VIRGINIA SCHOOLS IN THE SPACE AGE - A CONTINUED EVALUATION OF THE CURRICULUM, TEACHER TRAINING, AND RELATED MATTERS

REPORT OF THE
COMMISSION ON PUBLIC EDUCATION
TO
THE GOVERNOR
AND
THE GENERAL ASSEMBLY OF VIRGINIA

COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
1961

COMMONWEALTH OF VIRGINIA

COMMISSION ON PUBLIC EDUCATION
STATE CAPITOL
RICHMOND 19

Portsmouth, Virginia
December 5, 1961

Honorable J. Lindsay Almond, Jr.
Governor of Virginia
State Capitol
Richmond, Virginia

Dear Governor Almond:

I have the honor to transmit the final report of the Commission on Public Education, pursuant to House Joint Resolution No. 58 of the 1960 General Assembly.

Sincerely,

William B. Spong, Jr.

William B. Spong, Jr.
Chairman

WBS/d

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REPORT OF THE

COMMISSION ON PUBLIC EDUCATION

RICHMOND, VIRGINIA, December 4, 1961.

To:

HONORABLE J. LINDSAY ALMOND, JR., *Governor of Virginia*

and

THE GENERAL ASSEMBLY OF VIRGINIA

The 1958 Regular Session of the General Assembly of Virginia created the Commission on Public Education and, by Senate Joint Resolution No. 14, directed it "to make a thorough study and report upon the public school system of Virginia . . . ." The Commission made a report to the 1960 General Assembly, including a number of recommendations both to the Legislature and to the public school authorities. It was not able to complete its study in the time allocated, and therefore recommended to the General Assembly that the study be continued. Pursuant to this recommendation, the General Assembly adopted House Joint Resolution No. 58, 1960, which was as follows:

HOUSE JOINT RESOLUTION NO. 58

Continuing the Commission on Public Education.

Whereas, the Commission on Public Education, created by Senate Joint Resolution No. 14, 1958, was able, in the limited time available to it to make only a partial survey of the various matters related to the public schools, and considerable study remains if a thorough evaluation of public education in Virginia is to be made; now, therefore, be it

Resolved by the House of Delegates, the Senate concurring, That the Commission on Public Education, created by Senate Joint Resolution No. 14, 1958, is hereby continued. The Commission shall be composed of eleven members, of whom two shall be appointed by the President of the Senate from the membership of the Senate, three shall be appointed by the Speaker of the House of Delegates from the membership thereof, and six shall be appointed by the Governor from the State at large. The Governor shall appoint the chairman. The Commission is authorized to request the Department of Education to provide staff assistance or may employ such staff as it deems necessary. Members of the Commission shall receive no compensation for their services but shall be reimbursed for their actual and necessary expenses, for which, and for other expenses

of the Commission, there is hereby authorized to be expended from the contingent fund of the General Assembly the sum of twenty thousand dollars.

The Commission is directed to continue its appraisal of the education of children in this State, including consideration of the curriculum in the schools, instructional methods, and the quality of the instruction, and what changes may be desirable to better prepare our schools to train our youth for best adjustment to our modern, complex society. The Commission shall complete its study and make a report to the Governor and General Assembly not later than October one, nineteen hundred sixty-one.

The following were reappointed as members of the Commission: By the President of the Senate: George S. Aldhizer, II, of Broadway, and William B. Spong, Jr., of Portsmouth. By the Speaker of the House of Delegates: D. French Slaughter, Jr., of Culpeper; and by the Governor: Honorable Jerry G. Bray, Jr., Judge of the Corporation Court of the City of South Norfolk; James W. Fletcher, Attorney at Law, Sperryville; Thomas L. Lanier, Treasurer, Newport News Shipbuilding and Dry Dock Company, Newport News; William S. Mundy, Jr., member, Lynchburg City School Board and Attorney at Law, Lynchburg; Harold W. Ramsey, Superintendent of Schools, Franklin County, Rocky Mount; and Mrs. Bess Willis Shrader, Chairman, Amherst County School Board, Amherst. In addition, the Speaker of the House of Delegates appointed the following members of the House to the Commission: Thomas R. Glass of Lynchburg and W. Roy Smith of Petersburg.

The Governor again designated William B. Spong, Jr., as Chairman of the Commission.

Mr. Slaughter was again elected Vice-Chairman of the Commission. John B. Boatwright, Jr., was named Secretary and the following acted, from time to time, as Recording Secretaries: F. W. Harkrader, Jr., W. S. Kincheloe, Jr., and G. M. Lapsley.

The untimely death of Mr. Mundy on April 19, 1961, deprived the Commission of the wise counsel of an able and interested member. The Commission desires to record its sincere regret at his death and its indebtedness to him for the valuable assistance which he had theretofore rendered.

At its organization meeting the Commission conferred with Davis Y. Paschall, then Superintendent of Public Instruction, as to the implementation of its previous recommendations. Dr. C. Jackson Salisbury, of the University of Virginia, was again retained by the Commission to head its professional staff.

During the course of the study Dr. Salisbury was assisted by: Dr. J. Alex Rorer, Professor of Educational Supervision; Mr. Lawrence T. Ludwig, Director of Physical Education; Dr. Richard L. Beard, Associate Professor of Education; Dr. Emery P. Bliesmer, Director, McGuffey Reading Clinic; Mr. Raymond C. Heidloff, Associate Professor of Physical Education; Dr. John F. Leahy, Assistant Professor of Education; Dr. Charles Norford, Director of Audio-Visual Instruction; Dr. Stanley S. Stahl, Associate Professor of Elementary Education; Dr. Frank W. Banghart, Director, Division of Educational Research; Dr. James H. Bash, Associate Director, Division of Teacher Placement and Field Services; Dr. James D. Beaber, Coordinator of Special Education; Mr. James E. Colbert and Mr. Stewart Christiano, research associates; and Mr. Robert Maidment, graduate student, all of the University of Virginia; and Dr.

James Fox, Head, Department of Health and Physical Education of Lynchburg College.

An agenda for study was agreed upon which established as a priority of subjects for consideration those matters suggested for inquiry for the Commission at the conclusion of its first report.

The members of the Commission met a minimum of once a month from the time the Commission was reorganized. No compensation or per diem was paid the membership and there has been expended on the study during the biennium $17,500.00 out of the funds appropriated to the Commission by the 1960 General Assembly.

Early in its deliberations the Commission resumed its study of teacher training and in this connection obtained the views on the training of elementary school teachers from Dr. Beulah Benton Tatum of Goucher College, Baltimore and the following representatives of the teacher training institutions in Virginia: Admiral A. D. Chandler, Chancellor, The Colleges of William and Mary in Virginia; Dr. Davis Y. Paschall, President of the College of William and Mary, Williamsburg, and Dr. H. K. Holland, Head of the Department of Education of that institution; Dr. Ralph W. Cherry, Dean of the School of Education of the University of Virginia; Dr. A. T. Harris, Director, School of Education, Virginia State College; Dr. Francis G. Lankford, Jr., President, Longwood College; Dr. Charles K. Martin, Jr., President, Radford College; and Dr. G. Tyler Miller, President, and Dr. C. G. Caldwell and Dr. R. G. Poindexter of the faculty of Madison College.

Desiring to learn at first hand the opinions of Virginians about their schools, the Commission held a series of public hearings in the month of November, 1960. These were held in a city in each congressional district in the State—Harrisonburg, Alexandria, Fredericksburg, Abingdon, Roanoke, Danville, Petersburg, Richmond, Newport News and Norfolk. These hearings were well attended. Much of the planning for the hearings was done through the Virginia State Chamber of Commerce, and the local chambers of each of the cities in which the Commission sat aided with arrangements. In addition, the Commission solicited and received many written expressions of opinion from classroom teachers. The assistance of those who communicated their views is gratefully acknowledged.

Believing that it should carefully evaluate outstanding work being done in the educational field in other parts of the nation, the Commission, in addition to securing voluminous literature on experimental programs in different areas, selected several school systems for personal visits. Conferences were held with Dr. Lester W. Nelson, Associate Program Director of the Ford Foundation's Fund for the Advancement of Education, concerning some of the outstanding installations in various specialized fields. The Commission visited the public schools of Hagerstown, Maryland and saw the extensive use being made there of educational television. Following this visit, in the Spring of 1961, inspection teams composed of members of the Commission visited the following school systems: Norwalk, Connecticut, to observe team teaching; Long Beach, Long Island, New York, to observe the dual progress plan; the Rocky Mountain Area Project in Colorado and the Catskill Area Experiment in Oneonta, New York, to observe their programs for increasing the variety and improving the quality of education in rural and small schools; the University of Chicago where new techniques in equipment and flexibility of school design are being developed; Evanston, Illinois where the schools are sponsoring a number of experimental programs; the Milwaukee Public Schools, which

use the ungraded primary system; the Bay City, Michigan school systems, which pioneered in the use of teacher aides; and Columbia, South Carolina, the center of the nation's first state-wide closed circuit educational television network.

The Commission invited Mr. David W. Bishop, Administrative Assistant of the Board of Education, Ossining, New York and Dr. Medill Bair, Superintendent of Schools of Lexington, Massachusetts to attend a Commission meeting in Richmond where they discussed the experiments being conducted in their respective systems with dual progress and team teaching.

In addition, the Commission conferred with a number of persons in the State of Virginia who have knowledge of certain phases of subjects under study. These included specialists in the teaching of reading, those experienced in the use of educational television, and programmed instruction, commonly referred to as "teaching machines". Also, a number of individuals who are particularly interested in or experienced with school libraries met with the Commission. These persons, who gave of their time to share their views with the members of the Commission, are listed in the appendices.

The work of the Commission has been greatly assisted by the studies being conducted by the State Board of Education in the field of elementary education and social studies. Conferences with representatives of the Virginia Association of School Administrators and with individual school administrators assisted materially during this study. The Commission desires to thank the Virginia Education Association, the Virginia Teachers Association, the Virginia School Boards Association, the Virginia Congress of Parents and Teachers, and the American Association of University Women for their constructive suggestions and continuing interest. During its study the Commission and its staff have received the complete cooperation of Dr. Woodrow W. Wilkerson, Superintendent of Public Instruction, and the personnel of the State Department of Education. The Council of Higher Education through its Director, Dr. William H. McFarlane, was also most helpful with respect to certain aspects of the study, and we wish to record our gratitude for this assistance.

This study report stems from the activities of the Commission which have been detailed above and calls for a number of positive steps within the structure of education in Virginia. The Commission has been made aware of many factors within our school system which have earned its deep respect and approval. The comments and recommendations herein contained are presented with the hope that they will contribute to the solution of problems confronting public education in Virginia today.

II. CHALLENGES OF THE SIXTIES

Chill winds of war blow across the world today, constantly reminding us of the life and death struggle between democracy and communism. The cold war, ever threatening to become "hot", has accentuated the bitterly competitive nature of this age. Premier Khrushchev's speeches, the zeal of Soviet athletes on the Olympic fields at Rome, the confident features of a man who has conquered space, dramatically attest that today the United States is being challenged in every field of human endeavor. The first report of the Commission on Public Education referred to this conflict as the Russian challenge.

Difficult as it may be to accept, we face other serious challenges imposed upon us by the age in which we live. Because of the ominous

nature of the Russian threat we are inclined to overlook this. Yet, as we move with headlong speed into a new phase of man's struggle to control his environment, tremendous problems are being generated.

Take the growth of population as an example. It is a worldwide phenomenon. The Bureau of the Census says that the population of the United States has already passed the one hundred and eighty million mark. For the year 2000—less than 40 years away—the estimate of the population of the United States is 265 million people. The world population now stands at about 3¼ billion people. By the year 2000, it is estimated, there will be 6 billion people in the world. The problem is not the fact that the population of the United States and of the world is growing, but the speed of this growth.

There is also the tremendous development of new sources of energy. Never before have we had in our grasp unlimited power drawn from unlimited sources. Nuclear energy is already at our command and scientists assure us that control of solar energy is just around the corner. The use of this new power and its possibilities for altering the pattern of man's existence are staggering to the mind.

The explosion of technology is familiar to everyone for already it has vastly affected the way of life of every American. We have a tremendous number of new tools of production at our command which have vastly increased the products available to each of us. To use these new tools, however, a greater number of citizens must be trained, and they must be trained to higher levels of skill.

Any consideration of the explosion of knowledge touches on the basic purpose of education itself. Never has man acquired knowledge at the present pace nor on so broad a front, particularly in scientific and technological areas. Nuclear energy, space exploration, revolutionary studies of brain functions and important work on the living cell are but a few examples. There are amazing new tools at hand for exploration and for problem solving. It has been suggested that the sum total of all man's knowledge may very likely double in the next decade. Education therefore finds itself faced not only with the basic problem of teaching what we now know but of devising more efficient ways and means of teaching this rapidly expanding body of knowledge.

There are still other challenges arising from competition in the United States. There is a continuing contest between the states—and between localities within the states—for the location of new industry so that economic growth and development may stay abreast of the rising costs of government and provide the benefits that result from an expanded economy. One of our sister states has floated more than 200 industrial-aid bond issues totaling more than 68 million dollars in a colossal effort to bring more industry into that state.*

There is the further competition for employment among individuals and there is also the competition, often bordering on the desperate, for an opportunity to obtain a college education. This is attested to by the mad scramble among our young people to obtain admission to the better colleges and universities. The number of young people under eighteen years of age has increased by more than 36% in the last decade. This promises that competition for a college education will increase in intensity.

Faced with the most demanding era of our history, posed by the challenge of Communism, the crisis of a changing age, and the ever

* *U. S. News and World Report*—June 26, 1961.

increasing competition between states and between individuals, no sector of our society faces greater demands or promises to be more sorely taxed than the field of education.

Technological developments have provided us with learning resources, projectors, recorders, television, radio, teaching machines, etc. Education now has the tools with which to accelerate and enhance learning. One of our major tasks is to find techniques for employing them. The advance of technological developments and their accompanying experimental applications to education need to be watched closely.

Our American systems of education now and in the immediate future must provide for vastly increased numbers of individuals, for substantially increased periods of productive life and for very sharply elevated levels of competence and skill. Then too, the opportunities for employment of the unskilled person are rapidly diminishing. Even semi-skilled persons are experiencing difficulty in finding employment. This has serious implications for the kind of skill and competence our citizens must have for the world of tomorrow. The structure of education in this situation is a key responsibility and has a key role to play. There is therefore a need for the highest degree of scrutiny of the means by which information is presented to learners who need, as never before, to understand realistically the world of people, places and things.

III. VIRGINIA'S SCHOOLS IN A COMPETITIVE AGE

Any study of the nation's public schools, or any suggested changes for the schools of Virginia, should be made within the framework of certain basic truths about American public education:

First, our educational pattern is unique. Control of our schools is in the hands of local and state boards. Yet, even those nations closest to us in political belief such as Great Britain and France have highly nationalized systems. An order from an European ministry of education can inaugurate new programs or curtail existing ones for all of that nation's schools. Thus, thousands of local school boards in the United States, functioning in varying degrees under fifty different state departments of education, are today in competition with the highly nationalized systems of other nations.

Secondly, we are endeavoring to educate all of the children in this country. While in western Europe the curriculum at the secondary level in many of the nations is impressive in course requirement, the percentage of students exposed to it is small in terms of the total youth of eligible age. Those nations are not attempting to educate any child beyond capacity. Only the upper third, often only the upper ten per cent, attend the secondary schools, and these schools are geared to the abilities of the students. On the other hand Russia is as dedicated to universal education as we are.

Thirdly, the problems and complexity of school finance leave the average district superintendent, the person traditionally expected to provide academic leadership, little time for the strengthening of curriculum or faculty. Keeping abreast of the formulae for the distribution of state and federal funds, plus the necessity of dealing annually with a politically sensitive council or county board, demand the talents of a financier rather than an educator.

Fourthly, many activities not always related to the pursuit of knowledge have become an integral part of American school programs. While

many of these innovations have merit—and undeniable public appeal—they have served to becloud the real purpose of schools. Often the school has come to be regarded as a substitute for influences of the home, the church and community. Often duties unrelated to teaching have taken much of the time of the classroom teacher. The public concept of the purposes of education is not so complicated in the nations with which we compete.

This Commission believes in local and state control of education-tion. We recognize that the challenges of the space age impose upon Virginia and its local school divisions a higher duty than ever before to educate our youth for leadership in a competitive era. We also believe in universal education. The problems of school finance and the present emphasis upon school activities not always related to intellectual training we accept as realities that will not be solved or changed until the quest for educational quality becomes of greater concern to many more people.

The Commission has observed earlier that attitudes cannot be legislated. Also we have stated that appropriations alone are not the answer to our educational needs. We again admonish the people of Virginia that they, in the final analysis, will shape the future of Virginia's educational program.*

Every child in this Commonwealth should be given the opportunity for an education that will enable him to compete for employment, and to compete favorably with the graduates of the schools of other states for admission to colleges and universities.

Against this background of belief, we shall direct attention to those problems which our studies indicate Virginians must solve if we are to compete in a bitterly competitive world.

1. *The Disparity Among Virginia's School Divisions*

Today there are school divisions in Virginia which rank with the finest in the Nation. The schools within these systems are well equipped, they are staffed by competent teachers and administrators, and their curriculum offerings are broad in scope as well as current in course content. These systems are already doing many of the things we shall suggest in this report. Unfortunately, there are also divisions in Virginia which by every measure fall short of the requirements necessary to prepare graduates for higher education or equal vocational opportunity.

All the people of Virginia, wherever they reside, are affected by the level of education throughout the Commonwealth. The State's future economy is, in large measure, related to the quality of its educational systems. The migratory patterns of Virginia's population during this past census period indicate appreciable movement within the State. Educational products of many sections of Virginia are becoming citizens, residents and parents in other sections.

While not conclusive evidence of the range of disparity among Virginia's school divisions, the list of Merit Scholars chosen from our secondary schools during recent years is indicative that a few divisions have produced more than a proportionate share of those honored. At the twentieth annual Virginia Science Talent Search, sponsored by the

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* *Report of Commission on Public Education,* 1960.

Virginia Academy of Science, the forty-five finalists chosen were students from no more than fourteen of Virginia's school divisions.

Virginia is in a much better position to attack the problems of disparity among school systems than most of her sister states. The task of raising standards over an entire state is related to the number of local school districts involved. There recently has been much effort in many states to consolidate and eliminate school districts. In 1931-32 there were 127,422 local school districts in the United States. These districts had been reduced to an estimated 37,153 in 1960-61.

In 1922, the Commonwealth made a farsighted move when the county unit law was adopted. This reduced the number of district school systems from around 700 to 150. Today, there are only 131 school divisions in Virginia. Most of the southern states have followed Virginia's example. However, other states have many more school districts: Indiana has 957 districts; Oregon has 510; New Jersey has 590; and Nebraska has 3,250 school districts!

Thus, when weighing any aspect of public education in Virginia there are only 131 school systems to be evaluated; there are only 131 school boards and division superintendents charged with the responsibility of administering the educational programs of the Commonwealth.

Financial ability, resources, and the salaries paid teachers are, of course, factors to be considered in evaluating school divisions. A review of available statistics on all school systems in Virginia for the past school year leads to the general conclusion that those divisions with the highest salary averages have the highest percentage of teachers with degrees, the lowest percentage of teachers with special licenses, and the lowest teacher-pupil ratio. These statistics for recent sessions are included herein as Appendix I.

Obviously, the Commonwealth has a role to play in strengthening those divisions whose present needs are apparent, and those divisions must also help themselves. The problem is how the tax resources of the Commonwealth might be used to aid only certain divisions of the State without unduly prejudicing the rights of the citizens of the other divisions. We have been mindful of this in those recommendations made which are designed to aid the less forward school divisions of Virginia.

2. *The Need To Strengthen Local School Boards.*

The traditional American educational pattern places the prime responsibility for the operation of schools at the local level and requires that policy be determined by a local school board. No other nation has entrusted its schools to locally selected lay citizens.

Former President Eisenhower's Commission on National Goals in the section on education observed . . . "The local school district remains the key to good public education. Local school boards should be greatly strengthened."* The education consultant to that Commission, Dr. John W. Gardner, wrote:

> ". . .By 1970 informed Americans should have firmly in mind what a good board ought to be and do (something most Americans today are far from understanding). They will ask these questions about their school board:

* *Goals for Americans*—1960.

(a) Are the members devoted to education, well-educated themselves, outstanding in public spirit and integrity?

(b) Do they understand the nature of modern education, and carry on continuous evaluation of the district's educational program?

(c) Do they act in a disinterested manner, keep the board out of politics, and resist pressure groups which seek to shape American education to special ends?

(d) Do they distinguish between the policymaking function of a lay board and the professional responsibilities of the superintendent, principal and teachers?

(e) Do they work with citizens' groups who have the good of public education at heart, keeping these groups informed and giving them a sense of participation?"†

Dr. James B. Conant, in a recent report on our public schools, concluded with the following:

> ". . .Finally, I wish to emphasize again the importance of the local school board. The task that confronts citizens everywhere is to choose the best people available for membership on school boards in thousands of communities across the land. By so doing, Americans give evidence of their recognition of the challenge facing our schools in the years ahead."*

The Virginia School Boards Association has done much to emphasize the responsibilities of school board membership. Through the efforts of this organization, Virginia became one of the first states, if not the first, to have a manual for school board members. This splendid handbook has just been republished.**

The most important task for any school board member is the selection of a division superintendent. The school board and division superintendent together can determine the excellence or mediocrity of the schools within their division. School board members, when selecting a superintendent of schools, should carefully review the academic background of each candidate and his ability to get along with people. The prime mission of the division superintendent should be to provide academic leadership for the principals, teachers and students under his administration. This should be foremost despite all other demands. The capacity of a man to provide this academic leadership should be the most persuasive factor in the selection by school board members of a division superintendent.

There is no greater opportunity for public service in Virginia today than membership on a local school board. School board members in the counties of Virginia are appointed by district by a school trustee electoral board which is appointed by the circuit court.*** City school boards are appointed by city councils.

† *National Goals in Education*—Dr. John W. Gardner, 1960.

* *Education in the Junior High School Years*—Conant, 1960.

** *Virginia School Boards*, 1961.

*** Sections 22-60 and 22-61, Code of Virginia, 1950, as amended.

Wherever the appointive power, it should be exercised in Virginia by individuals with the knowledge that the General Assembly has placed in their hands a large measure of the responsibility for the excellence or mediocrity of the school systems in their respective localities.

3. *The Need For More And Better Teachers*

Recent studies have concluded that to maintain the present over-all pupil-teacher ratio the schools will have to enlarge their staffs more in the next ten years than in the previous thirty-five. At the present time one-fifth of all college graduates are entering the teaching field. In the next ten years one-half of all our graduates would have to enter the teaching profession in order to maintain present pupil-teacher ratios. This is hardly probable.

Virginia, as in the case of every other state, is faced with an acute shortage of teachers. Our sources of qualified teacher supply are:

a. From the new graduates of those State-supported colleges which have traditionally occupied the role of teacher training institutions.

b. From the new graduates of the liberal arts colleges, private and State-supported.

c. From the ranks of former teachers who have married, borne their families and desire to return to teaching. These require in-service training or summer courses.

d. From the graduates of the colleges of other states who are natives of Virginia or have moved to the State.

A total of 5,274 new teachers were needed in Virginia for the 1960-61 school session to fill new positions or vacancies caused by retirement or resignation. A total of 4,665 new, certified teachers were brought into our schools, and, of these, 2,523 or 54% were educated in out-of-state colleges. The remaining 2,142 new teachers certified were from Virginia colleges, of whom 1,400 were 1960 graduates.

Of these 1,400 new teachers who were graduated from Virginia colleges in 1960, 459 were graduates of the three State-supported colleges devoted primarily to teacher training; 458 were graduates of all other State-supported colleges and universities; 475 were graduates of private colleges where some courses in teacher training are offered; 8 were graduates of the private colleges which offer no courses in education.

An estimated total of 5,274 new teachers needed for the past session did not include 809 positions which the State Department of Education estimated were needed to relieve over-crowded conditions.

These figures, and others relating to teacher supply and demand obtained from the State Department of Education, are shown on charts included herein as Appendix II. They suggest the following:

a. Virginia cannot continue to rely upon the colleges of other states for the training of more than one-half of its annual supply of new teachers. Salary raises in neighboring states and changes in world conditions which affect transients may have a marked influence on this source of supply.

b. The three State-supported institutions of higher learning devoted primarily to the training of teachers furnished 16.7% of the new college graduates entering teaching in Virginia in 1960. It is doubtful if it would

be possible or economically practical to double or triple the capacity of these institutions to meet present and projected needs.

c. Those State-supported colleges not regarded as teacher training institutions are supplying relatively few teachers from among their graduates.

d. Only a small number of the graduates of many private liberal arts colleges in Virginia are being attracted into the teaching profession.

The figures we have quoted on teacher shortages in Virginia deal only with the quantitative aspect of the problem, except that the charts in the appendices do indicate that it was necessary to issue 441 new special licenses last year to meet total teacher demand.

Of Virginia's 35,056 teachers during 1960-61, 6,877 or 19.6% held licenses or certificates based upon sub-degree provisions. Also, of the 13,143 high school teachers in Virginia, 1,132 were not qualified by certification in the subjects they taught.

During the past school year 4,694 employees of the public school systems of Virginia held advanced degrees, representing 13.4% of the total number of teachers. This is not a large percentage, especially when one considers that the total figures includes all supervisory personnel and administrators, of which there were 2,590 in Virginia. This suggests that the motivating factor in past years for most classroom teachers to take graduate work has been to become school administrators rather than to become more proficient in subject matter fields.

The in-service training program begun in Virginia in 1960 must be expanded if nondegree teachers are to receive their degrees, if teachers returning to the classroom after a number of years are to meet the current demands of the subject areas in which they teach, and if teachers are to be encouraged to take graduate training in their subject fields.

Much attention has been given recently in Virginia to the possibility of equalizing teachers' salaries throughout the Commonwealth. Were this done, it would still be questionable if the more able teachers would be attracted to the localities where they are most needed. One of the problems in narrowing the disparity between school divisions is how to get more able new school teachers to the weaker school divisions.

There are fewer men teachers in Virginia than in most states. This is particularly true in our elementary schools. Projected needs indicate that we cannot continue to rely upon women as the source of the great majority of our classroom teachers.

The foregoing figures and observations suggest the following questions:

a. How can more of the top graduates of our liberal arts colleges be attracted into teaching?

b. Are our State-supported institutions of higher learning, other than those devoted primarily to the training of teachers, presently serving the needs of the Commonwealth in the critical area of public education?

c. What steps can be taken to assure financial incentives which will reward the more ambitious and able members of the teaching profession?

d. How can more men be attracted into teaching?

e. How can some of the more able graduates of our colleges be attracted to teaching in school divisions where there is need for able instruction?

f. How can more classroom teachers, as well as liberal arts graduates, be encouraged to take graduate work in their subject fields?

4. *The Need For More Educational Research.*

Growth industries in America have for years plowed back millions of dollars into research. Yet only recently have we become concerned with planning for education beyond the current school year. Projected shortages of teachers, spiralling construction costs and rapidly increasing enrollments have promoted speculation concerning our ability to continue to finance public education based on the traditional formula of a new teacher and new classroom for every thirty additional children. Also, new educational resources have appeared which have captured public imagination but require the tests of time and application.

There is a growing concern for the students in rural sections where financial resources and lack of population have resulted in limited facilities and curriculum, and for the rising number of academically talented students who terminate their education short of their potential.

Private foundations, alarmed by these problems as well as by the quality of American public education, have donated millions of dollars during this past decade for educational research. Many local school districts have also conducted independent experiments. Generally, this research has fitted into one of four areas of inquiry:

a. *Better utilization of teacher talent.*

This has involved: (1) freeing the teacher of many non-teaching responsibilities such as clerical work and collection of money, and (2) changing the arrangements within school organizations (i.e. team teaching) and working with larger and smaller class groupings. In short—this research has sought methods by which better use could be made of the better teacher.

b. *Changes in the design of school facilities.*

Experiments with larger or smaller class groupings, or with the basic organization of a school, have required changes in the design of school buildings, and especially in flexibility of interior arrangements. This has also been true when determining the best use of new educational resources. Increased summer school enrollments across the nation and the possibility of all year schools has prompted consideration of air conditioning in school design.

c. *Determining the most effective use of new and modern resources.*

Much time and money has been spent to determine the best use of television as an aid to education. It is now generally acknowledged that television has great promise as an educational resource. It is also recognized that television has limitations as a teaching device. The advantages and disadvantages of closed circuit television are now known, as is the value of video tape.

Another new resource is the "teaching machine", more properly called programmed learning. More experimentation has been done in Virginia with this than perhaps in any other part of America. The possibilities for programmed learning are recognized but as a lasting resource it is still being evaluated.

d. *Seeking to develop more modern materials.*

These experiments have involved the extensive use of films, tapes and recordings—learning aids which can be revised in a matter of minutes. This has become necessary because economy prohibits the rapid turnover of textbooks with the result that often in the fields of science, history and geography, books are outdated soon after publication. The acceptance and use of tapes and other devices has often been more difficult for teachers than pupils.

This Commission has visited many of the outstanding educational research projects in the United States. We have been visited by school administrators who are presently conducting the leading team teaching and dual progress experiments in the Nation. A list of these experiments along with brief descriptions of some are included herein as Appendix III of this report.

The results of these experiments will be of value to education in Virginia. Our rural areas especially can profit from the amazing things being done by schools in the Catskills and the Rocky Mountain area. Many of our school districts can be guided by the conclusions from research conducted by the more forward school divisions in Virginia.

The Commonwealth can aid *all* of the school divisions of Virginia if money is provided for research and experimentation, under proper supervision, in the localities and at the teacher training institutions. The State Board of Education has recognized the need for valid research in requesting funds for pilot studies and the establishment of a Department of Research. These funds should be appropriated.

Virgina must outline a State-wide plan for the use of educational television. A later section of this report is devoted to this subject.

The Commonwealth should take the lead in determining, with local school divisions, the best use in Virginia for new educational resources, being mindful of the over-enthusiasm of adherents on the one hand and the antagonism of those adverse to any change. Administrators and teachers alike in Virginia must be given a working acquaintance with new resources and modern materials through in-service training and the teacher training institutions.

We must begin to plan today in Virginia for the school systems of the next decade.

5. *The Need for Co-ordination of Effort Between All Concerned With Public Education.*

If we are to solve the problems of teacher shortage and the need for more qualified teachers, and if we are to have meaningful educational research in Virginia, then the efforts of the many concerned with education in Virginia at different levels and localities must be co-ordinated.

It is obvious that plans for supplying the number of qualified teachers necessary in the years ahead will call for the combined efforts of the State-supported institutions of higher learning and the private, liberal arts colleges of Virginia. It is equally apparent that effective research and experimentation for maximum benefit to all school divisions cannot be conducted unless it is co-ordinated at the State level and with the teacher training institutions.

A program for educational television which will reach all of the school divisions of Virginia cannot come into being without strong administrative leadership at the State level and co-operation from those localities already in the field of educational television, as well as those localities which have been allocated channels but have not yet begun transmitting.

If college professors in Virginia, especially those in State supported institutions of higher learning, are to question the preparedness of the graduates of our secondary schools, their criticism should be accompanied by constructive suggestions to those at the State level and in the localities, as to how deficiencies might be remedied. This is also true of those teaching at the secondary school level who complain about pupils not acquiring the basic skills during their years in elementary grades. Somehow it must be impressed upon all connected with public education from the first grade through the senior year of college, that teaching personnel at each level of learning can profit from the problems and experiences of others.

In-service training programs, summer school offerings, extension programs and teacher institutes must be co-ordinated to meet State needs, to avoid duplication, and to assure maximum attention to those critical areas of the curriculum and to those school divisions in Virginia where help is needed.

Those State-supported graduate schools concerned with education can render an invaluable service to the Commonwealth if research for graduate degrees is directed toward specific educational problems in Virginia. Moreover, efforts from the State level in the future, insofar as research and experimentation are concerned, must be co-ordinated with the teacher training institutions of Virginia. The teacher training institutions themselves can render a greater service to the public school systems if they become educational centers of research and in-service training for those school divisions in their respective geographic areas.

The vested authorities for the development and co-ordination of the educational programs of Virginia are: The State Board of Education, the State Department of Education and the boards of the respective State-supported institutions of higher learning. The proper authority for the co-ordination of effort between State-supported institutions of higher learning is the State Council of Higher Education. Many of the recommendations appearing throughout this report will be to these respective bodies.

The conclusion of the first report of the Commission on Public Education listed the following subjects which in our judgment merited further study:

(1) A thorough appraisal of the elementary schools.

(2) The possibilities of merit as a factor for determining teacher salary scales.

(3) A study of the adequacy of school library facilities.

(4) The relative importance of health and physical education in the curriculum.

5) The role of the Commonwealth in the education of physically and mentally handicapped children.

(6) The advisability of State financial assistance for summer schools.

(7) An evaluation of teacher efficiency under present teacher loads.

(8) An evaluation of the adequacy of the present school day, school week and school year.

These subjects were used as a basis for the public hearings held by the Commission throughout Virginia. We have endeavored in this report to make some observations and constructive suggestions concerning each.

The people of the world are drawing ever closer together as space and time are being mastered. To know and understand people, at home and abroad, is now vital to the existence of every citizen. The field of social studies is unique in that its subject matter, as well as its objectives, deal with people. Few seem happy with the teaching and learning of social studies in Virginia or, for that matter, in most other states. The Commission has given special attention to this subject in a following section.

Despite modern innovations and organizational changes, the classroom teacher remains the key to better education. Consequently, many of the recommendations of this report will concern the training of teachers in Virginia.

Our observations in the sections to follow are made with particular attention to the problems and needs in Virginia heretofore generally outlined: disparity, teacher shortage, the need for stronger school boards, educational research and co-ordination of effort.

IV. THE ELEMENTARY SCHOOL

No phase of education is more closely allied to the home and community than the elementary school. Almost with the advent of parenthood, parents look forward to the time when the child will enter the first grade. The elementary school reaches the greatest number of pupils for the longest period of time, and consequently should exercise the greatest influence on the pupils. This presents a unique challenge to those responsible for elementary education.

The Statement of Policy published by the State Board of Education on February 3, 1961, points out that the elementary school is the only institution charged with the specific responsibility of teaching our children to read, to write and to develop their ability to reason. This Statement of Policy is included herein as Appendix IV.

Elementary education is the foundation upon which all other education is built. Dr. Davis Y. Paschall, former Superintendent of Public Instruction, expressed this general view of elementary education:

> "Education is no stronger than the foundation on which it is built. Quality in education, therefore, at the upper level is dependent on the soundness of instruction in the elementary schools. The formative, impressionable years of the elementary school help set the direction for the child's life. It is then for the first time that he may learn the joy and dignity of work well done, the self-respect that comes from worthy achievement, the importance of people, the love of country, a respect for learning, and a zeal for acquiring both knowledge and skill."*

At no level of education are there more areas of widespread disagreement than at the elementary level. The following paragraphs touch

* *Elementary Education in Virginia,* State Department of Education Informational Service Bulletin, Richmond, June 1961.

some of the issues. The Commission has not always been able to reconcile differences and for this reason in some instances only the background of the problem is stated.

1. Organization

Elementary school organization in the United States has undergone many changes since its earliest beginning. In general, the one-room school in which one teacher taught all of the subjects to all of the children in all of the grades was prevalent until the middle of the nineteenth century when the rapidly increasing population gave rise to the graded school. The one teacher per grade class was introduced in Quincy, Massachusetts in 1848 and rapidly spread throughout the school systems of the nation. Although the graded plan was welcomed as a way to group large numbers of children, many undesirable practices were soon evident, such as heavy pupil failure, nonpromotions, and many drop-outs, mostly because of the expectation that children could achieve uniformly at each grade level. By 1870, many efforts had been made to overcome the deficiencies of the graded school and to individualize instruction. These have included such notable attempts as the Cambridge Plan (multilevel track plan originated in 1893), departmentalization (New York City, 1900), platooning (Bluffton, Indiana, 1900), the Winnetka plan (self-instructional plan of 1919), Hosic's Cooperative Group Plan (forerunnner of team teaching in 1930), the ungraded primary plan (Milwaukee, 1942) and interclass grouping (rather general approach appearing about 1947).

Thus, the history of elementary education shows a continuing effort to find a more effective and efficient means to present the basic skills in the early school years. More recently there has been an emphasis on the re-examination of old methods. There have been modifications of methods previously tried, together with widespread trial of the old in combination with the new. As previously noted, the Commission has visited school divisions throughout the nation where some of the more searching examinations are taking place.

Today, the arguments seem to center about the two basic types of school organizations: (a) one teacher per classroom for all subjects, usually known as the "self-contained classroom", and (b) a group of teachers working together as a team for subject-matter purposes. It should be emphasized that there can be no one answer to the problems of organization; every school system, every school, every staff is different and must make its own adaptation to the peculiarities of the local situation.

School building studies in recent years indicate that the necessary facilities and staff for a good elementary school can be justified economically when the enrollment approaches 300 to 350. Economy "levels off" beyond an enrollment of 500 and the size must be judged in terms of educational considerations. A study of the following tables shows that, in both staff and enrollment, an extremely large number of Virginia elementary schools are of such size that departure from the traditional one teacher per grade organization would be difficult and that the diversified skills of a large staff would be lacking. This is not to imply that change is impossible but centralization of materials and team teaching, and even d partmentalization are difficult to plan in the small school.

Size of Elementary Schools In Terms of Staff

Number of Teachers	Number of Schools		
	1948-49	1959-60	1960-61
1	1,056	240	209
2	572	250	220
3	183	139	143
4	153	110	110
5	38	64	55
6	61	47	39
7	136	82	91
8	61	68	66
9	21	52	51
10	27	48	45
11	16	37	44
12-15	53	164	190
16-20	50	170	159
21-25	20	118	123
26-30	15	51	55
31-40	0	30	28
Over 40	0	6	8

Size of Elementary Schools In Terms of Enrollment

	1960-61
Below 100	548
100-199	260
200-299	190
300-399	162
400-499	127
500-599	107
600-699	92
700-799	56
800-899	35
900-999	23
1000-1099	11
1100-1199	10
1200-1299	6
1300-1399	2
1400-1499	1
1500-1599	1
1600-1699	3
Over 1700	2
Total	1,636

Administrators are limited by the size and personnel of their own schools in determining the most effective method for the presentation of the wide range of elementary school subjects.

2. Staff

The success of an educational program rests primarily upon the competency of the teaching staff. An elementary teacher has long had to be expert in arithmetic, science, history, geography, reading, writing, spelling, music, art, physical and health education, guidance, counseling, etc. Today, however, the elementary teacher must also prepare and develop our youth to live in an age and a society which many teachers find difficult to visualize. This accounts for the searching examination now being made of the division of responsibility among elementary teachers for the presentation of material.

Major efforts are being made throughout the United States to improve the profession through recruitment of superior individuals, strengthened preparation programs, and continuous in-service training for all teachers. There have been, and will continue to be, many criticisms of education and teachers and no criticism has been more vociferous than that aimed at teacher education. Critics have complained of inadequate preparation of subjects taught, anti-intellectualism in education, over-emphasis upon methods, duplication and lack of content in education courses, unsound theories, lack of research, inferiority of teaching in education courses, and the low academic ability of education majors. Much of the criticism was, and is, justified.

Our Virginia teacher training institutions are to be commended, however, for making sharp revisions upward in required subject matter courses for elementary teachers. The twenty-four Virginia colleges concerned with the training of teachers have been studying and reappraising teacher education.* The Master of Arts in Teaching degree, currently being awarded at the University of Virginia and at William and Mary, stresses subject matter requirements and represents another promising development. Madison College is beginning this program.

The number of elementary teachers entering the teaching field throughout the United States is woefully inadequate. In Virginia, the picture is just as disturbing. The total number of new elementary teachers being prepared last year in the State was 536, of which an alarmingly small number, 27 or 5%, were men. (The national percentage of male trainees is 13%). The demand for teachers can be only estimated, but a conservative figure would be 2,300 for normal elementary teacher turnover. This does not include the number of teachers required to relieve overcrowded conditions or the 1,678 teachers in our elementary schools last year with special licenses. The elementary teacher supply-demand picture is not bright and corrective steps must be taken.

Turning now to the qualifications of those teaching, we find that of the 18,121 elementary classroom teachers in 1960-61, 1,678 or 9.2% were teaching with special licenses. A breakdown of the certificates held by Virginia's elementary teachers is shown in the following table:

TYPES OF CERTIFICATES**
ELEMENTARY TEACHERS
1960-61

Types	Number of Teachers Holding Each Type		
	Counties	Cities	Total
Postgraduate Professional	343	405	748
Collegiate Professional	6,669	4,173	10,842
Collegiate	460	154	614
Normal Professional	2,790	762	3,552
Elementary Certificate	500	41	541
Special License	1,435	243	1,678
Others	82	64	146
Total	12,279	5,842	18,121

* *The Professional Education of Teachers.* Report of a Study by Representatives of Higher Institutions in Virginia, State Board of Education, May, 1961.

** Data is from reports received from elementary principals and does not include special teachers as art, music, phys. ed.

The first three types of certificates shown in the table include teachers with degrees. Collegiate certificate holders have degrees but have not met professional requirements for teaching in elementary schools. Unfortunately there are large numbers of teachers without degrees. The special license teachers stand out as a particular problem area since they do not begin to meet the certification requirements in the vast majority of cases.

A teacher holding a special license under current regulations may continue to teach for many years. If the quality of instruction is to be improved, the holders of special licenses must be up-graded promptly. One of the objectives of the recommendations of the Commission for a State-supported in-service training program was to assist these teachers to meet certification requirements and obtain degrees. As a positive step toward eliminating special licenses the Commission recommends that a definite date be fixed by the State Board of Education after which no further State aid will be granted to localities for teaching positions filled by teachers holding special licenses.

Pupil-teacher ratio (the number of children taught by a teacher) is another area of great concern. There is no magic number as to optimum class size, since this depends upon the learning situation, the material to be assimilated, and other factors. Recent technological developments have brought to the elementary schools the possibilities of instruction by television, teaching machines, and similar devices which could affect the optimum size. A teacher-pupil ratio of one to five might be desirable for some learning situations, and at the other extreme television instruction

The prevalent organizational plan in the elementary schools of Virginia is the self-contained classroom. Pupil-teacher ratio in Virginia is set forth in the following table:

PUPIL-TEACHER RATIO (1960-61)

Elementary School Classroom Enrollment	Number of Teachers	Per Cent
30 and below	8,571	47.
31-35	6,450	35.
36-40	2,408	13.
41-50	742	4.
51-60	71	.38
Over 60	18	.09

Assuming that a ratio of 30 pupils per teacher would be a reasonable goal, Virginia faces a tremendous task in adjusting class size. It would have required the immediate addition of 809 elementary teachers to have done this for the last school year*. Projected further in terms of funds for salaries and additional classrooms the magnitude of the task of reaching such a ratio becomes alarmingly clear. When the increasing enrollments certain to follow the current population explosion are taken into account, the costs begin to reach astronomical proportions.

The choice, if the quality of instruction is to be raised, is either to lower pupil-teacher ratio or to seek more efficient ways of organization for instruction. Perhaps this is the most compelling reason for initiating immediately the research previously recommended in this report.

* See Appendix II.

3. Readiness for Learning

One of the major characteristics of the modern elementary school is the effort put forth to provide an educational program applicable to the individual child. Today, it is recognized that in child development and in the learning process, many factors must be considered which are peculiar to the individual, his maturity and his inclination for learning. Generally speaking, these factors make up an area of instructional consideration known as readiness for learning.

The readiness program is concerned with the development of the understanding, skills, and attitudes necessary for beginning new tasks. Many of these factors deal with the general maturity of the child and are not limited to mental capacity alone. Recent trends in educational thought hold that school readiness varies among children and cannot be determined solely by chronological age. The prevailing practice is that children are admitted to the first grade who are 6 years of age by October 1st. The result is that there is no flexibility and the school readiness of a child is arbitrarily fixed. It may be that research and experimentation will demonstrate the value of school readiness tests in achieving more flexibility in the admission policy.

It should be noted that experience and research have demonstrated that the child with kindergarten training had a definite initial advantage. Some of Virginia's school divisions include kindergarten as part of their

The physical condition of any child beginning school is, of course, an important factor when considering readiness for learning. Vision, hearing, co-ordination and general physical condition of a child are all factors about which teachers and parents alike should be aware. Preschool clinics and physical examinations by competent personnel should be used to determine where corrective measures might start the child's school life with a better chance for success.

The development of readiness cannot be confined to the schools. The home plays a most important part and it is essential that parents recognize their role and be informed of what they can do to help. Typical of the material which schools should place in the hands of parents of the beginning school child is "Getting Them Ready for School", published jointly by the State Department of Education and the State Department of Health, in 1956. The school should provide such materials at each level of instruction and continue to point out what the home can do to develop the readiness of the child for the school tasks ahead.

The State Department of Education in 1959 began State-wide testing. This was expanded during the school year 1959-60 to provide one or more tests for all pupils in grades one through twelve. The program by grades and tests in the elementary schools was as follows:

Grade 1 Metropolitan Readiness Test. This test measures children's maturity or readiness to profit from formal instruction in reading and number work.

Grades 2 and 3—Kuhlmann-Anderson Intelligence Test. This test measures several aspects of intelligence.

Grades 4, 5 and 6—Science Research Associates (SRA) Achievement Series. These tests measure educational development of pupils in the following broad curricular areas: Reading, Language Arts, Arithmetic and Work-Study Skills.

Grades 4, 5 and 6—Lorge-Thorndike Intelligence Test. Verbal and non-verbal tests to measure scholastic aptitude and to some extent abstract reasoning ability.

Grade 7—California Test of Mental Maturity. The sub-tests sample various kinds of mental processes to establish the level and rate of mental development.

Grades 7 and 8—Iowa Silent Reading Tests. The sub-tests measure three broad general areas: rate of reading, comprehension, and ability to use skills in locating information.

Much remains to be done before the results are fully evaluated. We have no comprehensive test by which the localities can determine how well they are meeting the objectives of elementary education. This need should be met.

Curriculum is a technical term the definition of which is subject to debate. This report makes no effort to do more than touch on some of the component elements.

Virginia initiated a curriculum study in 1931, regarded as one of the earliest attempts at a state-wide study. The Commission has noted, however, that in general, each school division is allowed to determine its course of study. This probably stems from the viewpoint that the curriculum should be as close as possible to the local community. Our examination of the efforts of other states to strengthen public education disclosed that some strong recommendations have been made for curriculum revision on a state-wide basis. The proposed minimum elementary curriculum for Pennsylvania is cited as an example and is reproduced in Appendix V.

The history of the curriculum shows that new substance and new labels are constantly added but seldom is anything dropped. One educator has observed, "It is easier to move a cemetery than to overhaul a curriculum". The schools are attempting to do more than they can possibly do well within the limitations of time and resources. This has become a factor which must be considered in the total school program and it is quite obvious that the program must fit within present limits or school time must be increased.

There is an apparent need for state-wide direction in determining emphases within the purpose of elementary education. The following paragraphs relate to subjects within the curriculum beginning with reading, writing and arithmetic.*

a. Reading.

Reading is the most important subject taught in the elementary schools. It is a skill difficult to master but of vital importance, for the acquisition of all other knowledge is dependent in part upon it. Many elementary schools have no formal program of reading instruction after the fourth grade. This is not enough. Reading instruction should be continued through the seventh grade. The Commission is disturbed by the necessity for large numbers of remedial reading classes in the upper elementary grades and the secondary schools.

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* Social Studies and Physical Education are covered in separate sections of this report.

The concern of parents about the reading program was quite evident during the course of public hearings across the State. This concern is national. One of the most frequent complaints involves the failure to use phonics in the teaching of reading. Another is the complaint often heard that reading texts fail to challenge or stimulate the mind of even a first grader.

Numerous authorities on reading have been consulted by the Commission both within and without the State. All agreed that there is no single method for the successful teaching of reading to all children. The teaching of reading is a combination of methods.

Each reading authority consulted by the Commission agreed that the principal cause for the failure of so many children to master reading was that many teachers have not mastered the technique of teaching reading. It was pointed out for example that many teachers do not know how to teach phonics. The Commission believes that all children in each of the early grades should receive thorough instruction in phonics.

The Commission visited the closed circuit educational television project in Hagerstown, Maryland, where the possibilities of teaching reading by combining the talents of an excellent reading teacher on television with the classroom teacher were demonstrated.

It is evident that parents, teachers and administrators have a renewed interest in up-grading reading instruction. A course in the teaching of reading should be required for the certification of elementary school teachers. Courses in the teaching of reading should be placed on the priority list for the granting of summer school scholarships and for in-service training grants. More adequate training in the teaching of reading is imperative.

b. Writing

One of the most repeated complaints about our schools concerns the inability of college students, as well as those entering the commercial and business world, to express themselves orally or in writing. This criticism is usually directed at the high school English teacher but the secondary school teacher can build only upon the foundation laid in the elementary school.

Listening has always been given a key position in learning. An individual spends more time listening than he does with the other language facets, and, in fact, should develop this skill at an early age. Unless the child learns to listen attentively, he will go through life only half hearing and half responding to situations.

Speaking is the second step in the development of a child's communicative power and is closely related to both listening and writing. A person unskilled in expression is handicapped in every situation that calls for speaking and writing.

Spelling is an indispensable part of language instruction. The accurate speller is usually the accurate listener. The correlation between spelling and reading is likewise high for it is in reading that the child sees words in use.

The ability to write legibly is an asset even in an age where the telephone, radio, television and typewriter have reduced the occasions when one must rely upon his own handwriting.

Francis Bacon, the English philosopher, had this to say "of Studies" in general:

"Reading maketh a full man, conference a ready man, and writing an exact man."

It is true today as it was in Bacon's time that reading, speaking and writing are the essential ingredients of learning. If our schools provide for this instruction thoroughly and efficiently throughout the elementary grades, students will be able to pursue their further studies with meaning and profit. It is for this reason that we would stress the importance of these basic skills in the total educational program.

c. Arithmetic

The teaching of arithmetic in the elementary school like reading and writing, has been firmly entrenched in the curriculum for many years. Traditionally regarded as a fundamental, arithmetic is second only to reading as a priority subject in elementary education.

There have been many developments in recent years of a variety of aids to the teaching of arithmetic including films, film strips, charts and various manipulative devices. Changes also have been taking place in instructional procedures and methods. Some school systems have, through a curriculum committee, been developing and improving their own arithmetic instruction material.

The child must master each step in the study of arithmetic before moving on to the next. One who falls behind cannot understand the work that follows and his progress in the subject is brought to a halt. Ability grouping from an early age enables the slower student to receive individual help, while at the same time permitting the mathematically gifted student to move forward at an accelerated pace.

The quality of secondary and college mathematics, on which so much emphasis has been placed recently, will profit greatly from improvement in the qualifications of elementary teachers of arithmetic.

d. Science

The teacher of a self-contained classroom is at a distinct disadvantage in her attempt to teach modern science. Often in the upper elementary grades a teacher may find among the brighter and more inquisitive students some whose knowledge of science exceeds her own.

Many boys and girls like science and have inquiring minds and a keen interest in knowing more about their own environment. They want to explore and find answers. These answers do not have to be technical or difficult but, in the elementary school, can be based upon simple concepts.

Frequently teachers avoid science almost entirely or approach it rather fearfully. This has often been caused by the teacher's own inadequate training and background and the belief that science is technical and difficult. Adequate materials of instruction, until recently, were compara-

Experimental schools visited by the Commission have a large percentage of elementary school science teachers who are men. Frequently in departmentalized grades, team-teaching situations and dual-progress programs, male science teachers were used in the lower grades. S ience was the only subject these men taught, enabling them to move not only from classroom to classroom but from school to school.

e. Foreign Language

The teaching of a foreign language in the elementary school is one of the most popular and widely acclaimed current trends. America's increased international activities and responsibilities have led to an increased awareness of our limited linquistic ability. But elementary teachers qualified to teach language in Virginia are virtually nonexistent. Any program, therefore, for the teaching of language in the elementary schools must utilize tapes, records or television for the presentation of the material. There is need for further research and development of the means by which language may be presented in the elementary schools. Elementary schools which feel justified in undertaking a language program should carefully consider the strength of their secondary language program. Once the elementary language program is begun, continuity should be maintained between the beginning of language instruction in the elementary school and the secondary program.

f. Music and Art

Music serves as one of the many media of expression for children. Pupils who participate in various types of music activities discover their abilities to express themselves through music and derive personal satisfaction and pleasure in sharing with others.

Art is another important medium of expression for children. Painting, drawing, constructing, modeling, carving, decorating, arranging objects and the like all contribute to the development of children's creative abilities. The arts may serve for some children as a source of discovering unusual talents to be developed more fully in later life.

The music and art program in the public school is essential to the well-rounded education of children. This program should have a two-fold purpose:

1. To discover and develop talents of children in these areas;

2. To develop on the part of all children an understanding and appreciation of the fine things of life.

Our emphasis upon materialism must not overshadow the need for the development in our society of an appreciation of fine music, the ability to appreciate and talk intelligently about great works of art and a familiarity with great literature.

Children in the elementary school should have an opportunity to participate in group singing, music appreciation and some elementary courses in painting, drawing and clay modelling or sculpturing.

5. Accreditation and Standards

An outstanding characteristic of public education in the United States is the high degree to which the public schools are operated and controlled under local self-government. Under our State Constitution the General Assembly has broad authority over education but in exercising this authority it has vested local school authorities with the general control, administration and supervision of schools.

Although the Commonwealth has the legal authority to accredit elementary schools, it has not elected to do so. Present State regulations do govern construction of buildings, selection of textbooks, the number of grades comprising elementary schools, the minimum and maximum hours

in the school day, and the number of days in the school year, and also require that certain specific subjects be taught.

The concept of accrediation or approval of public schools can be traced to the 1870's, most efforts in this direction having been concerned with secondary schools and colleges. Because graduation from an accredited high school is a general requirement for admission to college, strenuous efforts have been made on the part of local school authorities to accredit secondary schools. Frequently, the accreditation of the secondary school has been at the expense of the elementary schools. All that is required of a student moving from an elementary school to a secondary school is a passing grade in the last year of elementary school. Consequently, little importance has been previously assigned to the formal accreditation of elementary schools. Today, however, nineteen states require their elementary schools to be approved or accredited. Wisconsin requires accreditation of all elementary schools with four or more grades.

The Southern Association of Colleges and Secondary Schools, a regional accrediting agency since 1895, is the only such accrediting agency in the United States that has concerned itself with elementary schools. Individual schools or school districts in the South may participate in its accrediting program on a voluntary basis. Last year, however, only 62 of the 1648 elementary schools in Virginia participated in this program. The elementary schools have not met exacting standards on a voluntary basis. Some other approach is therefore indicated.

In February of 1961 the State Department of Education recommended that the need for standards in elementary schools be reviewed. Pursuant thereto, the State Superintendent of Public Instruction appointed a committee to conduct this study under the Division of Elementary Education. This Committee decided that the current Statement of Policy for Elementary Schools should serve as a basis for selecting standards in the broad areas of:

1. Organization and Administration
2. Curriculum
3. Qualification of Personnel
4. Plant Facilities and Materials of Instruction

Special attention is also to be devoted to elementary school libraries.

The State Department has in the past issued curriculum guides and instructional materials to the elementary schools but only on an advisory basis. Each elementary school could choose whether or not it would follow the suggestions of the Department. It should also be mentioned that while State law requires the teaching of various subjects in the elementary schools neither the law nor the State Department of Education prescribes a minimum time to be devoted to these subjects. Each school devotes time to key subjects on the basis of the varying decisions of local administrators. This arrangement has resulted in a wide disparity in the time given to the fundamentals.

The responsibility for laying the foundation of education rests upon the elementary school; however, there are few clearly defined standards for its operation. The expanding body of knowledge and the increasing demands made upon the elementary school have created a serious problem as to how much time should be devoted to each subject. State law requires that certain subjects be taught but often fails to specify the grade in which the subject is to be taught or the amount of time to be devoted to each subject. The wide disparity between the quality of education offered in

the school divisions of Virginia and the urgency of the times indicate a need for more direction of elementary education from the State level.

There is a pressing need for minimum standards in elementary education throughout the Commonwealth. The State Department should prescribe the minimum standards and minimum time to be devoted to specified subjects, including the basic skills of reading, writing and arithmetic.

It is impossible to overemphasize the importance of the elementary school principal. Present requirements for principals in Virginia permit employment in these positions of persons with virtually no training or experience in elementary education. The only knowledge or experience in elementary education required of an elementary principal is contained in this section:

> "III. At least three years' successful experience as a teacher, administrator or supervisor, *some* of which must have been at the elementary school level (italics supplied)." *

Technically, a principal could meet this requirement by teaching in an elementary school as little as one day. Elementary schools require adequate leadership and it can be given only by those trained for and experienced in the elementary schools.

We believe that the requirements for elementary school principals should be carefully reviewed and a qualification provision inserted requiring a minimum of two years' teaching experience in the elementary schools as a condition of appointment to a principalship.

This would ensure better preparation of elementary principals and may encourage more men to teach in the elementary schools.

V. MERIT PAY

Superior teaching requires able, ambitious, and devoted persons; persons who seek careers in which excellence is recognized and in which security may be obtained through accomplishment. Excellence of education is primarily dependent upon quality of teaching. If we are to attract and hold the talent most needed in the teaching profession, the salaries of superior teachers must be sufficient to provide the recognition and security sought by such persons.

Educators generally agree that quality of teaching should be recognized as a factor in determining teachers' salaries. Few will agree on how to determine quality. Consideration of quality of teaching as a factor in determining salaries is generally termed "merit pay".

Teachers' organizations have usually opposed merit pay while school administrators, school boards, some education specialists, and members of the general public have looked on merit pay schedules with more favor.

Merit pay is basically a system for rewarding outstanding teachers. It offers no means—other than the possibility of incentive—for improving weak average teachers.

Most of those who advocate merit pay believe that if higher salaries are paid to superior teachers than to ordinary teachers, it will serve as an incentive to better teaching; that it will improve the quality of teaching. Others believe that a merit schedule represents justice—that it is only fair

* *Certification Regulations for Teachers and Qualifications for Administrative, Supervisory, and Related Instructional Positions,* Volume 43—July, 1960.

to give the higher pay to the deserving, and that it is actually unfair to give the same salary to the lazy, or mediocre, or indifferent teacher as to the devoted people who give their full efforts to the service of children.

Several states have recently moved toward quality-of-service provisions (another term sometimes used instead of merit pay) in their salary schedules. The Florida Legislature in 1957 directed the development of a plan of career increments to be financed in part by State funds. Guidelines fixed by the State require that the increments be given only to classroom teachers who make formal application and that there be approval by the school principal and a recommendation by a reviewing board.

Another State program is going forward in Utah. After a State sponsored study the 1959 Legislature authorized an extra distribution unit of $5100 for each 50 teaching units a district already has, to support studies leading to the adoption of a merit salary program, and a second unit of $5100 for each 50 units if a district actually puts a merit salary program into effect.

The Committee for the Study of Teacher Merit Pay in North Carolina recommended last year that funds be appropriated to experiment with a program of superior service recognition in two selected school districts.

A proposal prepared by the Educational Research Council of Greater Cleveland advocates Educational Specialty Boards which are non-governmental examining boards for certifying specialists in teaching. This plan calls for an examining board similar to those which certify Certified Public Accountants, Medical Specialists, Psychology Specialists and other professional persons. Plans are underway to test this proposal by September of 1963.

Many schools have turned to a number of formalized plans to reward their better teachers while avoiding the stigma of the much abused term "merit pay". Many of these are much more than a camouflaged merit pay system. Some schools, for example, make superior teachers chairmen and department heads and give them additional compensation for the additional responsibility. Others use team teaching with various classifications of master teachers, associate teachers and teacher aides as a means of rewarding varying ability.

A new system for rewarding superior teachers, "the track plan", has been developing. It is designed to recognize that teachers have varying amounts of time and energy to devote to education regardless of their interest or dedication.

This plan establishes three or four tracks for teachers. Each track demands a different amount of time to be devoted to the job. Track one usually entails a normal teaching load plus attending weekly staff meetings and monthly PTA gatherings. Teachers in track one would be expected to contribute no more than this to the school. A married woman returning to teaching after her children attain school age may be convinced that this is all the time she can honestly give to her job. Likewise a teacher nearing retirement, or one in poor health, may believe that this basic load will tax her to the limit of her ability.

The second track in this type of plan includes everything in the basic track plus such added duties as extra curricular coaching, supervising the year book, or participating in curriculum planning groups. A teacher in this track would be paid somewhat more than a teacher on track one.

Some plans call for three tracks, others for four. The last track, whether the third or fourth, is reserved for the "total" teacher. This is

the person who is making teaching a life career and is really working full time at it. It entails exceptional work in the classroom, continued personal education, professional activities beyond the normal workday and, almost always, summer activity in education. A person on this track is paid at a salary high enough to equal what he might earn in business or industry and frequently the salary is as high as that of some administrators in the school.

The track system is explained to each teacher when first employed by the school. The choice of tracks is left completely up to the teacher and he is able to switch periodically from one to another if he wishes.

The summer curriculum workshop is another plan being tried in several districts. This involves a group of teachers working for six or seven weeks during the summer to revise, modernize or otherwise improve the curriculum in one subject area. For this they are paid a salary, often considerably less than their regular pay. The workshop is an attempt to combine the professional and financial needs of the individual while buying expert help for the system. A six weeks' summer workshop attended by competent people can often accomplish more than could the same people meeting weekly after school over the course of two years.

This type of planning is in line with the year-round school idea, which is being considered in some areas. The year-round school assumes that teachers are hired for twelve months even though the children may attend school only during nine. There is a choice of summer activities for the teachers in such plans. Some may elect to go to college summer schools for further training. Others may choose to travel or take personal leave. Those who remain at school take part in professional projects or teach. Such a system presents obvious administrative problems in scheduling and assigning equitable pay for various activities.

On June 13, 1960, representatives of twelve school divisions from the State of Virginia met at the Virginia Education Association office in Richmond to discuss merit pay and to give consideration to instituting some form of pilot program in their respective systems. Twenty-two school divisions had previously indicated their interest in a study of merit pay.

None of the school divisions represented at the meeting were obligating themselves to a trial of merit pay but their representatives attended the meeting for information about and consideration of such a program. The Commission has since learned that although all of the twelve superintendents expressed a continuing interest in the subject of merit pay, none of them had proceeded with a plan nor did they believe that they would be able to take any decisive action. Among the reasons for this hesitancy were: the superintendents did not believe they had adequate knowledge of merit pay; their school systems were just not ready at this time; they lacked the time and personnel for developing a sound program; basic salary schedules are too low at this time to venture forth into merit pay; and the teachers were somewhat cool to the idea.

Though reluctant to make a start, many school administrators now recognize that they must devise some new approach to salary payment before a new plan is imposed upon them. There is a growing discontent in many school divisions with across-the-board raises. The more able college students are not likely to be attracted to the teaching profession unless there is recognition for superior performance; nor will men be attracted to teaching unless twelve-month plans are more universally adopted.

Any successful plan providing special rewards for superior teaching will require much research and planning, and will require much cooperative effort between teachers and administrators.

Each school division in Virginia should establish a salary study committee consisting of school administrators, teachers and lay persons in the community. The task of the committee would be to review the local salary policy, stimulate local interest and support for teachers' salaries, and primarily to adopt a plan for rewarding superior service. Such a committee would not accomplish the purpose herein envisioned if merely used to promote additional across-the-board raises.

VI. SCHOOL LIBRARIES

The role of the public school library has changed in recent years. Accumulated knowledge has become too extensive to be stored in the minds of teachers who consequently have become dependent upon libraries and library services.

School libraries now contain more than books. Instruction today requires the use of a variety of aids, and the school library has become the center of distribution and instruction in the use of these aids. Teachers use films, film strips, projectors, recorders, record players, maps, globes, as well as books and magazines. A school library should be administered by one who understands the use of these aids and is sufficiently acquainted with teaching to appreciate their value.

Although a central library has always been recognized as an essential part of the high school, the establishment of central libraries in elementary schools is a recent development. In the past many schools have endeavored to supplement textbooks with classroom book collections. These collections are limited in scope and impose extra duties upon the elementary classroom teacher. Recognition of the need for additional library service and dissatisfaction with classroom collections have resulted in present designs for larger elementary school buildings providing for a centralized library.

Libraries, especially for students in the upper elementary grades through the high school, have become increasingly important. Economy prohibits the annual adoption of textbooks; consequently, a well supplied library provides the best source for current material. The school library, in its modern concept, has become the hub of the instructional program with teachers and pupils alike utilizing its varied services.

1. *Development in Virginia*

Virginia was one of the first states to recognize the importance of school libraries. A State-aid program was adopted in 1905 and provided matching funds to localities for the purchase of books for school libraries.

The Commonwealth has continued to provide through the years for the needs of school libraries. In 1960-61, the State provided $447,750.00 or $.57 per pupil in ADA in matching funds for library books to localities. This represents an increased expenditure for books of over $163,000.00 during the past decade, but represents a per pupil expenditure increase of only $.06. This may be readily understood when we consider that in the years between 1950-51 and 1960-61 the number of pupils in ADA increased from 547,754 to approximately 780,394.

The State expenditure per pupil for library matching funds for books has increased by only $.06 during ten years when the total per capita cost of instruction based on ADA has increased from $144.40 to $273.80. Local school divisions have increased their per pupil participation by $.11 during the same period.

2. *Staffing*

During the period of 1954-61, the percentage of certified librarians in public schools with enrollments of over 300 has decreased from 66 to 54 per cent. The following figures were supplied by the State Department of Education:

NUMBER OF LIBRARIANS REPORTED CERTIFICATED IN LIBRARY SCIENCE IN SCHOOLS OF 300 OR MORE

Year	Schools 300 Enrollment or More	Number of Certified Librarians	Percent Certified
1960-61	1,060	573	54.0
1959-60	1,009	568	56.3
1958-59	972	522	53.7
1957-58	915	536	58.6
1956-57	897	538	60.0
1955-56	841	523	62.2
1954-55	786	519	66.0

Note: There are also 16 certified librarians in elementary schools with less than 300 pupils; 17 in secondary schools with less than 300 pupils and 11 library supervisors. These combined with the 573 shown above give a total of 617 certified librarians in Virginia's public schools.

The libraries in the high schools of Virginia have a high percentage of qualified librarians. 92% of the librarians in the 434 high schools over 300-or-more enrollment held properly endorsed certificates during the 1960-61 session. This high percentage of qualified librarians may be accounted for, in large measure, by the standards imposed on the secondary schools by the regional accrediting association.

The elementary school library in the State is in less laudable straits. The following table is compiled from information supplied by the State Department of Education and indicates the percentage of certificated librarians in Virginia's high schools and elementary schools:

Number of Schools with Enrollments of 300 or More
and
Number of Librarians Reported as Certificated in Library Science
1954-55 Through 1960-61

Year	Elementary Schools			High Schools		
	Number	Certified Librarians	Percent	Number	Certified Librarians	Percent
1960-61	626	172	27	434	401	92
1959-60	515	180	35	426	388	91
1958-59	436	148	34	416	374	90
1957-58	450	157	35	417	379	91
1956-57	338	159	47	417	379	91
1955-56	337	155	46	423	368	87
1954-55	251	123	49	445	396	89

A perusal of the above table indicates that Virginia has been able to maintain a high level of qualified library service in its secondary schools, but availability of qualified library services in the elementary schools is rapidly diminishing. Whereas ten years ago approximately *one-half* of our larger elementary schools had qualified librarians, today slightly over *one-fourth* of schools in this category have them. This situation exists despite the emphasis on increased utilization of supplementary instructional materials.

A survey last year showed that of the 2118 elementary and high schools in Virginia, slightly more than one-half, 1099, had central library quarters. It is not economically feasible to provide a qualified librarian for elementary schools below a certain size and enrollment, and present school building regulations in Virginia do not require central library facilities in school designs proposed for enrollments of less than 360 pupils.* The following table indicates that less than one-half of the elementary schools with twelve or more teachers have qualified librarians although almost all of these schools have central library facilities.

ELEMENTARY SCHOOL LIBRARIES

May, 1961

1. *Schools with less than 7 teachers*	
Number of Schools	776
Number having central libraries	80
Number having certified librarians	12
2. *Schools with 7-11 teachers*	
Number of Schools	297
Number having central libraries	197
Number having certified librarians	31
3. *Schools with 12 or more teachers*	
Number of Schools	563
Number having central libraries	535
Number having certified librarians	208
Total Elementary Schools	1,636

3. *Library Science Training*

Librarians in Virginia may meet certification requirements in a number of ways:

1. By obtaining a Master of Library Science Degree;
2. By obtaining a Bachleor of Library Science Degree;
3. By obtaining a Bachelor of Science Degree in Education with a major in library science; or
4. By taking the necessary course work (eighteen semester hours) in addition to the Bachelor of Science Degree in Education.

The procedures mentioned in items 1 and 2 above are not available to Virginians unless they attend an out-of-state institution. Only eight individuals completed the requirements for the librarianship during this last session (1960-61) under the procedure described in item 3 above at Madi-

* *The School Planning Manual,* Commonwealth of Virginia October, 1959.

son and Radford Colleges. There were eighteen students majoring in Library Science at Virginia State College last year.

There are no special training programs specifically designed as such for persons who desire to become librarians, or for non-certified persons presently serving as librarians who desire to become certified. The only means and procedure for scholarship assistance for public school library training is a summer school scholarship. Although to date not one application for a summer scholarship, where the applicant met all conditions, has been denied, the program has not been used extensively.

Appropriations for State matching funds for books and other library materials should again be increased. Consideration should be given to rising costs of books, the annual increase in average daily attendance, and the value of these books and materials to supplement adopted texts in a rapidly changing world.

The Committee appointed in February, 1961 by the Superintendent of Public Instruction to review the need for standards for elementary schools has listed elementary school libraries for special attention. Should minimum standards be recommended and adopted which require a central library of specific dimensions, a minimum number of books and a certified librarian for each of the larger elementary schools, available statistics indicate that the shortage of qualified personnel will present more of a problem than books or facilities.

The library program in the elementary schools of Virginia needs to be strengthened. Standards which carry some condition for enforcement will be helpful; however, the obvious critical need is for qualified library personnel to staff central libraries in the larger elementary schools. Another need is for library supervisors or field-librarians to operate in the many school divisions which have few, if any, qualified librarians. These field-librarians would work with the many smaller elementary schools throughout Virginia. The present need is evident. The problem is how to train sufficient qualified librarians in the next few years. This problem is compounded by an evident lack of interest among undergraduates in the library science courses presently being offered in Virginia, as well as by the poor response to the summer school scholarship program now available.

The State Board of Education on September 22, 1961 recognized the increasing importance of library service in the schools of Virginia and the necessity of library service for the elementary school children of Virginia. Recommendations were adopted suggesting that teachers who have an interest in library service apply for summer scholarships for study directed toward endorsement in library science. These recommendations also suggested that local school authorities allocate a sufficient number of assigned teaching positions to library service. We applaud this action, for recognizing the library needs of the schools and suggesting some solution, but a swifter and more direct program is necessary if qualified librarians are to be available for the elementary school children of *all* school divisions in the Commonwealth. Accordingly, it is recommended that the State Department of Education establish one or more summer institutes, at which a wide selection of approved courses in library science would be available for credit leading toward a certificate. These courses should be designed for elementary school library training. It is suggested that each school division be granted two annual scholarships to these institutes. The scholarships should be available for the noncertified librarian who is seeking to complete requirements, and for the teacher who

under contract to become a librarian following the summer study. It is also recommended that the librarian's position for elementary schools be included as a State-aid unit when the State's share of local instructional costs is computed.

It has been suggested to this Commission that Virginia needs a graduate school of library science. The present limited response to the undergraduate programs now available, and the large initial capital outlay that would be necessary, have led us to the conclusion that increased State participation in the purchase of library books and the undergraduate training of librarians is a more practical approach to the present problem. A graduate school of library science may be needed at some future date.

Perhaps there would be more interest in the library training programs of Virginia were it possible to obtain a Bachelor of Library Science Degree at one of the State-supported institutions of higher learning.

There is almost universal recognition today of the value of a well equipped school library at both elementary and secondary school levels. We have need in Virginia for trained personnel and library service in the larger elementary schools and for supervisory and field library service in the smaller elementary schools. Steps to meet this need should be taken immediately.

VII. HEALTH AND PHYSICAL EDUCATION

More comments were made at the Commission's public hearings about health and physical education than about any of the other subjects announced as topics for inquiry. This is not surprising. There is a growing awareness that our nation is growing soft; that we have become a nation of spectators.

There is reason for this concern. Comparative tests have shown that in many areas of physical accomplishment, both the boys and girls of America fall short of the attainments of the youth of other nations. This is understandable. In no other nation is as little walking done. Americans have become totally dependent upon modes of transportation which require little in the way of physical exertion. Although we are the best fed nation

Our schools have experienced difficulty in fulfilling their responsibility in this area. This responsibility is defined in our statutes. Section 22-237 of the Code of Virginia reads as follows:

> "Physical and health education shall be emphasized throughout the course (of study) by proper lessons, drills and physical exercises set up by the State Board."

The problems of health and physical education in the public schools of Virginia are similar to those in most other states. For the most part, the problems are obvious. The development of a program of physical education which will reach all of the students presents a difficult challenge, and is as much of a necessity as the strengthening of subjects which we have heretofore referred to as "critical".

The public generally associates physical education in the schools with interscholastic athletics. When the average citizen thinks of physical education he thinks in terms of the local high school football or basketball team. Yet, these sports rarely involve more than 10% of a student body.

There is a place in the public schools for interscholastic athletics. Competition between schools at times when it does not interfere with

studies is a healthy activity and should be continued. The desire to represent one's school and community should be encouraged; yet one phase of the school program should not be emphasized to the neglect of much of the rest. Unfortunately, much of the physical education program seems to be caught in a crossfire between those whose interest is in interscholastic sports only, and those who in their zeal for strengthening the curriculum have become antiathletic.

The public should understand that when one speaks of physical education he is not referring to interscholastic sports. An all winning football team is in no way indicative of the physical well-being of the great percentage of students who do not participate in the more rugged sports. Moreover, it is unrealistic to expect coaching personnel, whose prime interest is in developing the prowess and abilities of varsity and junior varsity players, to have either time or inclination to direct the type of program which should be a part of every school in this nation.

To assure physical education programs where primary attention will be devoted to those students who do not participate in interscholastic sports, a solution might be to separate coaching personnel completely from the physical education program. Those responsible for physical education would have no coaching responsibilities.

An adequate physical education program in the public schools of Virginia will require additional trained personnel. Based on the present number of trained physical education instructors in Virginia and the estimated school population there is only one such instructor for every four thousand pupils. While 54% of all of our new teachers come from other states, a higher percentage of physical education instructors are trained outside of the Commonwealth. Although there are physical education departments in the colleges and universities of Virginia, no school can be said to specialize in this field. 1,315 men were classified as physical education instructors during the 1960-61 session (this figure includes all coaches and assistant coaches). 801 of these received their college training in out-of-state institutions.

There is also a shortage of physical education equipment in our schools. Perhaps the accomplishments of Soviet athletes in international track and field competition have served to dramatize what many regard as a slackening of American physical prowess. Yet, as a nation we have never promoted mass calisthenics or gymnastics as have the Europeans. American Olympic teams in gymnastic events have not often competed favorably with many smaller nations.

A survey of the gym equipment in most schools will indicate why this is true. Of ninety secondary schools in Virginia surveyed by our staff the answers were as follows concerning possession of certain gym equipment:

Do you have:	*Yes*	*No*
Mats	81	8
Parallel bars	21	69
Horizontal bars	21	69
Horse	11	79
Climbing ropes	40	50
Traveling rings	6	82
Trampoline	13	77
Horizontal ladder	10	80
Pulley weights	15	78
Weight training equipment	51	38

Of fifty-one combination elementary and secondary schools which were surveyed the answers were as follows:

Do you have:	*Yes*	*No*
Mats	35	16
Parallel bars	11	39
Horizontal bars	16	34
Horse	9	41
Climbing ropes	10	41
Traveling rings	3	47
Trampoline	5	44
Horizontal ladder	4	46
Pulley weights	2	48
Weight training equipment	19	31

Calisthenics and body building exercises should be stressed in the physical education classes in our schools. Adequate gym equipment will add materially to the effectiveness of this program.

The physical education program in the elementary schools is for the most part in the hands of the classroom teachers. These are the same teachers who now instruct in many other subjects. It is unrealistic to expect them to do a competent job without supervisory assistance.

School divisions should have supervisory personnel in physical education, especially to aid in the elementary school. These supervisors should do the following:

a. Consult with school principals to help teachers plan progressive grade programs in health and physical education.

b. Demonstrate the proper way in which calisthenics should be given.

c. Assist in organizing pupils and the scheduling of physical education in a school so that the best use is made of available facilities and equipment.

d. Conduct in-service training clinics for classroom teachers to acquaint them with the different types of physical education activities.

There is a need for continuous evaluation of the physical fitness of children through valid tests at regular intervals during their school years. Such tests should indicate strengths and weaknesses, and should also serve to motivate the individual pupil to strive for improvement. Tests such as the Five-Star Test, administered in some school divisions in Virginia, to determine running and jumping ability, are of real value. The State Department of Education has recently revised tests for grades eight through twelve and is now planning new elementary tests. Trained personnel will be required to supervise and evaluate these tests.

VIII. SPECIAL EDUCATION

All children including the handicapped, are entitled to realize their full potential for a creative life in freedom and dignity. Society has need for each child to contribute to his maximum capacity.

Provisions for special education for the handicapped child in the public schools of Virginia have shown tremendous growth during the past few years. State support of special education in Virginia has increased tenfold since 1950. For the biennium 1950-51 Virginia spent $88,150.34 on special education and in the present biennium has appropriated $891,-875.00.

There has been an increase in the number of teachers and students served in all areas of special education. The most notable increase has been in the classes for the mentally retarded. This is primarily due to the concerted efforts of the Virginia Association for Retarded Children, a parent sponsored organization, which has interested the general public in the need for provisions for both the educable and for the trainable mentally retarded. Similar organizations such as the Cerebral Palsy Association and the Virginia Society for Crippled Children and Adults have been instrumental in extending educational and medical services to the crippled child. The Virginia Speech and Hearing Foundation has provided direct services to the communities in Virginia primarily in identification of the hearing impaired child and in assisting the schools and communities in the development of educational programs. The field service and itinerant teacher program of the Virginia Commission for the Visually Handicapped has done an outstanding job of identifying children with impaired vision and in assisting the local school districts and teachers in providing for these children within the regular school program where possible. Sight saving books, talking books, braille books and similar materials are provided by this agency.

Special education programs for handicapped children are generally more expensive than for the regular school program. To provide effectively for the handicapped child, smaller classes and specialized services are required. Classes for the educable mentally retarded, on an average, contain fifteen children. Classes for the trainable mentally retarded contain 6 to 8 children.

The following table indicates the number of handicapped children in Virginia by categories:

Area of Handicap	Per cent of Incidence	Estimated Number* of School Age Children in Virginia (In round numbers)
Visually Handicapped (Blind and Partially Sighted)	.2%	2,100
Crippled and Special Health Problems	1.5%	13,500
Deaf and Hard of Hearing	1.5%	13,500
Speech Handicapped	2.0%	18,000
Socially and Emotionally Maladjusted	2.0%	18,000
Mentally Retarded	2.5%	22,000
Totals	9.7%	87,600

These figures are in all probability too conservative and only in part reflect the problem. The estimates in the area of the mentally retarded, speech handicapped, and the socially and emotionally disturbed should be considered as absolute minimums.

The map on page 42 indicates the geographic distribution of special education programs in Virginia.

Although some parts of the State have excellent programs, others are completely devoid of any type of program for the handicapped. The Tidewater area, Northern Virginia, and Richmond areas have 187 of the 260 classes for the mentally retarded. This is about 71% of all of the

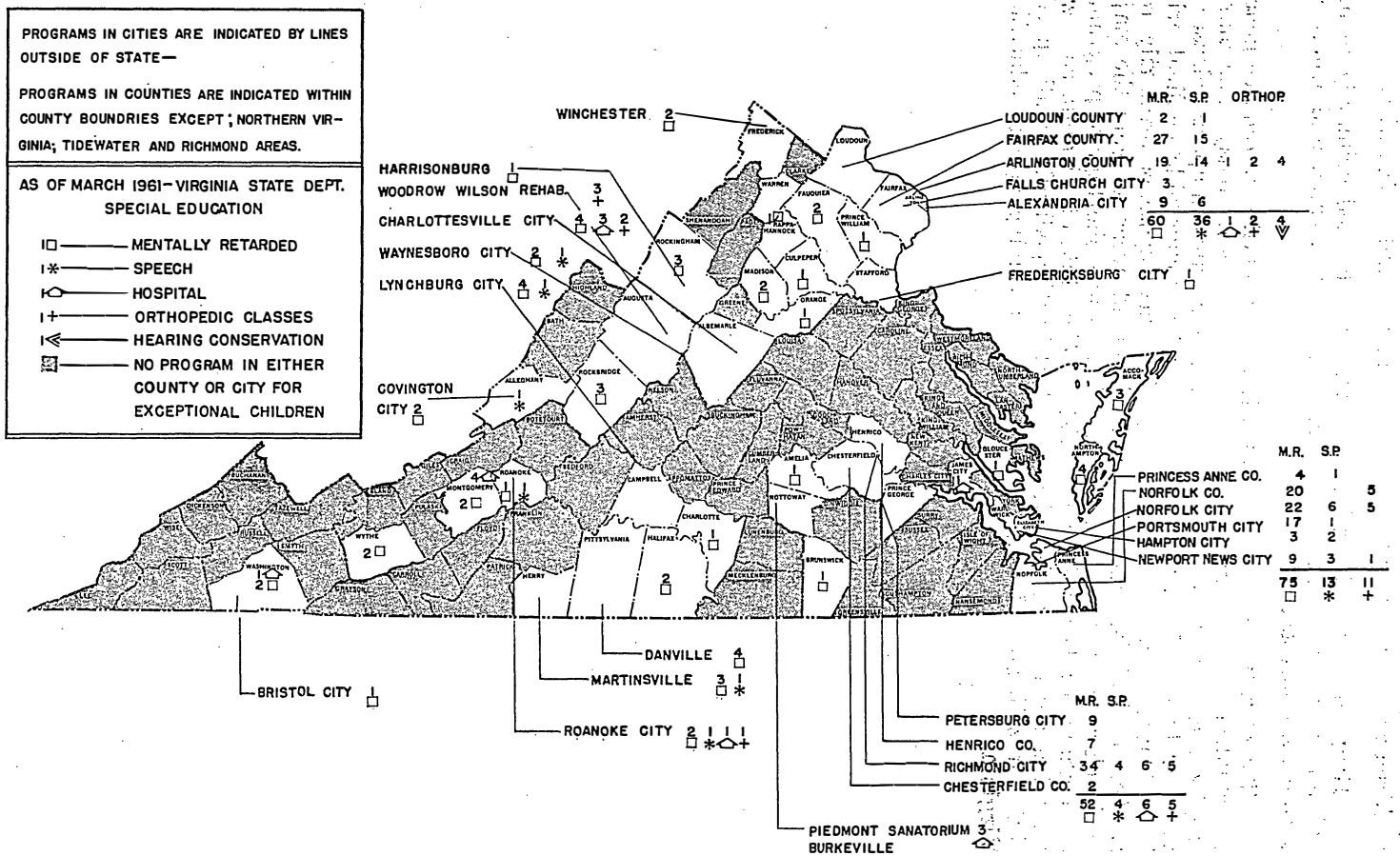
* Estimate based on 900,000 school age population.

classes for the mentally retarded and hence provide for approximately 1,720 of the total of 2,420 children served in 1960-61. The remaining 700 children are served in only 11 additional cities and 19 counties.

Hospital classes, it will be observed, are located primarily in metropolitan areas where major medical centers are located and where sanatoriums are located.

The classes for the orthopedically handicapped children are generally for children so severely handicapped (as in cerebral palsy, muscular dystrophy, etc.) that they require long-term programs in special classes with teachers trained in rehabilitation and with considerable medical orientation. These classes are also located in school systems primarily in the Northern Virginia, Tidewater, and Richmond areas as were the majority of the classes for the mentally retarded. A severe shortage of programs for the orthopedically handicapped exists in the State of Virginia as a whole. Less than one-tenth of the estimated 13,500 orthopedically handicapped and children with special health problems are receiving special education in Virginia.

GEOGRAPHIC DISTRIBUTION OF SPECIAL EDUCATION PROGRAMS IN VIRGINIA



Speech correction classes are generally conducted by teachers working with children in the regular school programs and the children are given individual or group speech therapy as indicated. There are only 4 hearing c

No classes for emotionally disturbed children exist in Virginia. The quality of special education programs as in the regular education program is directly related to the quality of teachers and their supervision.

For special education programs to be effective, it is essential that competent teachers with special preparation be provided. Special education experienced a severe setback in the years following 1930, primarily due to the inadequacy of teaching personnel at all levels. The current period of severe teacher shortage makes it difficult to provide even minimally qualified teachers for the handicapped child.

Specific endorsement requirements for special education teachers in Virginia were made effective for July 1, 1960 and later extended to the fall of 1960 to enable teachers not meeting these requirements to gain additional training during the summer. Specific endorsements are required for teachers of (1) blind, (2) deaf, (3) emotionally maladjusted, (4) mentally retarded (educable and trainable), (5) partially sighted, (6) physically handicapped, and (7) speech correction. While certification standards are major step in assuring qualified teachers, the rapid expansion of special education programs far exceeds the availability of trained persons.

Many excellent teachers trained in elementary education are currently teaching in the special education programs, but they are not equipped for this job and are doing little more than keeping the children and their parents happy with the idea that they are "doing something". To provide a realistic educational program with goals and objectives in keeping with the handicapped child's capabilities is essential. Teacher training of new teachers of handicapped children and a graduate program for the preparation of administrators and supervisors in this area is currently in progress at the University of Virginia. It should be pointed out, however, that there is a need for laboratory classes within which the persons being trained may gain functional experience. To meet this need the Commission proposes the provision of an education wing to the existing Children's Rehabilitation Center at the University. This is not an original suggestion, but one which in our opinion has considerable merit.

This addition would serve the following main purposes:

1. Make available a laboratory facility for the preparation of teachers of handicapped children.

2. Provide opportunities for training personnel in the cognate areas of school psychology and rehabilitation guidance.

3. Make available a State center to provide coordinated differential diagnostic services to communities in the State so that a child referred to the center could be evaluated with the purpose of determining and recommending realistic and practical measures whereby his needs may be met in his home community within the State of Virginia.

4. Provide for needed cooperative, longitudinal research in methods and techniques of education of handicapped children.

5. Make available an adequate educational program for children admitted to the center.

The education wing would provide unparalleled facilities for the available specialized staff to design, organize and carry out research proj-

ects to meet the extraordinary needs of differing groups of handicapped children. It would also provide the necessary laboratory facility required for the preparation and training of advanced graduate students specializing in this field. Coordinated with existing University research programs in medicine, psychology and the biological sciences, it would be possible to develop basic research and conduct the long needed longitudinal research that is possible only through such a facility. The handicapped child could be studied from infancy through adulthood. The educational and rehabilitation process needs a program of concerted action if the state is to provide ultimately and economically for such handicapped individuals.

Because of the shortage of trained special education teachers, not only in Virginia, but across the nation, the University should require that priority in admission to this program be granted to students who agree to teach in Virginia.

It is further recommended that consideration be given to methods of providing in-service training for those special education teachers already in the field. This is particularly desirable for teachers of the mentally retarded.

There is a great demand for special education teachers throughout the nation. Positions are being offered to qualified teachers of the mentally retarded that pay from $1,000 to $1,500 more per school year than do similar positions in Virginia.

It is not uncommon for a teacher to be offered $5,000 base salary, with no experience. Many schools outside of Virginia pay sizeable salary differentials to these specialists. This matter requires a careful examination.

Some children are being admitted to classes for the educable and trainable mentally retarded on the basis of a single psychological examination, at times administered by undergraduate psychology students. While this practice is not common it does occur and it should be eliminated.

The Commission is of the opinion that some effort should be made to assure mentally retarded children of qualified psychological services by psychologists who are oriented to the public school programs and are knowledgeable primarily in the area of learning. Certification standards are needed for school psychologists.

The estimated 87,600 handicapped children in Virginia cannot possibly achieve their maximum potential without additional aid to the special educational program.

IX. SUMMER SCHOOLS

Summer schools have been widely advocated in recent years as a substantial improvement to the present school system. Summer enrollment figures have increased throughout the nation and, indeed, this growth closely parallels man's initial conquest of outer space and the subsequent pressures for additional science and mathematics instruction.

In Virginia, this growth is reflected by the fact that 11,522 pupils were enrolled in 79 summer schools in 1955 compared with 29,826 pupils enrolled in 136 summer schools during the summer of 1961.

The principal or director of each public summer school in the Commonwealth submits a detailed annual report of summer school operation to the State Department of Education. Within the past two years the

Department has summarized these reports which reveal a wide range of practices. Salaries, for example, run from $100 to $200 (21 divisions) to $901 to $1,000 (14 divisions—all in cities) for the summer session. The range of classes taught per week was from 5 to 35. Days in session ranged from 20 to 45. Length of class periods ranged from 50 to 240 minutes. Class hours required for one-half unit of new work were from 60 to 90 hours. Tuition varied from none in five divisions to $60 per unit in other divisions. To the question: "Is the summer school operated by the local board?" fourteen divisions responded negatively. All divisions, however, reported that their programs were "authorized" by the local board. Although these ranges appear to be excessive, it must be pointed out that some degree of uniformity does exist. The salary range was $401 to $500. Forty days in session was most frequently reported (70 divisions) and 73 divisions required 80 class hours for each one-half unit of new work.

State support of summer schools throughout Virginia would be desirable. In all probability it would afford increased opportunities for exceptional children to proceed through school at a faster pace. Looking at the broad picture of public education in Virginia several factors must be taken into account, not the least of which is financial. The demands on the Commonwealth for increased financial support of education will continue to grow. These demands on which this Commission has commented carry, in our opinion, a higher priorty than does State support for summer schools. This does not mean that we are unmindful of the important role summer schools have played in education and can play in the future. They should be encouraged, developed and expanded, but at this time we believe that this should take place with local resources.

Apparently the charging of tuition has no material effect on the number of children attending summer school. Enrollments where tuition is charged have increased at the same pace as have enrollments in the five school divisions where no tuition is charged.

The principal purpose of charging tuition is to pay the teachers. The facilities are available and require year round maintenance. Earlier in this report, in the section devoted to the necessity for adopting plans which would reward superior service by teachers, we suggested the twelve month pay plan and the differential assignment plan. School divisions adopting either of these plans in the future would have a source of summer school teachers available.

Some urban school divisions are serving as summer school centers for surrounding communities. This suggests the possibilities of adjacent school divisions working co-operatively with each other where geographic considerations permit. Consolidated summer schools could offer economy as well as a larger range of subjects.

The annual report of summer school operations in Virginia referred to above and the research of our staff disclose that a number of summer schools are authorized but not operated under the supervision of the local school board. Our staff survey indicated that generally, summer instructional programs in Virginia do not match in scope or in depth many other outstanding programs in the nation. Summer school can and should be very serious education. It should not be a loosely organized and casually operated vacation school for children. The local school board should assume full responsibility for summer school operations.

X. TEACHER EFFICIENCY

There is widespread belief that classroom teachers are required to spend excessive time with duties other than actual instruction. Extra-

curricular activities, the number of records to be kept, and the occasions when money must be solicited and collected have all increased. Time consuming tasks unrelated to teaching now take a large share of the school day.

One approach to solving this problem has been the use of teacher aides. These aides work with the classroom teachers, taking care of clerical and other routine duties. They also assist in the use of any equipment such as film projectors or slides which the teacher might employ. Committees from this Commission visited the school systems in Bay City, Michigan; Norwalk, Connecticut and the Catskill Area of New York where teacher aides are used. At Norwalk these aides are part of a teaching team and receive less salary than the teachers in the team. Bay City, where the teacher aide idea was first put into practice, uses a lay aide in class groups of more than forty. This aide simply relieves the teacher of all non-teaching duties. Teacher aides on a voluntary basis have been used in the Lynchburg school system.

When employed in team teaching situations, the aide working with 2, 3, or as many as 4 teachers does not represent an additional salary expenditure in terms of the total compensation paid the team. An aide limited to assisting one classroom teacher without an appreciable increase in class size would, of course, represent an additional expense. The Virginia Education Facilities Committee, in its 1959 report, recommended experimentation in the use of teacher aides for large group instruction.

The use of teacher aides has merit. Each school division, in fact, each school, is in the best position to determine how these aides might be used effectively. Attention is invited to Appendix III which lists school districts where information concerning teacher aides may be obtained.

Some use in Virginia has already been made of lay assistants for the purpose of correcting English themes. Certainly, this enables the average teacher of English to assign more themes. In this connection, we again urge that English teachers in secondary schools be assigned a total class load of no more than 100 pupils, and no more than 25 pupils per class.

The role of the classroom teacher, especially in the self-contained elementary classroom, has changed greatly in the past quarter of a century. There is more to teach, and new demands are being made upon elementary teachers. These changes require an evaluation of whether or not an elementary teacher with four years of college preparation can adequately meet the instructional needs of a greatly expanded curriculum. Some assistance will come from the new resources: education television, teaching machines, motion pictures and other devices, but these instruments will not provide the final solution.

We have previously suggested some of the organizational patterns which may allow specialization within the elementary school. There is also another approach. In certain areas such as science, foreign languages and perhaps advanced arithmetic and even history and geography, specialists who go from classroom to classroom, and even from school to school can be used most effectively in the upper elementary grades. These specialists, in addition to a full understanding of their specific subject, must know how to work with elementary age children. They should not act as supervisors but should actually teach their specific subjects.

Regardless of whether teacher aides, new organizational patterns or elementary specialists are deemed desirable, school divisions should make surveys to determine that classroom interruptions are kept to a

minimum, that clerical work imposed upon the classroom teacher is not excessive and that all records required are necessary. Responsibitity for this is primarily in the hands of superintendents and principals. Maximum time during the school day should be devoted to instruction.

XI. ADEQUACY OF THE PRESENT SCHOOL DAY, SCHOOL WEEK AND SCHOOL YEAR

The explosion of knowledge in a competitive age has provoked searching examinations of the adequacy of the present school day, school week and school year. Other countries have lengthened the school year, as well as the week and the day. The Russian child, for example, goes to school six hours a day, six days a week and attends classes approximately 213 days each year. There is general agreement in this country that there is too little time to teach what is necessary. There is no agreement as to what to do to correct this situation.

Over the last ten years the national trend has been to increase the length of the school day. The greatest increase of the school day has come in the senior high school. Nationally, about 85 per cent of the elementary schools have a school day of 5½ hours (not counting lunch period) for children in grades 1—3; at grade levels of 4, 5, and 6, 95 per cent of the schools have a school day of between 5 and 6 hours. Of this group 45.4 per cent have 5½ hours in the school day, and 36.5 per cent have 6 hours. It is interesting to note that regional percentages show that schools in the South have longer school days for primary grade children (grades 1, 2, and 3) than other regions in the United States; while in grades 4, 5, and 6 the North Central region has a tendency for a longer school day.*

Research indicates that smaller school districts across the nation generally have longer school days for all elementary grades. This may be explained in part by the bus transportation problem in small districts. In other words the elementary school day is lengthened more nearly to that of the high school so that only one bus trip need be made on a route.

Many school divisions in Virginia have lengthened their school day in recent years. There seems to be sentiment among Virginia teachers, especially among those who have written to the Commission, that the school day is long enough if it is spent to the best advantage.

The proposal to lengthen the school week to six days has been made but seems not to have been well received by parents or by educators. Statements from teachers and parents to the Commission indicated their displeasure with the six-day school week which resulted when the children attended school on Saturdays in the spring to make up "snow days" missed in the winter. The universal acceptance of the forty hour week has made Saturday almost as much of a family holiday as Sunday.

In some states the schools are open on Saturday on a voluntary basis to selected students. New Jersey has re-opened its doors on Saturday morning for selected students who wish to take advanced courses in English, biology and chemistry. Outstanding students from the schools participating in the Catskill Area Project gather on Saturday at a central location for accelerated work.

The schools in Virginia are required to have a school year of at least 180 days to participate fully in apportionment of State funds. Examination of the national trend shows that the median school year has been increasing in length over the last fifteen to twenty years.

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* United States Office of Education, H. E. W., *Elementary School Administration and Organization,* Bulletin No. 11—1960.

Any discussion related to lengthening of the school year ultimately reaches the question of year round use of school facilities. The investment in public schools is tremendous and any plan for a more effective utilization of these facilities should be carefully considered. The Commission has had the benefit of the report of the Virginia Educational Facilities Committee made in 1959 which included a thorough study of the use of schools on a year round basis for all pupils. That Committee considered the four quarter plan which is a division of the school year into four quarters extending throughout the calendar year. The teachers are employed and the school buildings utilized all year while the pupils attend three out of four quarters; i.e., one fourth of the pupils are on vacation during each quarter of the year. First started in Bluffton, Indiana, in 1904 the plan reached its peak of popularity in 1925 when about a dozen cities employed it. Montgomery County, Maryland recently abandoned efforts to initiate the four quarter plan. The Virginia Educational Facilities Committee rejected the plan except on an experimental basis by interested school divisions. Latest information indicates that no area in the United States is currently using the plan.

There has been no increase in the length of the school year in Virginia in recent years. Children today are in school about half of the days in the year just as school children were thirty to forty years ago. The other half of the year is made up of Saturdays, Sundays, holidays and the long summer vacations of almost three months. This is true although the areas of learning have expanded tremendously while new courses of study as well as extensive testing programs have been added.

Where will the needed time be found? The Commission does not believe that the present school day should be lengthened, but that the day should be organized to eliminate tasks unrelated to teaching and assure maximum time for classroom instruction. The public, in our opinion, is not prepared to accept a six-day school week. Increased emphasis upon summer school programs is a partial answer; however the existence of these summer schools plus the need for affording teachers an opportunity for further study in summer schools and summer institutes places a limitation on the number of days which can be added to the school year. We do believe that the present school year can be lengthened to advantage by as many as ten days, and therefore recommend that the school year be lengthened from 180 to 190 days.

XII. EDUCATIONAL TELEVISION

Midway through this study, a group of school administrators requested this Commission to direct attention to the status of and prospects for educational television in Virginia. It was agreed that this should be done because of the increased activity in educational television in several localities within the State and the fact that many facets of the subject relate directly to some matters already under review. The December 1. 1959 report of the Commission to Study the Feasibility of Educational Television has been of great value because of its thoroughness as a preliminary study, and because its findings are so recent. The Commission will not repeat the wealth of information contained in that report, but will endeavor to bring developments in educational television in Virginia up to date.

The feasibility of educational television as a teaching resource has been established. Many of the states have gone forward with varied programs ranging from closed circuit statewide networks to multi-state

operations where transmission is from an airplane. The question in Virginia is no longer whether educational television should be employed as a learning medium for our schools, but rather how educational television might best be used throughout the Commonwealth.

Although Virginia, despite the 1959 study, has been slow to move at the State level, some advantages have been gained from the delay. First, the Commonwealth is in a position to profit by the experience of other states having state-wide networks such as South Carolina and Alabama, and from the operations in neighboring North Carolina at Chapel Hill and Maryland at Hagerstown. The personnel of these operations have been most helpful to members of the Commission, and have been candid in outlining shortcomings or mistakes involving their particular operation. Secondly, the cost factor in educational television has been reduced; for example, video tape recorders are now selling for approximately one-fourth of the cost of just a few years ago. A complete closed circuit operation for a particular school can now be installed for $20,000.

Before discussing recommendations for the role Virginia should play in educational television it would perhaps be best to outline the present programs within the State. Five of the outstanding educational television projects now in Virginia are described briefly as follows:

1. *Hampton Roads Area*

Educational television in Virginia was pioneered in Norfolk. The school boards of the cities of Norfolk and Hampton now own HRETA (Hampton Roads Educational Television Association). This ETV Station began September, 1961 transmitting to schools in the cities of Norfolk and Hampton. Other school divisions are expected to join for the next semester and the potential coverage in Virginia is for eight cities and six counties. This channel is one of the five UHF channels originally allocated to Virginia by the FCC for educational stations, and the first to begin operations.

2. *Richmond City*

The Richmond public schools, through WRVA-TV Richmond and WSVA-TV in Harrisonburg which picks up the Richmond signal, are currently serving 31,000 pupils in the Richmond city schools and 50,000 pupils in 39 counties and 7 cities in Virginia. The Richmond project is also serving 16 private and parochial schools. Finances are on a basis of the number of pupils participating and for the most part are paid by the school boards of the divisions represented. The Richmond area has also been allocated a UHF channel for educational purposes, and work is progressing toward establishment of an ETV station in the near future.

Virginia Educational Television, Incorporated has been active in Richmond and throughout the State in initiating activity and furnishing information about educational television.

3. *Northern Virginia Area*

The school divisions in Northern Virginia are participating in GWETA (Greater Washington Education Television Association). This UHF channel, currently transmitting to school divisions in Maryland and to Arlington, Fairfax, Alexandria, Falls Church and Prince William County in Virginia, switched from a commercial station to UHF transmission.

This station began this September and its present studio is at Yorktown High School in Arlington.

4. *Accomack County*

These programs jointly sponsored and produced by the school systems in southern Delaware, Eastern Shore Maryland, and Accomack County, Virginia, are carried on leased time over a commercial station in Salisbury, Maryland.

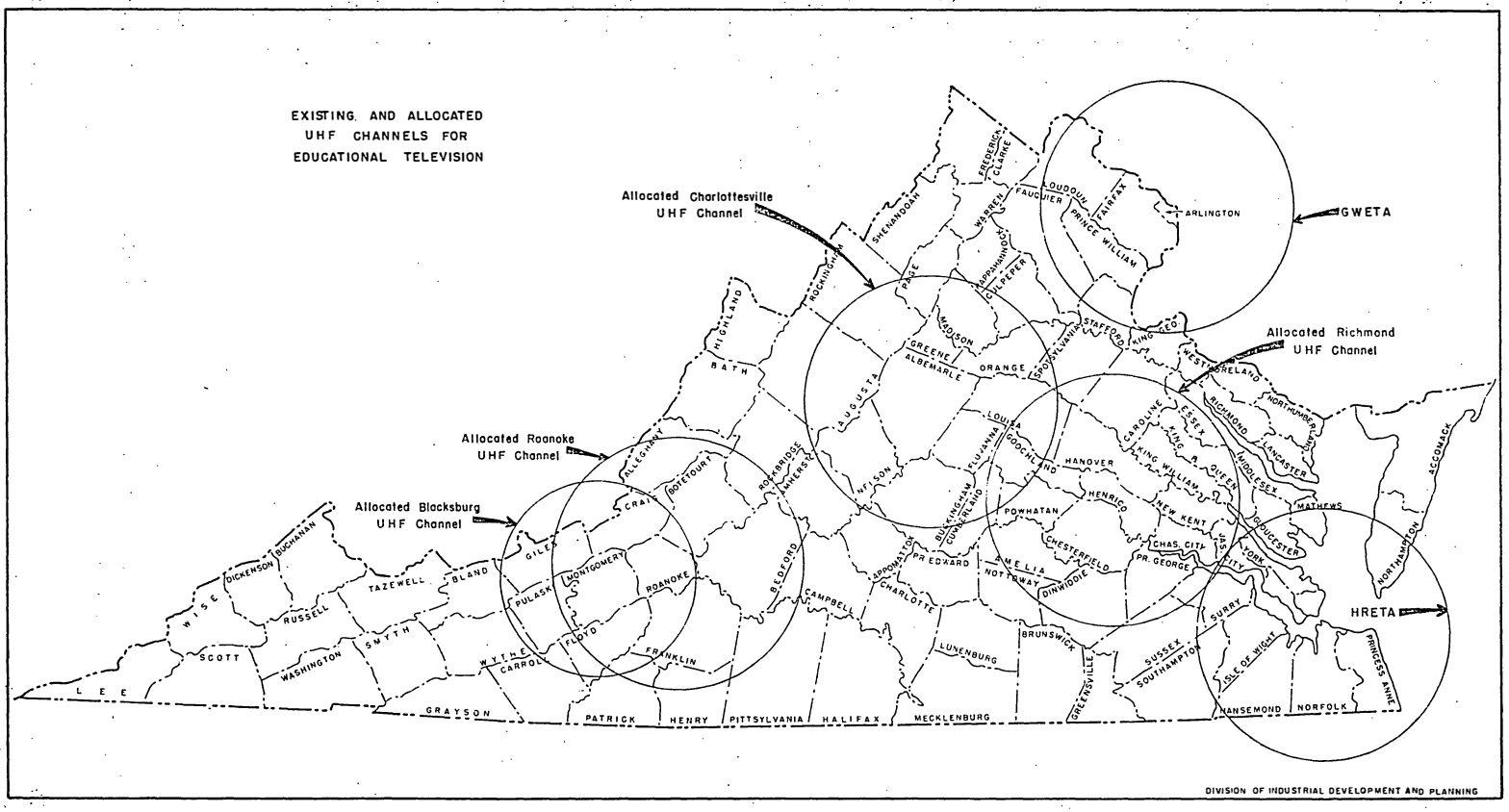
5. *Danville*

Several of the Danville schools have participated in the educational television project originating in North Carolina and telecast by the ETV station near Chapel Hill.

In addition to these there have been some recent experiments with closed circuit television operations with transmission usually limited to one school.

The FCC allocated five UHF channels to Virginia for educational television. These were to be located at Blacksburg, Charlottesville, Norfolk, Richmond and Roanoke. Of these five the Hampton Roads station is the only one in operation. On page 51 herein is shown the transmission coverage of each of these five stations were they in operation. It is interesting to note that when considered with GWETA, the UHF station transmitting to Northern Virginia, the transmission patterns cover a large part of the State of Virginia. There are, however, noticeable gaps, particularly in Southside and Southwest Virginia, which will have to be filled by either additional channels or translators ("TV Boosters") if the entire State is to be covered by educational television.

While the general impression of educational television is limited to its value to school children, there are two other areas of potential use for this medium. They are in-service training of teachers and adult education.


EXISTING AND ALLOCATED
UHF CHANNELS FOR
EDUCATIONAL TELEVISION
Allocated Charlottesville
UHF Channel
Allocated Roanoke
UHF Channel
Allocated Blacksburg
UHF Channel
Allocated Richmond
UHF Channel
GWETA
HRETA
DIVISION OF INDUSTRIAL DEVELOPMENT AND PLANNING

A recent dissertation relating to the use of television in teacher training indicates the potential of educational television as an aid to teachers.* Classes in adult education as well as for home-bound pupils and inmates of nursing homes and hospitals are of great value. Educational television, if made available throughout the State, would be a tremendous force in aiding those school divisions in Virginia whose resources or energies have not enabled them to achieve desired standards. There is need for the in-service training of teachers in those divisions through educational television. Also, expert teachers can through television be taken into the classrooms of those areas. Educational television is of unquestionable value to those school divisions in the metropolitan areas of Virginia which have pioneered it, but perhaps its greatest potential is as help for the weaker school divisions.

A glance at the illustration on page 51 will show that the UHF channels in Northern Virginia, in the Hampton Roads area and the one to be started at Richmond already blanket that section of Virginia known as the urban corridor. The channels at Charlottesville, Blacksburg and Roanoke should be activated as soon as possible. We recommend the following steps be taken:

1. That an office of the State Department of Education be established to arrange for engineering surveys of the State for coverage by UHF transmission, to determine what types of equipment should be considered for each community; whether the existing FCC State allocations for Virginia are sufficient for adequate coverage; whether translators (boosters) might be employed to satisfy the need in noncovered areas; and to advise the several localities what kind of coverage might be possible and the costs necessary to establish and operate such facilities. The General Assembly should appropriate the funds necessary for the engineering surveys.

2. The office of the State Department which is assigned the responsibility for educational television should, after the engineering surveys are completed, through the State Board of Education advise the Governor:

(a) The most feasible method for providing educational television to those areas of the State not presently served.

(b) The recommended role in educational television for the teacher training institutions of Virginia.

3. The office should endeavor to co-ordinate the use of tapes for programs already existing among the three present production centers at Richmond, Arlington and Norfolk. It should, through the use of the engineering advice available from the surveys, encourage the establishment of installations at Charlottesville, Blacksburg and Roanoke. It should be observed that all UHF operations in Virginia have been preceded by educational television presented through commercial stations. The office could obtain taped programs for use of commercial stations in some parts of the State until UHF is available.

4. The office should work with the various communities and with the teacher training institutions conducting "How To" clinics for teachers and administrators to show how the most effective use might be made of educational television.

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* *The Use of Television For In-Service Teacher Training,* Elizabeth Burger, University of Virginia—1960.

5. The office should devise and recommend to the Governor through the State Board of Education a formula for State aid to participating school divisions, once educational television is available throughout the Commonwealth.

The General Assembly should appropriate sufficient money to install closed circuit television facilities at the teacher training institutions in Virginia. This equipment would enable future teachers to become acquainted with the use of ETV through actual experience. Moreover, these facilities at each of the teacher training institutions could be of use in the training of teachers and administrators in neighboring school divisions.

These words of caution: the initial expenditure for engineering surveys and for the establishment of an office of educational television will embark the Commonwealth upon a new educational venture which might eventually cost millions of dollars. If this program is to be well-launched and the initial investments are to return ultimate dividends in improved education, then the best personnel available should be hired. Unless this program is administered by able and experienced educational television personnel its chances for ultimate success are questionable at best.

XIII. SOCIAL STUDIES

The freedom man has found under democratic government is endangered today throughout the world, and a large share of responsibility for its defense has fallen upon this Nation. If one is to defend freedom he must understand and appreciate it. A most important task facing Virginia in this hour of crisis is the education of our youth for responsible citizenship. While the home and the church have a vital role in this, within the school this task is assigned in large part to the area of the school curriculum known as the social studies.

The conquest of space resulted in great emphasis being placed upon science and mathematics. This emphasis was needed and proper, but all of today's youth will not become mathematicians and scientists because all are not endowed with talents in these fields. All students do not have the desire to follow these pursuits, and there are demands from other fields. It is just as vital to the future of our country that some become businessmen, farmers, doctors, lawyers, skilled technicians, etc. Regardless of the field a youth may enter upon reaching adulthood he will need training in the responsibilities of being a citizen.

Some consider that the term "social studies" is a course designation and as a course or series of courses, draws its contents somewhat indiscriminately from all the subjects included in the area. This has not been the practice in Virginia. The Virginia State Department of Education refers to this area as history, geography and government, and in the secondary schools economics is included in such reference. But as a practical matter many other subjects have been allowed to creep in for want of any other place to put them.

Real confusion seems to exist as to the aims and purposes to be accomplished in the area of the social studies. The public hearings held last November by this Commission, as well as conferences and written communications, have indicated a widespread concern regarding the lack of plan and definite guide posts in the presentation of history, government, economics and geography courses. That this concern is shared by educators is confirmed by the fact that during this year these subjects were

frequently the topics for conferences of teachers and administrators throughout the State. Many and diverse are the opinions as to what should be taught in the social studies.

There are many competent and sincere teachers of history and government who are confused by the conflicting demands as to the emphasis which should be placed on the various aspects of these subjects. The purpose of courses in history, government, geography and economics should be defined, as should the relationship of these courses to each other.

Those who are of the opinion that we cannot combat communism without some knowledge of what communism is, have asked that a course on communism be added. Those who are alarmed by the number of "economic illiterates" who graduate from our public schools each year have suggested that the free enterprise system and all it has meant to this country should be emphasized in a course of study. Those who have learned first hand in the Korean War of the vulnerability of American soldiers to brain washing insist that history, heritage, patriotism and what some refer to as "good old fashioned Americanism" should be emphasized in our schools. Those who believe that the future of the world lies in the hands of the underdeveloped nations are insisting that geography be given a position of paramount importance in the curriculum. Those who observe the sliding morality of American youth have suggested that a place for the teaching of moral and spiritual values must be found.

We heartily agree that all of these things are vital to the preparation of our youth for citizenship in the world of tomorrow. Finding the right place in the curriculum and the right time is not so simple. This is further complicated by the necessity of deciding the proper approach and the right emphasis to be given to the various subjects in the area of the social studies.

The social studies acquired the label initially when history and geography were combined. From time to time other subjects have been added. The complaint has been made that social studies has no subject content of its own; that it is quite likely to include current events, politics, art, music, family management, sociology or a dozen other as ill-assorted subjects. Social studies seem to have become a dumping ground for all the odds and ends of the curriculum for which no other place can be readily found.

One thing that needs to be done is to determine what subjects ought to be taught in this area. Certainly we need instruction in the basic philosophy of our government, in the importance of the free enterprise system and in the meaning and danger of communism. We are indebted to the Commission on Constitutional Government for bringing these needs to the public attention. We commend the State Board of Education for developing a unit on the free enterprise system and on communism which is to be incorporated in the twelfth grade government course. This is a step in the right direction.

Despite the almost limitless number of subjects that are included under the term "social studies", there is a rather astounding belief abroad that anyone with some college education can teach social studies courses. One of the most distressing aspects of this gloomy picture is that all too often social studies is the leftover—the subject given to the teacher not regarded as qualified to teach any other specific subject. It there is any meaning to our pride in our heritage or to the supremacy of the democratic way of life with its emphasis on an intelligent, informed citizenry, then this practice must cease. It is possible for a teacher to meet present certifi-

cation requirements in the social studies without doing any work in this area beyond the freshman or sophomore years of college. Certification standards should be adopted which will make it literally impossible for history, geography or government to be taught by people who do not have a strong background in these subjects. This cannot be done until we have decided what we want to teach in this area. Only then can we adequately train teachers for this field.

The whole subject of social studies needs a long and careful look. The State Board of Education should cause the social studies program to be reviewed from the fourth grade through the twelfth grade to determine the purposes to be achieved by these courses. The study should include the sequence and scope of the courses as well as their continuity. Finally, the Board should prescribe the courses to be taught at each grade level in the elementary schools and the sequence of courses in the secondary schools. Once this is done, certification of social studies teachers should be reviewed and strengthened.

Meanwhile, school boards should review with their superintendents the academic background and preparation of all their teachers in the social studies field. They should make the best possible use of the social studies teachers available in filling assignments and should encourage teachers presently employed to improve themselves in the subject areas to which currently assigned.

XIV. TEACHER TRAINING

One of the specific charges directed initially to this Commission was that study be given to the methods and facilities for the training of teachers in Virginia. There is previously outlined herein the present quantitative problem of teacher supply and demand. Projected in terms of future school enrollment, the prospects for an adequate teacher supply are not encouraging. There is need for an analysis of the potential for teacher training of every State-supported institution of higher learning in Virginia. The millions of dollars being spent on school construction will prove a poor investment if there are not qualified teachers available to staff the classrooms.

Despite the desire to offer science and foreign language courses in our elementary schools there are not even sufficient qualified teachers of those subjects in our high schools. There is a shortage of qualified librarians, of trained physical education instructors and of teachers in special education. Teacher shortages are being partially met today by the issuing of special licenses and the use of teachers not certified in the subjects they are teaching. It should be determined how Virginia can begin to train a majority of its new annual supply of teachers each year, and also how courses of study might be made available within the State to train teachers in fields where acute shortages are now apparent.

More men must be attracted to teaching. A persuasive reason for recruiting more males as teachers is the percentage of drop outs among the female graduates of our teacher training institutions because of marriage and the starting of families. Madison College recently published a survey of losses from teaching of its graduates in the classes from 1950 to 1959. The following table shows this information:

LOSSES TO TEACHING PROFESSION IN VIRGINIA*

		Years of Experience															
Classes	First No.	Second No.	%	Third No.	%	Fourth No.	%	Fifth No.	%	Sixth No.	%	Seventh No.	%	Eighth No.	%	Ninth No.	%
1951	142	118	83	93	65	66	46	55	38	44	31	34	23	35	24	32	22
1952	120	89	74	61	50	47	39	37	31	31	25	28	23	25	21		
1953	106	86	81	69	65	56	53	38	35	26	24	26	24				
1954	107	84	79	63	59	49	45	40	37	35	32						
1955	95	73	77	62	65	56	58	47	49								
1956	96	83	86	71	74	61	63										
1957	100	89	89	75	75												
1958	125	104	83														
1959	122																

* *Annual Report of Director of Field Services and Placement,* Madison College—1960.

It should be noted that less than a fourth of the graduates have remained in teaching beyond six years. The authorities at Madison have estimated that marriage or motherhood was responsible for 75% of the losses encountered. We cannot quarrel with either institution, but 1600 teachers in Virginia resigned at the end of this past session for these reasons. This is significant when one considers the Commonwealth's investment in the preparation of these teachers.

The legislation creating the State Council of Higher Education includes the following:

> *Section 23-9.8* "The Council shall cooperate with the State Board of Education in matters of interest to both the public schools and the State-supported institutions of higher education, particularly in connection with *coordination of* the college admission requirements and *teacher training programs with the public school program.*" (Emphasis supplied)

The Council has initiated a policy of encouraging each State-supported institution of higher learning in Virginia to begin a self-study program to reappraise its educational mission while simultaneously evaluating the strength of its program. This process would seem most helpful in the development of coordination of institutions, and in relating institutional purposes to State needs.

Each self-study should consider the present needs in public education of the Commonwealth and each college seek some contributing role consistent with its mission and tradition. There is need for the predominantly male State-supported institutions to enlarge their undergraduate programs for the training of teachers. These colleges should actively recruit male high school students for the teaching profession and priority for admission should be given male students who desire to become public school teachers. Teacher scholarships are available for study at these colleges and this should be made known to high school seniors. These steps should result in a better balance between the supply of male and female teachers than presently exists. It is hoped that in these self-surveys attention will be devoted to the need in Virginia for an accredited undergraduate school of library science and a school specializing in the teaching of physical education instruction.

Also, we would observe that those four-year community colleges in the metropolitan areas of Virginia are admirably located for practice teaching as well as for training of men in the teaching profession.

This Commission recommends that the State Council of Higher Education undertake, with the State Department of Education, a complete survey of the instructional needs of the public schools of Virginia in terms of present and future teacher supply; that this survey be made with a view toward determining the potential of each of the State-supported institutions of higher learning for making a contribution to the training program for teachers in the public schools of Virginia. The proposed survey should define present and projected teacher needs in Virginia both in terms of numbers and by subject and grade level. The staff of the Council should be enlarged, if necessary, to initiate and complete this work as soon as possible.

1. *Scholarships*

Virginia began its scholarship program to assist future teachers in 1947. This plan has proven to be most successful, and the General As-

sembly has consistently increased the appropriations for this purpose. We recommend that this program be further expanded.

One of the problems in helping the weaker school systems of Virginia to obtain qualified teaching personnel is that the great majority of the graduates from our teacher training institutions locate in fifteen or twenty of the preferred school divisions. 70 of the 116 graduates of Madison College in 1960, who began teaching in Virginia, accepted employment with 9 school divisions. High salaries are, of course, a factor, but college graduates seem attracted to the urban areas of Virginia.

The medical profession has used a scholarship plan for locating doctors in rural areas. We suggest, not as a panacea but as a partial remedy, that scholarships of twice the present three hundred and fifty dollars be created by the State Department of Education in its administration of the scholarship funds. These double scholarships would be available to top ranking students who, in accepting them, would agree to teach in a school division listed by the State Department of Education as being in need of qualified teaching personnel.

It is not proposed that the State Department of Education undertake the assignment of teachers. The recipient of the double scholarship would merely agree to teach for at least three years in any one of the school divisions of Virginia listed by the State Department as having a critical shortage of qualified teachers. Should employment in one of these divisions be offered and the graduate elect not to fully comply with the terms of the grant, the scholarship money would be returned just as if he or she elected not to enter teaching.

2. *Graduate Fellowships*

Virginia is blessed with a wealth of private liberal arts colleges. Many of these are old and distinguished institutions. There is a need to recruit teachers from the ranks of their top graduates.

The University of Virginia and The College of William and Mary have both initiated the Master of Arts in Teaching program. It is proposed that at each of these institutions, and at Virginia State, a State fellowship program be established for the recruiting and education of liberal arts college graduates to take a Master of Arts in Teaching Degree. These fellowships would be available to liberal arts students in the upper quarter of their classes who, upon graduation from their respective colleges, would enroll that summer in work leading toward a Master of Arts in Teaching Degree.

At the request of this Commission both The College of William and Mary and the University of Virginia have outlined plans for the administration of these programs. The degree could be obtained in one summer and one regular term or in four summer sessions. Briefly, the plans would be operated as follows:

1. The graduate school would co-operate with selected school systems in recruiting outstanding seniors of liberal arts colleges for teaching positions.

2. A special program of preparation for teaching would be provided for the liberal arts graduate during the summer immediately following his or her graduation from college.

3. A special program of supervision for these and other new teachers would be planned and conducted by the school system with the assistance of faculty members from the graduate school.

4. The liberal arts graduates could complete the requirements for the Master of Arts in Teaching Degree by attending three additional summer sessions or one regular session for two semesters.

Recipients of these fellowships would guarantee that they would teach in the public schools of Virginia for at least four years. Three of these fellowship programs would result in the recruiting of a number of superior liberal arts graduates into the teaching profession each year. The estimated annual outlay for the three programs, including expenses for personnel, recruitment and supervision is approximately $50,000.

3. *In-Service Training*

The Commonwealth initiated aid for in-service training programs in 1960, establishing grants for extension courses, home study and summer institutes. Requests for in-service grants were overwhelming. These grants were recommended to enable teachers to meet certification standards or to further their education in subject matter fields. The purpose of the institutes was to acquaint teachers with the many changes which have occurred in the curriculum and teaching of science, mathematics and foreign languages.

Appropriations for in-service training should be increased. The State Board of Education, on the basis of need and demand, should determine which of the summer institutes should be continued. The response to the grant program would indicate that these are looked upon with more favor by the teachers than the summer institutes.

The many developments in school organization and the use of new educational resources are discussed elsewhere in this report. Some of the large school divisions have sent administrators and school board members on trips to see at first hand these developments. Most of the school divisions in Virginia cannot afford or justify this expenditure. Although some information is offered herein concerning the location and nature of these experiments, more complete information would be needed for interested school administrators. In-service training for school administrators should be offered by the Commonwealth to this extent. Conferences for principals, teachers and school board members should be subsidized to the extent that experts and school administrators who have worked with team teaching, ungraded primary and dual-progress systems, programmed teaching and educational television be brought to these conferences for demonstrations. This will involve little money and will give firsthand information concerning these new educational developments to the school administrators of Virginia.

4. *Research*

The demands on our schools today require that present educational methods be constantly surveyed. A continual program of seeking and testing new methods is also needed. The State Department of Education has requested appropriations to begin a Department of Research in the coming biennium. Also, they have expressed interest in conducting pilot experiments in selected school divisions throughout Virginia.

We agree that teachers need to be given wide latitude and encouraged to try methods, which, while not new in the sense that they are untried and untested, are new to the teachers using them for the first time. There appear, however, to be distinct limits to the role which can be played by our public school in educational experimentation. This is true for at least

two good reasons. First, the public schools are supported by public monies in large part provided by local citizens. Therefore, it is right and proper that the public schools be more interested in spending their tax dollars to support the use of proven methods of instruction in the classroom, rather than to support the testing of experimental methods based on theory. After all, the findings of research sometimes prove the theory to be in error. Such an experiment carried on in the classroom can hardly be expected to please the taxpayer-parent whose child has been involved in the experiment.

Then too, the public schools are affected by local and State regulations —many written into law. Even when some of these regulations are officially waived, the school does not always gain the freedom needed for experimental research. Furthermore, it is extremely difficult for experienced teachers to break with the past. Thus, factors impossible to control are frequently detrimental to this type of research.

Of course, some local situations now do permit and will continue to permit experimentation in our public schools. These should be encouraged but we must provide for additional experimentation.

The Virginia Education Commission, better known as the Denny Commission, in 1944 foresaw the need for educational research from the State level, and wrote:

> "Central in all this picture should stand the University of Virginia, through its graduate training and an efficiently operated bureau of educational research setting the pace and standards for the entire public school system of the Commonwealth . . ."

The full resources of the University of Virginia should be available to the new Department of Research of the State Department of Education. It would be uneconomical to the Commonwealth were not the faculty of the graduate school of education at the University, as well as its graduate students, used extensively for educational research. As previously suggested, dissertations, similar to the one heretofore referred to concerning the in-service training of teachers in educational television, will be of value to the entire public school system of Virginia. We note with satisfaction that the University plans to establish a full professorship in research in its graduate school of education for the next session. We urge that when establishing the Department of Research, the State Board of Education consider the assistance which will be available and the economy to be effected by proper co-ordination of effort with the University of Virginia.

There is also an imperative need for seeking and testing new methods in other locations where our future teachers are being trained. There the dual objectives of training future teachers for tomorrow—not yesterday—and of freedom to experiment can be achieved. Historically, research has been a prime function of our institutions of higher learning, but this function has not always prevailed where our teachers are trained.

Obviously, we must also have experimental schools available with representative classes of typical students. These are available now in the "backyards" of some of our teacher-training institutions. As student teaching programs have been moved more and more into public schools, these campus schools have been looking increasingly for a new function. What more fitting role could be found for these schools than to return to their original function?

The opportunities for significant educational research in our teacher training institutions and the utilization of campus schools where experiments could be conducted under real school conditions appear limitless. A further development conducive to such research would be a cooperative arrangement between each teacher-training institution and its nearby public school divisions. The locations of our teacher-training institutions are most fortunate for this purpose. Some of those colleges are near areas of greatest need.

Each of the teacher-training institutions should establish a pattern of great sensitivity to the desires and needs of the surrounding school divisions. Many of the schools of Virginia possess inherent strengths which are not being fully utilized for lack of motivation and guidance. This is particularly true in some of our less populous areas. Teacher-training institutions can supply this motivation and guidance.

The teacher-training institutions should have their own electronic "bank" and their own television studio for use with nearby schools. Preparation of every kind of instructional tape and other materials to be used in the regional public schools would be a specific function, and teachers from those schools would be encouraged to come in to prepare their own special materials with assistance from trained personnel.

The teacher-training institutions would become the potential retraining site for the important job of in-service training for teachers, a task which deserves top priority. The radical changes in the very content of mathematics and science, and the methods used in foreign language instruction offer proof of the need for this, if proof were needed. Our teacher training institutions could thus become the pivotal agency upon which to center the training of present and future teachers to whatever degree required.

5. *Separate Boards for Longwood and Madison*

The quantitative figures recited throughout this report regarding teacher supply and demand should in no way be interpreted to reflect upon the service rendered in the past or present by the three colleges in Virginia devoted primarily to teacher training, namely: Longwood, Madison and Radford. Each of these institutions is doing an admirable job. Their locations and the fact that all are campus colleges suggest that from a standpoint of economy they should not be enlarged beyond gradual year-to-year expansion.

Despite the fact that Longwood, Madison and Radford are presently supplying only about one-sixth of Virginia's annual new supply of teachers, these institutions are the most constant and dependable source of teachers presently available. Radford is administered by the Board of Visitors of Virginia Polytechnic Institute. Madison and Longwood Colleges are under the control and management of the State Board of Education.

The Council of Higher Education recommended in 1960 that a separate board of control be established for Longwood and Madison Colleges. Its recent report of November, 1961 renewed this recommendation, stating that the mounting problems of the public school system and the growth of higher education place conflicting burdens upon the State Board. The report of the Commission to Study the State Government of Virginia, of September 1, 1961, recommended that legislation be enacted to place Longwood, Madison and Radford under the control of a Virginia State Teacher Education Board.

The State Board of Education under present law has the right to appoint a Board for Madison and Longwood to which direct management and control of these schools may be delegated.* This information is not presented with a view toward favoring another alternative proposal, but to stress the importance of these institutions having the guidance of a full time board which could give the needs and problems of the institutions undivided attention. We venture an opinion in this area because the future of Madison and Longwood is inseparable from the future of teacher training in Virginia.

The prospective new responsibilities for research and educational television in Virginia, along with other increasing problems of public education, dictate that the State Board of Education examine its overall obligation for general supervision of the public school system with a view toward relieving itself of some or all of the responsibility for the administration of Longwood and Madison.

XV. RECOMMENDATIONS

Our study has led us to make the following recommendations. They are classified according to the governmental agency primarily responsible for their execution. We recommend:

A. The General Assembly

1. That the in-service training program for teachers be expanded, and that funds be provided to demonstrate new educational developments to school administrators and school board members at State conferences.
2. That funds be provided for pilot experiments and research in selected school divisions and at the State-supported teacher training institutions under the supervision of the State Board of Education.
3. That State-supported teacher training institutions be equipped with closed circuit television facilities.
4. That fellowship programs be established for the recruiting into teaching of liberal arts graduates who are in the upper one-fourth of their classes, to enroll in a Master of Arts in Teaching program at the College of William and Mary, the University of Virginia and Virginia State College, upon the condition that recipients would teach for four years in the public schools of Virginia.
5. That the scholarship program for teachers be expanded to provide for double scholarships to be established by the State Department of Education.
6. That special summer institutes for elementary school librarians be established; that tuition costs of librarians attending these institutes be paid by the State.
7. That the position of elementary school librarian be listed as a unit for State-aid when the State's share of local instructional costs is computed.

* Section 23-61—Code of Virginia, 1950.

8. That a laboratory facility for research with handicapped children and the training of teachers for such children be established as an education wing to the Childrens Rehabilitation Center at the University of Virginia.

9. That the school year be lengthened from 180 to 190 days.

10. That funds be appropriated to the State Department of Education for an educational television engineering survey of the entire Commonwealth.

11. That the staff of the Council of Higher Education be increased to undertake the teacher supply and demand survey recommended herein.

B. THE STATE BOARD OF EDUCATION

1. That elementary school principals be required to have a minimum of two years teaching experience in the elementary schools.

2. That an office be established in the State Board of Education with responsibility for the encouragement and development of State-wide educational television.

3. That a study be made of history, geography, government, economics and related subjects to determine the purposes, content, sequence, continuity and standards for the elementary and secondary school curriculum in these areas and the qualifications of teachers therefor.

4. That a definite date be fixed after which no further State aid will be granted for teaching positions filled by teachers holding special licenses.

5. That a comprehensive test be provided for the localities for the purpose of determining how well each locality is performing the task of elementary education.

6. That courses in the teaching of reading should be given a priority for the granting of summer school scholarships and for in-service training grants.

7. That a course in the teaching of reading be required for the certification of elementary school teachers.

8. That minimum standards and minimum time be prescribed for specified subjects in the curriculum of the elementary schools including the basic skills of reading, writing and arithmetic.

9. That in conjunction with the Council of Higher Education a survey be made to determine the present and projected teacher needs in Virginia, both in terms of numbers and by subject and grade level, and the capacity of the State-supported institutions of higher learning to meet these needs.

10. That the scholarship program for teachers be modified to establish double scholarships to be awarded to exceptional students who agree to teach for at least three years in one of the school divisions listed by the Board as being in critical need of qualified teachers.

C. COUNCIL OF HIGHER EDUCATION

1. That in conjunction with the State Board of Education a new survey be made to determine present and projected teacher needs in Virginia, both in terms of numbers and by subject and grade level and the capacity of the State-supported institutions of higher learning to meet these needs.
2. That the need for an accredited under-graduate school of library science and a school specializing in physical education be appraised.

D. THE INSTITUTIONS OF HIGHER EDUCATION

1. That during the course of the self-surveys recommended by the Council of Higher Education each institution reappraise its educational mission in the light of the State's public education needs, particularly in the training of teachers.
2. That the predominantly male institutions with teacher training programs enlarge their programs for the recruitment and training of male teachers.
3. That the teacher training institutions of Virginia establish a pattern of greater sensitivity to the desires and needs of nearby school divisions.

E. THE LOCAL SCHOOL DIVISIONS

1. That a salary study committee composed of administrators, teachers and lay persons be formed to review local teacher salary policy, to stimulate local interest and support for teachers' salaries and primarily to adopt a plan for rewarding superior service.
2. That the local school boards assume full responsibility for summer school operations.
3. That all children in each of the early elementary grades receive thorough instruction in phonics in connection wi earning to read.
4. That schools continue to define at each level of instruction what parents can do in assisting to develop readi ess for learning.
5. That the library program, especially in the elementary schools, be reviewed to determine the need for qualified librarians and supervisory personnel; that qualified persons be recruited for library service and encouraged to enroll in special courses designed to enable them to meet certification requirements.
6. That the amount of clerical work, the number of written reports and classroom interruptions be surveyed in each school with a view toward allowing classroom teachers a maximum amount of time for instruction; that the use of teacher-aides be considered for larger class groups.
7. That no child be assigned to classes for the educable and trainable mentally retarded on the basis of one examination by unqualified personnel.
8. That the physical education program be reviewed thoroughly to assure that there is total participation and that calisthenics and

vigorous exercises are featured; that supervisory personnel in physical education be provided to render special assistance to the elementary schools; that adequate gym equipment be provided; and that physical fitness be stressed for all students.

XVI. CONCLUSION

This report completes a journey of inquiry that began in June, 1959.

The Commission has been pleased to observe growing sentiment throughout the Commonwealth for the continued improvement of our schools. Teachers are working harder. The State Board of Education continues to give able and wise guidance to the school programs of Virginia from the State level. Strong direction and leadership in public education, however, are needed in many localities. The most able citizens of each community are needed for service on local school boards. These lay boards must select district superintendents who have the capacity to provide academic leadership above all the modern demands of school management.

When new programs are suggested there is often a tendency to advocate the creation of a separate governmental agency for their administration. We have not done this. The need for immediate and co-ordinated action, as well as the prospect for long range economy, have prompted the Commission to conclude that educational television and educational research should be entrusted to authorities within the existing structure for the administration of public education in Virginia. We have recommended that these programs be administered through new offices of the State Department of Education. These offices should be staffed with individuals who have had experience with educational television and educational research. The best personnel available should be sought, for the success of these programs is vital to the future of public education in Virginia.

The Commissoin has voiced concern over the wide range of disparity among Virginia's school divisions. Minimum standards for elementary schools, educational television, meaningful research, double scholarships and qualified librarians should, we believe, be of help to the weaker school divisions.

Teacher shortage is a problem faced by every state in America. This is no reason for Virginia to "hope for the best" on a year to year basis. We should begin to plan now. Teacher supply and demand are directly related to the co-ordination of effort among the institutions of higher learning in Virginia. The Council of Higher Education is the proper authority to chart a blueprint of teacher needs for the future, and the Commission urges that the Council be directed and staffed to begin this important task immediately.

Projected teacher shortages, new organizational patterns in schools and recent experience with educational resources suggest that rigid formulae for pupil/teacher ratio may soon be subject to sweeping change. Research must be used in Virginia to prepare for the future, and to determine how, if change must come, the quality of instruction can be improved as well as maintained.

The problem of attracting our brighter college graduates into teaching is more easily stated than solved. Salaries for teachers will have to be raised, and we believe emphasis should be upon superior service. Many young students will be attracted into the classroom as teachers if they are persuaded that excellence will be recognized and rewarded.

The demands of our times and the rapidly increasing store of knowledge have prompted questions concerning the adequacy of the present school day, week and year. Our schools are being asked to do too many things. Although it may appear desirable for the schools to participate in many community activities, frequently this is done at the expense of the basic purpose of education. The church and the home, as well as civic and youth groups, have traditionally been expected to perform many of the functions now required of our schools. Yet, the school remains the only institution charged with the responsibility for teaching our children to read, write and compute. It is primarily in the schools that boys and girls acquire a knowledge of literature, history and science. The need for additional school time has been prompted, in large measure, by activities unrelated to teaching and learning.

This report contains but guide posts toward strengthening the quality of education in Virginia's schools. The future of our educational program will, in the final analysis, be determined by the kind of schools the people of Virginia want.

The fate of our freedom, our faith and of western civilization depends upon a strong and wise America. One of the great tests of our democracy concerns the capacity of thousands of local school districts to raise the quality of instruction in the Nation's classrooms. An urgency we sense moves us to exhort fellow Virginians to encourage excellence in our schools, for excellence is required if we are to remain competitive at home and abroad.

Respectfully submitted,

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APPENDIX I

Relationship of Percentage of Teachers with Degrees, Teachers with Special Licenses, and Pupil-Teacher Ratio with Salary Schedules in Virginia's School Divisions, 1960-61.

School Division	Average Salary	Rank	% of Teachers With Degrees	Rank	% of Teachers With Special Licenses	Rank	Total Positions	Pupil/Teacher Ratio Elem.	Total
Alexandria	$5965	2	97.4	1	.1	23	663	1/25	1/23
Bristol	4316	20	96.0	3	1.9	16	152	1/30	1/26
Buena Vista	4151	27	76.4	28	5.8	6	51	1/34	1/28
Charlottesville	4455	14	89.8	13	.5	22	206.5	1/23	1/23
Clifton Forge	4060	29	85.1	18	5.5	7	53.32	1/26	1/22
Colonial Heights	4231	23	81.0	25	4.0	12	74	1/36	1/30
Covington	4335	19	83.3	23	5.0	8	119	1/28	1/25
Danville	4216	25	93.8	9	.9	21	415.5	1/27	1/25
Falls Church	6141	1	92.7	10	4.1	11	95.5	1/25	1/22
Fredericksburg	4917	4	94.1	8	0		101.0	1/27	1/24
Galax	3831	31	70.1	30	7.0	2	54	1/31	1/28
Hampton	4425	16	84.1	19	6.1	5	629.5	1/35	1/30
Harrisonburg	4243	22	90.3	11	0		104.83	1/28	1/25
Hopewell	4558	11	82.0	24	2.3	14	167	1/28	1/26
Lynchburg	4714	8	94.2	7	2.0	15	438.5	1/29	1/27
Martinsville	4401	18	96.8	2	1.0	20	194.5	1/23	1/23
Newport News	4521	13	86.5	17	5.0	8	899	1/31	1/28
Norfolk	4828	5	87.6	15	2.4	13	1942	1/31	1/28
Norton	4196	26	61.1	31	18.5	1	48	1/32	1/27
Petersburg	4802	6	87.8	14	0		291.2	1/31	1/24
Portsmouth	4437	15	83.6	22	7.0	2	800.5	1/32	1/29
Radford	4051	30	95.2	4	0		83	1/26	1/24
Richmond	5108	3	90.3	11	0		1627.3	1/28	1/25
Roanoke	4791	7	94.8	5	1.2	19	785	1/28	1/25
South Norfolk	4580	10	76.7	28	0		189	1/32	1/28
Staunton	4217	24	84.1	19	0		142.8	1/31	1/27
Suffolk	4138	28	87.3	16	1.9	16	100	1/30	1/24
Virginia Beach	4543	12	80.3	26	4.9	10	58	1/36	1/29
Waynesboro	4420	17	80.1	27	6.6	4	146	1/28	1/25
Williamsburg	4653	9	94.7	6	0		116.33	1/30	1/27
Winchester	4314	21	84.1	19	1.6	18	119.5	1/34	1/25
$4760 (Mean)							10,907.78 (Total)	1/29 (Total)	1/27 (Total)

School Division	Average Salary	Rank	% of Teachers With Degrees	Rank	% of Teachers With Special Licenses	Rank	Total Positions	Pupil/Teacher Ratio Elem.	Total
Accomac	$3692	76	63.1	76	10.5	31	219	1/37	1/30
Albemarle	4322	8	77.9	26	.4	88	213.7	1/33	1/29
Alleghany	3896	32	62.6	77	16.8	11	78.5	1/34	1/31
Amelia	3761	58	76.2	33	0		73.5	1/38	1/29
Amherst	3700	75	66.2	65	10.1	36	150	1/34	1/30
Appomattox	3935	25	64.0	75	10.1	36	84.33	1/30	1/25
Arlington	6047	1	96.1	1	1.9	81	1199	1/30	1/22
Augusta	3840	42	68.5	57	15.8	12	311.5	1/32	1/28
Bath	3665	78	73.5	47	7.5	51	47	1/31	1/25
Bedford	3782	55	67.9	58	14.5	16	263	1/33	1/25
Bland	3616	82	60.3	83	0		47	1/35	1/28
Botetourt	3728	67	65.4	68	10.4	33	161	1/28	1/25
Brunswick	3869	39	81.4	17	.5	87	165	1/34	1/30
Buchanan	3534	85	36.5	96	37.5	1	280	1/46	1/38
Buckingham	3728	68	78.2	24	5.2	63	104	1/32	1/27
Campbell	3849	40	76.6	31	11.5	26	301.5	1/32	1/28
Caroline	3886	35	74.0	45	1.5	83	116.2	1/35	1/28
Carroll	3626	86	54.9	88	21.4	7	180	1/34	1/31
Charles City	3717	71	78.5	23	14.2	18	61	1/33	1/25
Charlotte	3870	38	74.4	42	3.0	74	121	1/33	1/29
Chesterfield	4290	9	81.8	16	6.9	52	583	1/32	1/29
Clarke	3906	30	72.6	53	9.5	40	69	1/34	1/26
Craig	3645	80	48.2	93	10.3	34	24.2	1/37	1/31
Culpeper	3818	49	80.1	19	6.3	58	134.67	1/35	1/27
Cumberland	3929	26	73.7	46	8.1	48	58.2	1/36	1/30
Dickenson	3442	90	36.7	95	36.7	2	192.6	1/38	1/31
Dinwiddie	3988	19	82.8	11	2.6	76	145	1/35	1/30
Essex	3791	53	77.9	26	0		63	1/31	1/25
Fairfax	5416	2	92.1	2	1.4	85	2438	1/30	1/26
Fauquier	4070	17	64.7	72	12.6	23	203	1/33	1/28
Floyd	3583	84	62.5	78	17.3	10	97	1/27	1/25
Fluvanna	3903	31	64.7	72	17.6	8	76	1/24	1/22
Franklin	3718	70	60.7	79	13.6	22	213.5	1/35	1/30
Frederick	3721	69	60.5	80	23.4	4	161	1/36	1/31

School Division	Average Salary	Rank	% of Teachers With Degrees	Rank	% of Teachers With Special Licenses	Rank	Total Positions	Pupil/Teacher Ratio Elem.	Total
Giles	4170	14	79.2	22	4.5	67	187.17	1/28	1/25
Gloucester	4012	18	67.3	61	3.2	72	91	1/32	1/28
Goochland	3789	54	76.3	32	7.8	50	68.9	1/34	1/31
Grayson	3464	89	51.5	90	24.6	3	116	1/36	1/31
Greene	3435	91	57.1	87	14.2	18	37.5	1/33	1/29
Greensville	3962	22	88.8	4	0		126	1/41	1/36
Halifax	3837	43	69.3	56	3.0	74	274	1/40	1/33
Hanover	3884	36	73.2	51	5.8	59	237	1/32	1/28
Henrico	4626	4	90.0	3	2.3	77	993	1/26	1/25
Henry	3927	28	82.5	13	.9	86	327.25	1/37	1/31
Highland	3745	62	64.2	74	10.7	30	24.67	1/32	1/27
Isle of Wight	4116	15	77.9	26	0		150.6	1/36	1/30
King George	3487	87	66.1	66	22.0	6	60	1/32	1/25
King and Queen	3751	60	73.5	47	5.8	59	60.5	1/32	1/26
King William	4189	12	74.3	43	4.8	66	73	1/31	1/25
Lancaster	3894	33	72.6	53	9.5	40	74	1/34	1/28
Lee	3748	61	65.0	70	3.2	72	240	1/35	1/29
Loudoun	4325	7	73.4	50	8.8	45	205.4	1/33	1/29
Louisa	3828	46	75.6	37	4.5	67	105.33	1/38	1/31
Lunenburg	3920	29	75.8	36	4.1	70	114.75	1/36	1/29
Madison	3758	59	59.6	84	11.2	27	58	1/34	1/31
Mathews	3792	52	66.6	64	10.0	38	56	1/31	1/24
Mecklenburg	3730	66	76.1	34	5.0	64	293.5	1/35	1/29
Middlesex	3823	46	76.9	30	0		55	1/35	1/28
Montgomery	3729	67	82.6	12	6.7	54	239	1/36	1/28
Nansemond	3978	20	74.6	41	6.5	56	240	1/39	1/35
Nelson	3646	79	66.9	62	9.4	42	102	1/36	1/29
New Kent	3748	61	59.5	85	14.2	18	44	1/33	1/25
Norfolk	4214	11	80.6	18	14.6	14	554	1/33	1/29
Northampton	3770	56	79.3	20	2.3	77	127.5	1/36	1/32
Northumberland	3797	51	73.5	47	6.8	53	91	1/31	1/26
Nottoway	3820	48	83.3	10	2.0	79	144	1/31	1/26
Orange	4098	16	75.0	40	3.5	71	105.5	1/30	1/29
Page	3621	81	64.9	71	11.9	25	126	1/37	1/30
Patrick	3890	34	74.3	43	2.0	79	129	1/37	1/31

School Division	Average Salary	Rank	% of Teachers With Degrees	Rank	% of Teachers With Special Licenses	Rank	Total Positions	Pupil/Teacher Ratio Elem.	Total
Pittsylvania	3679	77	65.4	68	10.3	34	484	1/35	1/27
Powhatan	3797	51	88.6	5	5.6	62	53	1/35	1/27
Prince George	3721	69	75.3	39	9.7	39	150	1/34	1/29
Prince William	4870	3	83.5	9	9.1	44	368	1/33	1/29
Princess Anne	4257	10	88.5	6	6.7	54	619.25	1/35	1/32
Pulaski	3836	44	82.3	15	6.5	56	234.25	1/33	1/30
Rappahannock	3384	92	60.4	81	13.9	21	37	1/34	1/34
Richmond	3928	27	79.3	20	1.5	83	57	1/33	1/26
Roanoke	4355	6	84.0	7	4.4	69	504.3	1/31	1/28
Rockbridge	3831	45	66.1	66	7.9	49	203.5	1/28	1/24
Rockingham	3874	37	73.0	32	10.5	31	317.4	1/33	1/28
Russell	3955	23	48.3	92	15.2	13	225	1/37	1/32
Scott	3712	73	48.0	94	10.9	28	228	1/34	1/29
Shenandoah	3798	50	67.7	59	8.3	47	179	1/31	1/28
Smyth	3714	72	66.7	63	14.6	14	266.5	1/32	1/28
Southampton	3949	24	83.7	8	.3	89	255.7	1/31	1/27
Spotsylvania	3967	21	75.6	37	5.0	64	115	1/33	1/29
Stafford	3594	83	69.4	55	12.2	24	128	1/34	1/29
Surry	3843	41	82.4	14	1.7	82	55.46	1/37	1/30
Sussex	3739	64	77.1	29	0		107.98	1/39	1/33
Tazewell	3470	88	54.0	89	23.4	4	396.5	1/34	1/30
Warren	4175	13	58.8	86	9.2	43	107	1/35	1/28
Washington	3703	74	60.4	81	14.5	16	307.5	1/36	1/29
Westmoreland	3767	57	78.0	25	8.7	46	106	1/31	1/26
Wise	3731	65	50.8	91	17.6	8	404	1/37	1/31
Wythe	3741	63	67.4	60	10.8	29	202	1/34	1/27
York	4436	5	76.0	35	5.7	61	205	1/29	1/26
	$4209 (Mean)						20,881.01 (Total)	1/33 (Total)	1/28 (Total)
State	$4398						31,788.79 (State Total)	1/32 (State Total)	1/28 (State Total)

APPENDIX II

Tables Relative to Training of Teachers, Supply of Teachers, etc., in Virginia (1)

GRADUATES WHO ENTERED TEACHING, 1960-61 FROM VIRGINIA COLLEGES

Colleges	Postgraduate Professional	Collegiate Professional	Collegiate	Total	Subtotal
State Higher Institutions Whose Primary Responsibilities Are to Prepare Teachers					
Longwood	.....	147	6	153	
Madison	.....	132	8	140	
Radford	.....	160	6	166	
					459
State Higher Institutions with Programs for the Preparation of Teachers					
Mary Washington	.....	62	12	74	
William and Mary	.....	38	21	59	
William and Mary (Norfolk)	.....	32	18	50	
Richmond Professional Institute	1	34	15	50	
University of Virginia	1	20	11	32	
Virginia Polytechnic Institute	.....	38	18	56	
Virginia State	.....	75	11	86	
Virginia State (Norfolk)	.....	35	5	40	
State Higher Institutions—No Teacher Preparation Program					
Virginia Military Institute	.....	.....	11	11	
					458
Independent Higher Institutions with Programs in Teacher Preparation					
Bridgewater	.....	18	11	29	
Eastern Mennonite	.....	.....	3	3	
Emory and Henry	.....	18	21	39	
Hampton Institute	.....	49	7	56	
Lynchburg	.....	17	44	61	
Randolph-Macon (Men)	.....	.....	10	10	
Randolph-Macon (Women)	.....	5	8	13	
Roanoke	.....	11	12	23	
St. Paul's	.....	19	1	20	
Shenandoah Conservatory of Music	.....	8	1	9	
Richmond	.....	1	32	33	
Westhampton	.....	3	53	56	
Virginia Union	.....	62	22	84	
Sweet Briar	.....	.....	10	10	
Mary Baldwin	.....	12	6	18	
Hollins	.....	4	7	11	
					475
Independent Higher Institutions—No Teacher Preparation Program					
Hampden-Sydney	.....	.....	5	5	
Washington and Lee	.....	.....	2	2	
Presbyterian School of Christian Education	.....	.....	1	1	
					8
Total	2	1,000	398	1,400	1,400

TEACHER SUPPLY AND DEMAND

1960-61

Additional Teachers Needed for Increased School Enrollment		
Elementary grades	227	
High schools	863	
Total	1,090	
Loss of Teachers Due to Resignation		
Marriage, Household Duties	1,600	
Transfer of Husband	696	
Accepted Positions Out-of-State or Private School	482	
Private Employment	323	
Retirement	284	
Illness	139	
Others	660	
Total	4,184	
New Teacher Supply		
Virginia	2,142	46%
Out-of-State	2,523	54%
Total	4,665	
Teachers Needed in Excess of Supply	609	
	5,274*	

SOURCE OF SUPPLY OF NEW VIRGINIA TEACHERS, 1960-61

Total supply new teachers			4,665
From Virginia		2,142	
1959-60 graduates	1,400		
Teachers returning after absence	301		
Special License	441		
From out of State		2,523	
1959-60 graduates	1,271		
Transfer teachers	1,252		

* Does not include 809 additional teachers required to reduce overcrowding to a ratio of 30 pupils to a classroom.

INSTRUCTIONAL PERSONNEL

1960-61

New Certificates Issued

Postgraduate Professional		502
From out-of-State institutions	289	
From Virginia institutions	213	
Collegiate Professional		3,534
From out-of-State institutions	2,016	
From Virginia institutions	1,518	
Collegiate		1,143
From out-of-State institutions	624	
From Virginia institutions	519	
Special License		708
Total		5,887*
Out-of-State institutions	2,929**	
Virginia Institutions	2,958	

NUMBER OF DEGREES HELD BY 35,056 TEACHERS IN 1960-61

	Counties	Cities	Total
Doctors	21	15	36
Masters	2,467	2,191	4,658
Bachelors	15,246	8,345	23,591
Total	17,734	10,551	28,285

* Includes both certificates to new teachers and certificates of higher level issued to experienced teachers.

** Of this number 406 were Virginia teachers who earned credits at out-of-State institutions. There were actually 2,523 teachers from other states.

(1) All figures furnished by the State Department of Education.

APPENDIX III

Brief Descriptions of Team Teaching, Dual Progress Plan and Ungraded Primary Educational Research Projects Visited by Members of the Commission.

TEAM TEACHING

Of all the ideas to come out of the recent experiments in organising the school for good teaching, one of those capturing most attention is team teaching. There is no one definition of team teaching because it lends itself so well to local conditions, needs, and teacher talents. Team teaching is more than just co-operation among a group of teachers; it is a method of teaching which utilizes teacher talents, and school space and equipment to their utmost.

At the elementary school level we have traditionally organized a classroom of about 30 pupils at the same grade level. They are taught nearly every subject by the same teacher. To be equally expert in teaching arithmetic, history and geography, reading and other language arts, science, and even art, music and physical education is expecting a lot from one human being! If children of a wide range of abilities are included in the same classroom the teacher is really being spread too thin. Those subjects with which the teacher is least familiar are liable to be neglected. Under team teaching skilled instructors can become available to greater numbers of students.

Thus if Miss Brown's specialty is teaching fourth grade arithmetic, instead of just one class of 30 fourth grade pupils benefiting, as many as 120 or more 4th graders may have Miss Brown. Mrs. White, who is especially good at teaching history and geography, but only so-so at teaching arithmetic, is able to team up with Miss Brown and with Mrs. Lewis who has specialized in teaching reading and other language arts, and Mr. Able an expert in teaching science. So far this sounds just like an expert for each subject as has been the case in the high school for many years. But the heart of the team idea seems to be that members of the team plan together, communicate, and collaborate without restraint. It also preserves the inter-relatedness of subjects and learning. Even a small team has a leader. The plan as used in some school systems has a hierarchy of team leader, master teachers, regular teacher, intern teacher, and non-professionals such as instructional and clerical aides. Teams may work either at all grade levels in a single subject; or they may work at one grade level but in several subjects as in the example given above for the elementary school.

At the high school level teams usually work in one subject area. Thus a team of four English teachers might teach freshman English to 150 or more students. One member could be researching and preparing to make a presentation of the work to be taken up next week, or the week following, while his team colleagues are providing the students with high level instruction for the current work. Some days the group may be divided up into smaller groups for practice, discussion, remedial or advanced work, make-up, testing, etc.

The school which does not have rooms large enough for large group instruction can use smaller teams or rotate groups.

The best team teaching would probably be in a building which has flexibility of space, so that groups of varying size could be accommodated. Such buildings have been and are being built, at the approximately same

cost as the traditional school building. But a school system need not wait on such a building to inaugurate team teaching. All that is needed is the understanding and acceptance of the idea by the teachers who will make up a team, and the support of the administration and community.

DUAL PROGRESS PLAN

The *Dual Progress Plan* is another attempt to break away from the so-called "self-contained" elementary classroom, where 20 to 30 pupils are taught almost all subjects by the same teacher. Yet it does not go all the way to "departmentalization" where each subject is taught by a subject expert (as in the high school), and no inter-relatedness between subjects or learning is preserved.

This Plan is more easily defined because it follows a proposal made by Dr. George Stoddard, Dean of the School of Education at New York University, and is being tried out in grades 3—6 of the elementary schools, and in grades 7 and 8 of the junior high schools in Long Beach and Ossining, New York.

Under the Plan, pupils progress in their subjects along two tracks. One half the day is spent in a two hour class with the homeroom teacher, studying the social studies (history, geography, etc.) and all learning concerned with reading, writing, and speaking; and a 40 minute period of physical education.

The social-studies-language-arts combination is called the "core." In both the core and physical education the pupils are grouped according to ability within their own grade level. A child's grade in school is determined by his core placement.

The other half day is spent with different specialist teachers in 40 minute classes in science, mathematics, arts and crafts, and music. During this half day the pupil is not held to grade level, but may advance without grade-level restrictions as fast and as far as his abilities will permit. Thus an able pupil who is in 4th grade "core" subjects may be in a science class with a few other fourth graders, and perhaps 5th, 6th, and even 7th grade pupils. The slow learner is also able to move at the speed and depth which his abilities permit. Thus instruction is more individualized under the dual progress plan. Obviously teachers of special competencies have to be trained or re-trained before such a plan can be inaugurated. Dr. Stoddard doesn't see this plan as a ready-made remedy for every school. But hopes it will show a way which can be adapted to meet local objectives and needs.

UNGRADED PRIMARY

The "ungraded" primary is a recent trend in elementary school organization which removes the grade lines during the first three years of school. This plan provides for continuous growth and development of the individual pupil unrestricted by grade lines. Ideally, no child is forced into trying to perform tasks for which he is not ready, but is moved along as fast as he is able to. Thus the child does not have to repeat the whole of a grade if he isn't quite up to "standard" in one or more subjects when school is out in June. Children may make spurts in their progress in one or more subjects and be ready for advanced work in those. He may be working at three or four levels in as many subjects. At the end of three years in the primary unit the majority of children will be ready to go into grade four. Some children will not be ready for grade four and will be held in the primary unit for a longer period. A few children may be ready for placement in grade four before the normal three year period is up.

The time which a child spends in the primary unit may be spent with the same teacher or with several teachers, depending on how local system wishes to set it up.

Under some ungraded plans the child may shift to another class at almost anytime, while in others shifts are controlled on a quarter or semester basis.

The oldest known plan for the ungraded primary unit is that found in Milwaukee, Wisconsin. In Milwaukee—The pilot program started in three of the elementary schools of the city and went on this basis for three years. Finding that the results were most desirable other schools were added as they *asked* to do it. No school was forced into this by the central office, but now nineteen years after it first started, the ungraded primary organization is found in 115 out of 117 elementary schools in the city.

The program formally consists of what would ordinarily be thought of as grades one to three. In actuality, however, the two-year nursery-kindergarten program is an important preparation for the ungraded primary program. In the kindergarten screening and readiness functions are carried out.

The Milwaukee school system continues on a mid-year promotion basis which facilitates their program.

The average child will spend three years or six semesters in the primary before going on to fourth grade. Some will spend only five semesters, a very few, only four semesters. Slower students may need to spend seven or eight semesters before going on to fourth grade. It can be seen that a teacher may have children in her class who have been in school for varying lengths of time. Classes are assembled by reading level of children who can work well together. The child, although he may be moved ahead rapidly or may take longer to do the work, is not moved forward until he does the work. Thus, an advanced child who has been in school only 3 semesters, might be working with children who have been in school 5 semesters. No labels are put on children and the stigma of failure does not appear before fourth grade. The Milwaukee plan is presented merely to show one way the idea can be implemented.

The following persons were in charge of experimental programs, as listed, when visited by members of the Commission:

1. Team Teaching

   Mr. Bryce Perkins, Director
   THE NORWALK PLAN
   Norwalk Board of Education
   Magrath School
   South Norwalk, Connecticut.

   SUPRAD
   Harvard University
   Graduate School of Education
   Lawrence Hall, Kirkland Street
   Cambridge 38, Massachusetts.

   Dr. Medill Bair
   Superintendent of Schools
   Lexington Public Schools
   1557 Massachusetts Avenue
   Lexington 73, Massachusetts.

2. Dual Progress Plan

Dr. Glen Heathers, Director
Experimental Teaching Center
School of Education
New York University
Room 520 MAIN
New York 3, New York.

Dr. Gilbert M. Trachtman
Research Coordinator
Long Beach Public School System
Long Beach, New York.

Mr. David W. Bishop, Study Director
Ossining Public School System
Ossining, New York.

3. Ungraded Primary Schools

Florence C. Kelly, Director
Division of Primary Curriculum and Instruction
Milwaukee Public Schools
1111 N. 10th Street
Milwaukee 1, Wisconsin.

4. Teacher Aides

Charles B. Park
Director of Special Studies
Central Michigan University
Mount Pleasant, Michigan.

T. Margaret Jamer, Director
School Volunteers
125 West 54th Street
New York 19, New York.

5. Improvement of Rural Schools

Noble J. Gividen, Coordinator
Catskill Area Project
215 Home Economics Building
State University College of Education
Oneonta, New York.

Ralph G. Bohrson, Director
Rocky Mountain Area Project
Department of Education
Denver 2, Colorado.

APPENDIX IV

Statement of Policy, Elementary Schools, Adopted by State Board of Education February, 1961.

The way of life cherished in the United States is unique in that it is founded on a great spiritual heritage, the ability of people to govern themselves through representative government, and a recognition of the dignity and integrity of the individual.

The home, the church, and the school are basic institutions responsible for the development of our children. These three, along with other community resources, must share this responsibility, and the extent to which they are continually strengthened determines the quality of our citizenry.

School practices and policies evolve from a knowledge of the nature of boys and girls, convictions regarding the environment most conducive to learning, and a fervent commitment to the fundamental principles underlying our form of government.

Of all educational institutions, the elementary school reaches the greatest number of girls and boys for the longest period of time. The elementary school represents the nation's most wide-spread provision for the education of its people.

Education is no stronger that the foundation on which it is built. Quality in education, therefore, at the upper levels is dependent on the soundness of instruction in the elementary school.

Purpose. The purpose of the elementary school is to provide the foundational instruction that will enable each child, commensurate with his stage of maturity, to:

Read, write, and speak with fluency and clarity; spell, add, subtract, multiply and divide with meaning and accuracy;

Develop and cherish a commitment to his own national and spiritual heritage, and gain knowledge of the culture and history of other peoples;

Acquire an understanding of the Universe and the influence of geographic factors on life with particular emphasis on the geography of his own country;

Continue to develop those qualities of character that are revealed in good moral conduct, an appreciation of noble sacrifice, and a reverence for things spiritual;

Learn, and gain satisfaction from, orderly and critical thinking involved in collecting information, grasping ideas, and drawing conclusions;

Appreciate the beauties of nature, and the great products of the human imagination found in music, art, and literature;

Grow in a sense of responsibility to his group while maintaining his individuality and to develop a spirit of responsibility and self-discipline; and

Develop habits conducive to sound health, safe living, and physical and mental well-being.

Some of the above purposes are shared with other agencies and institutions of the community. The elementary school is the institution charged with the primary responsibility for the development of the skills of learning and the child's rational powers in keeping with his stage of maturity. It, consequently, must provide for the basic education in the skills of reading, writing, speaking, listening, and computing. The elementary school is also the primary institution for developing understandings and appreciations through the first systematic instruction for the child in the fields of history, government, science, mathematics, and the like. While the achievement of other purposes such as the development of character and moral and spiritual values is fundamental to the child's education, this responsibility is shared with other agencies.

It is necessary that the meaning of literacy be continuously re-interpreted in light of the challenges and demands of each age. For example, reading for today's children is a far more extensive experience than it was for children of fifty years ago. The same is true of all other skills. This gives added responsibility and challenge to the elementary school.

The Teacher. The classroom teacher is the most important single factor in developing the total instructional program. Within the framework of State and local requirements and policies, it is the teacher who finally plans and carries forward an effective instructional program. To perform this task the teacher must have a knowledge of the subject content, an understanding of children at various stages of maturity, and the ability to stimulate their desire to learn.

The Pupil. The child learns best when he has purpose in what he attempts to do and when he can apply what he learns. His learning is individual because he brings to each situation his own special background of experience. His educational development is affected by his state of physical and mental health, and by his attitudes toward self, teachers, fellow students, the work to be done, and toward learning itself. He learns skills and attitudes at the same time. He learns a great deal through association with those about him, and the kind of life they exemplify.

Time to Teach and Time to Learn. There must be adequate time to teach and adequate time to learn. Teachers must be afforded an uninterrupted opportunity to teach and inspire if quality learning is to be expected. Administrators and supervisors should periodically reassess the plan of school organization with a view of assuring that the most efficient use is made of the teacher's talents and training. Furthermore, a realistic approach should be taken regarding what is expected of teachers in terms of maximum proficiency and preparation for the variety of subjects to be taught.

Need for Continuing Study. Some of the studies which are currently being made in Virginia's elementary schools are concerned with such matters as: teaching a foreign language, plan of school organization, the role of guidance, plans for grouping children both in classrooms and on a school-wide basis, team teaching, television, and the use of "programed" materials.

These and other problems should be faced through continuing study and careful research in order that elementary education may fully realize its purpose in these rapidly changing times.

APPENDIX V

Proposed Minimum Elementary Curriculum, Commonwealth of Pennsylvania (Committee on Education, Commonwealth of Pennsylvania, April, 1961)

First Grade

Subject Area	*Minutes Per Week*
Opening Exercises Planning	100
Language Arts*	675
Reading (450 minutes)	
Oral English	
Creative Writing	
Handwriting	
Usage	
Spelling	
Foreign Language (optional)**	
Library (see note, page 81)	
Appreciation	
Circulation	
Social Studies	310
Science	
Health	
Safety	
Classroom Living	
Arithmetic	125
Creative Activities	
Arts, Music and Dramatics	200
Recess, Physical Education, or Free Play	200
	1,650

Second and Third Grades

Subject Area	*Minutes Per Week*
Opening Exercises and Planning	80
Language Arts	650
Reading (450 minutes)	
Oral English	
Creative Writing	
Handwriting	
Usage	
Spelling	
Foreign Language (optional)	
Library (see note, page 81)	
Appreciation	
Circulation	
Reference	

* Instruction in phonics and the use of the dictionary should be an integral part of the language art program in grades one through six.

** Foreign languages are an optional part of the language arts program in grades one through six. If they are taught time may be taken from any area at the discretion of the school.

Social Studies	300
Science	
Health	
Safety	
Arithmetic	180
Creative Activities	
Art, Music, and Dramatics	200
Recess, Physical Education, or Free Play	200
	1,650

Fourth, Fifth and Sixth Grades

Subject Area	*Minutes Per Week*
Opening Exercises and Planning	60
Language Arts	500
Reading	200
English	180
Oral English	
Creative Writing	
Usage	
Spelling	80
Handwriting	40
Foreign Language (optional)	
Library (see note)	
Appreciation	
Circulation	
Reference	
Arithmetic	200
Social Studies	240
Geography	
History	
Civics	
Science and Health	180
Creative Activities	
Art, Music, and Dramatics	200
Physical Education and Recess	150
Games	
Team Sport	
Individual Activities	
	1,650

Note: The library schedule is intended for schools with a central library having a staff and a collection which meet the minimum library standards of the Department of Public Instruction. Where necessary arrangements may be made among schools to share the collection and services of the librarian and clerk.

APPENDIX VI

List of persons who conferred with the Commission on teaching of reading, educational television, programmed instruction and school libraries.

1. Teaching of Reading

Mrs. Betty H. Yarborough
Norfolk County, Virginia

Miss Mary Virginia Willson
Richmond, Virginia

Miss Florence Weiss
Richmond, Virginia

Miss Carolyn Weiss
Richmond, Virginia

Mrs. Mary Stewart Hammond
Roanoke, Virginia

2. Educational Television

Dr. H. I. Willett
Superintendent of Schools
Richmond, Virginia

Miss Mary Anne Franklin
Director of Television
Richmond City Schools
Richmond, Virginia

Clarence F. Manning, President
Virginia Educational Television, Inc.
Richmond, Virginia

Ray E. Reid
Superintendent of Arlington County Schools
Arlington, Virginia

Miss Martha Mendenhall, Chairman
Committee on Mass Media
Virginia Division
American Association of University Women
Arlington, Virginia

Mrs. Elizabeth P. Campbell, Vice-Chairman
Arlington County School Board
Arlington, Virginia

E. L. Lamberth
Superintendent of Schools
Norfolk, Virginia

Mrs. Grace Johnson Waters
Director of Educational Television
Norfolk City Schools
Norfolk, Virginia

Thomas P. Chisman
W.V.E.C. T.V. Radio
Hampton, Virginia

W. A. Lewis
Assistant Superintendent of Schools
Accomack County, Virginia

Samuel F. Carey
W.R.V.A. Television
Richmond, Virginia

3. Programmed Instruction

Dr. E. W. Rushton
Superintendent of Schools
Roanoke, Virginia

4. School Libraries

Joe W. Kraus, Librarian
Madison College
Harrisonburg, Virginia

Miss Ida Whyte
Director of Library Services
Norfolk City Schools
Norfolk, Virginia

Mrs. W. T. Leary, Chairman
Reading and Library Service Committee
Virginia Congress of Parents and Teachers
Portsmouth, Virginia

Miss Julia Frances Robinson
Supervisor of Libraries
Petersburg City Schools
Petersburg, Virginia

Miss Margaret Sue Copenhaver, Chairman
School Librarians' Section
Virginia Education Association
Richmond, Virginia

Mrs. Edwin B. Brooks, Jr.
Chesterfield County, Virginia

Frank C. Shirk
Carroll M. Newman Library
Virginia Polytechnic Institute
Blacksburg, Virginia

Roger P. Bristol
Alderman Library
University of Virginia
Charlottesville, Virginia

Miss Sterling Bagby, Librarian
Halifax County Library
Halifax, Virginia