training from the five most productive teacher-training institutions as measured by the number of Oklahoma teacher certificates issued. Those universities, in order of productivity, were Oklahoma State University, Central State University, Northeastern State University, The University of Oklahoma, and Southwestern State University. Seventy percent of the newly certificated teachers were women, and 71 percent of the positions filled were filled by women.

## Supply and Demand for Oklahoma Teachers In Specific Subject Areas

Thirty-three percent of the new teachers in Oklahoma were hired to fill positions as elementary teachers, 25.7 percent were hired as high school teachers, and 14.8 percent were hired as special education teachers. The remaining new employees were hired as vocational teachers, teaching administrators, and other specialized teachers. The areas in which positions became available by the largest percentage of total employees in the area were special education teacher, psychologist, assistant teaching principal, and nursery school teacher (although only six nursery school positions existed in the State). In addition, the turnover rate for high school teachers was 19.5 percent, junior high was 16.3 percent and elementary was 14.8 percent, indicating that

the turnover rate was greater in upper grades than in lower grades. This would also indicate that the turnover rate might be sex-related, since men represent a higher percentage of the teachers hired for secondary positions.

In examining specific subject areas of teachers in secondary positions, it was found that those least likely to be hired based on the percentage of those certificated were teachers of health/physical education, art, social studies, foreign language, journalism, business education, bookkeeping, and speech and drama. Those most likely to be hired were math, industrial arts, and vocational agriculture teachers.

Most teaching vacancies listed by the Oklahoma State University Placement Office for 1978 were for language arts, followed closely by math. In third and fourth ranks were science and industrial arts. Although more positions were available in the areas listed above, during the matching time period for teacher certification, more teachers were prepared in the following four areas, listed in order of preponderance of certificates: physical education, social studies, language arts, and reading. This would indicate that there is little correlation between fields in which teachers become certificated and fields in which most vacancies occur.

Although more jobs were actually available in the State in special education than in any other specialized area, the percentage of those qualified in special education who obtained a job in Oklahoma was lower than in some other areas. Although this situation could be temporary, it might also reflect the beginning of an oversupply in this teaching field.

The shortage of science teachers reflected in job listings in the State was not so obvious when number of positions filled in science was compared to number of persons certificated. The logical conclusion was that many of the individuals obtaining a teaching certificate in science were choosing to find employment in some area other than teaching.

## Reasons Teaching Positions Became Available in Oklahoma

Based on information obtained from the Personnel Reports in the Teacher Personnel Section of the State Department of Education, only 19 positions were vacated because of a death, less than one percent of the total vacancies. Eleven percent of those leaving their jobs were retiring, 12 percent sought other employment, and 32 percent vacated a job to take another teaching job. A large 39 percent did not indicate a reason for their leaving. In addition to the jobs vacated for the above reasons, 1205 new positions became available in the State for the school year 1978-79.

## Characteristics of New Oklahoma Teachers

The typical new teacher hired during the fall of 1978 was a 23-year-old white female with no teaching experience. She held a bachelor's degree and a teaching certificate in elementary education.

In an analysis of the race of the new teachers, it was found that 2.7 percent of those hired were Black, 1.8 percent were Indian, .2 percent were Spanish American, .3 percent were Oriental, and 95.0 percent were Caucasian. As a result of an analysis of sex of the new teachers,

it was found that 71 percent of those hired were female, and 29 percent were male.

The age of the new teachers was determined from a ten percent sample. The youngest teacher hired was 21 years old, and the oldest was more than 60. The median age of new teachers was 27.

Approximately 78 percent of the new teachers held a bachelor's degree, 21 percent held a master's degree, .4 percent held a doctoral degree, and the remaining teachers held less than a bachelor's degree or else no information was available concerning their degrees.

Of the 5749 teachers hired, more than 300 held a temporary teaching certificate. This number indicated that for some reason the supply of teachers was not matching the demand. Whether the problem was (a) teachers (the supply) unwilling to go to where the jobs were (the demand), (b) teachers being mismatched in subject areas of the demand, or (c) administrators not putting forth enough effort to find the teacher with a standard or provisional certificate is beyond the scope of this study. However, further study of this problem would be valuable.

Of the new teachers hired, 40 percent had no previous teaching experience, 43 percent had experience in some other Oklahoma school district, 21 percent had teaching experience outside Oklahoma, 8 percent had previous experience in the same district in which they were hired, and 7 percent received teaching credit for their military service. The median years of teaching experience was 1.7 years.

## Comparisons Between Dependent and Independent School Districts

In a comparison of the teachers hired by the independent school districts and those hired by the dependent school districts, it was found that those hired by the dependent school districts were younger and had less teaching experience. They were less likely to have advanced degrees, less likely to have had teaching experience out-of-state but just as likely to have experience teaching in another Oklahoma school. Fewer Blacks were hired by the dependent schools, but more Indians were hired, and a larger percentage of women were hired. In addition, the percentage of the total teachers in dependent schools that was inexperienced was 25 percent, compared to 15.8 percent of the teachers in independent districts. The larger percentage of women hirees can be explained by the fact that dependent districts do not include high schools, which hire more men employees. The fact that the hirees of the dependent districts were younger and less experienced and had fewer advanced degrees would indicate the dependent districts were less likely to attract the older, experienced teachers. The higher turnover rate evidenced by 25 percent new teachers would indicate that teachers are less likely to consider positions in dependent schools as permanent and may use such positions as stepping stones to independent districts.

## Comparisons Between New Inexperienced and New Experienced Teachers

It was found that 60 percent of the new teachers hired in the State

were experienced teachers. Examination of individual counties revealed that the percentage of experienced teachers hired varied from 43 percent in Texas County to 89 percent in Greer County. Such variation probably reflects how difficult it is to hire experienced teachers in some remote areas of the State. The fact that teachers hired to teach vocational agriculture tended to be inexperienced also suggests a difficulty in finding vocational agriculture teachers.

Inexperienced teachers were more likely to get an elementary position than a secondary position. This is especially notable since the turnover rate was higher in the secondary positions. While the reason is not known, this phenomenon is perhaps a reflection of the idea that inexperienced teachers cannot discipline secondary students.

Twenty-four percent of beginning teachers were male, compared to 32.6 percent of the experienced teachers and compared to 30 percent of the teacher supply being male. It is perhaps true that, since the districts are apparently showing no prejudice against male teachers--as indicated by their new experienced teachers--the reason may be that many newly certificated males chose other professions than teaching.

## A Comparison of Previous Predictions and the Present Situation of Supply and Demand

Hobbs, in a study completed in the 60's, made predictions concerning the teacher supply and demand situation of 1977-78. Since many of these predictions could be examined in light of data gathered in this study or by information available from the State Department of Education, some conclusions could be drawn concerning his predictions and their accuracy.

The 1977 first-grade, elementary, and secondary enrollments were all higher than had been forecast by Hobbs. The average number of pupils per teacher was lower than predicted, but turnover rate was higher. All of these factors would result in more teachers being hired than if the situation had been as predicted.

The number of teachers employed in Oklahoma in 1977 was almost 20 percent higher than was predicted by Hobbs. The number of teachers produced for the year, projected to increase by 81 percent, actually decreased by 1977 and 1978. The number of teachers needed to fill vacancies was projected by Hobbs to be 6500 to 7000; the true figure, 5749 in 1978, was slightly less. The percentage of jobs filled by experienced teachers rather than inexperienced teachers was accurately projected to be 60 percent. The number of special education teachers was predicted to double; in actuality, the number of special education teachers more than quadrupled.

In general, more teachers were needed than predicted by Hobbs, and fewer teachers were produced than predicted. Although the predicted oversupply did develop, the extent of the oversupply was not as great as had been expected. As Hobbs had anticipated, Oklahoma's practice of supplying teachers for other states had changed significantly by 1978. During the sixties Oklahoma teacher-training institutions prepared as many teachers for out-of-state jobs as they did for in-state jobs. In 1978 less than 1000 persons were recommended for out-of-state certification. This number was less than half those hired in Oklahoma and represented only 15 to 20 percent of the number certificated in Oklahoma.

The fact that Hobbs could not predict the teacher supply-demand situation of the future, even when utilizing all available data, helps to validate the conclusion of his study: there is a need for supply and demand of Oklahoma teachers to be monitored. He recommended that studies be made at least once every two years. In 1978 that need apparently still existed. Supply and demand was difficult to measure, and conclusions were difficult to formulate. However, interpretation of the data revealed that more than 60 percent of the teachers certificated during 1977-78 did not get a teaching job for that year. Even though more teachers were needed in some subject areas, an oversupply still existed. To reiterate the conclusion of Hobbs, some system should be devised to forecast teacher needs and adjust supply to those needs. If forecasting of teacher needs and counseling of teacher applicants is not sufficient to adjust supply to demand, a quota system should be considered. Continued feedback concerning the characteristics of teachers hired each year would also be valuable.

## Conclusions

The results of this study helped to verify many of the assumptions concerning an oversupply of teachers in the State. The oversupply of teachers which had been verified on the national level and had been predicted to develop in Oklahoma had not been studied in detail since the beginning of the decade. The findings in this study provided a data base for comparison of the supply and demand of teachers in general and specific areas. That comparison could be used as a basis for future planning within the State. This study also provided insight into the

kind of persons being hired to fill teaching positions available in the State.

The first general conclusion which can be drawn from the study is that there was an oversupply of teachers in the State for the school year 1978-79, although teacher shortages existed in many specific teaching areas such as vocational agriculture and math.

The second conclusion drawn concerns reasons for job openings in the State: except for the fact that teachers apparently move easily from one teaching job in Oklahoma to another, little is known about why teachers leave their jobs.

Third, new teachers hired during the fall of 1978 represented all ages, but the majority were young. The majority were also less experienced teachers with a bachelor's degree and were overwhelmingly white and female. The supply of new teachers from which these teachers were drawn was also overwhelmingly white and female, although the percentage of females in the supply was slightly smaller.

## Discussion

A review of the literature revealed that teacher supply and demand tended to be cyclical. Shortages appear in some specific subject area or location and, after some time lag, the supply catches up with and often exceeds demand in that area. Response to the changes in demand seem to be slow. In the specific situation of comprehensive supply and demand, the demand for new teachers began its decline in 1970, but the annual supply of beginning teachers continued to increase until 1973.

A review of the literature indicated that there was a shortage of special education teachers. In fact, the number of teachers employed

in special education in Oklahoma had been growing rapidly. Nevertheless, special education teachers were less likely to be hired in Oklahoma in the 1977-78 school year than were the teachers certificated in the general areas of elementary and secondary education. Perhaps supply had caught up with demand in this area. Unfortunately, whether or not this was true will probably not be known with certainty until supply has exceeded demand significantly and large numbers of unemployed special education teachers exist.

A shortage of science teachers was indicated by job vacancy listings. However, the data indicated that there should be enough science teachers produced to fill those jobs. It is very likely that many of those certificated to teach science had already chosen other employment instead of teaching, or, because math and science teachers were very selective, they may have chosen not to teach where the jobs are.

Not only did shortages and oversupply of teachers exist simultaneously in different subject areas, shortages and oversupply of teachers existed in different areas of the State. Metropolitan areas of the State had a large supply of teachers from which to select new employees, but some counties in more remote parts of the State had difficulty obtaining new teachers, even when the data suggested a significant oversupply of teachers. The conclusion to be drawn from these two paradoxical situations is that at least a large part of the oversupply of teachers is not an oversupply at all, but simply a mismatch. If individuals were willing to be trained as teachers in the subject areas in which they were most needed and to accept a job in the location in which they were most needed, supply and demand would be better aligned.

One potential approach to reducing quantity of teachers is to set higher standards of quality. By weeding out inferior teaching candidates, the supply might be kept in line with demand and also result in better teachers. However, in order to assure that the teachers left are of high quality, more competitive salaries must exist. Legislation being considered by the State Legislature of Oklahoma in 1980 (HB 1706) would test prospective teachers for knowledge in subject areas and require an intern assignment of beginning teachers. Higher teaching salaries are a part of the bill. The result of this legislation, if passed, would probably be decreased supply and increased quality of new teachers. However, at least some school personnel directors are concerned that such tests and trial assignments, coming after three or four years of teacher preparation, would tend to discourage students from enrolling in teacher education, and that the legislation would result in an even more serious undersupply in specific subjects and areas of Oklahoma.

Just how much supply should be reduced and how it should be done are questions that should be answered after a thorough study of teacher applicants and after a thorough study of instructional needs of the State. To make such decisions would require much additional inquiry and analysis. Accepting the previously reported percentages of the director of the California Teachers' Association that 20 percent of new teachers will never seek a job and 20 percent will take one only on their own terms, there are still 20-25 percent of the trained teachers of Oklahoma (1500-2000) who seek a teaching position, are apparently willing to be flexible in job assignment, and yet do not find employment.

If such plans to monitor and control teacher supply are seriously considered, it would be necessary to have commitments from the teacher-preparation institutions. They must be willing to examine what they are doing and assume responsibility for their part in the overall picture of teacher supply and demand.

The element missing if accurate judgments are to be made about surplus or shortage is a closer analysis of the job market. If the school districts of the State are to have an adequate supply of teachers in all areas, some system of forecasting must be devised. If individual college students are going to have some assurance that the teaching area they select will still be needing teachers at the time they enter the job market, a system of forecasting must be used. Simply allowing the natural law of supply and demand to solve the problem is potentially damaging to both the individual teachers involved and the school districts seeking employees. Such a system is also detrimental to overall state welfare because the money to educate them is not reflected in the marginal production of people working outside of their major area. Even the teacher-training institutions could benefit from having more accurate predictions of needs. If this system of forecasting were voluntarily utilized by the teacher-training institutions, school districts and individuals, actual monitoring would not be necessary. If voluntary attention does not exist, a statewide monitoring system would be necessary. Although it might not be necessary to limit students in teacher education to the extent that Utah has, such attention to the market should result in lower supply, which in turn results in higher salaries, which in turn results in better students, which results in higher prestige for the teacher-preparation institution--

consequences which should be beneficial to all concerned.

In considering the reasons for which jobs became available in Oklahoma, it was noted that almost 40 percent of those employees leaving a job gave "other reasons" or "no reason given" as their reason. Such answers have such little value as to be completely useless. The real reasons behind an employee's leaving may never be known. Even when it is known that a teacher is changing to a different job, the question of why that teacher decided to move to a different teaching job or take other employment is not revealed. However, every effort should be made to determine why teachers leave positions; a 14 percent turnover rate of teachers in a period when teaching jobs are difficult to obtain needs some explanation. If the system now used to ascertain why teachers leave their jobs is to be continued, some effort should be made to make it a more viable instrument.

In examining new teachers hired in 1978, several conclusions can be reached. First, in relation to age, there appear to be representatives of every age group being hired in new teaching positions. In relation to college degree held by the new teacher, the fact that 80 percent have bachelor's degrees and 20 percent have master's degrees reveals a solid interest in both the teacher with a master's degree and the teacher without an advanced degree. In the same way the selection of 40 percent of new staff members from the pool of inexperienced teachers indicates a willingness to hire the beginning teacher, but still reserves for the experienced teacher a slight advantage for a job.

The fact that 95 percent of those hired were white is a disappointing factor. Although it may be true that there was a shortage of

qualified minorities applying for jobs, if only five percent of those hired were minorities, then a need exists for further examination of the situation. Perhaps an affirmative action plan is needed. Perhaps teacher-training institutions have an obligation to recruit more minority candidates, perhaps individual administrators need to examine their own hiring policies and practices. This area needs immediate examination and careful follow-up studies.

The study of the sex of beginning teachers revealed that 71 percent of those hired were women. This does not indicate a prejudice in hiring practices since 70 percent of those receiving teaching certificates were female. However, as in the situation of race, some direct effort should be made to create a better balance between sexes. In the society in which we live, many children have no father-figure in the home, and there is value in having adult males in contact with students. At the least, male teachers are needed as male role models for all children--both in elementary and secondary schools. A concerted effort should be made to recruit more men for teaching positions.

## Problems

It was extremely difficult to get accurate data in some areas of this study. No information was available concerning specific teaching areas of newly certificated teachers without a direct response from each individual teacher-preparation institution, and four of the twenty institutions did not respond to the request. It was also very difficult to determine in what subject area a teacher was hired to teach. In order to arrive at some conclusions concerning this, it was necessary to rely on information concerning areas of certification rather than

actual teaching assignment. Other information could be obtained only after numerous contacts with several different agencies. It would seem desirable that more information could be centered in one agency to simplify future studies of supply and demand.

## Recommendations

The following recommendations were made after and as a result of this study:

(1) Comprehensive information concerning supply and demand should be made more accessible.

(2) Teacher-training institutions should develop a system to study demand and a plan for responding to that demand. They should, by counseling or quota systems, change the supply of teachers to correlate better with the demand.

(3) The profession should recruit more males and minorities into teaching.

(4) Counseling of prospective teachers should make them cognizant early in their teaching preparation of the demand for teachers in general, demand in specific subject areas, and demand in specific locations.

(5) If current proposals before the legislature should be adopted, a follow-up study should be made of the resulting effect on teacher supply.

(6) A study of supply and demand should be made at least every two years.

(7) A more comprehensive study should be made to determine why teachers leave their jobs.

We are living in an era in which individual teachers are asked to set goals for themselves and objectives for their teaching and are expected to be accountable for how well they do their jobs. Is it too much to ask of the agencies concerned with recruiting, preparing, and selecting teachers that they do the same? Shouldn't these agencies set goals and objectives and be held accountable? It is the very least that should be done to provide a fully balanced, well-prepared group of teachers for Oklahoma's schools.

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# APPENDIX A

## COVER LETTER

# OKLAHOMA PUBLIC SCHOOL RESEARCH COUNCIL

AFFILIATED UNIVERSITIES
The University of Oklahoma
Oklahoma State University

OKLAHOMA STATE UNIVERSITY
Stillwater, Oklahoma
74074

OFFICE OF THE EXECUTIVE SECRETARY
Gundersen Hall, Room 309
Phone 624-7244


June 21, 1979

Recent news coverage of the teacher supply in Oklahoma implied that there is now a substantial surplus of teachers in the state. The school districts specifically mentioned were large urban districts, and no reference was made to smaller districts or districts not near Tulsa or Oklahoma City. Nevertheless, there is some indication that a surplus does exist; if so, the extent of that surplus is not known.

In order to ascertain if such a surplus exists, the Oklahoma Public School Research Council is conducting a study of the present supply and demand of teachers in Oklahoma. In order to obtain all the data needed for such a study, it is necessary to examine the job market as it existed at the beginning of the 1978-79 school year. To determine the teacher supply produced for that year, the figures are needed from each of the teacher training institutions for the period September 1, 1977, to September 1, 1978.

Would you please help us conduct this study by completing the enclosed questionnaire and returning it in the enclosed envelope by July 13? We appreciate your help, and we will be glad to inform you of our findings.

Sincerely,

Kenneth St. Clair
Executive Secretary

Jo Pettigrew
Research Associate

# APPENDIX B

## TEACHER CERTIFICATION QUESTIONNAIRE

Name of Institution_____

Oklahoma Teaching Certificates Issued from September 1, 1977 to September 1, 1978:

(Include only the persons completing certification requirements for the first time.)

| TYPE | Number (Standard) | Number (Provisional) | TYPE | Number (Standard) | Number (Provisional) |
|---|---|---|---|---|---|
| Administration | _____ | _____ | Agriculture | _____ | _____ |
| Counselor | _____ | _____ | Industrial Arts | _____ | _____ |
| Librarian | _____ | _____ | Business Education | _____ | _____ |
| Psychologist | _____ | _____ | Bookkeeping/Clerical | _____ | _____ |
| Psychometrist | _____ | _____ | Speech/Theatre | _____ | _____ |
| Nurse | _____ | _____ | Journalism | _____ | _____ |
| Elementary Education | _____ | _____ | Early Childhood Ed | _____ | _____ |
| Health/P.E. | _____ | _____ | Driver/Safety Education | _____ | _____ |
| Art | _____ | _____ | Special Education | _____ | _____ |
| Music | _____ | _____ | D.E. | _____ | _____ |
| Language Arts | _____ | _____ | D.O. | _____ | _____ |
| Social Studies | _____ | _____ | Vocational/Tech Ed | _____ | _____ |
| Science | _____ | _____ | T & I Ed | _____ | _____ |
| Math | _____ | _____ | Voc Business/Office Ed | _____ | _____ |
| Foreign Language | _____ | _____ | Reading Specialist | _____ | _____ |
| Home Economics | _____ | _____ | A-V Specialist | _____ | _____ |

In addition to the numbers given above,
what is the total number of students recommended for certification
in other states during the period September 1, 1977 to September 1, 1978? _____

What is the total number of students who received a bachelor's degree in education during the same period, regardless of whether or not they applied for or received a teaching certificate?

_____

PLEASE RETURN BY JULY 13, 1979.

# APPENDIX C

## PERSONNEL REPORT

# OKLAHOMA ANNUAL PERSONNEL REPORT

FOR THE YEAR ENDING JUNE 30, 19____ SCHOOL _____ POST OFFICE _____ CO. CODE _____ DIST. CODE _____

| SOCIAL SECURITY NUMBER | TEACHER NUMBER | TEACHER NAME | | | RACE | SEX | SCHOOL SITE CODE | CONTRACT | | | | | | | | | | QUALIFICATIONS | | | EXPERIENCE ON RECORD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LAST | FIRST | M I | | | | FRACTION OF DAY EMPLOYED | NO. OF DAYS EMPLOYED | NO. OF DAYS IN FULL TIME CONTRACT | POSITION HELD | GROSS SALARY PAID OR TO BE PAID FOR PERIOD EMPLOYED (INCLUDE ANNUITIES) | FRINGE BENEFITS NOT TO BE INCLUDED IN GROSS SALARY | FLAT GRANT SALARY TO BE PAID BY | FLAT GRANT CODE | FEDERAL GRANT SALARY TO BE PAID BY | FEDERAL GRANT CODE | COLLEGE ATTENDED | DEGREE HELD | YEAR CERTIFICATE EXPIRES | OKLA. | | OUT OF STATE | MILITARY SERVICE | OTHER EMPLOYMENT | NO. OF YEARS THIS DISTRICT | REASON FOR LEAVING |
| 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 |

VITA

Jo Arnold Pettigrew

Candidate for the Degree of

Doctor of Education

Thesis: SUPPLY AND DEMAND OF PUBLIC SCHOOL TEACHERS IN OKLAHOMA

Major Field: Educational Administration

Biographical:

Personal Data: Born in Cushing, Oklahoma, June 14, 1936, the daughter of Mr. and Mrs. Zack Arnold.

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