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REPORT TO THE CONGRESS



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Supply And Demand Conditions For Teachers And Implications For Federal Programs B-164031 (1)

Office of Education
Department of Health, Education,
and Welfare

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

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MARCH 6, 1974



COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-164031(1)

To the President of the Senate and the
Speaker of the House of Representatives

This is our report on our review of the supply and demand conditions for teachers and the implications for Federal programs. The major programs affecting these conditions are authorized under a number of different acts, and most are administered by the Office of Education, Department of Health, Education, and Welfare. Other programs are administered by the Department's Social Security Administration and the Veterans Administration.

Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Health, Education, and Welfare; the Secretary of Labor; and the Administrator of Veterans Affairs.

A handwritten signature in cursive script that reads "James B. Peets".

Comptroller General
of the United States

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*labor statistics
Federal programs
job surveys
Teachers*

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ABBREVIATIONS

GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
OE	Office of Education
VA	Veterans Administration
SSA	Social Security Administration

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

SUPPLY AND DEMAND CONDITIONS
FOR TEACHERS AND IMPLICATIONS
FOR FEDERAL PROGRAMS
Office of Education
Department of Health, Education,
and Welfare B-164031(1)

D I G E S T

WHY THE REVIEW WAS MADE

GAO reviewed supply and demand conditions for elementary and secondary school teachers and Federal programs affecting the supply of such teachers because:

- Available reports have identified teacher surpluses and have projected that job prospects for teachers will continue to worsen. (See pp. 5 and 6.)
- Federal aid for college students has more than doubled in the last several years, and many of these students majored in curriculums designed to produce teachers. (See pp. 5 and 7.)

FINDINGS AND CONCLUSIONS

Federal education programs

The Federal Government was very responsive during the early 1960s to a growing need for teachers and other professionals. The Government initiated extensive financial assistance programs for college students, some with loans forgiveness provisions for teachers. Surveys conducted over the last 4 years indicated Federal actions have helped alleviate overall teacher shortages. (See p. 6.)

1 The Office of Education (OE),
Department of Health, Education,

and Welfare (HEW), serves as a focal point for information on education in the United States. OE is also a principal administrator of Federal student assistance programs.

In fiscal year 1972 OE provided about \$965 million to eligible students under assistance programs and also guaranteed private loans to students which totaled over \$1 billion.

In the same fiscal year, OE administered programs amounting to about \$75 million designed to develop new teachers and programs amounting to about \$176 million that had teacher training as one objective.

Other Federal agencies also provide student assistance. In fiscal year 1972, the Veterans Administration (VA) provided about \$1.7 billion and the Social Security Administration (SSA) provided about \$768 million. Other Federal agencies administered programs affecting the teaching profession but on a smaller scale. (See p. 7.)

Federal assistance may now be contributing to teacher surpluses.

GAO noted that:

--No central information source identifies Federal educational programs affecting the teaching profession.

--Agencies lack adequate information

about the effects of Federal programs on new teacher supply and on the supply of graduates for other professions. (See p. 8.)

- Complete and consistent data about supply and demand conditions within the teaching and other professions is not available. OE's National Center for Educational Statistics and the Department of Labor's Bureau of Labor statistics have projects underway to standardize and refine educational manpower data available from the States. (See p. 9.)

Information about fields of study undertaken by recipients of Federal student aid funds--together with data on job market conditions--should better equip Federal decision-makers to evaluate present programs. It also should help to consider alternative approaches to controlling surpluses and reducing shortages among teachers and other professionals. (See p. 10.)

Survey of teacher supply and demand 2

Results of a GAO questionnaire survey showed a general surplus of elementary and secondary school teachers in the United States. Oversupply varies among geographic areas and teaching subject fields. Some school districts reported a need for additional teachers but lacked suitable applicants.

Teachers in most demand are for such specialized subjects as special education (education of the physically or mentally handicapped) in elementary schools and trade or vocational education in secondary schools. (See pp. 12 and 15.)

Responses to GAO questionnaires and GAO's discussions with State department of education and school district officials indicated a need for better student counseling at institutions of higher education and, as a whole, more effective communication within the educational community.

Of the responding colleges and universities, 47 percent had no formal counseling programs to inform students of the teacher job market and less than one-half of the State departments of education reported that their school districts prepare reports on teacher supply and demand conditions. (See pp. 22, 23, and 24.)

RECOMMENDATIONS

To insure the Federal education efforts are properly coordinated, that effective manpower policies are developed at each level in the educational system, and that resources are directed at priority areas, the Secretary of HEW should direct OE to: 22

- Obtain and maintain centralized data about all Federal programs affecting teachers.
- Study the feasibility of maintaining feedback on areas of study undertaken by all recipients of Federal education funds and coordinate such studies with other Federal agencies supporting education programs.
- Continue efforts with the Bureau of Labor Statistics to develop a system for conducting surveys of supply and demand for new college

graduates. These surveys should gather information in different sections of the country and should provide a basis upon which future job market conditions can be projected.

- Coordinate with the Bureau of Labor Statistics in disseminating this job market information to all Federal, State, and local agencies responsible for administering education programs and to all institutions of higher education. (See pp. 10 and 11.)
- Encourage colleges and universities to establish or improve student-counseling programs concerning job opportunities and to make appropriate curriculum changes to better meet the needs of prospective employees.
- Consider the feasibility of a program to retrain surplus teachers for existing teacher shortage areas. (See p. 27.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

HEW concurred in GAO's recommendations and described actions taken or planned to implement them. (See pp. 11 and 27.) Appendix III contains a complete text of HEW's comments.

MATTERS FOR CONSIDERATION BY THE CONGRESS

The improved information to be obtained by OE should be useful to the Congress in considering new legislation or in modifying existing legislation, as well as in considering funding levels for related educational programs.

Such information should help the Congress to determine whether programs should be redirected toward critical teachers shortage areas and whether incentives should be provided to encourage students to enter teaching shortage areas or discourage them from entering surplus fields.

CHAPTER 1

INTRODUCTION

The Nation's colleges and universities are the primary facilities for training men and women seeking professional careers. The number of college graduates and their skills depend mostly upon the early career choices of individuals. Several factors influence these choices, such as a student's financial means to continue his or her college education and counseling about job opportunities in various professions.

The Office of Education (OE), Department of Health, Education, and Welfare (HEW) serves as a focal point for information about the state of education in the Nation and a principle administrator of Federal student assistance programs. Federal assistance programs help individuals who otherwise could not afford an education.

In the last several years, Federal aid to college students has more than doubled. In fiscal year 1973, about \$5.7 billion was made available for higher education programs and other advanced training. Along with this increased Federal aid comes a greater need for awareness of the manpower requirements among various professions and for well-founded policies which ultimately influence career choice.

We assessed the teacher employment issue because a surplus of elementary and secondary school teachers was reported and because Federal spending for programs affecting the supply of teachers and other professionals increased. Our review was directed at determining the extent and possible causes of any teacher shortages and surpluses.

EMERGING TEACHER SURPLUS

During much of the past two decades, the supply of elementary and secondary school teachers provided by institutions of higher education has been short of demand. The need for teachers was heightened as a result of the post-World War II baby boom and continued into the late 1960s. In 1963 approximately 150,000 new teachers were needed but only 80,000 teacher graduates were available. For the next 5 years the demand for new teachers continued to exceed the supply until 1969 when the number of new college graduates entering the teaching profession increased significantly.

During the years of teacher shortages, Federal and State governments took various actions to increase the teacher supply. Some States offered financial incentives to students who sought to become teachers, and others offered temporary teaching certificates to persons lacking the requisite formal training in education. Federal efforts to influence teacher supply were also extensive and ranged from student loans, which teachers were not required to repay, to specific teacher-training programs. Surveys made within the last 4 years indicated that Federal and State actions have helped meet critical teacher shortages.

The shortage of teachers gradually lessened by the end of the 1960s. The National Education Association, an organization of teachers, conducts an annual survey of the teacher job market. A recapitulation of its reported data for the years 1966-72 shows a reduction in the number of States having shortages of teachers, as indicated by the following table.

General condition of teacher supply and demand	Number of States reporting condition as of fall						
	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Substantial shortage of applicants	20	19	5	2	-	-	-
Some shortage of applicants	11	14	17	12	2	-	1
Shortage of applicants in some subject areas and excess in others	8	11	19	32	35	24	20
Sufficient applicants to fill positions	-	1	1	1	7	-	2
Some excess of applicants	-	-	-	2	1	11	9
Valid appraisal not possible	-	-	-	-	4	13	15
Valid appraisal not possible with present information	11	5	8	1	1	2	3

OE's information corresponds to that of the National Education Association. For example, in 1968 OE reported a national shortage of about 50,000 school teachers. In 1970 OE estimated that, of every four teacher graduates, one would be unable to find a teaching job.

FEDERAL HIGHER EDUCATION PROGRAMS

OE, the Veterans Administration (VA), and HEW's Social Security Administration (SSA) provide Federal funds to students who may become teachers. In fiscal year 1972, OE administered four programs--Teacher Corps, Career Opportunities, State Grants for Attracting Qualified Persons, and a component of the Vocational Education program--aimed specifically at developing new teachers for specialized areas, both academic and geographic. The programs were funded at \$75 million. In the same year, OE administered programs amounting to about \$176 million that had teacher training as one objective.

In fiscal year 1972, OE spent about \$965 million under three student assistance programs--National Direct Student Loan, College Work-Study, and Educational Opportunity Grant. In addition, OE insured over \$1 billion in student loans provided by private lenders under OE's Guaranteed Student Loan Program. Also in fiscal year 1972, VA provided approximately \$1.7 billion in assistance payments to veterans, servicemen, and other eligible persons enrolled in institutions of higher education. SSA spent about \$768 million for higher education expenses for student dependents or survivors aged 18 to 21 of disabled, deceased, or retired workers. Students can use funds from these sources to pursue any course of study.

We could not determine expenditures for teacher training under these programs because the agencies did not maintain complete records on degrees sought. Because over 20 percent of all college graduates with bachelor's degrees major in elementary or secondary education curriculums, it is reasonable to assume that a very significant portion of the total Federal student assistance funds is used to develop school teachers.

CHAPTER 2

NEED FOR IMPROVED INFORMATION ON HOW

HIGHER EDUCATION PROGRAMS AFFECT TEACHER SUPPLY

Discussions with administrators of Federal educational programs and examination of related records indicated that:

- No central information source identifies Federal educational programs affecting the teaching profession.
- OE, VA, and SSA did not have adequate information about effects of individual programs on new teacher supply and on the supply of graduates for other professions.
- Complete and consistent data about supply and demand conditions within the teaching and other professions is not available.

NEED FOR CENTRAL SOURCE OF INFORMATION ABOUT FEDERAL TEACHER PROGRAMS

At the beginning of our review, we attempted to obtain an inventory of Federal programs which affected the supply of new elementary and secondary school teachers. Although OE would appear to be the logical place for this information, it did not have it. We learned that no central source for such information existed, so we contracted the Federal Interagency Committee on Education--which is responsible for coordinating data about Federal education programs--and requested that it compile an inventory of all Federal education programs.

The inventory indicated that programs in agencies other than OE, VA, and SSA were on a smaller scale and were generally aimed at upgrading the quality of existing teachers, rather than training individuals to become teachers.

INFORMATION NOT AVAILABLE ON HOW PROGRAMS AFFECT THE JOB MARKET

We attempted to determine expenditures related to teacher training, the number and the subject majors of education students receiving assistance, and the number of such

students who entered the teaching profession. OE's four loan and grant programs provide assistance to students regardless of their majors. Information was not available on how these programs affect the supply of teachers or other professionals. According to VA officials, VA data was incomplete regarding the majors veterans chose. Although students are requested to report data on their fields of study, in most cases they did not show their majors. VA officials informed us no attempts to obtain complete data have been made. Similarly, SSA does not obtain information about the majors of students receiving assistance.

We did note that OE's four programs designed to train new teachers are targeted at geographic areas serving disadvantaged children or at academic areas needing teachers. For example, Teacher Corps--as we reported to the Congress in July 1972--has been successful in meeting its objectives of placing teachers in schools serving children from low-income families.

EFFORTS UNDERWAY TO GATHER INFORMATION ON JOB MARKET CONDITIONS

OE's National Center for Educational Statistics is responsible for developing comprehensive statistics about the state of education in the United States. According to center officials, they need to develop a reliable data base upon which projections of the future teacher market can be made. This information could be disseminated to Federal, State, and local decisionmakers and institutions of higher education for their planning, evaluation, and counseling purposes.

Also Center officials stated that they funded a pilot program in fiscal year 1969 in nine States aimed at identifying and compiling teacher market data and designing reporting formats to make such data comparable and usable. OE believes that this effort, if successful and expanded to other States, could lead to systematic data compilation of teacher supply and demand information on a nationwide basis.

In 1971 OE awarded a contract to the Rand Corporation to develop methods which could be used to forecast teacher supply and demand trends. Rand officials informed us that better data collection systems must be developed before their methods could be effectively used.

The Bureau of Labor Statistics, Department of Labor, is the Federal organization responsible for developing national projections of future occupation requirements for teachers and other professional workers. The Bureau analyzes projections of supply and demand conditions for teachers and several other professional occupations and issues a report on its analysis every 2 years. According to Bureau officials, they use OE as one source of information about teacher supply and demand when preparing these analyses.

The Bureau is engaged in a cooperative effort with the States to systematically develop standardized estimates and projections of occupational requirements and to analyze prospective supply and demand conditions at the local level. Bureau officials said it will take several years for this system to become fully operational.

CONCLUSIONS

During the early 1960s, the Federal Government effectively responded to a growing need for teachers and other educated manpower by developing student financial assistance programs and other training programs. Such Federal assistance--available to all eligible college students--may not be contributing to teacher surpluses.

Information about Federal programs affecting the teacher supply as well as the supply of other professionals should be centralized in one agency. Federal program administrators should obtain information about the field of study undertaken by recipients of Federal funds. Such information--together with data on job market conditions--should better equip Federal decisionmakers to evaluate present programs and consider alternative approaches to controlling surpluses and reducing shortages among teachers and other professionals.

RECOMMENDATIONS TO THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE

The Secretary of HEW should direct OE to consider the following:

- Obtain and maintain centralized information about all Federal programs affecting teachers.

- Study the feasibility of developing and maintaining feedback on the areas of study undertaken by recipients of Federal education funds and coordinate such studies with other Federal agencies supporting education programs.
- Continue efforts with the Bureau of Labor Statistics to develop a system for conducting surveys of supply and demand for new college graduates. These surveys should gather information in different sections of the country and should provide a basis upon which future job market conditions can be projected.
- Coordinate with the Bureau of Labor Statistics in disseminating this job market information to all Federal, State, and local agencies responsible for administering education programs and to all institutions of higher education.

HEW concurred in our recommendations and stated that OE would:

- Explore the possibility of maintaining (1) centralized data on all Federal programs affecting teachers and (2) feedback information on the areas of study undertaken by all recipients of Federal education funds.
- Continue working with the Bureau of Labor Statistics to develop selective surveys on the supply and demand conditions for educational personnel.
- Consider coordinating efforts with the Bureau of Labor Statistics to disseminate information from such surveys to responsible Federal, State, and local agencies, as well as institutions of higher education conducting teacher training.

CHAPTER 3

RESULTS OF TEACHER SUPPLY AND DEMAND SURVEY

We conducted our nationwide questionnaire survey because information on teacher shortages and surpluses, factors causing problems, and actions being taken or planned to correct the problems was not available from the National Center for Educational Statistics nor was it available in a form suitable to our purpose from the National Education Association. As discussed below, we did use the resources of these organizations and those of the American Association of Colleges for Teacher Education in developing our survey.

The results of our nationwide survey and review of available studies showed:

1. A general surplus of qualified elementary and secondary school teachers.
2. Shortages of teachers in some subject fields and in certain localities.
3. Indications that college students are beginning to react to the general oversupply by studying in other fields, but it could be many years before these decisions affect the general oversupply situation.

NATIONAL CENTER FOR EDUCATIONAL STATISTICS

OE established the Center in 1965 to develop and provide comprehensive statistics about the state of education in the Nation.

In carrying out its responsibilities, the Center accumulates statistical data on many different aspects of education, including teacher salaries, college graduates by subject field, pupil enrollment, and expenditures and receipts of school systems.

NATIONAL EDUCATION ASSOCIATION

The National Education Association founded in 1856 is a private organization representing over 1 million teachers.

Each year since 1947, the Association has conducted surveys of teacher supply and demand. The Association annually surveys all State departments of education, which, in turn, solicit information from colleges and universities on education graduates and other graduates who meet minimum State teacher certification requirements. In its 1972 study, the Association also surveyed the Nation's 80 largest school systems (50,000 or more pupil enrollment).

Our survey approach was broader than that of the Association in several ways. First, it included a sampling of all school districts--small, medium, and large. Second, it addressed only those college students with education majors desiring teacher positions. Third, questionnaires were designed to elicit information and opinions about causes and possible corrective measures for teacher supply and demand imbalances. Fourth, our survey did not consider the increased demand for teachers which could result by reducing pupil-teacher ratios (number of pupils per teacher)--rather, we concentrated on the number of teachers school districts could hire with available funds.

Our work was coordinated with the Association, and its Director of Research reviewed and agreed with our questionnaire before the survey was conducted.

AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

The American Association of Colleges for Teacher Education is a national association of colleges and universities organized to improve the quality of teacher education programs. All types of 4-year institutions of higher education are represented--private, religious, State, etc. The institutions which make up the membership of the organization account for about 95 percent of new teacher graduates each year.

We selected the survey sample of colleges and universities from the organization's membership. In addition, the organization reviewed and endorsed our college and university questionnaire. We sent the endorsement to each institution in our survey, and it helped us obtain a high rate of response to our questionnaire.

NATURE OF TEACHER SUPPLY AND DEMAND

Qualified college graduates seeking teaching positions for the first time make up the largest part of new teacher supply in a given year. Teacher graduates are not restricted to any State or school district, although teacher certification standards vary among States and tend somewhat to limit teacher mobility. Teachers seeking to return to the profession after temporarily leaving also add to the new teacher supply. The National Education Association estimates, however, that teachers seeking to return from a break in service represent only about 3 or 4 percent of the new teacher supply in a given year.

Budgeted demand for new teachers is determined by the number of Nation's school districts can afford to hire in filling their teacher vacancies. Retirements and other separations from the profession, increased pupil enrollments, and changes in pupil-teacher ratios cause teacher vacancies. OE estimates that retirements and other separations make up 8 percent of the current teacher demand and the need for new positions makes up the remainder.

The National Education Association favors viewing the demand for teachers in terms of those needed to reach a higher degree of student achievement rather than in terms of those needed on the basis of budget constraints.

QUESTIONNAIRE SURVEY SAMPLE AND RESPONSES

We sent questionnaires to 276 colleges and universities, 495 school districts, and the 50 State departments of education. We received responses from 91 percent of the colleges and universities, 81 percent of the school districts, and 84 percent of the State departments of education. We defined "responses" as usable returned questionnaires. (See app. I.)

Teacher supply and demand conditions according to the survey are presented for the country's nine geographic divisions as defined by the Census Bureau, Department of Commerce.

All figures are projected from sample results unless otherwise stated.

Ability of new teacher graduates to find teaching positions

College officials responding to our questionnaire indicated that about 14 percent of graduates with bachelor's degrees qualified to teach in elementary schools and 18 percent of graduates qualified to teach in secondary schools could not find teaching jobs. Of all teacher graduates--both elementary and secondary--about 27,000, or 16 percent, could not find teaching jobs. Inability of graduates to find teaching positions was greatest for elementary teacher graduates in the New England region (27 percent). For secondary teacher graduates the West-North-Central region was worst (24 percent).

The following map shows the nine geographic divisions of the country as defined by the Census Bureau and the placement success of teacher graduates by geographic division.

Although the responses showed mixed patterns within and among regions for graduates finding teaching positions in their subject areas, certain trends were discernible. Graduates seeking teaching positions in the New England, West-North-Central, and Pacific States encountered more problems in finding jobs than graduates seeking jobs in States of the other six regions. Graduates were most successful in finding teaching positions in the South Atlantic and West-South-Central regions. The data used in preparing the map was computed using table 1 of appendix II.

Ability of various types of teachers to find teaching jobs

Colleges' responses indicated that graduates qualified as secondary school teachers were least successful in finding jobs.

Of the graduates qualified to teach in secondary school, those with subject majors in agriculture, special education,¹ and industrial arts were most successful in finding teaching jobs. Graduates majoring in social sciences, art, business education, foreign languages, physical education

¹Education for physically or mentally handicapped youth.

(men), and English were least successful in finding teaching jobs. (See app. II, table 2.)

Demand for teachers in school districts

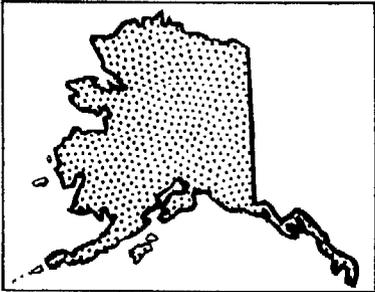
During the 1972 school year, approximately 2.3 million applications were submitted for about 179,000 teacher vacancies and about 176,000 applicants were hired--as estimated from school district responses to our questionnaire. According to the school districts, the 3,000 vacancies were not filled because of the shortage of qualified applicants in the required fields. (See app. II, table 3, for applicants hired by census geographic region and size of school district.)

Because a teacher graduate may apply for employment in as many school districts as he chooses, there may be duplication in the number of applications filed. Accordingly, applications submitted is not an accurate means to determine the number of available teachers or a surplus. The relationship between applications received and teachers hired does indicate, however, the desire of graduates to work in certain school districts and the relative success of applicants in finding teaching positions in the districts and in various subject fields.

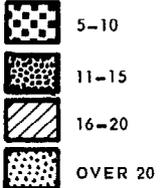
School districts reported that they hired the highest percentage of applicants for teaching positions in industrial arts, mathematics, trades and vocational, and special education. Subject areas for which the lowest percentage of applicants were hired were physical education (men), social sciences, English, foreign languages, and distributive education (subjects relating to selling and sales supportive functions, such as transportation, financing, warehousing, and marketing). Data on these subject fields is comparable to that reported by the colleges and universities.

The lowest percentage of teacher graduate applicants hired was in the intermediate-sized school districts (5,000 to 24,999 pupils) which are likely to be in suburban areas. These districts generally offer better working conditions than rural or larger city areas. The small districts (300 to 4,999 pupils) received the greatest number of applications.

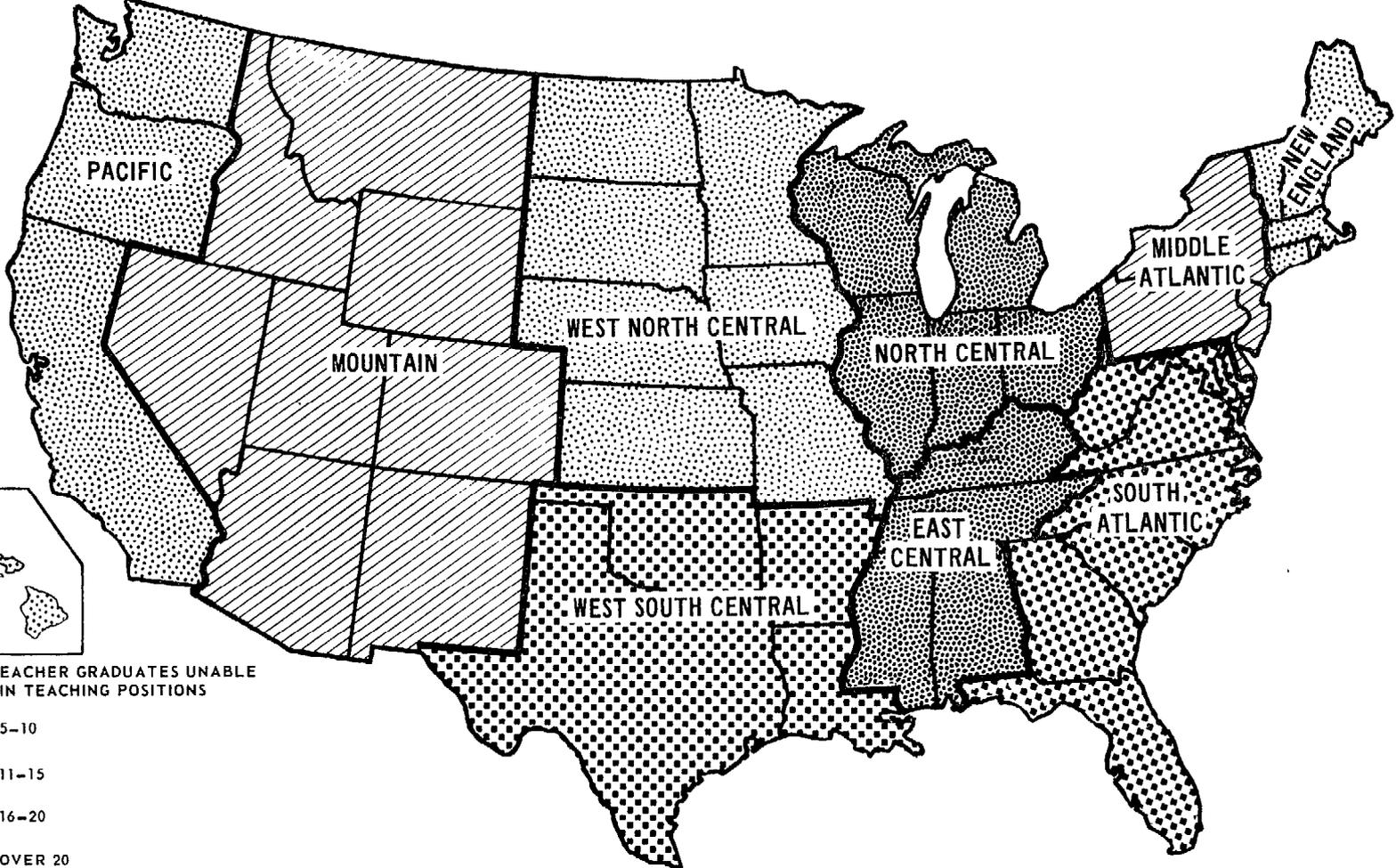
TEACHER GRADUATES UNABLE TO OBTAIN A TEACHING POSITION ON A GEOGRAPHIC DIVISION BASIS



PERCENT OF TEACHER GRADUATES UNABLE TO OBTAIN TEACHING POSITIONS



NOTE: ALASKA AND HAWAII ARE PART OF THE PACIFIC REGION



We received only limited information from the Nation's very large school districts (those comprising 25,000 or more pupils and generally located in large urban areas). This information, however, suggests that the larger districts hired more teachers than the national average (8 percent of applications received) and received fewer applications per opening than the suburban districts; thus employment prospects for those applying in these areas were better.

For example, the country's largest school district--New York City--hired 32 percent of all the applicants in that district for school year 1972-73. Those hired also represented 50 percent of all new teachers hired within the district's geographic division--the Middle Atlantic, which is made up of New York, New Jersey, Pennsylvania, and Delaware. The district contained over 20 percent of the population in the division yet received only 7 percent of the total applications in the division. On the other hand, small suburban districts in the same division received 34 percent of the total applications but hired only 5 percent of the new teachers in that division.

This example points up a deeper social problem that must be resolved before the imbalances in the supply of teacher graduates for large school districts can be corrected. It appears that most teacher graduates apply for positions in middle-class suburban communities, rather than in large urban communities, because schools located in the latter, particularly those in inner cities, are less desirable to the graduates. Such schools serve an area that has a lower socioeconomic segment of the population, the children are mostly nonwhite, economic blight is most prevalent, and crime and violence are disproportionately higher than in other areas.

Additional teachers desired if
funds were available

According to the school districts, about 28,000 additional teachers would have been hired during the 1971-72 school year had funds been available. Most of the school districts responding to this question did not specify their needs by subject fields. School districts which did, indicated a desire to expand curriculums and special services by

specifying such subjects as special education, special assignments,¹ industrial arts, and vocational education.

The table below shows the number of teachers hired and additional teachers who would have been hired were funds available.

Teachers Hired and Teachers Needed

<u>Geographic division</u>	<u>Hired</u>	<u>Needed but not hired due to budget constraints</u>
New England	3,895	1,241
Middle Atlantic	17,641	1,235
South Atlantic	28,458	416
East-North-Central	23,079	8,770
East-South-Central	25,939	4,544
West-North-Central	37,767	3,707
West-South-Central	7,209	2,501
Mountain	11,885	1,070
Pacific	<u>19,812</u>	<u>4,297</u>
Total	<u>175,685</u>	<u>27,781</u>

The number of teachers needed but not hired is approximately the same as the number of teacher graduates reported by colleges and universities as being unable to find teaching positions. (See p. 15.) Our data, unlike that compiled by the National Education Association, does not include those noneducation majors qualified to teach. However, the mere availability of funds would not necessarily have solved the teacher imbalances since the subject major and the location of vacancies would still be determinant factors affecting teacher employment prospects.

¹Assignments dealing with education of economically or educationally disadvantaged youth.

State departments of education
report teacher market conditions
similar to those reported by
school districts and colleges

The State departments of education gave reports similar to those of school districts and colleges concerning teacher supply and demand within subject fields. They reported a demand for teachers in the fields of industrial arts and special education and teacher surpluses in such subject areas as English, social sciences, and home economics. States' responses are summarized in the following table.

Percent of State Departments of Education
Reporting Teacher Excesses, Vacancies,
and Teacher Supply Equal to Demand
by Subject Field

	<u>Excess of</u> <u>applicants</u>	<u>Supply and</u> <u>demand</u> <u>balance</u>	<u>Vacancies</u>
Elementary:			
Regular instruction	75	16	9
Special education	3	17	80
Secondary:			
Agriculture	45	38	17
Art	47	37	16
Business education	41	41	18
Distributive education	21	54	25
English language arts	91	9	-
Foreign languages	45	39	16
Home economics	58	39	3
Industrial arts	13	31	56
Mathematics	16	59	25
Music	36	43	21
Physical education and health:			
Men	87	13	-
Women	36	48	16
Natural and physical sciences	26	45	29
Social sciences	100	-	-
Trade, industrial, vocational, technical	3	24	73
Special education	3	10	87

Students considering teaching careers may be reacting to teacher oversupply situation

Early in the 1970s a number of studies showed that demand for teachers would likely remain relatively constant throughout the remainder of the decade. The supply of teachers was projected as exceeding demand each year, and this excess was projected to grow steadily. It now appears that prospective teacher graduates are beginning to react to the oversupply situation.

In 1971 the National Education Association reported a surplus of about 100,000 college and university graduates qualified to teach. The National Center for Educational Statistics reported that the 1971 graduating class showed a 6-percent increase over 1970 in the number of new teacher graduates with bachelor's degrees. However, in 1972 the American Council on Education's survey of college and university freshmen showed that about 12 percent planned to become elementary and secondary school teachers. A similar survey made by the Council in 1968 showed that about 24 percent of the freshmen had such plans.

CONCLUSIONS

Officials at all three levels of the educational community covered in our questionnaire survey--institutions of higher education, local school districts, and State departments of education--agree that a general surplus of elementary and secondary school teachers exists in the country.

Our review showed that the surplus varied by geographic region and graduates were more successful in obtaining positions in some regions than in others. Also graduates in certain subject fields, such as industrial arts and mathematics, were more successful in obtaining teacher employment than graduates in other subject fields, such as the social sciences. In spite of the general surplus, shortages of teachers still existed in some subject fields, such as special and vocational education, and in certain geographic locations, such as large inner cities.

The number of students entering colleges and universities to pursue teaching careers seems to be decreasing; thus, the general oversupply of teachers may decrease in future

years. However, the correction of geographic and subject matter imbalances--both surplus and shortages--will not be reached without external intervention. It appears to us that a national strategy is needed which would reduce the oversupply of certain types of teachers and at the same time develop those resources needed to alleviate shortages.

CHAPTER 4

METHODS FOR EQUALIZING TEACHER SUPPLY AND DEMAND

One reason for our questionnaire survey was to obtain opinions of State departments of education, school districts, and colleges and universities about measures which were being taken or could be taken to help correct teacher supply and demand imbalances. We asked questions about the availability of career counseling programs at colleges and universities and the degree of communication concerning teacher job opportunities which takes place among the States, colleges and universities, and school districts. We also asked about sources outside the three levels which the colleges and universities commonly relied upon for information about the teacher market.

To supplement questionnaire responses, we interviewed selected officials representing 4 State departments of education, 9 colleges, and 12 local school districts. Their observations were:

- Counseling about job opportunities at teacher-producing colleges is, in many cases, informal and is viewed as insufficient by State departments and school districts.
- Colleges and universities rely on the National Education Association and the National Center for Educational Statistics reports for information about the teacher market.
- Communication among school districts, State departments of education, and colleges and universities concerning teacher job opportunities should be improved.

State, college, and school district officials cited, in their questionnaire responses, the following measures for curbing teacher surplus problems:

1. Organize college curriculums to produce teachers for which a demand will exist.
2. Retrain surplus teachers for shortage subject fields.

3. Limit the number of students entering education through screening procedures and quota systems.
4. Raise or lower State certification standards to affect the number of teachers eligible to teach within States.

Two other corrective measures aimed at increasing demand for new teachers and improving the quality of education are often cited in available studies of teacher supply and demand:

1. Reduce the number of students assigned to each classroom teacher.
2. Increase the number of preschool programs.

COLLEGE COUNSELING PROGRAMS

Education experts agreed that student counseling can be a major influence in the career decisions of college students, either early or well into their college programs. Of the teacher colleges we surveyed, 47 percent did not have formal counseling programs designed to inform students of the teacher job market. Almost 70 percent reported that students are encouraged to obtain such information from the college placement office.

We received general opinions about job counseling performed at colleges and universities from local school districts and State departments of education. About 59 percent of school district officials and 73 percent of the State departments believe colleges and universities do not adequately inform students about employment conditions and that this is a major reason for teacher surpluses.

EXTERNAL INFORMATION SOURCES USED BY COLLEGES FOR COUNSELING

The National Education Association and the National Center for Educational Statistics are the two major sources of statistics in the educational field. About 73 percent of the colleges reported they rely upon the Association's reports, and about 54 percent said they rely upon the Center's reports for information with which to counsel students planning to become teachers. Some schools relied on both sources.

The colleges responded that they frequently use magazines and other common media for their counseling information. Both the Association and the Center are, however, sources of educational information for these other media.

COMMUNICATION AMONG EDUCATIONAL ORGANIZATIONS
CONCERNING TEACHER JOB OPPORTUNITIES

Effective communication among the colleges which supply teachers, the school districts which hire teachers, and the controlling State departments of education which certify teachers is needed to maintain proper balance in the teacher supply and demand system. Only 40 percent of the State departments of education reported that their local school districts prepare reports of teacher demand or supply conditions within the districts. A small number of colleges reported that State department reports are a primary source of data on teacher demand. About 86 percent of the school districts said meetings are not regularly held to discuss needs for teachers, and another 35 percent said that even informal discussions about the subject do not take place.

OE recognized this problem and in December 1972 the Commissioner of Education stated that:

"The waste involved in continuing to prepare teachers for whom no job exists is of course intolerable. The first step toward correcting these education manpower imbalances is the development of a close collaboration between the colleges and universities which recruit and train teachers and the school systems which hire them. State education agencies will need to assume leadership in bringing about this collaboration and in developing action programs to minimize a costly and wasteful teacher surplus."

STATES, COLLEGES, AND DISTRICTS
SUGGESTED SURPLUS REMEDIES

Questionnaire respondents suggested several measures aimed at correcting teacher surplus problems.

One measure was to reorganize college curriculums to produce the types of teachers for which a demand would exist. Some colleges have done this, although others in our survey

which supplied teachers for school districts needing special or vocational education teachers reported they had no related training programs because of high costs of implementing such programs. Most of the institutions that suggested this measure believed they needed more Federal assistance to make these changes.

A second measure was to retrain surplus teachers for the more specialized teaching jobs which were available. Because of the similarities in some subject areas, the transition from one subject area to another through retraining could be relatively simple, whereas, in other cases, the change could be quite difficult. For instance, the transition from English teacher to remedial reading teacher would be easier than the transition from English teacher to mathematics teacher. Retraining could reduce the number of surplus teachers who may be underemployed, or even unemployed, and could increase skilled and specially trained teachers. Retraining in a teaching specialty would presumably require minimal time and cost compared with the normal time and cost of a 4-year education.

A third suggestion was to intensify college screening procedures to insure only students with high aptitude for teaching were entering education curriculums. A few colleges reported that they were setting up screening procedures; however, such procedures may not be acceptable to all colleges because they could be construed as an infringement on the student's free choice and also because they could decrease college revenues along with enrollments.

Establishing quota systems to govern the number of students enrolled in education courses was a fourth suggestion. Colleges and universities or the State departments of education could initiate such quotas, depending upon their respective authorities and controls. It was suggested that State agencies could influence colleges and universities to set quotas by restricting State and Federal funds. Several States reported they already have quota systems. Such quota systems, without full cooperation and endorsement, may tend to strain relations among colleges, States, and the Federal Government. Also, students denied enrollment in education curriculums may view such a system as discriminatory.

The fifth measure suggested dealt with changing teacher certification standards to reduce the number of teachers

eligible to teach in the States. Requiring applicants to hold a bachelor's degree in education or a master's degree before qualifying to teach within a State would reduce the teacher supply for that State. But the job opportunities available to bachelor's degree holders, noneducation majors, and individuals not college trained would also be reduced, and different problems could arise.

OTHER SUGGESTIONS FOR REDUCING TEACHER SURPLUSES

Our review of available studies and position papers dealing with teacher supply and demand revealed other suggestions which would help to alleviate the teacher supply and demand problem. These include suggestions to reduce pupil-teacher ratios and to place increased emphasis on preschool programs.

Funding conditions generally determine the pupil-teacher ratio. The existing pupil-teacher ratio in the Nation's public schools is about 22 to 1. Many education professionals advocate reducing pupil-teacher ratios for the twofold benefit of increasing the quality of education and reducing teacher surpluses. Existing evidence suggests that student achievement is not affected until pupil-teacher ratios are less than 15 to 1. Teacher salary costs would undoubtedly increase by several billion dollars if the pupil-teacher ratio were to be reduced to 15 to 1 or below. Considering the existing problems in school finance, this does not appear to be a feasible option.

An increase in preschool training programs for children also offers possibilities for absorbing the surplus of qualified teachers. Again, the school districts' ability to fund such programs is the determinant factor.

CONCLUSIONS

Responses to our questionnaire indicate counseling about job opportunities at teacher-producing colleges and universities and communication among colleges, school districts, and State departments of education should be improved. Other measures are needed, however, before college counseling and general communication can be made more effective. Data concerning teacher and other market conditions both

within and among the States must be refined, compiled, projected, and distributed to decisionmakers. Data about national and regional teacher market conditions presently is not sufficient for planning, program evaluation, or counseling purposes. Moreover, the reported reliance colleges and universities place upon data from OE's National Center for Educational Statistics should encourage OE to gather and disseminate current comprehensive data about the teacher job market.

In addition (1) college curriculum changes aimed at meeting the teacher needs within school districts and regions of the country and (2) retraining surplus teachers to meet existing shortages for specialized teachers appear to be suggestions worthy of consideration for dealing with current surplus problems. Other measures suggested to reduce the numbers of qualified teachers, such as quota systems, screening procedures, and certification standards, can have serious effects and should be carefully studied before being acted upon.

RECOMMENDATIONS TO THE SECRETARY OF HEALTH,
EDUCATION, AND WELFARE

The Secretary of HEW should direct OE to consider the following actions.

- Encourage colleges and universities to establish or improve student-counseling programs about job opportunities and make appropriate curriculum changes to better meet the needs of prospective employers.
- Consider the feasibility of a program to retrain surplus teachers for existing teacher shortage areas.

HEW concurred in our recommendations and stated that OE would continue to encourage colleges--by pointing out opportunities and benefits--to (1) establish or improve job counseling programs and (2) make appropriate curricular changes to better meet the future needs of the Nation. HEW also stated that OE will consider a program to retrain surplus teachers for selective areas of existing shortages of qualified teachers.

The improved information to be obtained by OE should be useful to the Congress in considering new legislation or in modifying existing legislation, as well as in considering funding levels for related educational programs. Such information should help the Congress to determine whether programs should be directed toward critical teacher shortage areas and whether incentives should be provided to encourage students to enter teacher shortage areas or discourage them from entering surplus fields.

CHAPTER 5

SCOPE OF REVIEW

We attempted to identify all Federal programs which provide assistance to develop elementary and secondary school teachers. This was accomplished through a questionnaire survey of Federal agencies, performed at our request by the Federal Interagency Committee on Education, as well as our survey work. We concentrated our efforts on those programs which aid in developing new teachers.

We held discussions with Federal program administrators; reviewed program policies, procedures, and guidelines; and inquired into the type and quality of information available to administrators in evaluating program effectiveness and efficiency.

In addition to researching Federal education programs, we surveyed nationwide teacher supply and demand conditions. We developed questionnaires and had them reviewed by the National Education Association and the American Association of Colleges for Teacher Education. Most of our research work for the questionnaires involved reports and materials obtained from the National Education Association, the Education Research Information Center at OE, OE's National Center for Educational Statistics, and the American Association of Colleges for Teacher Education.

We sent questionnaires to all State departments of education and to statistically selected colleges and universities and school districts. (See app. I.)

We also conducted followup interviews with selected questionnaire respondents. The specific objectives of our questionnaires and discussions were:

- To determine the extent of teacher surpluses or shortages by geographic location and by teaching subject field.
- To identify probable causes of imbalances in the teacher job market.

--To solicit opinions on methods for alleviating
teacher job market imbalances.

We discussed questionnaire survey results with officials of interested Federal agencies and private educational organizations.

SAMPLING PLAN FOR QUESTIONNAIRE SURVEY
OF TEACHER SUPPLY AND DEMAND

We sent questionnaires to a probability sample (or scientific sample) of colleges and universities that train teachers, to a probability sample of school districts, and to all State departments of education.

SAMPLE OF COLLEGES AND UNIVERSITIES

We drew this sample from the "American Association of Colleges for Teacher Education Membership Directory for 1970," which lists approximately 95 percent of the institutions of higher learning that train teachers, classified by State or territory. An independent random sample of colleges or universities was selected from the institutions listed for each State or territory. The sample consisted of 276 institutions.

SAMPLE OF LOCAL SCHOOL DISTRICTS

We drew this sample from the "National Center for Educational Statistics Educational Directory; Public Schools, 1971," which lists the public school districts of the United States and its outlying areas, classified by State or territory, and size (in terms of number of pupils). We included the five largest school districts in the Nation--New York, Chicago, Los Angeles, Philadelphia, and Detroit--as certainty selections; that is, they were automatically included. Within each State and the District of Columbia, we stratified the remaining school districts into the following nonoverlapping groups.

25,000 pupils or more
5,000 to 24,999 pupils
1,000 to 4,999 pupils
300 to 999 pupils
Less than 300 pupils

An independent random sample of school districts was selected from the school districts in each group within each State, except that it was decided not to include in the sample school districts having less than 300 pupils, since few pupils are enrolled nationwide in such districts. The sample consisted of 495 school districts, including the 5 districts selected with certainty.

TABLES OF SELECTED QUESTIONNAIRE RESPONSES

TABLE 1

PLACEMENT OF EDUCATION GRADUATES
IN TEACHING POSITIONS

<u>Geographic divisions</u>	<u>Elementary teacher graduates</u>		
	<u>Number of teacher graduates</u>	<u>Number desiring but not finding teaching jobs</u>	<u>Percent not finding teaching jobs</u>
New England	3,970	1,077	27
Middle Atlantic	9,855	1,593	a16
South Atlantic	7,405	454	6
East-North-Central	15,154	1,205	8
East-South-Central	3,142	331	a11
West-North-Central	11,982	2,239	a19
West-South-Central	4,609	150	a 3
Mountain	4,641	756	16
Pacific	<u>7,344</u>	<u>1,616</u>	22
Total	<u>68,102</u>	<u>9,421</u>	14

^aThese estimates may be of limited reliability due to a large sampling error. Such estimates are presented as general information, and caution should be exercised in drawing important conclusions from them.

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<u>Secondary teacher graduates</u>			<u>Total teacher graduates</u>		
<u>Number of teacher graduates</u>	<u>Number desiring but not finding teaching jobs</u>	<u>Percent not finding teaching jobs</u>	<u>Number of teacher graduates</u>	<u>Number desiring but not finding teaching jobs</u>	<u>Percent not finding teaching jobs</u>
3,591	760	21	7,561	1,837	24
15,674	3,105	20	25,529	4,698	18
10,013	973	10	17,418	1,427	8
26,527	4,119	16	41,681	5,324	13
5,221	797	15	8,363	1,128	13
18,516	4,504	24	30,498	6,743	22
6,420	417	6	11,029	567	5
6,044	1,112	18	10,685	1,868	17
<u>7,540</u>	<u>1,718</u>	23	<u>14,884</u>	<u>3,334</u>	22
<u>99,546</u>	<u>17,505</u>	18	<u>167,648</u>	<u>26,926</u>	16

APPENDIX II

TABLE 2

TEACHER GRADUATES NOT FINDING TEACHING POSITIONS

<u>Subject fields</u>	<u>Number of teacher graduates desiring teaching jobs</u>	<u>Number of teacher graduates desiring but not finding teaching jobs</u>	<u>Percent of teacher graduates desiring but not finding teaching jobs</u>
Elementary:			
Regular instruction	63,793	9,156	14
Special education	<u>4,309</u>	<u>265</u>	<u>6</u>
Total	68,102	9,421	14
Secondary:			
Agriculture	1,172	15	^a 1
Art	4,634	1,106	24
Business education	6,792	1,419	21
Distributive education	625	80	13
English	16,781	3,067	18
Foreign language	5,941	1,160	20
Home economics	4,570	698	15
Industrial arts	3,121	167	5
Mathematics	6,893	693	10
Music	4,144	364	9
Physical education:			
Men	8,992	1,683	19
Women	6,604	1,055	16
Natural and physical sciences	6,529	698	11
Social sciences	18,364	4,873	27
Trade, industrial, vocational	785	138	^a 18
Special education	1,576	59	^a 4
Special assignments	<u>2,023</u>	<u>230</u>	^a <u>11</u>
Total	99,546	17,505	18
Total	<u>167,648</u>	<u>26,926</u>	<u>16</u>

^aThese estimates may be of limited reliability due to a large sampling error. Such estimates are presented as general information, and caution should be exercised in drawing important conclusions from these estimates.

TABLE 3
 APPLICANTS FOR TEACHING POSITIONS WITHIN
 SCHOOL DISTRICTS OF VARYING STUDENT POPULATION

Geographic division	Student population											
	300 to 4,999			5,000 to 24,999			25,000 and over			All school districts		
	Number of teachers hired	Number of applicants	Percent of applicants hired									
New England	2,256	136,345	2	255	17,689	^a 1	1,384	6,717	21	3,895	160,751	?
Middle Atlantic	6,927	229,557	^a 3	947	135,492	^a 1	9,767	32,408	30	17,641	397,457	4
South Atlantic	7,895	32,269	25	10,823	53,519	20	9,650	86,245	11	28,458	172,033	17
East-North- Central	11,910	183,291	^a 6	3,916	159,799	^a 2	7,253	91,703	8	23,079	434,793	5
East-South- Central	14,255	23,949	^a 60	5,256	19,231	^a 27	6,428	34,266	19	25,939	77,446	33
West-North- Central	26,371	209,762	13	9,220	147,181	6	2,176	14,033	16	37,767	370,976	10
West-South- Central	6,290	47,977	13	704	16,098	4	215	4,564	^a 5	7,209	68,639	11
Mountain	2,688	81,750	3	9,088	184,183	^a 5	109	2,581	4	11,885	268,514	4
Pacific	<u>12,188</u>	<u>273,384</u>	^a 4	<u>2,432</u>	<u>48,915</u>	5	<u>5,192</u>	<u>64,140</u>	8	<u>19,812</u>	<u>386,439</u>	5
Total	<u>90,870</u>	<u>1,218,284</u>	7	<u>42,641</u>	<u>782,107</u>	5	<u>42,174</u>	<u>336,657</u>	13	<u>175,685</u>	<u>2,337,048</u>	8

^aThese estimates may be of limited reliability due to a large sampling error. Such estimates are presented as general information and caution should be exercised in drawing important conclusions from them.

APPENDIX III



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

NOV 8 1973

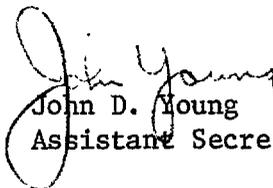
Mr. Morton E. Henig
Associate Director
Manpower and Welfare Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Henig:

The Secretary has asked that I reply to your letter dated August 29, 1973, pertaining to the General Accounting Office draft report to the Congress entitled "Supply and Demand Conditions for Teachers and Implications for Federal Programs."

The enclosed comments set forth this Department's views on those parts of the report pertaining to the HEW, Office of Education (OE).

Sincerely yours,


John D. Young
Assistant Secretary, Comptroller

Enclosure

Department of Health, Education and Welfare Comments Pertinent to the Draft Report to the Congress of the United States Entitled "Supply and Demand Conditions for Teachers and Implications for Federal Programs"

The GAO recommended to the Secretary that he direct OE to consider the following action:

Recommendation

By virtue of its involvement with the development of elementary and secondary school teachers, undertake action to obtain and maintain centralized data about all Federal programs affecting teachers.

Department Comment

We concur in the recommendation.

The Office of Education (OE) will explore the subject of developing and maintaining centralized data on all Federal programs affecting teachers with the Federal Interagency Committee on Education. Also, OE is proceeding with plans for a recurring survey that involves collecting and analyzing data from teachers, students and institutions on the effects of Federal programs on teacher supply.

Recommendation

Study the feasibility of developing and maintaining feedback on the areas of study undertaken by all recipients of Federal education funds and coordinate such studies with other Federal agencies supporting education programs.

Department Comment

We concur in the recommendation. However, rather than conduct a specific feasibility study we will incorporate requirements for gathering the necessary data into other studies that OE has plans to make.

At this time, we believe the costs of collecting feedback on the areas of study undertaken by all recipients of Federal education funds would be very high. The data gathered from OE's studies will provide us with the cost for annual surveys and reports in different levels of detail and scope. Responsible judgements can then be made as to the scope and depth of an annual data collection program on areas of study. As appropriate, we will of course coordinate such studies with other Federal agencies supporting education programs.

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Recommendation

Continue efforts, in conjunction with the Bureau of Labor Statistics, toward the timely development of a system for conducting surveys of supply and demand conditions for new college graduates. These surveys should gather information on conditions in different sections of the country and should provide a basis upon which future job market conditions can be projected.

Department Comment

We concur in the recommendation.

The Office of Education will continue its efforts, in conjunction with the Bureau of Labor Statistics and the Bureau of the Census, to develop, as rapidly as resources permit, selective further surveys on supply and demand conditions for educational personnel. Gradual extension of the system of surveys is planned as feasible on the basis of realistic comparisons of practical benefits to the financial and technical effort required. OE projections for teacher market conditions, which are accepted by the Bureau of Labor Statistics, will utilize such new information sources as they begin to provide results.

Recommendation

Coordinate with the Bureau of Labor Statistics in disseminating this job market information to all Federal, State, and local agencies responsible for administering education programs as well as institutions of higher education.

Department Comment

We concur in the recommendation.

In fact the Office of Education regularly disseminates projections of numbers of teachers, and demand for additions to the teacher force, based on stated plausible assumptions, through its annual Projections of Educational Statistics publication. This data is also provided to the Bureau of Labor Statistics, which uses the OE projections in its occupational and industrial labor force projections, published in the Occupational Outlook Handbook and elsewhere. The two agencies coordinate their activities in this field closely. Increased effort to reach all the agencies administering education programs and institutions of higher education conducting teacher training will be considered.

Recommendations

Encourage colleges to establish or improve student counseling programs concerning job opportunities; continue to encourage colleges to make appropriate curricular changes to better meet the needs of prospective employers.

Department Comment

We concur in the recommendations.

The Office of Education will continue to encourage colleges -- by pointing out opportunities and benefits -- to (i) establish or improve student counseling programs concerning job opportunities, and (ii) make appropriate curricular changes to better meet the future needs of the nation. The more detailed projections discussed in connection with other recommendations will contribute also to OE leadership in both of these areas.

Recommendation

Consider the feasibility of a program to re-train surplus teachers for existing teacher shortage areas.

Department Comment

We concur in the recommendation.

The Office of Education will consider a program to re-train surplus teachers for selective areas of existing shortages of highly qualified teachers in which a strong Federal concern exists. The design of any possible re-training program would involve careful consideration of the best source from the total teacher pool for filling the vacancies in shortage categories. It may well be that some of the re-training can most effectively be done on an in-service basis to upgrade experienced active teachers, creating vacancies in turn for some of the "surplus" teachers.

The Report rightly recognizes that the relatively low ratio of applications to hires in the nation's urban school districts (which have less than a fourth of the national enrollment) reflects a "deeper social problem", apparently referring to the reasons such jobs may be less attractive to many teachers than suburban or rural ones. Another facet of the problem is the continued relative under-representation of minority members in the new teacher-graduates. For effective teaching for the children in cities, there is need for teachers who know the various cultures

APPENDIX III

represented, who provide models the disadvantaged children may identify with. This is a critical shortage area different from those defined by subject areas or field, and OE programs (Teacher Corps and Career Opportunities) have addressed it. In fact, OE funding programs for teacher preparation have been directed heavily to shortage areas in special education, low income area schools, and vocational education.

PRINCIPAL OFFICIALS OF THE
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
SECRETARY OF HEALTH, EDUCATION, AND WELFARE:		
Caspar W. Weinberger	Feb. 1973	Present
Elliot L. Richardson	June 1970	Jan. 1973
Robert H. Finch	Jan. 1969	June 1970
Wilbur J. Cohen	Mar. 1968	Jan. 1969
John W. Gardner	Aug. 1965	Mar. 1968
Anthony J. Celebrezze	July 1962	Aug. 1965
ASSISTANT SECRETARY (EDUCATION):		
Charles B. Saunders, Jr. (acting)	Nov. 1973	Present
Sidney P. Marland, Jr.	Nov. 1972	Nov. 1973
COMMISSIONER OF EDUCATION:		
John R. Ottina	Aug. 1973	Present
John R. Ottina (acting)	Nov. 1972	Aug. 1973
Sidney P. Marland, Jr.	Dec. 1970	Nov. 1972
Terrel H. Bell (acting)	June 1970	Dec. 1970
James E. Allen, Jr.	May 1969	June 1970
Peter P. Muirhead (acting)	Jan. 1969	May 1969
Harold Howe II	Jan. 1966	Jan. 1969
Francis Keppel	Dec. 1962	Jan. 1966

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