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ABSTRACT

Education workshop participants at the First Statewide Legislative Symposium on Rural Development pinpointed trends, strengths, weaknesses, goals, and public policy questions for grades K-12 and higher education. For grades K-12, rural schools were characterized by increased enrollment due to migration from urban areas, increasing popularity with parents, and continued consolidation/centralization of school districts. Their strengths included close school-community interactions and good student participation. Problems relating to limited program offerings, poorly prepared staff, and a limited financial base indicated the need to establish additional specific programs. For higher education, concerns centered around the sophisticated technologies of business and industry and means of attracting students to available training programs. Thirty-six of the State University of New York's 64 campuses are located in rural counties, and vocational and community colleges are also available to most rural residents, but workshop participants identified a need for financial aid to students, better program planning and management, and more interaction between education and business/industry. Education's 2-fold role was viewed as preparing rural students for a changing world, and developing its generally unrealized potential for improving the quality of rural life. Appended lists, maps, and charts reflect supporting statistical data. (MM)

ELEMENTARY, SECONDARY AND HIGHER EDUCATION IN RURAL NEW YORK STATE: A PRELIMINARY REPORT

NEW YORK STATE LEGISLATIVE COMMISSION ON RURAL RESOURCES
SENATOR CHARLES D. COOK, CHAIRMAN

MARCH 15, 1984

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RURAL FUTURES

LEGISLATIVE COMMISSION ON RURAL RESOURCES
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The Commission on Rural Resources was established by Chapter 428 of the Laws of 1982, and began its work February, 1983. A bipartisan Commission, its primary purpose is to promote a state-level focus and avenue for rural affairs policy and program development in New York State.

The Commission provides state lawmakers with a unique capability and perspective from which to anticipate and approach large-scale problems and opportunities in the state's rural areas. In addition, legislators who live in rural New York are in the minority and look to the Commission for assistance in fulfilling their responsibilities to constituents.

The Commission seeks to amplify the efforts of others who are interested in such policy areas as agriculture; business, economic development, and employment; education; government and management; environment, land use, and natural resources; transportation; housing, community facilities, and renewal; human relations and community life; and health care. It seeks to support lawmakers' efforts to preserve and enhance the state's vital rural resources through positive, decisive action.

In order to obtain a clearer picture of key problems and opportunities, the Commission invited people to informal discussions at a Statewide Rural Development Symposium, held October 5-7, 1983. It was the first such effort of its kind in the state and nation. Workshop participants undertook in-depth examinations of key policy areas the Commission believed were critical to the state's future rural development.

Symposium participants focused their discussions on ends, not means. In short, the objective was to identify key trends, strengths, weaknesses, goals, and opportunities for advancement; not to present solutions. Once a clearer picture of these findings is drawn, the next step will be to identify and propose the required, and hopefully innovative, recommendations. This task will be the subject of a second, follow-up symposium. Another unique feature of the first symposium was the opportunity it provided participants to share their thinking with colleagues from throughout the state over a three-day period of intensive dialogue.

The Commission is happy to announce that the objective of the Symposium was accomplished. Preliminary reports, based on the findings, are being issued as planned, in connection with a series of public hearings it is sponsoring across the state. The aim of these hearings is to obtain public commentary on the preliminary reports. Following these, a final symposium report will be prepared for submission to the Governor and the State Legislature. It will also serve as a resource report for the second statewide symposium on recommendations.

The Commission is comprised of five Assemblymen and five Senators with members appointed by the leader of each legislative branch. Senator Charles D. Cook (R.-Delaware, Sullivan, Greene, Schoharie, Ulster Counties) serves as Chairman. Assemblyman William L. Parment (D.-Chautauqua) is Vice Chairman and Senator L. Paul Kehoe (R.-Wayne, Ontario, Monroe) is Secretary. Members also include: Senator William T. Smith (R.-Steuben, Chemung, Schuyler, Yates, Senaca, Ontario); Senator Anthony M. Masiello (D.-Erie); Senator Thomas J. Bartosiewicz (D.-Kings); Assemblywoman Louise M. Slaughter (D.-Monroe, Wayne); Assemblyman Michael McNulty (D.-Albany, Rensselaer); Assemblyman John G.A. O'Neil (R.-St. Lawrence); and Assemblyman Richard Coombe (R.-Sullivan, Delaware, Chenango).

PREFACE

The Legislative Commission on Rural Resources publishes herein one of nine preliminary reports from the First Statewide Legislative Symposium on Rural Development held October 5-7, 1983. This effort was not only a "first" for New York State, but for the nation as well.

The purpose of the Symposium, and the public hearings that will follow, is to catalog the strengths of rural New York, to define its problems, and to establish goals for the next two decades. Neither the Symposium nor the hearings will deal with strategy to develop our resources, address our problems, or accomplish our goals. That will be the thrust of a later Commission effort.

For the moment, it is our purpose to foster as objectively and exhaustively as possible, an understanding of where we are and where we want to go.

The Symposium reports in each subject area encompass the oral and written findings of the respective workshops, along with responses given at the Commission hearing where the reports were presented to State legislators for comment and discussion. Incorporated into this preliminary report is subsequent comment from group participants on points they felt needed amplification. Also appended to the published product is basic resource material intended to clarify points made in the reports.

I wish to personally congratulate the Symposium participants on the very sound and scholarly documents they have produced. However, their work is only preliminary to the final product which will be issued by the Commission once the hearing process is complete.

Those who read this report are urgently invited to participate in the public hearings that will be held throughout rural New York, or to submit comments in writing to the Commission. Your support, disagreement or commentary on specific points contained in the Symposium report will have a strong influence on the final report of the Commission.

Please do your part in helping to define sound public policy for rural New York during the next two decades.

Senator Charles D. Cook

Chairman

Legislative Commission on Rural Resources

INTRODUCTION

The quality of education at the elementary, secondary, and postsecondary levels is vital to the future commercial, industrial, cultural, and social development of rural New York and the constituency it serves. Quality health care systems and economic development strategies, for example, both hinge upon an outstanding and integrated educational system. Implicit in this assumption is the significant impact of education on the delivery of important social services to a highly diverse population of rural residents with varying backgrounds and interests.

There are 737 public school districts overall in New York State. A "rural" school district is generally defined as one that has twenty-five or less students per square mile. An accepted definition for a "small" school district is one whose enrollment at the K-12 level does not exceed 1,500 pupils. Of the more than 400 school districts in which either of these definitions apply, 300 (including 24 BOCES) participate in the Rural School Programs headquartered at Cornell University.

Educational institutions have been a dominant force in rural New York's overall development patterns. At the K-12 level, the school is a focal point of community life. Many parents have strongly supported the positive educational climate found in the small elementary school. In addition to its traditional educational role, the rural school often serves as a center for community social activities and cultural enrichment. Many rural residents, therefore, are extremely vocal in their opposition to school district consolidation because of their desire to preserve the school's unique identity within the community.

Despite evidence of recent population influxes to many of New York's

rural counties, public school enrollment in New York State has continued to decline. However, enrollments in rural counties have not declined as rapidly as in metropolitan counties. Indeed, in some more rapidly developing rural areas, school enrollments are on the rise. Between 1973 and 1981, the State's metropolitan counties lost over 20% of their public elementary and secondary school population, while rural counties as a group experienced an 18% decrease.

Another significant trend which has emerged in New York State's rural counties during the past decade has been the increased reliance on local tax revenue to fund elementary and secondary education. Although personal income per pupil rose at the same rate in rural and metropolitan counties (145%) between 1973 and 1982, full property value per pupil increased a whopping 206% in rural counties - twice as fast as the increase of full property value in metropolitan counties. Furthermore, the percentage of local contributions used to fund education also increased in rural counties. In 1973, local revenues accounted for 37% of the total revenues spent on education in rural counties. This figure rose to 44% in 1981, while remaining at 59% in metropolitan counties during the same eight-year period.

The future effectiveness of elementary and secondary education in rural New York will depend in large part upon the resourcefulness and creativity of school districts in integrating a new wave of communications technology into academic and vocational curricula. Such innovations would greatly reduce the friction of time and distance. In addition, they would encourage students in rural areas to choose a career path that did not force them to select either a vocational or a college preparation program, as so often happens in rural school districts. The availability of state aid and other financial resources is also of importance in the gradual shift away from real property assessment

as the primary source of educational funding. Many rural school districts currently favor a more equitable aid distribution based on personal income and block grant funding.

The State University of New York is the largest and most diverse public multi-campus university system in the world. The land-grant colleges at Cornell University, which include the statuatory colleges of Agriculture and Life Science, Human Ecology, Industrial and Labor Relations, and Veterinary Medicine, have continually sought to adapt their programs and resources to meet the contemporary needs of rural New York's institutions and economic structure. Cornell's Cooperative Extension Service, in conjunction with county governments, has assumed a key role over the years in making technical knowledge and management expertise available to the agricultural community through a strong network of county extension agents and offices. Instrumental roles in advancing technology and educational preparation have also been played by the School of Environmental Science and Forestry at Syracuse University, the College of Ceramics located at Alfred University, and the five Agricultural and Technical Colleges and thirty community colleges located in rural counties. The latter institutions offer a variety of two-year technical programs in dozens of vocational and skills development areas. Diverse programs and disciplines are offered by New York State's 116 independent colleges and universities, over twenty of which are located in rural counties. These institutions round out a viable system of higher education attuned to modern demands and opportunities.

During the past decade, there has been rising concern over the ability of New York State and the United States economies to compete successfully in a sophisticated, post-industrial information society. In order to encourage high technology and research facilities to do business in New York State, a

unique government-industry-university consortium has been forged. Two of the most notable products of this effort have been the Center for Industrial Innovation, located at Rensselaer Polytechnic Institute in Troy, and the Centers for Advanced Technology, currently underway at seven of the state's universities. These efforts in high technology research and development, if cultivated carefully, have the potential to generate additional jobs and revenue in rural New York during the coming decades.

Among the chief problems currently facing many educational institutions in New York's rural areas is the uncertain thrust of vocational education. Such education is often found to be duplicative, inconsistent, and costly in its efforts. In addition, poor career guidance at the elementary and secondary levels, coupled with the inflexibility of state auditing and financial practices and a cumbersome annual budgetary preparation process, have serious implications for higher education institutions. These troubles would be greatly eased by increased program articulation among BOCES, community colleges, Agricultural and Technical Colleges, and Cornell University. Moveover, a multi-year budget plan for state-supported higher education institutions, increased financial assistance for full and part-time students, the provision of SUNY campuses with greater management and fiscal autonomy, and a strengthening of the partnership between education, government, and the private sector in important skills and training areas is required.

At the suggestion of Education Workshop participants, the identification of educational trends, strengths, weaknesses, goals and public policy questions in New York State was divided into two sections: K-12 and higher education. This method, in their estimation, best facilitated discussion of the appropriate subject matter.

In sum, the role of education in rural New York is two-fold. On one hand, education has an important responsibility to provide students of all ages with basic competencies, technical expertise, cultural enrichment, and an equality of opportunity in order to readily adapt to the type of environment they have chosen to live in. In addition, education in rural localities has a generally unrealized potential to enhance economic development and social services delivery, and thereby improve the quality of life for the people the educational system was designed to serve.

WHERE RURAL NEW YORK IS TODAY (K-12)

Trends

- Evidence of increased migration to many rural localities in New York State.
  - For example, job development in these areas is enhanced by corporations that establish new rural locations for the bulk of their office operations ("back offices").
- The small community and the small elementary school are popular with an increasing number of parents.
- Evidence of countertrends - although population inflow has increased in rural areas, school enrollments have continued to decline in some school districts.
  - Yet, school enrollments in rural counties are not declining as rapidly as as they are in metropolitan counties. Indeed, many rural districts are experiencing a sharp increase;
  - With declining student populations in some elementary and secondary schools, there will be a surplus of resources, particularly among educational facilities and teaching specialists.
- There will be a continuing number of "necessarily small rural school districts" in the foreseeable future.
- A new wave of communications technology has direct implications for rural school districts by reducing information distance.
  - The growing importance of teachers as "instructional managers;"
  - In-service instruction in classroom management techniques is currently transmitted to teachers in rural school districts via closed circuit television.
- Continued consolidation/centralization of school districts.

Strengths and Assets

- Interaction between "school family" and rural communities.
  - The congeniality and friendliness between teachers and parents, who very often find themselves as neighbors with similar interests, has a positive effect on students.
- The rural school is a focal point of community life.
  - In addition to its traditional role, the school is a repository for social activities and cultural enrichment;
  - Pride in school and community is prevalent. Many rural

residents remain steadfast in their opposition to school district consolidation, especially at the elementary level, because of their desire to keep schools within the community.

- The positive educational climate found in rural schools encourages student participation in the learning process.
  - The "natural laboratory-like qualities" of rural areas enable students to receive first-hand exposure to the environment;
  - The informal nature of small-town politics afford students a chance to understand and actively participate in local government.

Weaknesses and Problem Areas

- Insufficient data base of factors affecting education in rural areas.
  - Research is lacking on the inter-relationship of elements relative to education (i.e., enrollments, test scores, per capita income, etc.).
- Insufficient educational opportunities for special populations, such as literacy, job training, resource sharing, and telecommunications.
  - For example, the number of microcomputers per student in rural schools is appallingly low.
- Declining enrollments have more seriously impacted on programs in rural schools.
  - This presents an increased burden to the rural taxpayer since small or sparse rural districts must **increase** the fraction of their local income spent on education faster than their metropolitan cousins;
  - Since rural school districts tend to be small, even a slight reduction (e.g., 20 or 30 students) can be significant.
- Insufficient career guidance for students. For example, many students are dissuaded from pursuing a college education. In addition, students are generally unaware of the numerous agricultural opportunities, other than farming, available to them.
- The two-sided controversy surrounding school district reorganization/ consolidation.
  - Separating the school district from the community causes an area to lose a significant portion of its local identity;
  - In addition, as school districts are centralized, a sizable proportion of the adult population who participate in school activities is lost;
  - Therefore, rural residents are unwilling to sacrifice local prerogatives for regional benefits. On the other hand, many

school district administrators believe that consolidation is a financial imperative which can have significant benefits in the long-run. They feel money saved through reorganization could be poured back into the school to improve the delivery of educational services.

- Regardless of their size or sparsity, payable operating aid is making up a smaller fraction of rural school districts' approved educational expenditures.

- Inherent limitations of rural school districts.

  - Program offerings/staff;

  - Aspirations of people;

  - Geography (e.g., school district consolidation impacts more severely on student transportation in rural areas);

  - Access to cultural resources;

  - Financial base.

- Availability of quality personnel, particularly due to low salaries and limited employment opportunities for both spouses.

  - Mathematics, English and foreign language teachers are less well-trained and less experienced in small, rural districts compared to large, urban districts;

  - There is a greater incidence of first-year teachers in small districts compared to large districts;

  - Teachers in small districts are more likely to teach outside their area of certification than in large districts.

- The impact of an increasing population of "rural disadvantaged."

  - This problem is often masked by the "idyllic" natural environment of rural communities;

  - Children from broken homes are becoming the ones who are most difficult to educate in rural areas.

- Per capita income has declined in real dollars:

  - Property values in rural counties have increased **dramatically**, and contributed to an overal ballooning in "paper wealth;"

  - This situation has led to serious financial problems for rural taxpayers as well as a backlash from a growing proportion of rural residents who are reluctant to pay school taxes because they do not have school-age children.

- Deteriorating facilities in rural schools, with a poor tax base to support rennovation. (This problem was cited to be common among urban and suburban schools as well).

- Lack of coordination and articulation among the range of vocational program offerings.

  - Competition/duplication of adult education services is prevalent;

  - "Pigeon-holing" of opportunities for vocational education students (e.g., many BOCES students in rural areas are unaware of the numerous opportunities for further technical training available at the postsecondary level).

GOALS FOR RURAL NEW YORK

- Education must be re-established as a top priority in New York State, particularly in rural areas.

- Develop a consensus and on-going evaluation of the Regents Action Plan.

- Establish a blue-ribbon commission on "Financial and Resource Management Reorganization in Rural School Districts" in order to study consolidation and the role of BOCES in providing a comprehensive education:

  - Such a reorganization effort might eventually provide inducements for satellite and telecommunications. Thus, rural school districts, with limited access to resources, could provide innovative programming and networking, through a consortia of educational institutions and cultural entities;

  - Reorganization should strengthen the position of the elementary school as the focal point of community life;

  - Reorganization should support the creation of "Centers for Learning Technology", so that schools can share a larger menu of services through greater interaction with one another;

  - A system for faculty and administrative in-service training and intensive supervisory follow-up is critical.

- Establish satellite institutions to enhance regional cooperation and small business management.

- Address the need for additional state and financial resources to achieve the educational opportunity specified in all goals. The acquisition of these funds is based on the need to stress personal income (as opposed to real property assessment) as an important distribution factor in devising educational formulas.

- Establish financial and instructional equality among all school districts in New York State regarding funding and staffing.

  - Rural school districts should receive state aid which would enable them to develop and maintain bi-lingual foreign language requirements equal to their urban counterparts;

- Local tax effort should include utility and sales taxes as an equitable requirement in the formulation of HURD aid;

- The State should recognize the infeasibility of consolidating some school districts. "Necessarily small rural school districts" should be an important subset in formula development.

- Provide a reduced regulatory framework so that schools have more flexibility in the utilization of the financial resources available to them.

- Support "Summer Immersion Institutes."

  - Such institutes would enable all students in the state (preferably a mix of urban and rural residents) to have access to an innovative educational experience;

  - Concurrent programs in teacher training could be established at these institutes.

- Increase the percentage of high school students who enroll in academic subjects such as Regents Science, Mathematics, Foreign Languages, etc.:

  - Increase the test score performance of students enrolled in these courses;

  - Provide the opportunity for BOCES students to enroll in academic (Regents) courses at BOCES Centers.

- Decrease the turnover rate among rural administrators, faculty, and Board of Education members.

- Expand training opportunities for those people who have not adequately prepared themselves for current and future job markets.

- Lengthen approval for services at BOCES institutions to a five-year period.

- If a certain percentage of a particular year's state budget goes toward funding K-12 education in a rural school district, then that percentage should be maintained in the following year's state budget. This would be more justifiable than simply taking the sum allocated in one year's budget and adding a set amount to it in order to create the following year's state appropriation to K-12 education in a particular rural district.

PUBLIC POLICY QUESTIONS TO BE ADDRESSED

- How can a degree of flexibility be incorporated into educational performance standards, in the event that they conflict with vocational career paths?

  - For example, vocational (BOCES) students are oftentimes enrolled in advanced math, but do not have the time to fulfill foreign language requirements;

- Individual students should be encouraged to choose a career path, instead of choosing between vocational or college preparation.

- In existing public policy, urban areas have built-in safeguards and clout. Is there a need to identify "rural disadvantaged areas" in order to create new, more responsive funding mechanisms?

- How should the two types of consolidation/centralization be distinguished in the discussion of these educational policy issues: 1) school district service pooling or BOCES academic services (functional); and 2) school district (physical)?

- Is it desirable to offer vocational and technical training to students before they have mastered basic competencies in mathematics, science, verbal and written communications, and computer literacy?

- Some rural school districts are contracting in enrollment size while others are experiencing substantial increases due to population changes. How can state funding formulas be made more responsive to the special needs experienced by both types of school districts?

- How can "necessarily small rural school districts" be supported in their efforts to offer quality education on par with their larger urban and rural counterparts?

- How can technology, such as telecommunications, be put to greater use serving students in sparsely settled rural school districts?

WHERE RURAL NEW YORK IS TODAY (HIGHER EDUCATION)

Trends

- There has been a rising concern over the ability of the New York State and United States economies to compete successfully in a sophisticated, post-industrial information society.

- Massive structural changes and persistent unemployment have radically altered national, state and local economies.

- Enrollment of "traditional students" (18-21 age group) in many higher education institutions in rural areas is projected to decline sharply during the next decade or more.

- Business and industry are becoming more sophisticated and require workers to have additional vocational education and re-training at the post-secondary level.

- Not only does the presence of high quality universities serve as a significant force in attracting high technology industry, but the universities themselves serve as a source from which new industries may evolve. A cooperative atmosphere between the State's universities and industries will be a necessary precondition for future economic development.

- According to a study by The Battelle Corporation, the success of high technology parks is heavily dependent upon the availability and proximity of quality colleges and universities and existing high technology industry and research facilities.

- Electronic linkages (i.e., media and telecommunications) will be increasingly important in affording individuals in rural areas the opportunity and convenience to pursue higher education.

Strengths and Assets

- Higher education contributes to statewide job opportunities by inducing business and industry to remain within the State.

- The State University of New York is the largest and most diverse public multi-campus university system in the world. Of its 64 campuses, 36 are located in rural counties.

- A sizable proportion of State University Agricultural and Technical College students who seek employment upon graduation are successful in their efforts. The remainder of these graduates go on to the baccalaureate level.

- Generally, vocational and community college education, as well as adult re-training are available and accessible to most rural residents, many of whom would not ordinarily pursue higher education. In addition, many community college students eventually pursue baccalaureate education. The average age of the community college student is between 25 and 27 years old. This implies that many students served by these institutions are already employed and seek

in-service training.

- The independent sector of higher education in New York State, comprised of over 100 campuses offering a variety of disciplines and programs, is the largest in the nation. Twenty-eight of these institutions are located in rural counties throughout New York State.

  - Independent sector campuses enroll over 20,000 residents of rural counties.

  - The conservative economic impact of colleges and universities located in rural counties, exceeds $2 billion annually, minus all federal and state appropriations made to these campuses.

- Higher education has made a significant contribution to quality health care systems in rural New York.

- Socioeconomic and educational utility of the land-grant colleges at Cornell in adapting to the complexity and diversity of rural New York's institutions and economy. This includes a unique system of Cooperative Extension Services made available through a strong network of County Extension Agents and Offices.

- The "Centers for Advanced Technology" program will stimulate public-university-industry partnerships and increase the potential for high technology research and development in rural New York.

Weaknesses and Problem Areas

- There is uncertainty as to where future vocational education should take place - at the BOCES, community college, or Agricultural and Technical level; or a combination of all three;

  - It has become increasingly difficult to distinguish between the academic programs and clientele of the Agricultural and Technical Colleges and the community colleges;

  - Vocational education facilities are sometimes duplicative and costly in their programs;

  - Reduced access to educational re-training, particularly because of high costs for adults at BOCES institutions;

  - Reluctance of taxpayers to support skills training that could otherwise be acquired on-the-job at the expense of others.

- Poor career guidance at elementary and secondary levels has serious implications for higher education.

- Poor curriculum coordination between educational, business-related and governmental programs at all institutional levels.

- Increased reticence among rural counties to contribute their portion of funds to finance community college education.

- Within public institutions, the inflexibility of the state system

relative to auditing and financial management.

- The present system of comprehensive annual budget preparation and documentation is very cumbersome for state-operated colleges and universities.

- Although part-time teachers are cost effective, over-reliance on their services diminishes loyalty as well as an institution's reputation for excellence.

- Linkages between rural counties' financial contributions to community college education and economic development have been attempted, but the results have not been satisfactory.

- Rural New York has "invested" heavily in the students it has educated, but out-migration often suggests this has not always been a reciprocal arrangement.

    - Out-migration is frequently fueled because the financial needs of many college-bound students in New York State cannot be adequately met by existing federal and state student aid packages.

GOALS FOR RURAL NEW YORK

- Education must be re-established as a top priority in New York State, particularly in rural areas.

- Higher education should be accessible to all rural residents. Everyone who wishes to pursue advanced study or continuing education should have the opportunity to do so:

    - Address problems with student aid and loans, particularly in the case of financial assistance for part-time students;

    - Re-evaluate the criteria for determining loan waivers in accordance with emerging societal needs in rural areas;

    - Emphasize the original parity purpose of the Tuition Assistance Program (TAP).

- Establish a multi-year budget plan for state-supported higher education institutions.

- Provide SUNY campuses with greater management and fiscal autonomy.

- Strengthen the partnership and contact between government-supported higher education and the private sector in order to provide skills and training:

    - Encourage "remote distance learning" and establish satellite institutions in off-campus locations for regional cooperation and small business enhancement.

    - Tap the resources of the Job Training Partnership Program's Private Industry Councils in order to provide educational

outreach services and skills re-training in rural areas.

- Address the need for "Professional Development Centers for Public Two-Year Colleges" in order to train administrative personnel and faculty.
- Expand opportunities for students who seek baccalaureate degrees in the applied technologies.
- Address salary inequities between similar positions in SUNY units.
- Increase curriculum articulation among BOCES, community colleges, Agricultural and Technical Colleges, State Colleges and Universities and private institutions in order to develop a viable and **sequential** program for quality vocational education in rural areas:
  - The institutional missions of the Agricultural and Technical Colleges need to be reassessed in light of the evolution of BOCES education in rural New York;
  - There are **layers** of vocational education. As industrial advances are made, preparation is needed beyond the BOCES level;
  - Vocational education should follow a sequence of events in order to avoid duplication and unnecessary costs.

PUBLIC POLICY QUESTIONS TO BE ADDRESSED

- How can responsive and equitable opportunities in higher education best be provided in rural New York?
  - What factors most seriously hinder rural colleges' and universities' institutional responsiveness, creativity, and initiative?
- How can required flexibility, resources, and articulation best be provided secondary and post-secondary institutions so that they can adapt to and be supportive of new societal, economic, and technological changes?
- How will the increased competition for students due to sharp declines in the traditional 18-21 college-age cohort affect the quality, responsiveness, and cost of post-secondary education during the next two decades? Does the current system have the tools and concepts required to manage and adapt itself in an extended period of restructuring?
- How does higher education contribute to rural development and the quality of rural life?
  - Specifically, what can higher education do to stimulate economic and employment growth? How can it benefit quality health care systems?
  - How can the mission orientations of rural New York's post-secondary institutions be re-evaluated with regard to the potential impact of education on the delivery of social services

in rural areas?

- How can public policy address the need for increased access to educational opportunities at the **local** level? Current policy emphasizes **regional** access, often to the exclusion and detriment of local needs.

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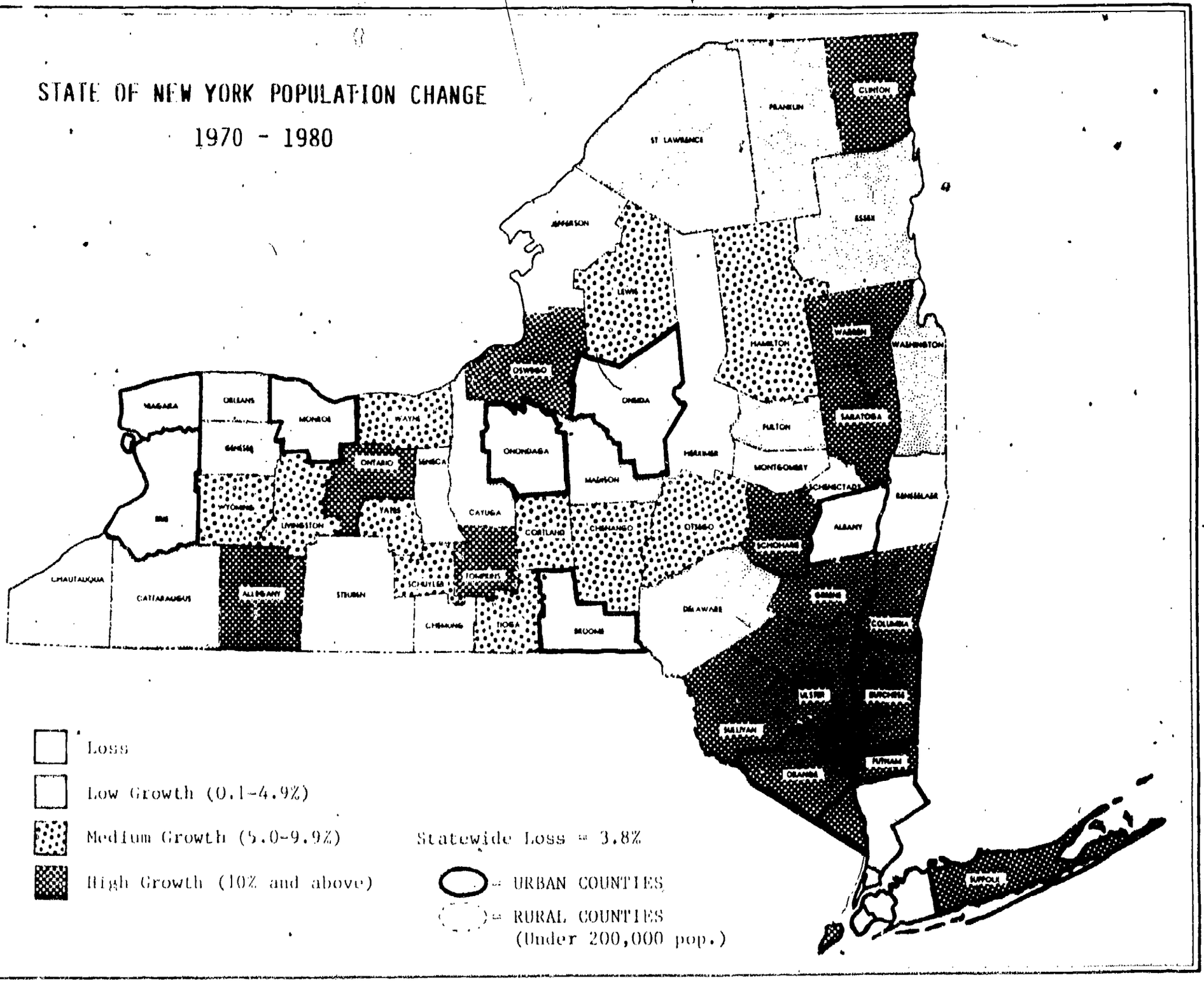
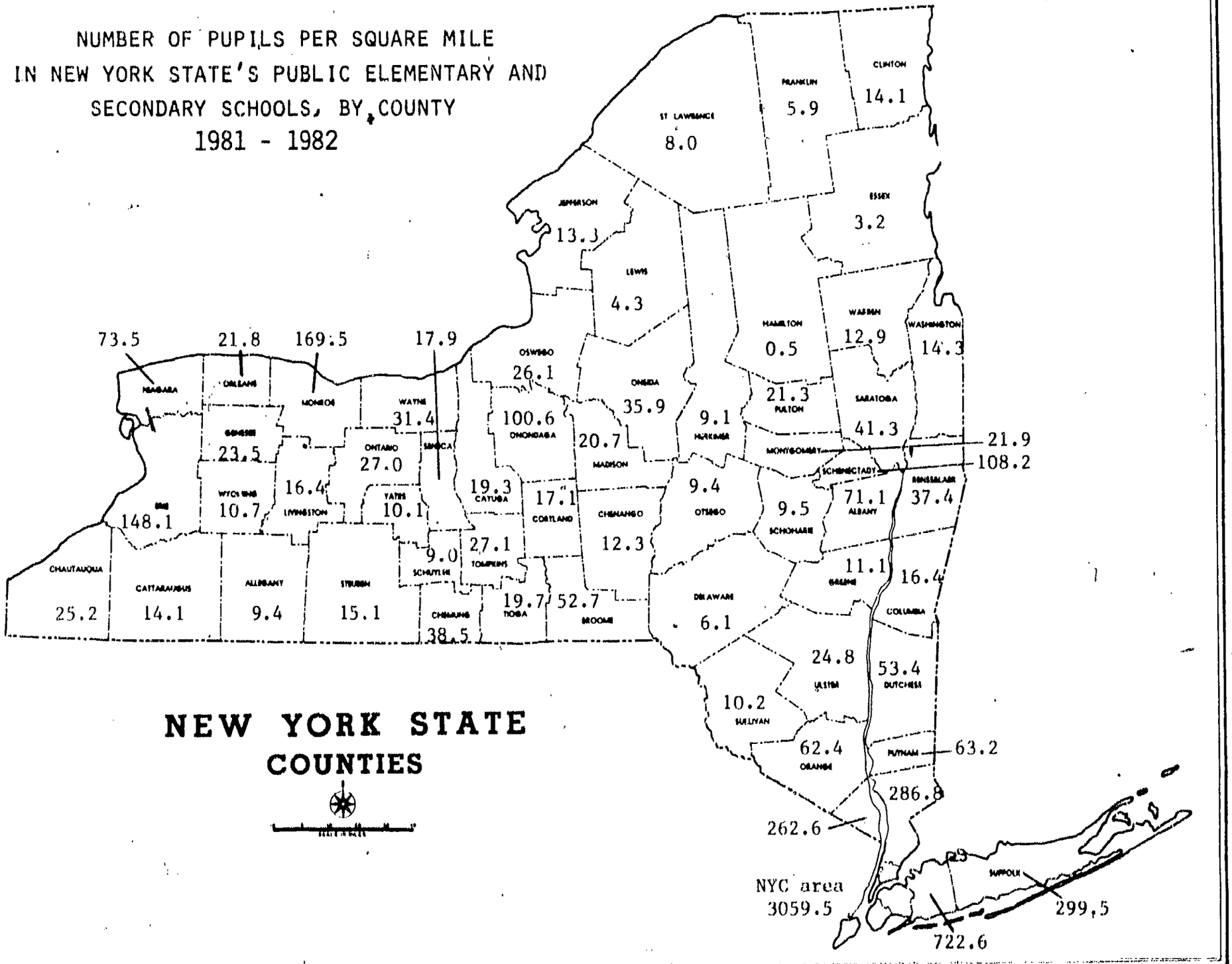
APPENDIX



Source: U.S. Bureau of the Census, 1980 Census of Population and Housing.

NUMBER OF PUPILS PER SQUARE MILE IN NEW YORK STATE'S PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY COUNTY 1981 - 1982



NEW YORK STATE COUNTIES

CHANGE IN FALL ENROLLMENT OF NEW YORK STATE'S PUBLIC ELEMENTARY AND SECONDARY SCHOOL PUPILS, BY COUNTY, 1973 - 1981

	1973 Fall Enrollment	1981 Fall Enrollment	Percent Change
Rural Counties			
Allegany	11,620	9,746	-16.1
Cattaraugus	21,764	18,436	-15.3
Cayuga	16,622	13,414	-19.3
Chautauqua	34,111	26,817	-21.4
Chemung	21,553	15,837	-26.5
Chenango	14,078	11,011	-21.8
Clinton	19,474	14,757	-24.2
Columbia	12,894	10,473	-18.8
Cortland	10,358	8,527	-17.7
Delaware	10,958	8,854	-19.2
Essex	7,163	5,712	-20.3
Franklin	11,953	9,674	-19.1
Fulton	12,863	10,607	-17.5
Genesee	14,354	11,629	-19.0
Greene	8,555	7,209	-15.7
Hamilton	1,138	849	-25.4
Herkimer	15,516	12,860	-17.1
Jefferson	21,251	16,872	-20.6
Lewis	6,672	5,488	-17.8
Livingston	11,629	10,392	-10.6
Madison	16,755	13,607	-18.8
Montgomery	10,560	8,830	-16.4
Ontario	20,367	17,368	-14.7
Orleans	10,019	8,516	-15.0
Oswego	28,037	24,878	-11.3
Otsego	11,238	9,417	-16.2
Putnam	16,120	14,598	- 9.4
Rensselaer	29,101	24,488	-15.9
St. Lawrence	27,245	21,716	-20.3
Saratoga	37,275	33,464	-10.2
Schenectady	29,921	22,293	-25.5
Schoharie	6,987	5,919	-15.3
Schuyler	3,734	2,977	-20.3
Seneca	7,560	5,867	-22.4
Steuben	26,312	21,143	-19.6
Sullivan	12,542	9,989	-20.4
Tioga	13,112	10,216	-22.1
Tompkins	15,884	12,908	-18.7
Ulster	34,066	27,994	-17.8
Warren	13,089	11,353	-13.3
Washington	14,215	11,990	-15.7
Wayne	22,626	18,969	-16.2
Wyoming	7,973	6,386	-19.9
Yates	4,511	3,435	-23.9
Metropolitan Counties			
Albany	47,030	37,253	-20.8
Bronx	164,002	182,676	+11.4
Broome	50,924	37,501	-26.4
Dutchess	51,938	42,956	-17.3
Erie	209,317	154,882	-26.0
Kings	234,908	323,522	+37.7
Monroe	141,191	112,383	-20.4
Nassau	301,999	207,396	-31.3
New York	395,282	145,631	-63.2
Niagara	53,925	38,670	-28.3
Oneida	57,658	43,747	-24.1
Onondaga	101,947	78,979	-22.5
Orange	56,178	51,512	- 8.3
Queens	248,691	217,364	-12.6
Richmond	56,397	51,718	- 8.3
Rockland	60,185	45,953	-23.7
Suffolk	327,136	273,145	-16.5
Westchester	165,077	125,624	-23.9
SUMMARY:			
New York State	3,427,560	2,748,397	-19.8
Rural Counties	703,775	577,485	-17.9
Metropolitan Counties	2,723,785	2,170,912	-20.3

SOURCE: New York State Education Department, Information Center on Education.

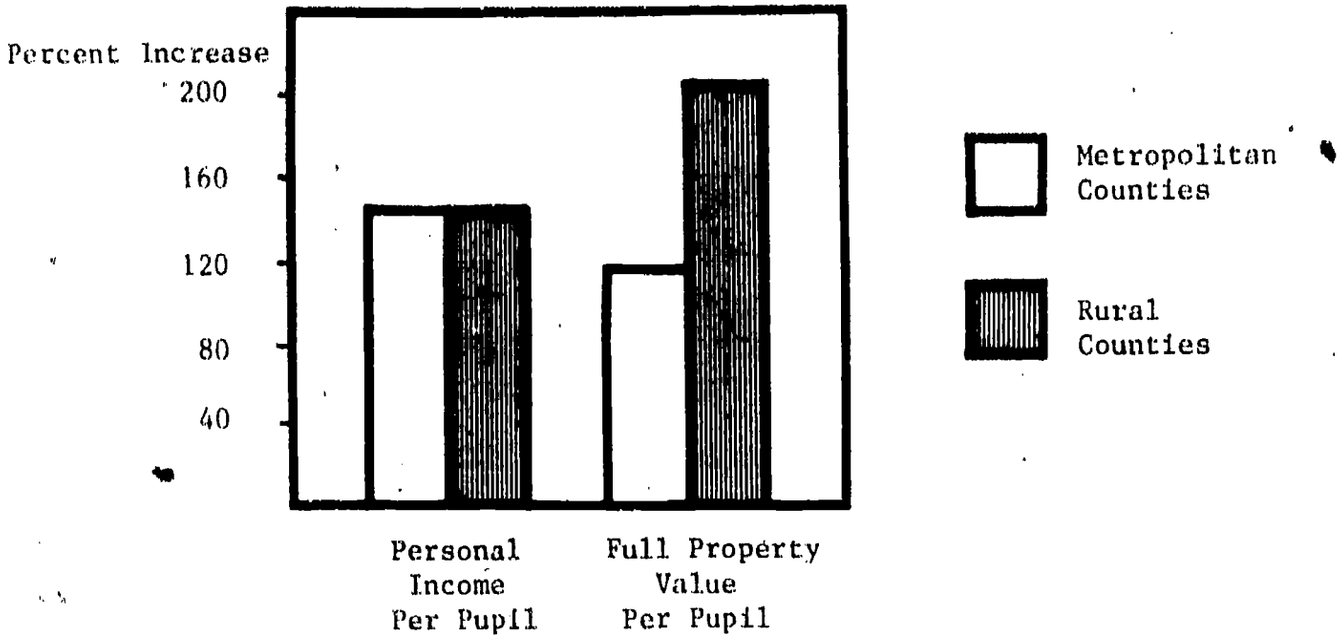
PERSONAL INCOME AND FULL VALUE PROPERTY WEALTH PER PUPIL IN NEW YORK STATE'S PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY COUNTY, 1973-1981

	Personal Income Per Pupil (Thousands)			Full Property Value Per Pupil (Thousands)		
Rural Counties	1973	1981	% Increase	1973	1981	% Increase
Allegany	15.6	37.5	140	20.5	68.1	232
Cattaraugus	14.9	35.7	140	21.6	66.7	209
Cayuga	20.5	51.6	152	21.5	65.8	206
Chautauqua	19.0	48.9	157	28.2	81.4	189
Chemung	22.1	57.3	159	28.3	77.0	172
Chenango	13.7	35.9	162	19.1	60.8	218
Clinton	15.0	40.1	167	17.2	64.5	275
Columbia	19.0	47.6	151	30.7	94.8	209
Cortland	19.1	46.7	145	24.4	74.0	203
Delaware	16.3	42.1	158	30.6	104.4	241
Essex	18.6	48.8	162	37.0	139.3	277
Franklin	12.8	31.9	149	18.7	74.5	298
Fulton	17.3	41.8	142	22.2	67.4	204
Genesee	19.9	47.4	138	26.1	75.7	190
Greene	19.6	46.5	137	40.1	128.6	221
Hamilton	16.5	44.8	172	116.4	444.2	282
Herkimer	19.9	44.0	121	24.6	76.6	211
Jefferson	17.4	43.7	151	21.8	70.5	223
Lewis	12.9	32.2	150	18.0	68.1	278
Livingston	21.5	46.8	118	29.7	77.6	161
Madison	15.9	39.3	147	20.6	64.8	215
Montgomery	23.8	53.1	123	23.9	72.8	205
Ontario	19.9	48.5	144	30.5	87.1	186
Orleans	18.1	42.4	134	22.1	60.4	173
Oswego	15.8	38.5	144	26.2	109.2	317
Otsego	21.7	50.0	130	26.0	87.3	236
Putnam	21.4	56.0	162	38.3	105.7	176
Rensselaer	24.7	56.1	127	24.8	62.0	150
St. Lawrence	15.5	38.0	145	21.7	64.1	195
Saratoga	17.1	41.3	142	22.3	69.4	211
Schenectady	29.8	78.6	164	33.4	92.6	177
Schoharie	14.9	33.3	124	26.0	89.1	243
Schuyler	18.4	46.4	152	20.0	63.6	218
Seneca	20.1	52.0	159	22.9	73.2	220
Steuben	17.0	42.4	149	21.0	69.0	229
Sullivan	21.7	57.6	165	48.3	146.3	203
Tioga	16.4	42.9	162	17.4	59.3	241
Tompkins	22.4	56.8	154	34.1	95.0	179
Ulster	22.0	53.6	144	39.0	107.5	176
Warren	18.0	43.5	142	37.8	109.6	190
Washington	15.0	35.6	137	18.3	60.3	230
Wayne	17.6	42.1	139	29.2	69.4	138
Wyoming	21.6	50.9	136	22.7	73.7	225
Yates	19.5	40.8	109	45.1	109.1	142
Metropolitan Counties						
Albany	35.0	79.1	126	47.4	120.0	153
Broome	21.1	57.7	173	30.9	85.8	178
Dutchess	24.2	63.3	162	33.3	93.1	180
Erie	26.8	68.5	156	34.1	87.7	157
Monroe	29.9	77.4	159	44.4	101.5	129
Nassau	35.2	102.2	190	55.2	133.8	142
New York City**	40.1	89.4	123	61.5	95.2	55
Niagara	21.1	57.4	172	27.4	80.0	192
Oneida	20.9	52.5	151	23.7	66.4	180
Onondaga	23.4	60.6	159	32.0	84.1	163
Orange	21.7	48.8	125	31.2	74.1	138
Rockland	25.3	73.2	189	41.3	114.6	178
Suffolk	20.1	53.3	165	35.5	94.4	166
Westchester	41.9	112.1	168	64.1	158.7	148
SUMMARY:						
New York State	30.0	73.4	145	45.1	97.0	115
Rural Counties	19.0	46.6	145	26.6	81.5	206
Metropolitan Counties	32.9	80.5	145	49.8	101.1	103

**Includes all five boroughs.

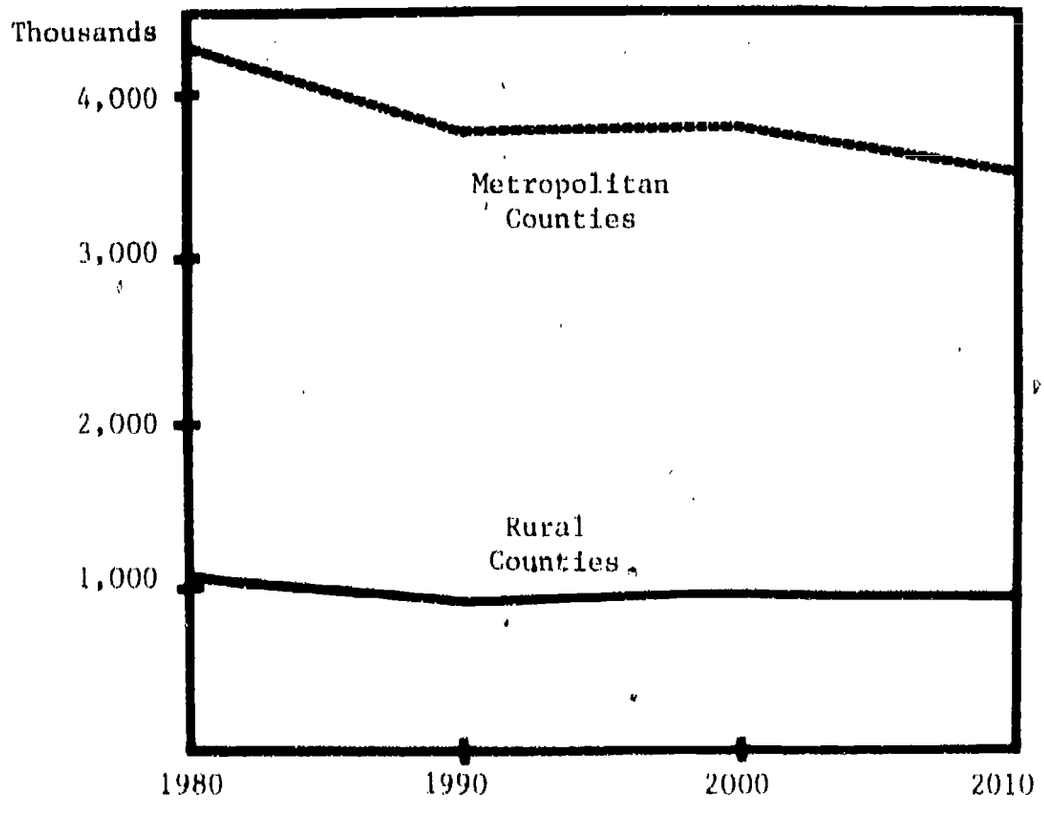
SOURCES: New York State Education Department, Information Center on Education.
New York State Department of Commerce, Bureau of Business Research

PERCENT INCREASE IN PERSONAL INCOME AND FULL PROPERTY VALUE
PER PUBLIC SCHOOL PUPIL IN NEW YORK STATE'S RURAL AND METROPOLITAN COUNTIES
1973 - 1981



SOURCE: New York State Education Department, Information Center on Education and New York Department of Commerce, Bureau of Business Research.

PROJECTED POPULATION IN 0 - 19 AGE GROUP IN NEW YORK STATE COUNTIES
1980 - 2010



SOURCE: New York State Department of Commerce

TOTAL REVENUES AND SOURCES OF RECEIPTS PER PUPIL IN NEW YORK STATE'S PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY COUNTY 1973-74

	Total Revenues	State Sources	Federal Sources*	Local Sources**	Other Sources
Rural Counties					
Allegany	$1,526	$1,029	$48	$446	$3
Cattaraugus	1,501	959	38	499	5
Cayuga	1,550	994	47	507	2
Chautauqua	1,515	871	43	599	2
Chemung	1,576	893	94	588	1
Chenango	1,490	1,044	33	411	2
Clinton	1,593	1,071	111	405	6
Columbia	1,673	937	36	690	10
Cortland	1,736	1,239	37	448	12
Delaware	1,601	987	30	583	1
Essex	1,742	909	52	781	0
Franklin	1,586	1,101	49	432	4
Fulton	1,393	895	39	459	0
Genesee	1,527	933	49	543	2
Greene	1,505	738	32	727	8
Hamilton	2,381	459	12	1,893	17
Herkimer	1,453	962	29	462	0
Jefferson	1,597	1,020	57	512	8
Lewis	1,679	1,268	9	398	4
Livingston	1,598	953	21	610	14
Madison	1,472	967	58	439	8
Montgomery	1,657	1,000	63	560	34
Ontario	1,496	877	46	569	4
Orleans	1,476	974	51	442	9
Oswego	1,419	892	31	478	18
Otsego	1,595	1,007	48	538	2
Putnam	2,057	787	19	1,243	8
Rensselaer	1,568	904	51	606	7
St. Lawrence	1,542	1,007	52	468	15
Saratoga	1,498	930	39	512	17
Schenectady	1,808	840	70	886	12
Schoharie	1,390	888	35	467	0
Schuyler	1,448	950	27	468	3
Seneca	1,455	945	48	458	4
Steuben	1,550	991	103	447	9
Sullivan	1,716	650	36	1,029	1
Tioga	1,443	1,047	33	361	2
Tompkins	1,707	881	33	788	5
Ulster	1,693	749	30	908	6
Warren	1,627	775	45	807	0
Washington	1,467	1,021	30	415	1
Wayne	1,633	959	54	617	3
Wyoming	1,393	933	40	419	1
Yates	1,486	800	20	656	10
Metropolitan Counties					
Albany	1,840	691	107	1,032	10
Broome	1,563	820	41	692	10
Dutchess	1,738	811	58	856	13
Erie	1,630	795	76	754	5
Monroe	1,854	678	99	1,067	10
Nassau	2,286	723	38	1,522	3
New York City***	2,139	604	130	1,319	86
Niagara	1,530	836	65	623	6
Oneida	1,401	848	84	464	5
Onondaga	1,596	773	84	725	14
Orange	1,693	852	62	760	19
Rockland	2,207	785	29	1,376	17
Suffolk	1,987	852	57	1,072	6
Westchester	2,441	584	75	1,770	12
SUMMARY:					
New York State	1,930	747	80	1,070	33
Rural Counties	1,576	932	48	589	7
Metropolitan Counties	2,022	699	89	1,194	40
PERCENT OF TOTAL:					
New York State	100.0%	38.7%	4.2%	55.4%	1.7%
Rural Counties	100.0%	59.1%	3.1%	37.4%	0.4%
Metropolitan Counties	100.0%	34.6%	4.4%	59.1%	1.9%

* Includes federal aid entered in NYS General Fund and Federal Aid Fund.
** Includes local taxes, plus other local revenues.
*** Includes all five boroughs.
SOURCE: New York State Education Department, Information Center on Education.

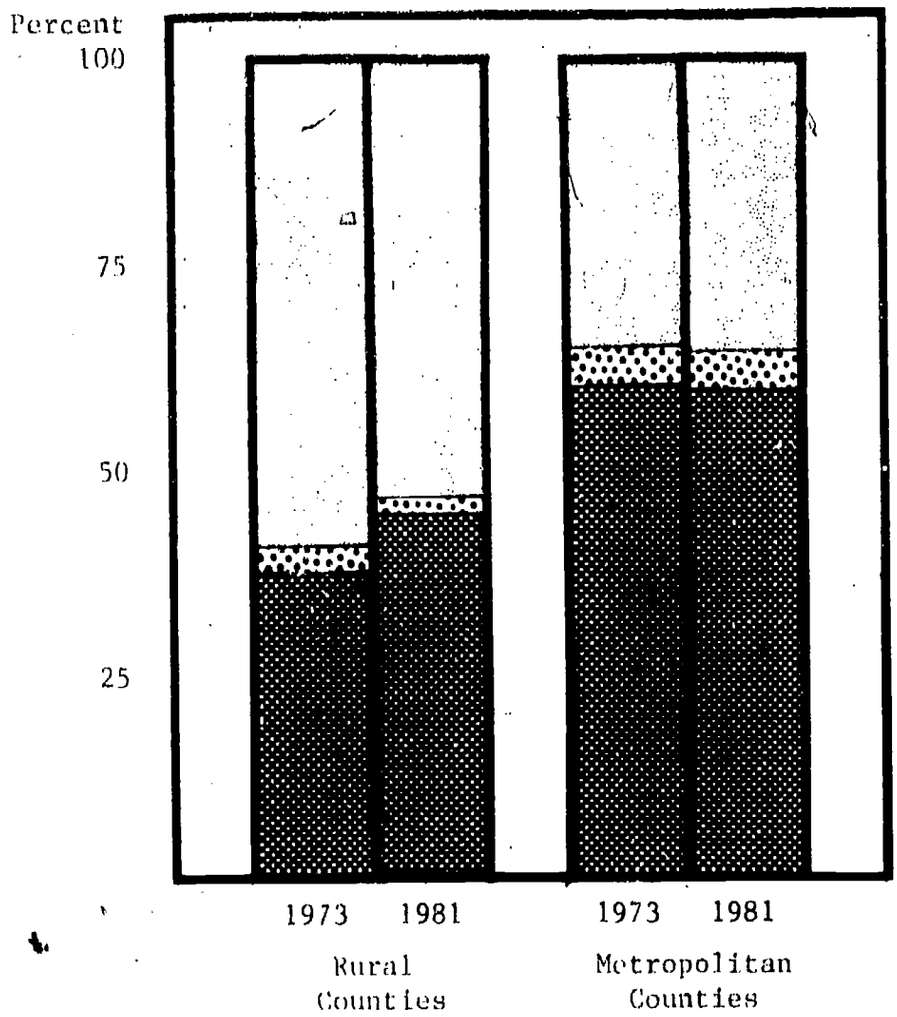
TOTAL REVENUES AND SOURCES OF RECEIPTS PER PUPIL IN NEW YORK STATE'S PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY COUNTY, 1981-82

	Total Revenues	State Sources	Federal Sources*	Local Sources**	Other Sources
Rural Counties					
Allegany	$3,153	$2,029	$74	$1,026	$24
Cattaraugus	3,153	1,902	96	1,140	15
Cayuga	3,303	2,071	86	1,146	0
Chautauqua	3,282	1,783	98	1,401	0
Chemung	3,411	1,741	103	1,556	11
Chenango	3,395	2,092	81	1,217	5
Clinton	3,397	2,046	213	1,136	2
Columbia	3,507	1,563	83	1,861	0
Cortland	3,664	2,212	75	1,278	99
Delaware	3,346	1,540	79	1,726	1
Essex	3,613	1,524	78	1,999	12
Franklin	3,597	2,180	118	1,296	3
Fulton	3,095	1,827	101	1,165	2
Genesee	3,232	1,774	47	1,409	2
Greene	3,355	1,315	52	1,988	0
Hamilton	5,445	812	29	4,603	1
Herkimer	3,130	1,996	76	1,051	7
Jefferson	3,370	2,056	92	1,218	4
Lewis	3,232	2,044	13	1,175	0
Livingston	3,359	1,848	66	1,444	1
Madison	3,177	1,932	74	1,163	8
Montgomery	3,157	1,726	53	1,342	36
Ontario	3,150	1,637	68	1,438	7
Orleans	3,107	1,899	68	1,139	1
Oswego	3,277	1,841	71	1,357	8
Otsego	3,354	1,768	75	1,509	2
Putnam	4,732	1,651	56	3,019	6
Rensselaer	3,420	1,886	83	1,446	5
St. Lawrence	3,528	2,214	94	1,178	42
Saratoga	3,094	1,724	54	1,315	1
Schenectady	3,610	1,525	84	1,327	674
Schoharie	3,253	1,733	75	1,440	5
Schuyler	3,369	2,053	95	1,184	37
Seneca	3,177	1,745	76	1,352	4
Steuben	3,190	1,826	92	1,269	3
Sullivan	3,931	1,205	77	2,647	2
Tioga	3,180	2,103	71	1,001	5
Tompkins	3,649	1,555	86	2,008	0
Ulster	3,803	1,538	72	2,184	9
Warren	3,292	1,462	73	1,757	0
Washington	3,128	1,984	69	1,073	2
Wayne	3,663	1,969	70	1,624	0
Wyoming	3,125	1,868	63	1,194	0
Yates	3,320	1,519	99	1,702	0
Metropolitan Counties:					
Albany	3,689	1,302	131	2,249	7
Broome	3,440	1,788	79	1,570	3
Dutchess	3,592	1,573	64	1,947	7
Erie	3,559	1,721	185	1,650	3
Monroe	4,087	1,478	168	2,438	3
Nassau	5,082	1,320	76	3,679	7
New York City***	3,983	1,375	285	2,274	49
Niagara	3,342	1,749	122	1,471	0
Oneida	3,044	1,841	115	1,088	0
Onondaga	3,499	1,695	162	1,638	4
Orange	3,546	1,770	117	1,656	3
Rockland	4,748	1,389	68	3,291	0
Suffolk	4,460	1,763	72	2,624	1
Westchester	5,491	1,207	144	4,131	9
SUMMARY:					
New York State	3,991	1,555	167	2,249	20
Rural Counties	3,395	1,812	83	1,493	7
Metropolitan Counties	4,145	1,486	186	2,450	23
PERCENT OF TOTAL:					
New York State	100.0%	39.0%	4.2%	56.3%	0.5%
Rural Counties	100.0%	53.4%	2.4%	44.0%	0.2%
Metropolitan Counties	100.0%	35.9%	4.5%	59.1%	0.5%

* Includes federal aid entered in General Fund and Federal Aid Fund.
** Includes local taxes plus other local revenues.
*** Includes all five boroughs.
SOURCE: New York State Education Department, Information Center on Education.

COMPARISON OF SOURCES OF REVENUE FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN NEW YORK STATE'S RURAL AND METROPOLITAN COUNTIES

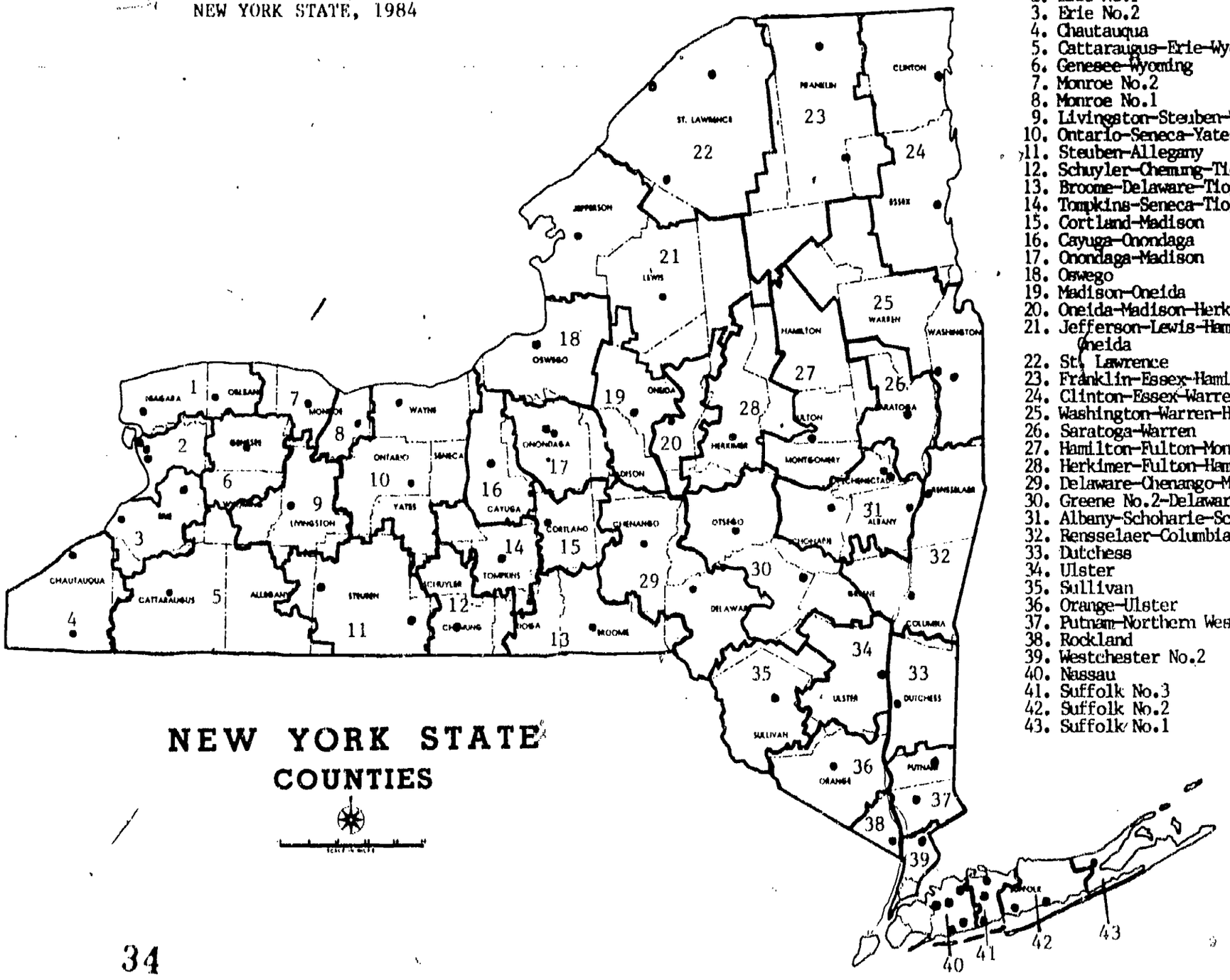
1973 - 1981



SOURCE: New York State Education Department, Information Center on Education.

BOCES DISTRICTS AND OCCUPATIONAL EDUCATION CENTERS

NEW YORK STATE, 1984



BOCES Districts:

1. Orleans-Niagara
2. Erie No.1
3. Erie No.2
4. Chautauqua
5. Cattaraugus-Erie-Wyoming
6. Genesee-Wyoming
7. Monroe No.2
8. Monroe No.1
9. Livingston-Steuben-Wyoming
10. Ontario-Seneca-Yates-Cayuga-Wayne
11. Steuben-Allegany
12. Schuyler-Chemung-Tioga
13. Broome-Delaware-Tioga
14. Tompkins-Seneca-Tioga
15. Cortland-Madison
16. Cayuga-Onondaga
17. Onondaga-Madison
18. Oswego
19. Madison-Oneida
20. Oneida-Madison-Herkimer
21. Jefferson-Lewis-Hamilton-Herkimer-Oneida
22. St. Lawrence
23. Franklin-Essex-Hamilton
24. Clinton-Essex-Warren-Washington
25. Washington-Warren-Hamilton-Essex
26. Saratoga-Warren
27. Hamilton-Fulton-Montgomery
28. Herkimer-Fulton-Hamilton-Otsego
29. Delaware-Chenango-Madison-Otsego
30. Greene No.2-Delaware-Schoharie-Otsego
31. Albany-Schoharie-Schenectady
32. Rensselaer-Columbia-Greene
33. Dutchess
34. Ulster
35. Sullivan
36. Orange-Ulster
37. Putnam-Northern Westchester
38. Rockland
39. Westchester No.2
40. Nassau
41. Suffolk No.3
42. Suffolk No.2
43. Suffolk No.1

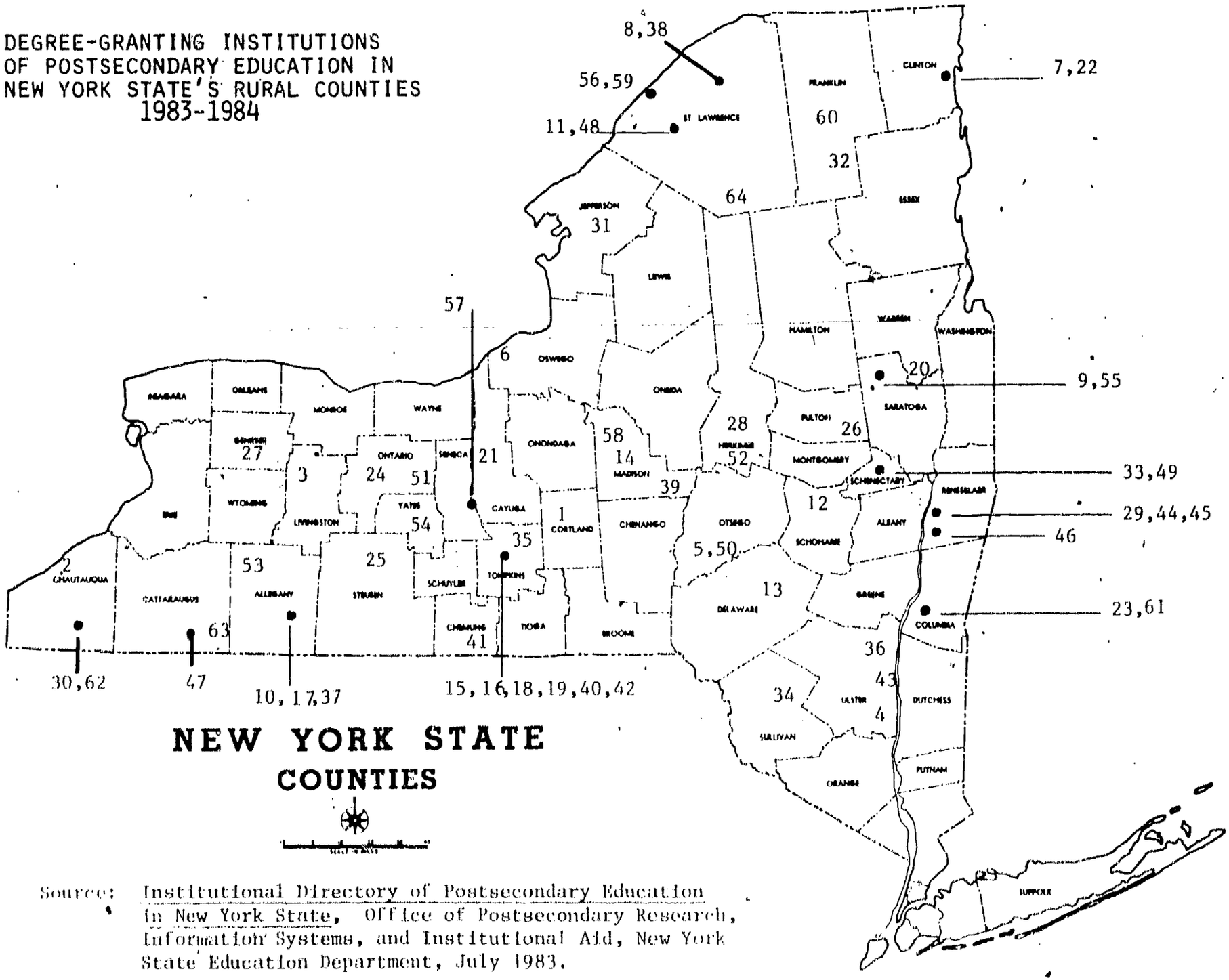
THE INCIDENCE OF NEW TEACHERS AND TEACHERS TEACHING OUTSIDE THEIR AREA OF CERTIFICATION IN SMALL COMPARED TO LARGE DISTRICTS, 1978-79

District Size (Weighted pupil count) Estimated Cutting Points	The Number of Assignments Taught By New Teachers Per 100 Pupils* In: (1) All General Education	(2) All H.S. Eng., For. Language, Math & Science	The Number of Assignments Taught By Teachers Outside Their Area of Certification Per 100 Pupils* In: (3) All General Education	(4) All H.S. Eng., For. Language, Math & Science
< 566	2.30	1.09	.55	.59
566-933	.94	1.12	.59	.49
934-1303	1.21	.31	.36	.18
1304-1553	.77	.53	.32	.13
1554-1968	.65	.33	.30	.43
1969-2549	.73	.64	.30	.19
2550-3311	.51	.24	.15	.16
3312-4472	.32	.06	.18	.12
4473-6962	.52	.29	.16	.15
> 6962	.58	.49	.12	.12
Whole Sample (n=80)	.85	.51	.30	.26

* The pupil count varies across the columns. In columns 1 and 3, the K-12 enrollment is used. For columns 2 and 4, the high school enrollment (grades 9-12) is used.

Source: Monk, David H. **Differences in the Curricular Offerings of Large Compared to Small School Districts, 1978-79.** (Prepared for the Fourth Annual Conference of the Rural Schools Program, New York State College of Agriculture and Life Sciences at Cornell University, July 1983).

DEGREE-GRANTING INSTITUTIONS OF POSTSECONDARY EDUCATION IN NEW YORK STATE'S RURAL COUNTIES 1983-1984



NEW YORK STATE COUNTIES

Source: Institutional Directory of Postsecondary Education in New York State, Office of Postsecondary Research, Information Systems, and Institutional Aid, New York State Education Department, July 1983.

DEGREE-GRANTING INSTITUTIONS OF POSTSECONDARY EDUCATION IN NEW YORK STATE'S RURAL COUNTIES (SEE MAP) 1983-84

State University of New York Colleges of Arts and Sciences - Baccalaureate, Post-Baccalaureate

1. State University College at Cortland
2. State University College at Fredonia
3. State University College at Geneseo
4. State University College at New Paltz
5. State University College at Oneonta
6. State University College at Oswego
7. State University College at Plattsburgh
8. State University College at Potsdam

State University of New York Colleges of Arts and Science - Baccalaureate

9. Empire State College - Saratoga Springs (Coordinating Center)*

State University of New York Agricultural and Technical Colleges - Certificate, Associate

10. Agricultural and Technical College at Alfred
11. Agricultural and Technical College at Canton
12. Agricultural and Technical College at Cobleskill
13. Agricultural and Technical College at Delhi
14. Agricultural and Technical College at Morrisville

State University of New York Statuatory Colleges - Post-Baccalaureate

15. College of Veterinary Medicine at Cornell University, Ithaca

State University of New York Statuatory Colleges - Baccalaureate, Post-Baccalaureate

16. College of Agriculture and Life Sciences at Cornell University, Ithaca
17. College of Ceramics at Alfred University*, Alfred
18. College of Human Ecology at Cornell University, Ithaca
19. School of Industrial and Labor Relations at Cornell University, Ithaca**

State University of New York Community Colleges - Certificate, Associate

20. Adirondack Community College at Glens Falls
21. Cayuga County Community College at Auburn
22. Clinton Community College at Plattsburgh
23. Columbia-Greene Community College at Hudson
24. Community College of the Finger Lakes at Canandaigua
25. Corning Community College at Corning
26. Fulton-Montgomery Community College at Johnstown
27. Genesee Community College at Batavia
28. Herkimer County Community College at Herkimer
29. Hudson Valley Community College at Troy
30. Jamestown Community College at Jamestown
31. Jefferson Community College at Watertown
32. North Country Community College at Saranac Lake***
33. Schenectady County Community College at Schenectady
34. Sullivan County Community College at Loch Sheldrake
35. Tompkins-Cortland Community College at Dryden
36. Ulster County Community College at Stone Ridge

Private Institutions - Baccalaureate, Post-Baccalaureate

37. Alfred University, Alfred**
38. Clarkson College of Technology, Potsdam
39. Colgate University, Hamilton
40. Cornell University, Ithaca
41. Elmira College, Elmira
42. Ithaca College, Ithaca
43. Mount Saint Alphonsus Seminary of Esopus
44. Rensselaer Polytechnic Institute, Troy
45. Russell Sage College, Troy
46. St. Anthony-on-Hudson, Rensselaer
47. St. Bonaventure University, St. Bonaventure
48. St. Lawrence University, Canton
49. Union University, Schenectady

* Also has Regional Centers with outreach services in: Alfred, Auburn, Canandaigua, Columbia-Greene, New Paltz, Fredonia, Plattsburgh, and Watertown.

** Degree program offered by these institutions at Corning Graduate Center, Corning.

*** Also has three branches in addition to main campus at Malone, Ticonderoga, and Elizabethtown.

Private Institutions - Baccalaureate

50. Hartwick College, Oneonta
51. Hobart and William Smith College, Geneva
52. Holy Trinity Orthodox Seminary, Jordanville
53. Houghton College, Houghton
54. Keuka College, Keuka Park
55. Skidmore College, Saratoga Springs
56. Wadhams Hall, Ogdensburg
57. Wells College, Aurora

Private Institutions - Associate, Certificate

58. Cazenovia College, Cazenovia
59. Mater Dei College, Ogdensburg
60. Paul Smith's College of Arts and Sciences, Paul Smiths

Private Institutions - Associate

61. Columbia Memorial Hospital School of Nursing, Hudson

Proprietary Institutions - Certificate, Associate

62. Jamestown Business College, Jamestown
63. Olean Business Institute, Olean

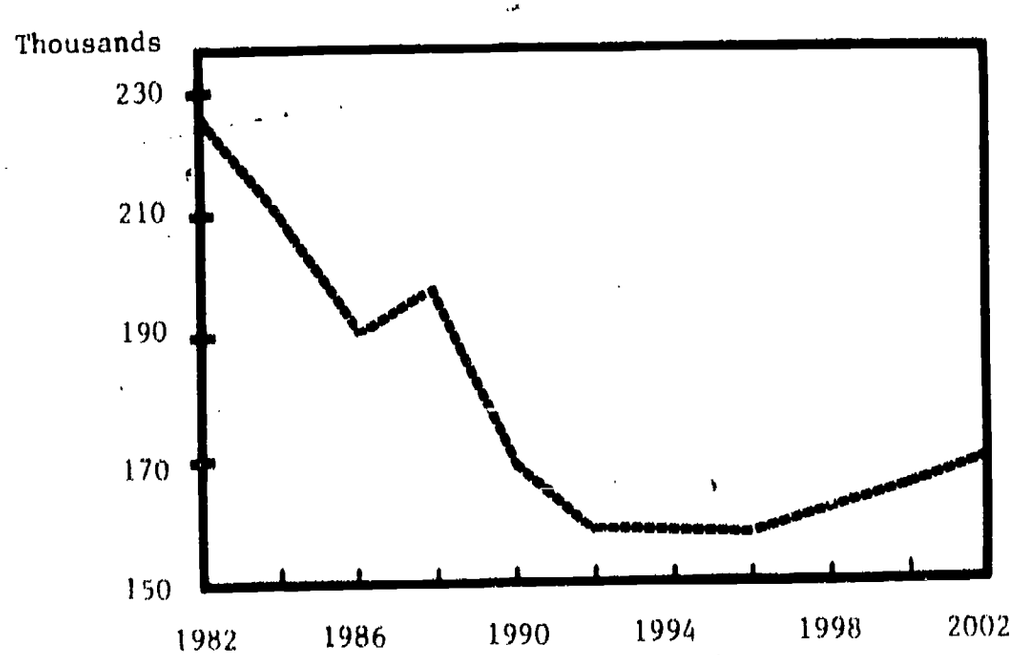
Metropolitan Institutions with Branch Campuses in Rural Counties

64. New York State Ranger School at Wanakena (College of Environmental Science and Forestry)

SOURCE: **Institutional Directory of Postsecondary Education New York State,** Office of Postsecondary Research, Information Systems, and Institutional Aid, New York State Education Department, July 1983.

PROJECTIONS OF HIGH SCHOOL GRADUATES IN PUBLIC AND NONPUBLIC SCHOOLS

NEW YORK STATE, 1982 TO 2002



Source: New York State Education Department, Information Center on Education.

PROJECTIONS OF HIGH SCHOOL GRADUATES IN PUBLIC AND NONPUBLIC SCHOOLS BY COUNTY
NEW YORK STATE, 1982 - 2002

	High School Graduates in Public and Nonpublic Schools		
	1982 *	1992	2002
Rural Counties			
Allegany	748	632	629
Cattaraugus	1,432	1,151	1,284
Cayuga	1,122	706	813
Chautauqua	2,169	1,473	1,637
Chemung	1,409	831	885
Chenango	904	624	736
Clinton	1,359	855	883
Columbia	818	499	548
Cortland	668	471	569
Delaware	672	445	478
Essex	535	327	376
Franklin	888	449	496
Fulton	699	558	638
Genesee	1,005	698	796
Greene	598	447	445
Hamilton	87	52	64
Herkimer	1,055	717	744
Jefferson	1,383	935	1,079
Lewis	452	330	362
Livingston	862	535	637
Madison	1,019	717	829
Montgomery	701	504	544
Ontario	1,443	1,119	1,267
Orleans	700	443	478
Oswego	1,717	1,531	1,620
Otsego	754	572	688
Putnam	1,093	637	693
Rensselaer	2,337	1,609	1,655
St. Lawrence	1,767	1,195	1,287
Saratoga	2,552	1,885	2,095
Schenectady	2,018	1,399	1,427
Schoharie	473	390	418
Schuyler	245	145	187
Seneca	466	318	323
Steuben	1,700	1,172	1,211
Sullivan	825	731	840
Tioga	266	179	640
Tompkins	1,002	802	896
Ulster	2,277	1,447	1,655
Warren	863	611	643
Washington	961	635	652
Wayne	1,367	872	1,048
Wyoming	517	366	395
Yates	266	179	209
Metropolitan Counties			
Albany	3,703	2,550	2,879
Broome	3,243	2,107	2,374
Dutchess	3,771	2,323	2,532
Erie	14,863	8,811	9,103
Monroe	9,897	6,062	7,230
Nassau	22,543	14,539	16,440
New York City area	62,826	50,277	52,341
Niagara	3,341	2,153	2,241
Oneida	3,765	2,530	2,618
Onondaga	6,864	4,375	4,894
Orange	4,121	2,980	3,715
Rockland	4,558	3,059	3,300
Suffolk	23,703	16,315	15,748
Westchester	12,925	8,287	8,762
SUMMARY:			
Rural Counties	45,411	31,648	35,195
Metropolitan Counties	143,495	101,766	109,667
New York State	188,906	133,414	144,862

* Actual number of high school graduates.
Source: New York State Education Department, Information Center on Education.

NUMBER OF INSTITUTIONS OFFERING UNDERGRADUATE AND GRADUATE PROGRAMS, BY MAJOR HEGIS AREAS* IN NEW YORK STATE'S RURAL AND METROPOLITAN COUNTIES, 1983

Major HEGIS AREA	Number of Institutions in Rural Counties	Number of Institutions in Metropolitan Counties	State Total
Agriculture and Natural Resources	3	4	7
Architecture and Environmental Design	4	14	18
Area Studies	14	38	52
Biological Sciences	28	72	100
Business and Management	21	65	86
Communications	8	32	40
Computer and Informaton Sciences	17	49	66
Education	26	70	96
Engineering	6	22	28
Fine and Applied Arts	24	65	89
Foreign Languages	23	60	83
Health Profesaions	17	64	81
Home Economics	6	14	20
Law	1	14	15
Letters	28	70	98
Library Science	1	8	9
Mathematics	27	69	96
Physical Sciences	26	66	92
Psychology	29	69	98
Public Affairs and Services	12	45	57
Social Sciences	29	75	104
Theology	5	18	23
Interdisciplinary Studies	26	61	87
Business and Commerce Technologies	30	91	121
Data Processing Technologies	22	61	83
Health Services and Paramedical Technologies	28	54	82
Mechanical and Engineering Technologies	22	31	53
Natural Science Technologies	17	22	39
Public Service Related Technologies	28	49	77
Pre-Baccalaureate Liberal Arts Programs	29	64	93

* HEGIS indicates the Higher Education General Informaton survey code, based on the Taxonomy of Instructional Programs in Higher Education (U.S. Office of Education) under which a program is registered by the New York State Education Department.

Source: Inventory of Registered Degree and Certificate Programs," New York State Education Department, May 1981.

Center for Industrial Innovation

Rensselaer Polytechnic Institute, located in Troy, New York, epitomizes the spirit of public-university-industry cooperation in high technology research and development through the pioneering efforts of its Center for Industrial Innovation and High Technology Park.

Chapter 561 of New York State's Laws of 1982 authorized $30 million for the design and construction of RPI's Center for Industrial Innovation. The legislation also named the State Urban Development Corporation as an active participant in the project and required that private financial contributions at least match the UDC amount.

The Center, upon completion, will house RPI's existing centers for interactive computer graphics, manufacturing productivity and integrated electronics. According to university officials, through its research, development, education and training efforts, the Center could stimulate up to 1,000 new full-time jobs statewide by 1986.

Centers for Advanced Technology (CATS) Program

The Center For Advanced Technologies Program was established by Chapter 562 of the Laws of 1982. These Centers, as part of a university-industry-government consortium, serve as focal points for the development and application of high technologies. The Centers also attempt to enhance the productivity and state-of-the-art capacities of already-existing industries in New York State.

Designated Universities

Institution	Area of Specialization	Major Financial Contributors to Date
Cornell University	Biotechnology (Agriculture)	Eastman Kodak, General Foods, Union Carbide
University of Rochester	Optics	Eastman Kodak, Bausch and Lomb, Corning Glass Work, Xerox Corporation
Polytechnic Institute of New York	Telecommunications	Not Available
State University at Stony Brook	Medical Diagnosis and Therapy	Not Available

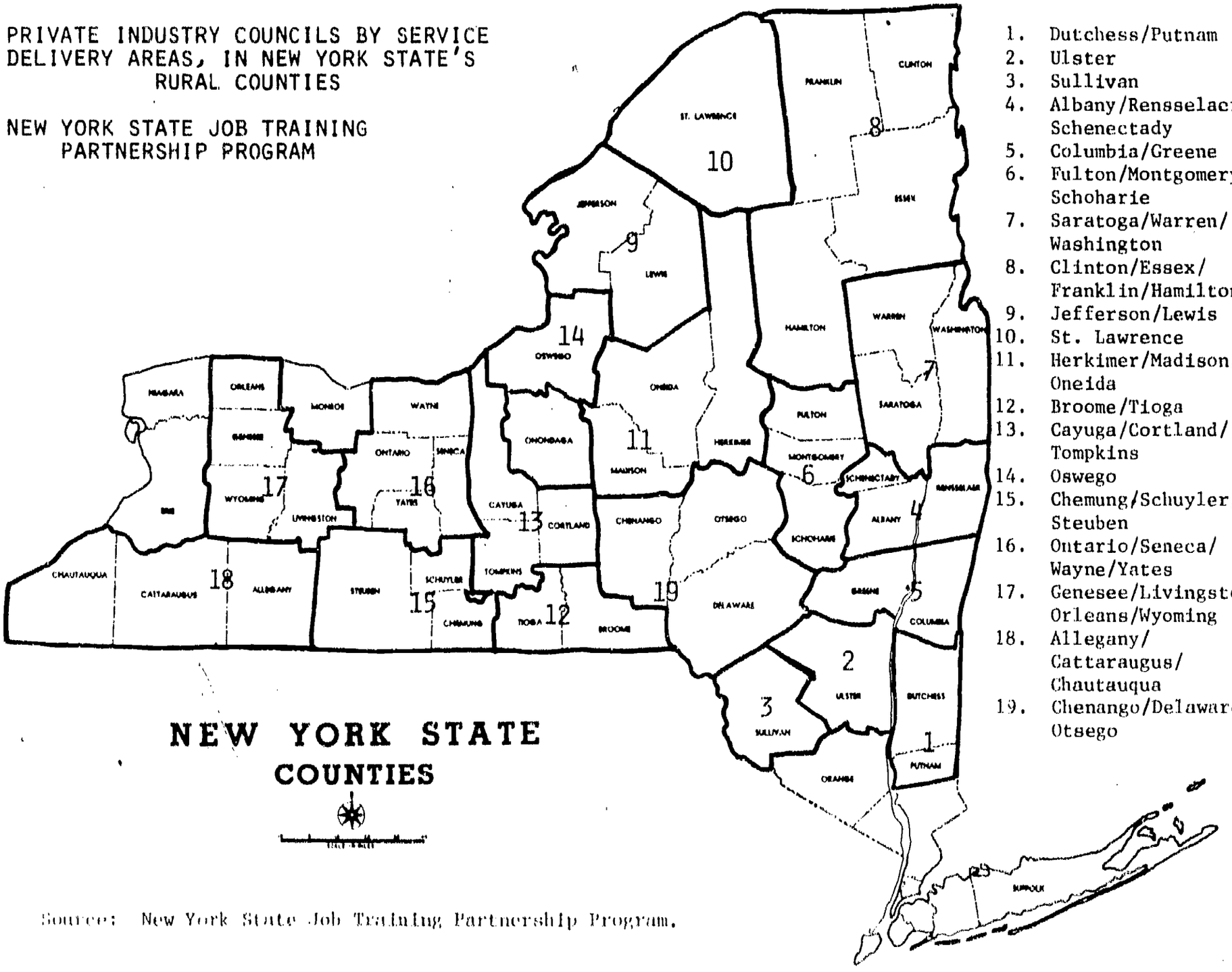
Universities Receiving Planning Grants

State University at Buffalo	Medical Instruments and Devices	Visidyne, Olin, Warner-Lambert
Columbia University	Computers and Information Systems	IBM
Syracuse University	Computer Applications and Software Engineering	IBM, General Electric, United Technologies, Texas Instruments, Westinghouse, Corning Glass Work

Sources: **New York State Senate Research Service**, "The Development of High Technology Industry - Recent Initiatives," **Issues in Focus**, Number 83-44, p. 9, and **New York State Science and Technology Foundation**

PRIVATE INDUSTRY COUNCILS BY SERVICE DELIVERY AREAS, IN NEW YORK STATE'S RURAL COUNTIES

NEW YORK STATE JOB TRAINING PARTNERSHIP PROGRAM



1. Dutchess/Putnam
2. Ulster
3. Sullivan
4. Albany/Rensselaer/Schenectady
5. Columbia/Greene
6. Fulton/Montgomery/Schoharie
7. Saratoga/Warren/Washington
8. Clinton/Essex/Franklin/Hamilton
9. Jefferson/Lewis
10. St. Lawrence
11. Herkimer/Madison/Oneida
12. Broome/Tioga
13. Cayuga/Cortland/Tompkins
14. Oswego
15. Chemung/Schuyler/Steuben
16. Ontario/Seneca/Wayne/Yates
17. Genesee/Livingston/Orleans/Wyoming
18. Allegany/Cattaraugus/Chautauqua
19. Chenango/Delaware/Otsego

Source: New York State Job Training Partnership Program.

CONTRACT COURSES AT COMMUNITY COLLEGES IN RURAL COUNTIES, 1982-83

Established by Chapter 113 of the Laws of 1981, community college "contract courses" are designed to meet the manpower needs of local employers throughout New York State, many of whom have been hampered by shortages of skilled technicians. The State University's 30 community colleges are given financial incentives to enter into contract courses with area enterprises.

Community College	Total FTE's	Total Headcount	Number of Businesses Served	Number of Courses Offered
Adirondack	8.9	173	4	6
Cayuga	4.3	232	3	6
Clinton	3.1	68	2	3
Corning	55.0	743	7	24
Finger Lakes	2.1	142	3	4
Fulton-Montgomery	2.8	81	2	2
Genesee	4.0	50	2	3
Herkimer	.3	8	1	1
Hudson Valley	92.7	1,304	13	37
Jamestown	32.7	895	27	35
Jefferson	1.7	35	2	2
Schenectady	12.3	71	3	4
Tompkins-Cortland	65.0	517	7	23
Ulster	29.0	731	7	17
TOTAL	313.9	5,050	83	167

Sources: **New York State Senate Research Service**, "The Development of High Technology Industry - Recent Initiatives," **Issues in Focus** Number 83-44, p. 9. and **Office of Community Colleges, State University of New York Central Administration.**

N.B.: Contract courses have also been offered at the following community colleges in metropolitan areas: Broome, Dutchess, Erie, Fashion Institute of Technology, Mohawk Valley, Monroe, Niagra, Onondaga, Orange, Rockland, Suffolk, and Westchester.

CONTRACT COURSES AT COMMUNITY COLLEGES IN NEW YORK STATE'S RURAL COUNTIES, 1982-83, BY SUBJECT AREA

	Community College													
Subject Area	Adirondack	Cayuga	Clinton	Corning	Finger Lakes	Fulton-Montgomery	Genesee	Herkimer	Hudson Valley	Jamestown	Jefferson	Schenectady	Tompkins-Cortland	Ulster	TOTAL
General Supervisory and Management Skills		1	1	4	2	1	1		1	6	1		3	3	24
Communication and Problem-Solving Skills	1	1		5		1			1		1		7	4	21
Health and Safety	1	1		2	1				6	6			1	3	21
Computer Literacy	1	1		6				1	4	2			2		17
Small Business Enhancement									10	1			2		13
Mechanical and Industrial Technology	1			3						5		3			12
Mathematics	1			2						2			3	1	9
Word Processing and Typing				1					8						9
Electronics		1					2			1		1		2	7
Behavorial Studies													2	4	6
Inventory and Quality Control	1	1			1					3					6
Health Professional				1						1			3		5
Auto Mechanics									3						3
Construction										3					3
Insurance			2							1					3
Job Enrichment									3	1					4
Engineering Science										2					2
Tourism									1						1

Source: State University of New York Central Administration.