

**OKLAHOMA'S TEACHING FORCE:  
CRITICAL ISSUES**

**A Report on Teacher Supply and Demand,  
Recruitment and Retention**

**State Department of Education**

**March, 1990**

**Gerald E. Hoeltzel  
State Superintendent of Public Instruction**

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## OKLAHOMA'S TEACHING FORCE: CRITICAL ISSUES

### A Report on Teacher Supply and Demand, Recruitment and Retention

Teachers in the public schools of Oklahoma provide guidance and instruction to Oklahoma's children, the state's most valuable resource. Recruiting, training, placing, and retaining qualified teachers in state schools should be one of the first priorities in Oklahoma's mission to achieve excellence at all levels of education. In order for this to occur, programs must be developed which have a beginning phase of recruitment culminating in incentives which retain quality educators in the teaching profession. The problems of attracting and retaining individuals in the teaching profession are not unique to Oklahoma. Examination of this arena both on a national level and local level reinforces the issue.

Educational reforms, the decline of minorities and women in the teaching profession, increased enrollments in the public schools, the attrition rate for beginning teachers, retirements, teacher-student ratios, and the decline in the number of college graduates prepared for teaching have led to shortages in the profession nationwide. Teacher supply and demand is not an issue that will be quickly solved.

Nationally, research has substantiated that a shortage of mathematics and science teachers has existed for several years. In 1981, 1,400 bachelor's degrees were awarded in these areas. In 1982, 18,000 mathematics and science teachers left the profession. (Teachers for Today and Tomorrow, "The National Context for Change,") The National Science Foundation data indicate that fifty percent (50%) of secondary mathematics and science teachers are not qualified to teach their current course assignments. By 1995, a projected forty percent (40%) of current

mathematics and science teachers will retire, while increased emphasis on science in the curriculum will lead to increased enrollments in public school science classes. ("Attracting Excellence: The Call for Teacher Incentives," NCREL, 1987.)

A 1985 supply and demand survey completed by the Council of Chief State School Officers (CCSSO) shows the major areas of critical shortage are science, mathematics, special education and foreign languages, although few states have comprehensive, operable data collection systems for obtaining information or documenting changes. The American Council on the Teaching of Foreign Language and the American Library Association agree that they have severe shortages in their respective areas.

There are a growing number of innovative programs in foreign languages in the state: immersion programs, international high school, elementary school foreign language (FLES), and satellite instruction. Most innovative programs require a certified foreign language teacher. All foreign languages offered in the public schools have experienced an increase in enrollment even in the face of steady or declining secondary school populations. The number of college students preparing to be foreign language teachers in 1987 was approximately 15 to 20. The survey of Oklahoma state directors of teacher education, January 1990, reports that there were 40 graduates for the 1988-89 school year. (Appendix A) Pending legislation, if passed, will require the establishment of state accreditation standards that are consistent with the North Central Association requirements and will greatly increase the number of certified foreign language teachers needed in the state. (Appendix B)

The Joint National Committee for Languages survey reports that forty percent of respondees show a shortage of foreign language teachers; over half (57%) noted a shortage at one level or another. Teachers are generally

hardest to find for rural areas and small school districts. Unless conditions change, the most severe shortages will probably occur toward the end of the nineties. (Appendix C)

Only seven Oklahoma institutions of higher education offer library media certification. Prospective candidates for a degree or certificate in library media often have difficulty in completing requirements because of the availability of courses as well as when the courses are offered and in what sequence. Currently, there are 1,069 elementary schools in Oklahoma; of these, 594 (55.56%) are served by a certified library media specialist. There are 830 middle, junior high, and senior high schools in the state; 660 (79.51%) are being served by a library media specialist. A total of 645 schools are not served. Although there are 1,215 certified librarians, only 803 are employed in the school systems. The Library Media Improvement Grant Program, which increases the amount of technical assistance supplied to local districts, requires a fully certified librarian if there is an enrollment of 150 or more students.

In central Oklahoma there is one comprehensive university, three regional universities, and five private and/or parochial colleges or universities. Another comprehensive university is in north central Oklahoma. Two regional universities are in the southeastern part of the state; one regional and three private/parochial universities are in the northeastern part of the state; one regional university in the northwestern part, one regional university in the extreme northwest; and three regional universities in the southwestern part of the state. Of these twenty-one institutions, twelve have approved programs in special education (six in speech-language pathology); twenty have approved programs in mathematics and science, but very few graduates; ten of the institutions have approved programs in foreign language (only one in Latin); and seven

have approved programs in library media. (Appendix D)

In 1981-82, personnel from the Teacher Certification Section at the State Department of Education, in cooperation with the superintendents of public schools in Oklahoma and the Directors of Teacher Education of the colleges and universities, published a report of Teacher Supply and Demand.

The purpose of the study was to identify the critical issues of teacher supply and demand in the state as to:

- The curriculum areas where teachers were in short supply and where they were in abundant supply;
- The geographic areas where teachers were not readily available;
- The number of teacher education graduates from state colleges and universities along with their curriculum areas;
- The placement of state teacher education graduates;
- The proportion of out-of-state teachers who fill available teaching positions in Oklahoma;
- The manner in which teachers are recruited and placed in available positions; and
- The turnover of teachers on an annual basis.

The study used the survey method to obtain data for the report. Data in 1981-82 indicated teacher shortages in a number of areas. In supervisory, student services, or administrative areas, shortages were found in the areas of school counselors, psychometrists, psychologists, and librarians. At the elementary education level, shortages occurred in music, art, special education, reading specialties, and speech pathology. At the secondary level, there were critical shortages in mathematics, science,

language arts, industrial arts, foreign languages, music, reading specialties, and special education. A conclusion from the report that appears to have current application is that there appeared to be no systematic approach to the recruitment and placement of teachers in the state.

The methods used to determine shortage have proven reliable although somewhat cumbersome. The research studied, as well as the national survey conducted, concludes that similar approaches are being used in states with shortages. In determining critical shortage teaching areas for the state, a convergence of methods is utilized: the number of emergency certificates issued in a specific teaching area; the job vacancy listings received monthly from the Employment Security Commission, and the annual vacancy reports of local school districts received in the Teacher Education and Certification Section as required by statute (Appendix E); and reports from regional and national professional organizations. On a recent national survey of state directors of teacher education (January, 1990), most states reporting shortages used the issuance of emergency certificates, or waivers, as the determining factor. (Appendix F)

The State Board of Education is empowered by statute to approve the issuance of emergency certificates. During the 1988-89 school year 522 emergency and one-year provisional certificates, minor assignment exceptions, and provisional extensions were issued by the State Board of Education. Of this number, 227 (43.5%) were in the special education areas; 32 (6.1%) were in library media; 31 (5.9%) were in science; 19 (3.6%) were in mathematics; and 11 (2.1%) were in foreign languages.

For the 1989-90 school year 342 emergency and one-year provisional certificates, minor assignment exceptions, and provisional extensions were issued by the State Board of Education. Of this number, 198 (58%) were in the special education areas; 9 (2.6%) were in library media; 9 (2.6%) were

in science; 10 (2.9%) were in mathematics; and 14 (4%) were in foreign languages. The results of the national survey also show these areas, and others, as shortages.

Local school districts report vacancies monthly to the Oklahoma Employment Security Commission. An analysis of these documents reveals that 21% were in the special education areas; 7% were in science; 8% were in mathematics; 3% were in foreign languages; and 2.5% were in library media. Totally, 41% of the reported vacancies were in the shortage areas.

The geographic areas of the state, locations of teacher education institutions, and availability of approved programs tend to affect emergency certificates issued as well as vacancies. As may be expected, more emergencies were issued and vacancies reported for the highly populated, urban areas. Teacher turnover is also greater in these areas, as it is nationally. It is believed that the ability to attract candidates to rural areas, as well as the availability of candidates in these areas, further substantiates these implications: however, research is needed to validate these conclusions.

### Recruitment of Teachers

A systematic plan for the recruitment of qualified candidates into the teaching profession has not been implemented in Oklahoma. Until recently, it was generally assumed that the teacher education institutions, accompanied by the flux of out-of-state applicants, were adequately supplying the state's demand with the exception of specific teaching areas, thereby eliminating or greatly reducing the need for recruitment efforts or programs. Teacher reform movements, however, have necessitated national and local attention and consideration be given to this area.

Before exploring what has been done and attempting to suggest methods of recruitment, it is necessary to examine the reasons why the

effort is required. Research studies have cited that the main reason for the decrease of candidates preparing to become teachers is low salary and fringe benefits. Teaching salaries are extraordinarily compressed when compared to other occupations demanding a college degree. They start low and remain low. The Carnegie Forum's, A Nation Prepared: Teachers for the 21st Century, states that most teachers approach the top of the scale within ten to twelve years after entering the work force. Teachers find themselves in their mid-thirties faced with the prospect of no salary growth in real terms when their peers are beginning to enter their prime earning years. Salaries and increased benefits may not become fully competitive overnight, but a start in this direction must be made immediately. Higher teacher pay is an absolute prerequisite to attracting and retaining high quality candidates for the teaching profession. Teachers, and prospective teachers, are more likely to reach for higher standards if substantial raises in pay are provided. Nationally, many school districts are attempting to raise all teachers' salaries, with particular emphasis on starting salaries, in the hopes of attracting more qualified new teachers.

The large number of foreseeable teachers retiring and the high attrition rate are other reasons for the increased demand, thus requiring recruitment. The Task Force on Teaching as a Profession ("Teacher Shortage: Truth and Consequences," 1987) estimates that, because few teachers were hired in the 1970's and the average age of teachers rose as a result, many teachers are near retirement. On a national scale, as many as 900,000 of the current 2.3 million teachers will retire in the next decade, according to a 1986 NEA report. Further, Richard Murnane in Understanding Teacher Attrition (1987) ascertains that a relatively large percentage of teachers leave the classroom after only a few years of

teaching. Murnane states that it is the most academically talented teachers who leave the profession, often within the first five years of their careers. The Rand Report (Darling-Hammond, et. al.) of 1987 emphasizes that one main reason new teachers resign lies in school system personnel policies that allow senior teachers to transfer to more "desirable" schools, which means that the newest teachers are placed in the least attractive, most troubled schools. It further suggests that present attrition rates are near the lowest levels that have occurred over the last 25 years. This is due to the fact that in recent years schools have done relatively little hiring. It is predicted that these rates will increase over the next 15 years as mid-career teachers become eligible to retire and as expanded enrollments present more positions and allow for more mobility and promotion. Because of these alarming statistics, recruitment must become a top priority of the state's educational agenda.

The U.S. Department of Education's National Center for Educational Statistics data reveal that there will be a significant increase in the enrollment of school-aged children. The grandchildren of baby boom parents entered elementary schools beginning in 1985, and their numbers will continue to increase until 1995. An overall increase in the number of school-aged children is by far the most significant indicator of an anticipated increase in job openings.

Lowered class sizes, or pupil-teacher ratios, also translate into increased job openings. In Oklahoma, if pending legislation is approved, the projected pupil-teacher ratio will be expected to decrease at both elementary and secondary levels by the year 1993. With the increases in pupil enrollment and a possible mandated lower teacher-pupil ratio, the potential for an extreme teacher shortage exists, unless recruitment efforts are accelerated.

Another factor affecting teacher shortage and recruitment needs is the decrease in the number of candidates enrolled in teacher education programs, especially in fields deemed shortage areas. In addition to the extremely low pay, other conditions have affected this decline. Historically, among the most educated members of our nation's communities were teachers. This is no longer necessarily true. Thus, status, prestige and respect have declined, eroding an important incentive to potential teachers. The most qualified are dissatisfied with the lack of input into professional decision making and the bureaucratic controls (Rand Report, 1987). In his 1984 book, Teaching-the imperiled profession, Duke states that teachers suffer from disillusionment when they find that they are not to have the benefits of professional status; this is a principal cause for eroding teacher morale. In short, teachers are expected to behave as professionals and are disappointed when they are not treated as such. Professionals are presumed to know what they are doing and are paid to exercise their judgments. Schools operate as if consultants, textbook authors, school district "experts," and even legislators possess more relevant expertise than the teacher in the school (Carnegie Report, The Nation at Risk . . ., 1986). Giving teachers a greater voice in the decisions that affect the school will make teaching more attractive to good teachers who are already in our schools, as well as people considering teaching as a profession.

New opportunities have opened for talented young women and minorities, who traditionally have had few other professional career options and have constituted a "captive" labor market for teaching. Feistritzer reports that the teaching force is an aging population, of which seventy percent are women. The average age of a classroom teacher is forty years. Nearly seventy percent of teachers have been teaching longer

than 10 years. Two-thirds of the nation's classroom teachers have between five and nineteen years of teaching experience. Those having fewer than five years' experience represent only eight percent of all teachers in the classroom today, whereas one-fourth have been teaching twenty years or more.

Minority students are frequently drawn into fields more lucrative than education. The lure of other fields is magnified by the increase of professional education standards for obtaining teaching credentials without a concomitant increase in salary and benefits. There is sometimes a qualitative difference in the education available to minorities and the disadvantaged as compared to the quality of educational experience offered to the majority.

#### Teacher Incentive Programs

Teacher Incentive Programs designed to recruit, retain and motivate teachers have been established at state or district levels. There are two types of incentive programs: direct monetary incentive programs that increase teachers' earnings through salary increases, bonuses, or stipends; and non-monetary programs where teachers receive recognition, increased responsibility, opportunities for professional growth and development, or additional classroom materials. Merit pay plans, career ladders, fringe benefits and bonuses have been introduced into the educational arena at several points in the last century.

Career ladder programs (also called differentiated staffing and mentor/master teacher programs) establish both a hierarchy of job classifications for teachers and a differentiated salary schedule. As teachers move up the steps of the career ladder, based on evaluation of teaching excellence, they receive higher salaries and status primarily for increased work and responsibility outside the classroom.

Merit pay plans provide monetary awards to teachers as a reward for outstanding performance, based on some type of evaluation system. Simply put, people judged to be performing better are paid more. This has been ineffective in the past because of low funding, unsatisfactory methods of evaluating meritorious work, and staff dissension. Other merit pay programs reward schools, not individual teachers, for improved performance. Schools may compete against other schools for financial bonuses, etc.

Unlike other incentive plans, which are targeted to specific groups of teachers (or schools), fringe benefits usually are provided to all teachers, if at all. These benefits may include hospitalization or health insurance, retirement benefits, paid sabbatical leave, or fee waiver programs for pursuing graduate studies. For many teachers, having the summer off is still considered an important fringe benefit.

Incentive bonuses, or one-time awards, usually are provided to address a variety of school district needs: filling vacancies in critical specialty areas; teaching in schools with high concentrations of minority or poor students; or improving performance of students.

Awards, sabbaticals, and additional training programs reward superior teachers with grants or paid time off which will allow them to pursue special projects for professional growth or personal renewal. A local district may provide a grant for an individual's training in a subject field or for certification in exchange for service in that district in a subject area that is experiencing a shortage in supply.

Teacher Recognition Programs, probably among the least expensive incentive programs, are currently being used by many school districts in the state. The State Department of Education also has an annual "Teacher of the Year" program. These programs, however, could be expanded and

further enhanced with the inducement of additional incentives. States with comparable recognition programs have increased from the recognition of one teacher to the recognition of six to ten teachers. These teachers also receive special gifts, monetary awards, engraved plaques, awards banquets and programs, front page newspaper articles, etc., in addition to a certificate and state presentation.

Incentives should be designed to match the motivator with the intent of the plan. If it is believed that monetary compensation is a strong motivator for those entering the teaching profession, and if the intent is to recruit outstanding candidates, beginning teachers should be offered the highest salary possible. If, however, it is believed that professional responsibilities are the strongest motivator, the focus should be on the nature of the job itself and the opportunities for professional development (Bartell, 1987).

### **State Initiatives to Meet Current Needs**

Several programs have been initiated by the State Department of Education, State Regents for Higher Education, and the Oklahoma Legislature in attempts to recruit and/or retrain candidates into the teaching shortage areas to help alleviate present and anticipated shortages.

The Future Teacher Scholarship Program, which was implemented in 1984-85 pursuant to Senate Bill 368, Section 98, passed during the Second Regular Session of the 39th Legislature, is for students pursuing careers in teaching fields identified as shortage areas by the State Department of Education. For the academic years of 1984-85, 1985-86, and 1986-87, there have been a total of 300 students receiving awards. A 1987 follow-up report showed that sixty-one percent of these scholarship recipients were teaching in the state. In 1988-89, the legislature appropriated to the

State Regents for Higher Education \$180,000 to continue the scholarship program for high-activity students who will commit to a program of teacher education in fields where there is a teacher shortage: special education, mathematics, science, foreign languages, speech-language pathology, and library media specialists. One hundred and forty-seven awards were made to students in fiscal year 1988-89: forty-seven in science; fifty-one in mathematics; forty-five in special education; two in foreign languages; and two in music (3rd year recipients). One recipient received the award for the fourth year, fifteen recipients received the award for the third year, and twenty-six for the second year. The higher education institutions' appropriations were allocated as follows: \$139,750 to public institutions; \$25,250 to private institutions; and \$15,000 to junior colleges. Additional funding could be utilized by this program.

In 1986, the legislature made funds available to the State Regents for Higher Education to help address teaching areas where critical shortages existed. The Regents supported efforts to upgrade skills and to assist persons to become certified in the following areas: mathematics, science, computer science, and foreign language. Grants for Professional Training Institutes were awarded through Northwestern Oklahoma State University, Central State University, and Cameron University. These institutes were designed to provide professional education coursework to participants during the summer months. By fall, the participants would have had some professional education and field experiences and would have met initial certification requirements. A total of forty-nine persons completed the Professional Training Institutes. Funding was made available only for the summer of 1986.

A method was devised to enlist degreed professionals to move into the classroom while completing professional education coursework. The

Alternative Certification Plan was approved by the State Board of Education in 1987, as recommended by the Professional Standards Board. It was anticipated that the development of this plan for certification would help alleviate teacher shortages, especially in the areas of mathematics and science. The stresses of completing additional coursework while teaching, the internship or entry-year assistance program, and the supervised practicum, along with low pay and a poor image have made the alternate route less enticing than anticipated. Only a very small percentage of the teachers in the state have entered the profession by this method.

In March, 1989, the State Board of Education approved Special Endorsements in five areas of special education: emotionally disturbed, mentally handicapped, physically handicapped, learning disabilities, and visually impaired. The Special Endorsement requires completion of 24 semester hours in a concentrated area of special education. These endorsements must be attached to an early childhood, elementary, elementary-secondary, library media specialist, or vocational-technical certificate.

In August, 1989, the State Board of Education voted to approve a plan to provide emergency certification for special education teachers, including speech-language pathology. In cooperation with the State Regents for Higher Education and the teacher training institutions, a one-week intensive training program for certified teachers was provided. The State Department of Education could fund 418 tuition stipends of a maximum of \$150.00 per teacher, which is in accordance with the Comprehensive System of Personnel Development requirements as outlined in the Oklahoma State Plan for Special Education. The training workshops were held at seven institutions during the month of September. Ninety-seven teachers participated in the workshops with a total of eighty emergency

certificates issued in the various areas of special education and speech-language pathology. Teachers receiving these certificates are employed in these areas in districts across the state.

At the same Board meeting a hearing was held and approved on the amendments to the Administrator's Handbook for Elementary, Middle, Junior High and High Schools, 1989-90, which changed the limitations on minor assignment teaching. Teachers certified prior to January, 1989, may now teach any portion of the school day, in any subject or subjects for which they hold a credential. Prior to this change, teachers could not teach more periods per day on a minor credential than on their major credential or endorsement.

In 1988-89, special training grants from federal funds were made available to the State Department of Education through the Special Education Section to help meet the demand for qualified, certified special education teachers. Of the seventy-one grants awarded in 1988, the majority were given to special education teachers for certification in other special education categorical areas. Grants for 1989 summer training were awarded to seventy-three recipients. For the fall, 1989, forty-six qualified applicants were awarded grants of up to \$500.00 by the Special Education Section of the State Department of Education in an attempt to reduce the shortage of special education teachers. The individuals were selected by the State EHA-B Advisory Panel in accordance with established priorities.

In October, 1989, the State Department of Education and the State Regents for Higher Education entered into a contractual agreement for the study of an Early Intervention Program for infants and toddlers with handicaps. (Appendix G) The study will include:

- a plan on current and projected training needs of service providers;
- new knowledge elements on identification, intervention, and treatment;
- coordinating and communicating approaches to the program;
- approaches, timelines, and procedures for incorporating into higher education programs;
- an assessment system on the current and projected need for service providers;
- a reporting system on the number of graduates and students enrolled in the programs; and
- policies and procedures which address the guidelines of the federal Office of Special Education.

If a definite need is shown to exist and if Oklahoma's school systems will be expected to address the need, future implications are that there will be an increased demand for trained early childhood teachers (or service providers), and a restructuring of the teacher education programs and certification requirements will be necessary.

The Title II-Critical Skills Improvement Act (Eisenhower Mathematics and Science Education Act) is allocated based on a formula and is usually used for equipment or inservice training. If state funds would match or supplement these grants, the money could be specifically earmarked for teachers' college tuition and expenses.

Pending national legislation, the Excellence in Teaching Act, is designed to recruit highly qualified individuals into the teaching profession, particularly in geographic and skill areas of shortage. The proposed legislation has eight titles authorizing scholarship programs to recruit teachers, program development funds to strengthen their preparation, and

professional development funds to support their induction and continued education. As summarized in the American Association of Colleges of Teacher Education (AACTE) Briefs, Title I of the bill will create a new Teacher Corps; Title III supports programs to encourage minorities to enter teaching careers, and alternative approaches to increase minority participation; Title IV addresses the recruitment of persons into bilingual education programs; Title V supports early childhood education and recruiting minorities into this area; and Title VII will provide grants to train mathematics and science teachers. (Titles II, VI, and VIII are not relevant to recruitment or teacher supply and demand.)

In support of the recommendations of the Legislative Task Force on Minority Teacher Recruitment, the State Department of Education and the State Regents for Higher Education have developed a proposal for the establishment of a Minority Teacher Recruitment Center. This center will be responsible for establishing programs to recruit, retain, and place teachers in areas of critical shortages within the State of Oklahoma, with an immediate emphasis on minority teacher recruitment. It will be an independent state entity working in cooperation with all facets of the public education community.

These efforts to reduce the teacher shortage in the state are merely a beginning. Much more concerted efforts and programs will need to be established which are directly aimed at teacher recruitment. These should include minority recruitment, geographic recruitment, and critical shortage areas recruitment. But of even more significance is the need to establish a strong systematic data base for analyzing the current status of the teaching force and the ability to project future needs and to facilitate decision-making.

## **SUMMARY AND RECOMMENDATIONS**

The previous discussion of teacher supply and demand, recruitment and retention of the teaching force provides an overview of what initiatives and research have been undertaken in this arena. It is easy to recognize the complexity of the problems. Not only in Oklahoma but across the nation, education policy makers have responded to teacher supply and demand through a variety of initiatives. Oklahoma's initiatives in the development of scholarship and loan programs, professional training institutes, and other programs are deserving of continued support. However, a review of these programs and an analysis of current literature reveal the need for quality data on supply and demand. It is imperative that, as current activities are continued to address needs on a short-term basis, a computerized system for estimating and projecting teacher supply and demand be initiated immediately.

### **1. ESTABLISHMENT OF AN ESSENTIAL DATA BASE**

The most cost-effective program which can be implemented for educators and policymakers for the state of Oklahoma is a computerized system which can simulate changes in certain conditions of teacher supply and demand in the state. Although limited data are available currently, much more information could be collected, analyzed and utilized for projecting needs. Available data on teacher supply and demand on the qualifications of the teaching force are inadequate because information in the past has been based upon antiquated methods of gathering data. For example, teacher shortages are not estimated for individual cities and towns, even though we believe these will, in many cases, be more serious than for the state as

a whole. Data on the flexibility of current teachers to teach in areas of certification other than their current assignments are also limited. Without the use of modern technology, it is almost impossible to assess the condition of teacher supply-demand markets or to target policies to address possibly emerging supply and demand imbalances. However, with modern technology, data systems can provide information about current concerns for policymakers, such as, increases in total enrollment, increasing minority enrollments, the aging of the active teaching force, the potential depletion of the reserve pool with the decline of traditional graduates, and salary competition from other states.

It is imperative to develop a program which can simulate the impact of policy initiatives including, for example, changes in the student to teacher ratio, changes in the number of classes taught per teacher, changes in retirement policies, changes in the curriculum required of students, changes in student attrition rates, and changes in the responsiveness of the reserve pool to enter teaching.

If a data gathering system is to be useful and cost effective, it must also have the capacity to project future teacher supply and demand information under varying assumptions about future circumstances and events. It must be able to provide data as to the future supply-demand balance overall and for specific subjects and geographic areas, the sources of future teacher supply, and the impact of various education policy actions and socioeconomic forces on prospective supply and demand.

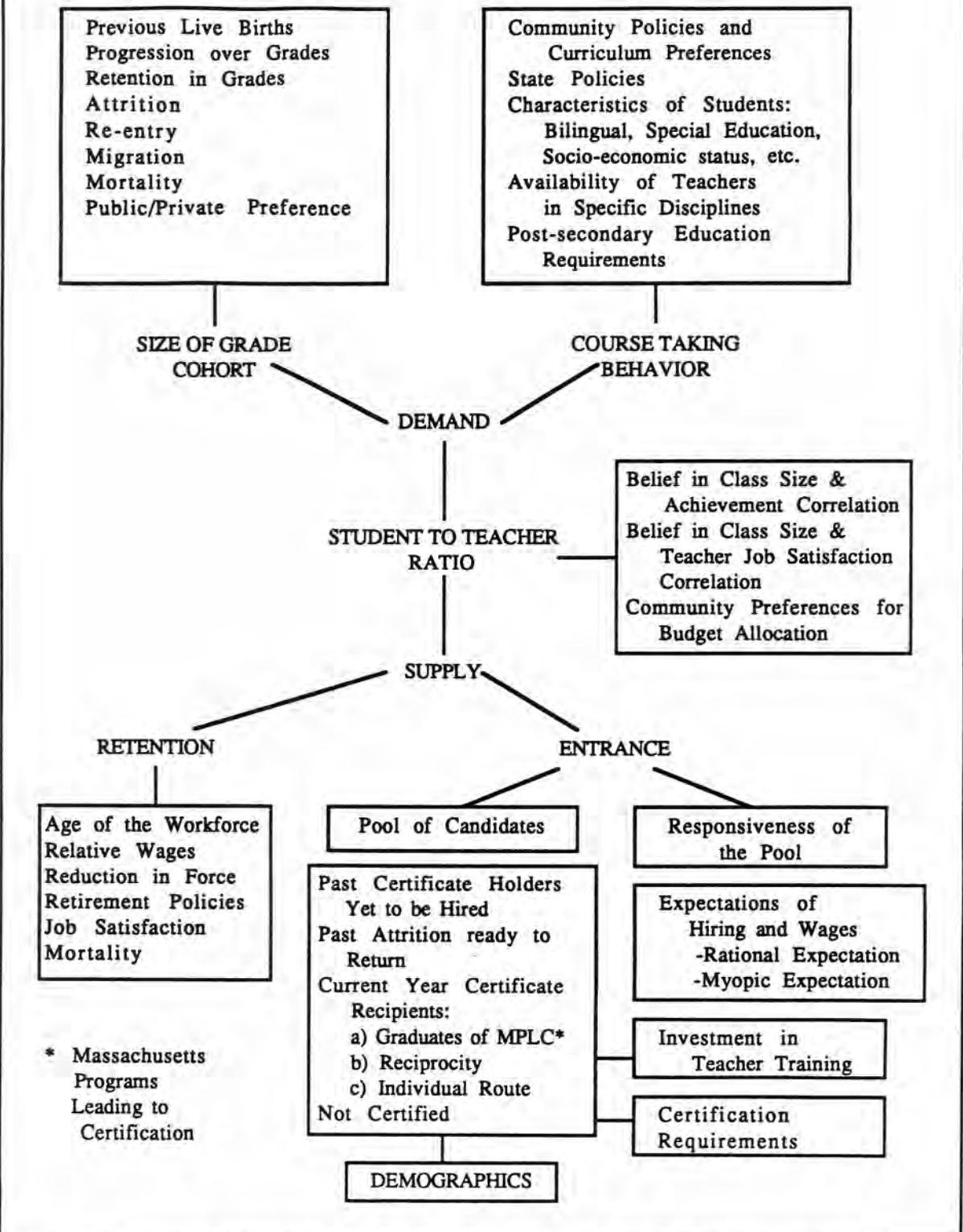
The impact of policy and socioeconomic forces upon supply and demand is most difficult because they require a capacity to make projections based upon a plethora of variables, such as the effects in

mandated changes in class size, changes in graduation requirements, curriculum mandates, funding for schools, accessibility to teacher training programs, the numbers and kinds of teachers needed by school systems, the climate of the work force, changing market conditions, job satisfaction, and changes in certification requirements.

Some components of the teacher supply and demand model are the size of the grade cohorts and course-taking behavior of students, the number of teachers retained from the previous period, the preferred student to teacher ratio, and the number of teacher entrants needed to maintain the current preference for appropriate student to teacher ratios and other components. Education is so critical to Oklahoma's future that policy should not be formulated in the statistical dark.

The preceding information on a data base system as well as the chart on the following page is taken from a report on a teacher supply and demand system compiled and developed by the Massachusetts Institute for Social and Economic Research (MISER). The MISER model uses data from teacher retirement, hiring reports from the state education agency (SEA), certification records from the SEA, surveys on the number of teachers being trained from their institutions of higher education, federal government information concerning the status of minority teachers, and pupil enrollment information provided by local education agencies. The chart reveals how valid statistical data provide accurate information that may be used to identify availability of qualified teachers to a school district or a state or to project the demand for teachers in a specified content area or in a geographic region. It is estimated that this system would cost between \$70,000-\$90,000.

# TEACHER SUPPLY AND DEMAND SYSTEM



\* Massachusetts Programs Leading to Certification

Massachusetts Institute for Social and Economic Research (MISER), & School of Education at University of Massachusetts-Amherst (1987).  
 Report of the status of teacher supply and demand in Massachusetts. Amherst, Mass.

## 2. PUBLIC RELATIONS AND AWARENESS CAMPAIGN

The primary responsibility of Oklahoma teachers is the education of children, the leaders of tomorrow. The vast majority of Oklahoma's teachers are highly qualified educators, dedicated to the profession and caring of their children. They teach because they love children; they love the joy of shaping young minds.

Many states have begun campaigns to accentuate the positive aspects of the profession, highlighting excellent educators and schools and focusing on innovative programs. For example in 1987, the state of Georgia initiated a massive campaign on recruitment, which included offering certification for liberal arts graduates, identifying and addressing teacher shortages, and accentuating the overall positive aspects of the teaching profession. Although it is too early to obtain specific results, the recruitment director for the Georgia State Department of Education stated that an increase in inquiries and the availability of teachers have occurred, especially in the shortage areas and among minorities.

It is evident that a well-planned information and awareness campaign can inform the citizens of the state about the critical issues in teacher supply and demand. As important as a positive awareness campaign is, it is crucial that the details of the campaign be based upon sound marketing strategies. Therefore, the first step to the campaign is to survey the target audiences to determine the activities of the campaign and most effective form of media to utilize to reach the target audiences. The services of an independent public relations consultant will be utilized to develop the survey and to analyze the results. The survey will be completed within three months at an estimated cost of \$3,500. Based on the survey results, the campaign

could include, but not be limited to, the following types of activities:

- (1) **Public service media announcements:** Public service announcements will be secured from radio and television stations, and advertisements will appear in newspapers across the state. The Instructional Media Section of the State Department of Education will oversee the preparation of a videotape for television and an audio presentation for radio; the Community and Public Relations Section will oversee the preparation of an advertisement for participating newspapers. The estimated cost of \$7,500.00 for the production of public service announcements will include scriptwriting, purchase of tapes, actual taping, duplication, and distribution. The project should be ready for distribution and implementation by January, 1991.
- (2) **Informative brochures and posters:** Twenty thousand colorful and attractive brochures and 2,000 posters will be printed which highlight the intrinsic and extrinsic rewards of the teaching profession, designed by the Community and Public Relations Section of the State Department of Education at an estimated cost of \$7,500.00. These materials will be ready for distribution by January, 1991.
- (3) **Information pamphlets:** These pamphlets will be mailed to neighboring states and states with which Oklahoma has signed the Interstate Reciprocity Agreement. The pamphlets will advertise teaching opportunities and shortage areas and will encourage migration to the state. Information will be included on certification, reciprocity, incentives, and highlights of teaching in Oklahoma. The minimum cost for

printing and distribution of 5,000 pamphlets will be \$3,500.00. They will be ready for distribution by January, 1991.

- (4) **Information videotape:** The production of a videotape and accompanying booklet coordinated by the Instructional Media and Community and Public Relations Section of the State Department of Education will highlight historical information on teachers and teaching in Oklahoma, the current issues and dilemmas confronting the profession, the teacher's role as a professional, and the rewards of being an educator. These materials would be made available to accredited schools to be utilized by schools as a part of such activities as career education classes or recruitment of students for future educator associations. The materials would also be available to civic clubs and organizations as well as colleges of education. The estimated cost of \$45,000.00 for the production of the videotape will include scriptwriting, purchase of tapes, actual taping, duplication, and distribution. Publication of the accompanying booklet will be \$10,000.00. Both will be available by January, 1991.

A summary of total expenditures is:

<u>Project</u>	<u>Timeline</u>	<u>Cost</u>
Survey	July, 1990	\$ 3,500.00
Public Service	January, 1991	7,500.00
Brochures/Posters	January, 1991	7,500.00
Pamphlets	January, 1991	3,500.00
Video/Booklet	January, 1991	55,000.00
<b>TOTAL</b>		<b>\$77,000.00</b>

### 3. REISSUANCE OF EXPIRED CERTIFICATES

The State Department of Education, the Oklahoma Association of

Teacher Education, and the Professional Standards Board will develop rules and regulations for the reissuance of a certificate for individual teachers who have allowed their certificates to expire for five or more years. Such rules and regulations will address how these teachers can become recertified under 1984 standards with less hours than is currently specified. Specific coursework required of each applicant will be determined through an evaluation of the applicant's preparation in the field of specialization and in professional education. The proposal will address only those teachers who were formerly certified in a declared shortage area and will not exempt the applicant from current testing and/or statutory requirements.

The proposal along with rules and regulations will be presented to the State Board of Education on or before the scheduled meeting of the Board at its June, 1990, meeting with implementation by September, 1990.

#### **4. SCHOLARSHIP/LOAN PROGRAMS**

One of Oklahoma's most pressing educational needs is attracting and retaining qualified teachers, particularly in some rural areas of the state. To meet this need, wherever it exists, a task force will be appointed by the State Superintendent of Public Instruction to promulgate rules and regulations for a financial assistance program modeled after the successful Oklahoma Rural Medical Loan and Scholarship Program, the Nursing Assistance Program, and the Physician Community Match Program. These programs are under the administration of the Physician Manpower and Training Commission. The Commission reports that since the inception of the physicians programs, all physicians, except one, are in compliance with their contracts. They have fulfilled their work obligation or have repaid

their loans. At the present time, 94% of the total 835 nursing scholarship program recipients have fulfilled their work obligations, have repaid their loans, or are in the process of meeting their obligations.

The educational task force that will have the responsibility for promulgating rules and regulations will be chaired by the State Superintendent of Public Instruction or designee and shall consist of representatives from the State Regents for Higher Education, the State Department of Education, colleges of education from colleges or universities, the Oklahoma Student Loan Authority, school administrators, and classroom teachers. The task force shall consult with representatives from the Oklahoma Physician Manpower Training Commission to develop financial assistance programs to teacher-candidates who agree, upon graduation or upon completion of a specified teacher certification program, to return to geographical areas of shortage to teach for a specified period of time.

**(1) Oklahoma Loan and Scholarship Program**

An Oklahoma Loan and Scholarship Program will be developed as a loan forgiveness program in which a teacher-candidate, in return for financial assistance, will agree by contract and promissory note to complete a teacher education certification program in a content shortage area or an area of need and to accept employment in geographic areas of need during the period of loan obligation.

Upon completion of the teacher education certification program and subsequent licensing or certification, the teacher will teach a minimum of two years to receive any loan forgiveness or must repay the scholarship loan plus interest

and/or penalty. At the end of the second year of teaching, the loan will be forgiven at the rate of \$2,000 for each year of teaching service that is in compliance with the terms of the contractual agreement. The design of the program follows:

## **OKLAHOMA EDUCATIONAL LOAN AND SCHOLARSHIP PROGRAM**

### ***SPONSORS:***

The Oklahoma Educational Loan and Scholarship Program will be sponsored by the State of Oklahoma through the Oklahoma State Board of Education and the State Regents for Higher Education.

### ***OBJECTIVES:***

- (1) To assist Oklahoma's school districts to attract and retain qualified teachers in shortage areas, both in content and in geographical regions, and
- (2) To provide financial assistance to eligible teacher-candidates who agree to complete a teacher education certificate program in a content shortage area and will accept employment in geographic regions where shortages exist.

### ***ELIGIBILITY:***

- (1) The candidate desires to teach or desires to complete additional area/s of certification identified as shortages.
- (2) The candidate has no other assistance that has a conflicting service obligation requirement.

### ***AMOUNT OF LOAN:***

A maximum of \$10,000 per year will be available for scholarship/loan recipients. Consideration will be given to applicants who demonstrate financial need.

### ***OBLIGATION:***

Service obligation - At the close of the second year of teaching, the scholarship loan will be forgiven at a rate of \$2,000 per year of teaching service in a school district identified as in need.

### ***PENALTY:***

If the teacher-recipient of the scholarship does not fulfill his or her obligation to the sponsoring entities, the teacher will owe in lump sum the remaining principal at the time of default plus 12% interest and up to 10% penalty for default.

**(2) Teacher Community Match Program**

The Teacher Community Match Program will be a loan forgiveness program created to provide funding for a teacher-candidate to receive financial assistance to attend an Oklahoma college or university to complete a teacher certificate program in an area identified and validated as a shortage area in a specific school district.

State funds are matched on a 50%-50% basis with a school district in which the teacher-candidate would agree to teach for a specified period of time in the sponsoring district. Contractual obligations will be specified and entered into by the sponsoring state entities, the local school district, and the teacher-candidate. Basic components of the program design follow:

## TEACHER COMMUNITY MATCH PROGRAM

### *SPONSORS:*

The Teacher Community Match Program will be sponsored by the State of Oklahoma through the Oklahoma State Board of Education and the State Regents for Higher Education and through the local Oklahoma School District (50%-50%).

### *OBJECTIVE:*

To assist Oklahoma's school districts through a partnership agreement to use local people and resources to meet teacher shortages in identified and validated areas of need.

### *ELIGIBILITY:*

- (1) The teacher-candidate desires to teach in the sponsoring school district.
- (2) The teacher-candidate agrees to complete a teacher education certificate program in the content area specified by the contractual agreement and will accept a teaching position in the sponsoring school district.
- (3) The teacher-candidate has no other assistance that has a conflicting service obligation requirement.

### *AMOUNT OF LOAN:*

A maximum of \$10,000 per year. Special consideration will be given to teacher-candidates who live in or near the sponsoring school district and to applicants who demonstrate financial need.

### *OBLIGATION:*

Service obligation - At the close of the second year of teaching, the scholarship loan will be forgiven at a rate of \$2,000 per year of teaching service in the sponsoring school district.

### *PENALTY:*

If the teacher-recipient of the scholarship loan does not fulfill his or her obligation to the sponsoring entities, the teacher will owe in lump sum the remaining principal at the time of default plus 12% interest and up to 10% penalty for default.

## ESTIMATED COST OF PROGRAMS

### The Oklahoma Educational Loan and Scholarship Program

State Appropriation for Scholarships/Loans	\$2,000,000.00
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### The Teacher Community Match Program

State Appropriation for Loan Program (Community to match state allocation dollar for dollar)	1,000,000.00
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### Administration of the Program

Coordinator II Salary with Fringe Benefits	33,533.00
Secretary II Salary with Fringe Benefits	21,142.00
Office Supplies and Equipment	10,000.00
Printing/Postage	6,000.00
Travel Expense	7,500.00
<b>TOTAL for Administration</b>	<b>\$78,175.00</b>

## 5. SUPPLEMENTAL EDUCATIONAL OPPORTUNITIES FOR CERTIFICATION PURPOSES

The State Superintendent of Public Instruction and the Chancellor for Higher Education will name a joint task force to address the shortages of teachers in either content or geographic areas in Oklahoma. Specifically, the task force will be charged with investigating the combined use of the Oklahoma Higher Education Televised Instruction System (OHETI), a series of weekend intensive workshops, and the reinstatement of Professional Training Institutes to provide instruction in declared shortage areas. This combined program will be reviewed for its ability to provide the most beneficial offerings of courses to the greatest numbers of students who will use the courses to complete degrees, to add other teaching areas to their certificates, or to complete coursework in the area of professional education.

Specific factors to be addressed by the task force will include, but not be limited to:

- Assessing the geographical coverage of the state by the OHETI system;
- Evaluating the cost effectiveness of the system;
- Reinstating funding to programs for professional training institutes, which provide coursework in professional education;
- Developing a systematic list of course offerings which will move participants toward a degree, an endorsement in a shortage area, or the professional education requirement;
- Staffing weekend intensive workshops;
- Requesting funding through which institutions would hire adjunct or other faculty who live in the region to conduct the weekend workshops;

- Planning the location of workshops in order to serve a relatively cohesive geographical area of the state;
- Developing a means of evaluating the effectiveness of the program after one year of implementation.

The task force will present recommendations to the Chancellor for Higher Education and the State Superintendent of Public Instruction by November, 1990, for implementation by January, 1991.

## **6. TEACHER INCENTIVE PROGRAMS**

Teacher incentive programs in more than half the states include career ladder or merit pay plans. According to the Southern Regional Education Board (SREB), more than 8 of 10 Americans favor increased pay for teachers who prove themselves particularly capable. SREB states that this is a higher percentage than five years ago when the nation's first incentive pay plans were being debated and established. In April, 1989, SREB reported that 25 states have career ladders or incentive programs with state funding or assistance; nine additional states have incentive programs planned or under development.

A task force will be appointed to research incentive programs implemented in other states. These incentive programs may include, but not be limited to, the following: career ladders, merit pay plans, extended contract year, job enhancement, and/or performance bonuses.

The task force will gather data from various sources to determine:

- The effectiveness of various incentive programs;
- The overall impact of programs currently implemented in other states;

- The impact of such programs on teachers and administrators working in an incentive program;
- The impact on current or future educational reforms;
- Whether education is positively influenced when teachers are paid for performance;
- Whether a program improved recruitment, retention, and/or motivation of high-quality teachers;
- Whether an incentive program will actually develop and improve teacher performance in the classroom;
- What the funding needs would be to support an effective incentive program; and
- Most importantly, whether an incentive program will result in improved student achievement.

The task force for teacher incentive programs will be appointed by the State Superintendent of Public Instruction and will be chaired by the Superintendent or designee. Appointees to serve on the task force will include representatives from both houses of the Oklahoma Legislature, the professional teacher organizations, professional administrative organizations, school boards, parents, business/industry, classroom teachers, and administrators. On or before July 1991, the task force will develop and recommend to the State Board of Education an incentive program most appropriate and effective for recruitment and retention of highly productive and effective teachers and administrators as well as for enhancing student achievement.

## 7. FUTURE EDUCATOR ORGANIZATIONS

The Association of Teacher Educators (ATE) membership identified a need to take a proactive role in the development of a nation-wide model to establish chapters for future teachers at the high school level. At its 1989 delegate assembly, the formal implementation of Future Educators of America (FEA) Chapters was announced. The state of Florida has been a major influence on the rekindled interest in future educators as a recruitment tool to attract quality teachers. Sponsorship of the program involves students in Florida's public schools and institutions of higher education in experiences that support their interest in teaching and the teaching profession. Kansas has also established FEA Chapters with the assistance of its teacher training institutions.

Future educator organizations will be established in Oklahoma at the middle/junior high, high school, and postsecondary levels, which will require full participation and collaboration of the State Department of Education, State Regents for Higher Education, State Department of Vocational Technical Education, professional teacher organizations, colleges of education, and local school districts. A representative task force will be appointed on or before July 1, 1990, to formulate policies, procedures and recommendations for organizing and implementing local chapters of a future educators organization. The task force will have completed its recommendations and submit them to the State Superintendent of Public Instruction on or before November 1, 1990. The task force will devise plans, procedures, and promotional activities for the establishment of the organization. Recruitment efforts and publicity will occur during the Spring, 1991, for full implementation by the 1991-92 school year. Seven thousand

five hundred dollars will be needed for printing (brochures, pamphlets, guidelines, certificates, etc.), postage, and dissemination; \$3,000.00 will be required for task force travel expenses.

#### **8. ESTABLISHMENT OF A TEACHER REGISTER**

One of the most difficult problems in this state as well as nationwide is the ability to match qualified teachers throughout the state with vacancies. Many of the institutions of higher education have placement offices which assist in informing teachers of school districts that have vacancies. The State Department of Education and institutions of higher education are continually contacted by school administrators who are desperately searching for teachers, particularly in shortage areas. The Oklahoma Employment Security Commission currently produces a vacancy listing, which has provided an additional mechanism for school districts to list openings. However, a need exists to offer school districts immediate access to the names and qualifications of educators who are certified by the state of Oklahoma and who are seeking employment.

To initiate a Teacher Register the State Department of Education will send a notice to all persons currently certified in Oklahoma, advising them of the opportunity to be included on the register. A scannable registration form will be included with each notice. Oklahoma certificated persons interested in seeking employment as teachers will respond by mailing the registration form back to the State Department of Education. (Appendix H) This registration will qualify them to be on the register for six months. Each registrant will need to renew his or her registration each six months to remain on the register. This will allow the system to remain more current.

The State Department of Education will be prepared to initiate this process by April 1, 1991. The register will be printed and disseminated to all Oklahoma public school districts and Oklahoma colleges and universities in June of each year, beginning June, 1991. Thereafter, school districts may request a listing of educators seeking employment on a monthly basis for a nominal fee, which will be used to cover the cost of printing and postage.

Once the initial registration procedure has been implemented, persons submitting applications for certification will be permitted to designate whether or not they want to be included on the register at the time they become certified.

Each entry in the directory will identify the candidate and offer a brief profile of the teacher's professional qualifications. This profile will include highest degree earned and the degree-granting institution, major areas of study, certification information relative to position sought, a summary of the teacher's experience and expertise, and geographic location preference.

At the request of the applicant, the registration application information will be shared with the Oklahoma Employment Security Commission. This will provide a vehicle for registrants to receive a listing of the vacancies in Oklahoma school districts. Costs for the development and maintenance of this system follow:

**Development:**

Scanner & associated software	\$6,000.00
Mainframe computer disk storage	5,000.00
Postage for initial mailout: \$.30 X 70,000 certified persons	21,000.00
Design & purchase of scannable forms: \$.56/1000 X 70,000 forms	3,920.00
1/2 FTE - Data Processing Programmer Analyst III	16,080.00

**Annual System Maintenance:**

Printing of annual mailout of register: 100 pages x \$.02/page x 750 copies	1,500.00
Postage for annual mailout of register: 750 copies x \$1.00/copy	750.00
Postage for biannual registration renewal inquiries: 20,000 letters x \$.30/letter	6,000.00
Purchase of scannable forms (original and renewal): \$.56/1000 x 20,000 forms	1,120.00
1/2 FTE - Data Processing Programmer Analyst III	16,080.00

**TOTAL COST: \$77,450.00**

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