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Virginia Commission on Higher Education

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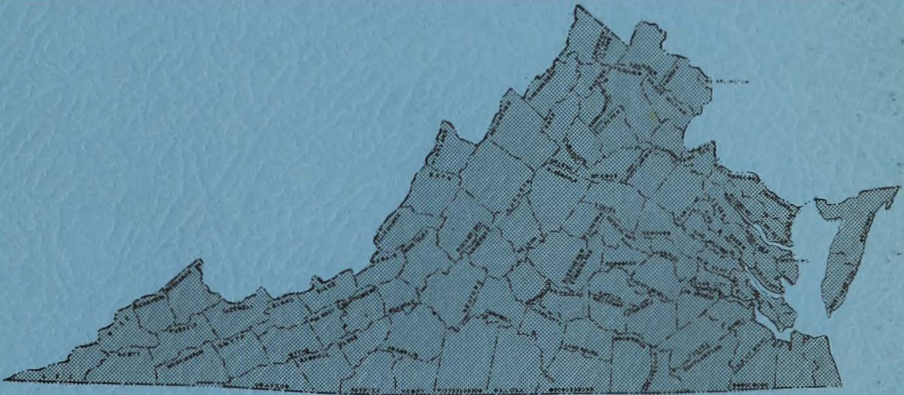
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**REPORT OF THE
HIGHER EDUCATION STUDY COMMISSION**
to
THE GOVERNOR
and
THE GENERAL ASSEMBLY OF VIRGINIA



COMMONWEALTH OF VIRGINIA
RICHMOND
DECEMBER, 1965

**REPORT OF THE
HIGHER EDUCATION STUDY COMMISSION**

Prepared by
John Dale Russell
Director of the Study

Lloyd C. Bird
Chairman of the Commission

Richmond, Virginia
December, 1965

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Secretariat to the Commission

STAFF REPORTS

The following Staff Reports are published as a part of the Study of Higher Education in Virginia. Copies of the Reports may be requested from the State Council of Higher Education for Virginia, 10th Floor, Life Insurance Company of Virginia Building, 914 Capital Street, Richmond, Virginia, 23219

- #1. Prospective College-age Population in Virginia, by Subregions
1960-1985
by Lorin Thompson
- #2. State-wide Pattern of Higher Education in Virginia
by James R. Connor
- #3. Geographical Origins of Students Attending College in Virginia
by John Dale Russell
- #4. The Two-year College in Virginia
by A. J. Brumbaugh
- #5. Instructional Programs in Virginia's Institutions of Higher Education
by John Dale Russell
- #6. Educational Programs in Virginia for Fields Related to Health
by William J. McGlothlin
- #7. Extension Services, Television Instruction, and Research in
Virginia's Institutions of Higher Education
by Richard G. Browne
- #8. The Faculties of Virginia's Colleges and Universities
by R. Jan LeCroy, Richard G. Browne, and James R. Connor
- #9. Library Services in Virginia's Institutions of Higher Education
by Errett W. McDiarmid
- #10. Instructional Plants in Virginia's Institutions of Higher Education
by John X. Jamrich and Harold L. Dahnke
- #11. Control and Coordination of Higher Education in Virginia
by John Dale Russell

REPORT OF THE HIGHER EDUCATION
STUDY COMMISSION

Richmond, Virginia, December 1965

To:

THE HONORABLE ALBERTIS S. HARRISON, JR., Governor of Virginia

and

THE GENERAL ASSEMBLY OF VIRGINIA

The 1964 session of the General Assembly of Virginia, in Senate Joint Resolution No. 30, made provision for the appointment of a Higher Education Study Commission, and gave directions for the work of this Commission in the following terms:

SENATE JOINT RESOLUTION NO. 30

WHEREAS, substantial growth of higher education is evidenced by the following trends:

- (1) unprecedented numbers of Virginians are seeking admission to institutions of higher learning;
- (2) employment opportunities in Virginia's changing and expanding economy are creating needs for more graduates at the post-high school, college and graduate levels;

(3) Virginia's program of industrial development is causing greater demands for advanced training and research in business, commercial, scientific and technological fields;

(4) urbanization, higher standards of living and related social changes are increasing requirements for medical, dental, and other professional and social services; and

WHEREAS, Public and private colleges and universities in Virginia are having to adjust and expand their educational programs, services, and facilities to accommodate these rapid changes and emerging requirements, thus generating progressively larger financial requirements that accentuate the increasing and conflicting pressures on public, private and corporate financial resources; and

WHEREAS, it is essential that Virginia's dual and complementary system of public and private colleges and universities be preserved, maintained and strengthened; and

WHEREAS, all these problems should be subjected to a comprehensive review and study in order to evaluate higher educational objectives, needs and resources and to develop a program of long-range planning for higher education in which both public and private colleges will continue to furnish their unique and valuable contributions to the economic progress of the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring That the Governor shall appoint a Commission on Higher Education, consisting of the State Council of Higher Education and eleven additional members to be chosen from the State at large. The Chairman shall be designated by the Governor. The Commission is directed to undertake a comprehensive study and review of higher education to be used as a basis for effective long-range planning as to objectives, needs and resources of public and private higher education in the Commonwealth of Virginia.

In addition to such other matters as may be included in its study and report, the Commission shall consult with State

institutions of higher education which operate off-campus branches, divisions or colleges, and with such state boards and departments as operate area vocational and technical schools, and shall then recommend to the Governor and the General Assembly procedures whereby such branches, divisions, colleges and schools may be consolidated into a state-wide system of comprehensive community colleges which offer post-high school education for terminal vocational and technical training, and for college-transfer programs of not more than two years duration.

The Director and staff of the State Council of Higher Education shall serve as the secretariat of the Commission.

The Commission shall also seek the guidance of the governing boards and administrative officials of public and private institutions of higher learning in the Commonwealth appropriate government officials, and representatives of Virginia business, industry and the professions.

All agencies of the State, educational and otherwise, shall cooperate with the Commission in the study.

The Commission shall conclude the study and make its report to the Governor and the General Assembly not later than October 1, 1965.

The members appointed to the Commission are listed on a preceding page of this volume. The Commission herewith presents its Report.

The Commission appointed a staff for carrying on the Study and approved an outline of topics to be covered. Several of the topics included in the Study required the collection and interpretation of extensive data; the detailed analyses of problems led, in many cases, to suggestions for their solution. The results of these detailed studies, prepared by staff members and consultants, are published as Staff

Reports, to make the information generally available. A list of the eleven Staff Reports is presented on a preceding page of this volume. The text of each Staff Report represents only the findings and interpretations of the author.

Each Staff Report was reviewed by the Commission, but only those suggestions and recommendations specifically incorporated in this Report carry the endorsement of the Commission. Many of the proposals of the consultants and staff do not fall within the province of the General Assembly; however, some pertain to internal administration of institutions of higher education and merit careful consideration and implementation. Publication of the detailed studies, therefore, is being authorized so that all parties concerned may have the benefit of the findings and be encouraged to engage in critical self-examination. Copies of these Staff Reports, as well as this Report of the Commission, may be requested from the State Council of Higher Education for Virginia, 914 Capital Street, Richmond, Virginia 23219.

The Study, as conceived by the Higher Education Study Commission, has been both intensive and extensive, and the time for gathering the data and preparing this Report has been short. From the institutions of higher education in Virginia, and other sources as well, a vast amount of information in statistical form has been collected,

analyzed, and digested, in order to reach the findings and conclusions for this Study. Each of the recognized institutions of higher education in the State was visited by one or more of the three major members of the Commission's staff -- the Director of the Study, the Associate Director, and the Research Associate. Contacts were made with many officials of State government and leaders throughout the State in various fields who could supply special information. A number of consultants were brought in for work on special problems in higher education. In most cases, these consultants are the authors of the Staff Reports on the topics that they investigated.

Acknowledgement should be made of the fine cooperation extended to the Study of Higher Education in Virginia by all the institutions and agencies in the State, public and private. The collection of the data on which the findings and recommendations are based imposed a heavy burden on the staff members of the institutions of higher education, and also on the staff members of some other state agencies. But in all cases, the required information was obtained. Every courtesy was extended to the staff members of the Commission in their visits to the institutions and the hospitable reception that was met everywhere is gratefully appreciated.

Special acknowledgement must be made of the exceptional service rendered by the staff and the membership of the State Council of Higher Education. By Senate Joint Resolution No. 30, the State Council of

Higher Education was designated as the secretariat for the Commission. This service has been carried on by the Council and its staff without any relief from their regular burdens in the State's system of higher education. The work of the Higher Education Study Commission could not possibly have been accomplished without the valuable assistance rendered by the State Council of Higher Education, which has handled all the housekeeping chores associated with the maintenance of this extensive investigation.

The Report of the Higher Education Study Commission, published herewith, was prepared in draft form by the Director of the Study. It was reviewed in detail by the Commission at meetings on December 8, 15, and 16, 1965. The recommendations in the Report are concurred in by both the Commission and its Director of Study. In order that these recommendations may be clearly identified, they are underlined wherever they appear in the text of this Report.

The Report of the Higher Education Study Commission and its recommendations are presented to the Governor of Virginia, the members of the General Assembly, and to all interested citizens of the Commonwealth, in the hope and expectation that the adoption of these recommendations will be influential in the continued improvement in the State's facilities for and service in higher education.

Respectfully submitted,
Lloyd C. Bird
Chairman of the Commission
1965

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CHAPTER I

VIRGINIA'S PERFORMANCE IN HIGHER EDUCATION

By long tradition in the United States, supported by interpretations of the Federal Constitution, the operation of public schools and institutions of higher education is a function of each of the several States. Each State is free to set up its educational system and its provisions according to its own pattern, subject only to the general restrictions of the Federal Constitution.

Although there is no national system of education in this country, the States have generally followed rather similar patterns in the broad outline of their organization for educational services. Uniformity has been achieved largely on a voluntary basis through the influences of professional organizations and accrediting associations that are national or regional in scope. Students freely cross state lines to attend school or college and the product of a State's educational system disperses for employment in a market for their services which is nationwide.

It is common practice for States to compare their provisions for education with those of other States. Each State normally has some conscience about carrying its fair share of the total national burden of providing education. A broad picture of Virginia's performance in higher

education may be obtained by comparisons with the general situation in the United States.

Virginia has a little more than 2 per cent of the total population of the United States; in the 1960 Census the almost 4,000,000 people in Virginia were 2.21 per cent of the national total of about 180,000,000. Virginia's population is increasing slightly faster than that of the entire country, and in 1964 the estimated total population of Virginia was 2.29 per cent of the total for the country. Virginia in 1964 is estimated to have had 2.35 per cent of the college-age population of the entire country (those 18-21 years of age), proportionately more than would be expected from the State's total population.

On economic factors, Virginia stands at about 2 per cent, or slightly less, of the totals for the entire country. For example, on the following economic measures, Virginia has 1.9 per cent or more of the national totals: personal income, number of housing units, housing units with one or more television sets, and motor vehicle registrations. An examination of many other sets of data for economic factors leads to the conclusion that in general Virginia has just slightly less than 2 per cent of the total economic strength of the United States. It should be noted, however, that although Virginia has 1.92 per cent of the total personal income of the United States as a whole, all tax collections of State and local governments in Virginia are only 1.50 per cent of the national total of such collections.

If two factors, population, which is somewhat above 2 per cent, and economic resources, slightly below 2 per cent, are combined it seems that as a rough measure of performance in higher education, Virginia should expect to carry about 2 per cent of the total national load.

Virginia approximately meets this 2 per cent expectation in the maintenance of its public schools, but falls considerably below that level on most measures of its service in higher education. On financial support of higher education, the several measures used show an average standing at about 1.70 or 1.80 of the national total. College enrollments in all institutions of higher education in Virginia were only 1.54 per cent of the national total in the fall of 1964. In that year, the colleges and universities in Virginia produced 1.65 per cent of the bachelor's degrees produced in the country as a whole, only 0.93 per cent of the master's degrees, and only 0.78 per cent of the doctor's degrees. The foregoing figures are for all institutions combined, publicly and privately controlled.

For Virginia's institutions of higher education to have enrolled 2 per cent of the national total of students attending college in the fall of 1964, accommodations for an increase of 25,000 students would have been required in Virginia; this would mean approximately the doubling of the enrollments of the four largest institutions in the State. If Virginia's enrollments in institutions of higher education had equalled its percentage

of the total college-age population in 1964, the additional accommodations needed would have required a doubling of the enrollments of all but one of the state-controlled institutions in the Commonwealth. There can be no other conclusion but that Virginia is failing to provide higher education within its borders to the extent that would be justified by the relation of the State's population and economic resources to the national totals. The detailed treatment of the statistics on which this conclusion is based is presented in Staff Report #2.

The privately controlled institutions of higher education in Virginia are making a strong contribution in the production of bachelor's degrees in most of the fields of the liberal arts and in theology. In general, the privately controlled institutions have only limited programs of graduate work at the master's level, and no doctoral programs except in theology. Staff Report #2 presents data showing the production of degrees at each academic level in recent years in Virginia for each special subject matter field. There are relatively few fields in which the Virginia institutions produce more than the expected 2 per cent of the national totals, but many fields in which the production is markedly below this expected level.

The foregoing statistics have related to Virginia's performance in higher education in the immediate past. What will be the load of students that may be expected to attend Virginia's institutions of higher education in the future? The projection of future enrollments requires first of all

an estimate of the future college-age population, for this is the group from which potential college students are drawn. A demographic study of Virginia's population, projecting future college-age population in 1980 and 1985 is presented in Staff Report #1. To the data of college-age population can then be applied the estimated percentage of college attendance to project the number who will be enrolled in Virginia's institutions in future years. Throughout the country, and also in Virginia, the percentage that college enrollments are of college-age population has been steadily increasing over a long period of time, and the increases have been accelerated in the past decade. There is every reason to believe that the rate of college attendance will continue to increase, not only in the country as a whole, but also in Virginia. Virginia at present is considerably below the national average in the percentage that its college enrollments are of its college-age population. It may be expected that the increases in this percentage will be more rapid in Virginia than in the nation as a whole, as this State seeks to catch up or correct its present below-par status. On the basis of such data and considerations, Staff Report #2 makes projections of the probable number of students who will be attending Virginia colleges and universities during the next 15 years, up to 1980.

It should be noted that all these young people who will be attending college up to 1980 are already born and the total number in the pool from

which college students will be drawn can be estimated with reasonable accuracy. There were 78,041 students attending college in Virginia in the fall of 1964. The projections of future enrollments, which have been made on a rather conservative basis, indicate that the number will approximately double by 1975. The rate of expansion in enrollments will continue until at least 1980; the estimates indicate that in 1980, about 182,000 students should be attending colleges and universities in Virginia. By a less conservative estimate, the number might go as high as 223,000 by 1980. Forecasts have not been made beyond 1980, but the indications are that the increases in college enrollments will continue through the remaining decades of the twentieth century.

To provide the accommodations that will be necessary for those who will want to attend college in Virginia, it is urgent that planning be initiated at the earliest possible date. Virginia has the problem, not only of making suitable provisions for the increases of college attendance that are bound to result from the increases in college-age population and in the percentage of young people who want to attend college, but also the problem of catching up with past deficiencies in the provision of higher education. The doubling of the present provisions in the next 10 or 12 years may seem a staggering burden, but it represents a rate of expansion that is not much greater than that maintained in the past in Virginia. The rate is also similar to the kinds of expansion that have occurred and that will occur in most of the other States in the United States.

CHAPTER II

THE INSTITUTIONAL PATTERN OF HIGHER EDUCATION IN VIRGINIA

The definitive list of institutions of higher education in Virginia, as prepared by the State Board of Education for the fall of 1964, consisted of a total of 57 institutions. There are 13 institutions under state control that have programs of four years or more leading to the bachelor's or higher degree, and 21 institutions under private control with programs of that length. There are 12 institutions under private control that offer programs of less than a bachelor's degree which are, for convenience, called two-year colleges for the purpose of this Study. There are 11 institutions under state control that offer programs of this length. Each of these 11 is operated as a branch of one of three parent institutions; five are branches of the University of Virginia, four of Virginia Polytechnic Institute, and two of The College of William and Mary.

The privately controlled colleges, both the four-year and the two-year, are an important segment of Virginia's facilities for higher education. Most of them are liberal arts colleges, and as previously noted, they contribute heavily to the production of bachelor's degrees in the subject matter areas of the arts and sciences. Only a few of the

privately controlled colleges and universities in Virginia offer graduate courses, and most of those have only limited programs at this level. Many of the privately controlled institutions are church-related. Others are independent foundations. Most of the privately controlled colleges have relatively small enrollments, and altogether these institutions account for only about one-third of the students attending college in Virginia. Two of the privately controlled colleges date their founding in the 18th century; the youngest of the privately controlled institutions was founded in 1958. An announcement has been made of the establishment in the near future of another privately controlled college related to one of the religious denominations. As in most other States, the privately controlled colleges in Virginia do not receive appropriations of public funds.

All the publicly controlled colleges in Virginia are under the immediate control of the State. Virginia has no institutions of higher education under the control of local governmental agencies, such as a municipal university or community college. In the present Study, the publicly controlled institutions of Virginia are, therefore, generally referred to as state-controlled.

One of the state-controlled institutions in Virginia is the second oldest college in the United States-- The College of William and Mary, founded in 1693. It is only in the 20th century that this institution has become state-controlled. The University of Virginia, founded in 1819,

has the distinction of being planned by Thomas Jefferson. It has long served as the state university in Virginia. Virginia Polytechnic Institute is the State's land-grant university. Virginia State College at Petersburg is also a land-grant college, its organization dating from the time when separate facilities were maintained for students of each race; it still shares in the Federal funds for the support of land-grant colleges. Virginia State College maintains a branch at Norfolk, where a four-year program of instruction is provided and also a vocational-technical curriculum of less than baccalaureate degree length.

The Medical College of Virginia, located in Richmond, limits its instruction and research, as its name indicates, to the health fields, with medicine, dentistry, pharmacy, nursing, and similar subjects constituting the main areas of service. The Virginia Military Institute at Lexington is one of the few four-year military schools maintained as a part of a state system of higher education in the United States.

Four of the state-controlled institutions in Virginia were originally teachers colleges; the word "teachers" has been dropped from their titles in recent years, though they still give strong emphasis to the preparation of personnel for the public schools. The former teachers colleges are Longwood College, Madison College, Radford College, and Mary Washington College. The first three of these are independent institutions, each having its own controlling board; Mary Washington

College is operated as a four-year branch of the University of Virginia.

Old Dominion College at Norfolk is one of the newer institutions in the State's system. Originally developed out of a branch college maintained by The College of William and Mary, in recent years it has been given independent status as a four-year degree-granting institution with its own Board of Visitors.

Richmond Professional Institute is another recent addition to the family of higher education in Virginia. Some years ago, as a privately controlled institution in Richmond, it became associated with The College of William and Mary and then was given independent status as a four-year institution under state control with its own Board of Visitors.

To a greater extent than any other state, Virginia follows the pattern of maintaining separate schools for each sex in its state-controlled institutions of higher education. This was formerly a common pattern in the South, but the Southern States in general have converted their institutions to a coeducational pattern, though in some states one institution exclusively for women is still maintained. In Virginia, Virginia Military Institute, as would be expected, is exclusively for men students. The University of Virginia admits only men to its undergraduate College of Arts and Sciences, although women are admitted to some of the other undergraduate colleges and to graduate and advanced professional schools. Women students, however,

constitute only a minority of the total enrollment at the University of Virginia. Virginia Polytechnic Institute has also been in the past predominantly a college for men. The policy has been changed recently and the institution now admits women on an equal basis with men, to the limit of the available housing facilities. Because of the nature of the curriculums offered at Virginia Polytechnic Institute, which are heavily concentrated in agriculture, engineering, and the sciences, women still constitute a small minority of the total enrollment.

The four institutions that formerly were teachers colleges, Longwood College, Madison College, Radford College, and Mary Washington College, admit only women as students. This limitation has been relaxed somewhat in recent years in the first three of these institutions, for the benefit of young men living in the community who do not require institutional housing or for men who want to attend only in the summer session. Mary Washington College is designated as the woman's branch of the University of Virginia. Apparently the statute enacted in 1964, which gave new Boards of Visitors to Longwood College, Madison College, and Radford College, repealed any former statutory provisions requiring these Colleges to admit only women students.

The College of William and Mary, the Medical College of Virginia, and Virginia State College at Petersburg are all coeducational. At The College of William and Mary, the attempt is made to preserve a ratio of about 60 men to 40 women in the student body. The more recently

established institutions, Old Dominion College in Norfolk, Richmond Professional Institute in Richmond, and the Norfolk Division of Virginia State College at Petersburg, are coeducational. All the two-year branch colleges in the state system are coeducational although at one, Roanoke Technical Institute, the nature of the curriculum in the past has been such as to attract chiefly men as students.

In 1964, the General Assembly of Virginia established the Board of Technical Education, with authority to develop a system of two-year college programs of the technical institute type throughout the State. This Board has gone to work actively, with a competent staff, to promote the development of institutions which are to be called technical colleges. Federal funds are available for the development and support of these new institutions. Their programs are to lay heavy emphasis on technical subjects that will lead to occupational competence in programs of two years or less in length beyond the high school. The necessary supporting courses in the sciences, social sciences, and humanities, are also to be offered in these technical curriculums. The first of these technical colleges was opened in the fall of 1965 and two others are in advanced states of planning at the time of the writing of this Report. Inasmuch as none of these institutions was in operation in 1964-65, the year for which data for the present Study of Higher Education in Virginia were gathered, there is no analysis of their programs in this Report. There can be no doubt, however, that the instructional programs in these new technical colleges will be significant additions to the service of higher education in Virginia.

There are also a few institutions in Virginia offering vocational-technical education under an arrangement with the State Board of Education. Five of these are associated with local school systems and the programs are not considered to be of college grade. In some cases, however, a majority of the students are high school graduates. Four of these programs are operated by four-year state-controlled institutions, in close association with their campus programs, at Old Dominion College, at Virginia State College, both at Petersburg and Norfolk, and at Richmond Professional Institute. Statistics from these vocational-technical schools are not included in the present Study of Higher Education in Virginia. Although these vocational-technical schools are not considered part of higher education in Virginia, they do offer post-high school training to citizens of the areas where they are located.

Geographical Distribution of Institutions

In Staff Report #2, a series of maps is presented showing the locations in Virginia of the institutions offering various kinds of programs and serving various kinds of students in higher education. The background of one of the series of maps shows the estimated college-age population in various subregions of the State in 1965; the other series shows the background as the college-age population is expected to be in 1980.

Many of the state-controlled institutions of higher education in Virginia are located where there is no large concentration of population. One major area of the State, where there is both a large population and one that is rapidly increasing, has no degree-granting institution of higher education and only two small two-year colleges, one privately and one state-controlled; this is the northern area of the State across the Potomac River from the District of Columbia.

The Hampton Roads area has had very limited facilities for higher education until recently. In Southside Hampton Roads, Old Dominion College at Norfolk and the Norfolk Division of Virginia State College have recently been established; the area is also served by Frederick College, the youngest of the privately controlled colleges in Virginia. Northside Hampton Roads has the service of Hampton Institute, which has been predominantly attended by Negro students. Rather recently, Christopher Newport College, a branch of The College of William and Mary, has been set up at Newport News to offer a two-year curriculum, including some courses that emphasize technical preparation of a terminal sort. The Apprentice School is also located in Newport News. Its enrollment is limited to men serving apprenticeships with a large shipbuilding firm there. The institutions of higher education which the State has organized in the Hampton Roads area have all flourished. It is clear that they meet a long felt need,

and the communities involved have been generous in providing support for them from non-State sources.

As a general rule, the privately controlled institutions of higher education in Virginia are located away from the main centers of population in the State. One exception is the privately controlled institution with the largest enrollment, the University of Richmond, which is located in the State's capital city. Virginia Union University and the Presbyterian School of Christian Education are also located in Richmond, as well as Union Theological Seminary. As previously noted, Hampton Institute is located in the Northside Hampton Roads area and Frederick College in the Southside Hampton Roads area. A few privately controlled institutions are located in the lower (Northern) Shenandoah Valley, where there is a moderate concentration of population. Two privately controlled institutions, Hollins College and Roanoke College, are located near Roanoke. Lynchburg College and Randolph Macon Woman's College are located in Lynchburg, and Sweet Briar is nearby. Most of the other four-year privately controlled colleges, and also most of the two-year colleges under private control, are located in the smaller towns and cities of the State. The Commission has learned that a two-year privately controlled college in Danville is considering plans to become a four-year institution. Danville is certainly the kind of a location where a four-year college is needed, for the programs of the two-year colleges there have flourished; the Danville area should be served eventually by a four-year college that is coeducational. A proposed new church-related college, to be known as Virginia Wesleyan

College, is to be located in the Norfolk area, where there is also a large local population to be served.

It is quite likely that future establishments of four-year colleges and universities in Virginia will be more or less limited to areas where there is considerable concentration of population. This has been the pattern for both state-controlled and privately controlled institutions that have been organized in the recent past, and there is every reason to believe that it will continue to be the policy to establish new institutions chiefly in the more heavily populated areas in the State.

Geographical Origins of Students

Staff Report #3 presents data on the geographical sources from which students are drawn to the colleges and universities of Virginia, and on places where recent graduates from Virginia high schools attend college. An analysis of this sort tends to show the extent to which equal opportunity is being provided young people in every part of the State to attend college in the State. The analysis was based on data furnished by every college and university in the State, showing the home residence of all its students who were attending in the fall term of 1964. Data were also furnished by the public high schools of the State, showing how many of their graduates of June 1964 were attending college in the fall of 1964 and where and what kind of institution they were attending.

In the fall of 1964, the state-controlled four-year institutions in Virginia drew 80.91 per cent of their students from the State of Virginia,

18.28 per cent from other States, and only 0.81 per cent from foreign countries. The privately controlled colleges and universities drew only 59.51 per cent of their students from Virginia, but got 39.41 per cent from other States and 1.08 per cent from foreign countries. The state-controlled two-year colleges got 95.90 per cent of their students from Virginia, but the privately controlled two-year colleges got only 56.13 per cent from this State.

Among the state-controlled institutions in Virginia, those having high percentages of students drawn from other States are the University of Virginia, 42.4 per cent, Virginia Military Institute with 38.0 per cent, the Medical College of Virginia with 27.4 per cent, and The College of William and Mary with 26.1 per cent. It is to be expected that institutions with national and international reputations will draw students rather heavily from other States and foreign countries.

Some concern has been expressed within Virginia over the possibility that the acceptance of large numbers of students from other States is depriving Virginia residents of the opportunity to attend college in their home State. The situation revealed by the analysis of geographical origins of students, however, does not indicate the need for any action to impose restrictions on the institutions with reference to the acceptance of out-of-state students. This point is discussed at length in Staff Report #3.

Analysis of data supplied in a report prepared by the United States Office of Education, based on a nation-wide study of the residence and migration of students attending college in every State in the fall term of

1963, shows that while 15,722 came into Virginia from other States to attend college, 25,902 Virginians migrated to other States to attend college. Virginia has a negative "balance of trade" of more than 10,000 students. If other States had accepted only as many Virginians as Virginia accepted from them, Virginia would have had to either find places for 10,000 more students in the fall of 1963 or that number of Virginians would have been denied opportunity for higher education. If the comparison is limited only to students attending publicly controlled institutions, there were about 1,000 more Virginians attending publicly controlled institutions in other States than residents of other States attending state-controlled institutions in Virginia. Virginia would seem to be in a poor position to impose restrictions on the acceptance of out-of-state students by its state-controlled institutions of higher education.

The state-controlled institutions in Virginia follow the practice, similar to that in almost all other States, of charging much higher tuition fees to nonresidents than to residents of the State. Studies in other States indicate that this practice does not limit appreciably the number of applications for admission from nonresidents.

Educational leaders are generally agreed that it is advantageous to the educational program for an institution to have its students drawn from a wide area. Provincialism and parochialism are not conducive to the greatest values in higher education. Particularly in graduate-degree programs, it is to be expected that advanced students will be drawn from a wide area, not just from the State in which the institution

is located.

It is recommended that no arbitrary limitations be imposed on the number or percentage of students to be admitted from other States or foreign countries in the state-controlled institutions of Virginia. The institutions should be allowed to charge whatever additional tuition fees they may deem proper to students who are not residents of Virginia.

The Virginia residents attending college in Virginia are the subject of a special analysis in Staff Report #3. The results of the analysis give a vivid indication of the great advantage a locality enjoys if it has an institution of higher education in or near it. The data are expressed in terms of the percentage that all students attending any college in Virginia from the particular locality (county or independent city) are of the college-age population of that locality. For the 62 counties and four independent cities in Virginia that have no college of any kind in or near them the residents attending college in Virginia amounted to 9.93 per cent of the total college population of those areas. For the State as a whole, this percentage was 20.45. For the areas of the State having some kind of a college or university, the percentage was 24.37. In other words, if a county or independent city has a college in or near it, the chances of a boy or girl attending college in Virginia from that area are about two and one half times what the chances are if the area is one in which no college is located.

The rate of college attendance from an area in Virginia is strongly influenced also by the kind of institution located in it. Areas with state-controlled colleges tend to produce more students for attendance in Virginia colleges, in proportion to their college-age population, than the areas where there are privately controlled institutions. Areas with four-year colleges produce college students for attendance in Virginia much more heavily than areas with two-year colleges. Areas with coeducational colleges have a substantially higher attendance rate than areas with single-sex institutions. Institutions attended predominantly by Negroes seem to produce much the same sort of effect on rates of attendance from their locality as are produced by institutions predominantly attended by white students (the population base and college attendance in the case of this comparison is not classified at all by race).

These findings for Virginia correspond to those in similar studies conducted in other States. This seems to be the first time, however, that such an analysis has permitted a classification of rates of attendance according to the coeducational or single-sex patterns of institutions, and also according to the predominant racial characteristics of the institutions. A full description of the data of the Study will be found in Staff Report #3.

The analysis of high school graduates in Virginia in June 1964 who continued their education in the fall of 1964 shows wide differences in the rates in college attendance for the various subregions of the State. The

highest rate of college attendance for high school graduates in 1964 was in the Arlington, Alexandria, Fairfax region of Northern Virginia, with 72.02 per cent of the June 1964 graduates continuing their education somewhere the following fall. Of those from this area who continued their education, almost 60 per cent went outside the State of Virginia, and the rate of college attendance in Virginia institutions from this area was among the lowest in the State. It is clear that this area of Virginia is not being well served by the present institutional pattern of higher education in the State.

In general the patterns of college attendance by the June 1964 high school graduates are rather closely associated with the presence of institutions of higher education in their localities. The highest percentage of high school graduates continuing their education in Virginia institutions of higher education was found for the Southside Hampton Roads area, where Old Dominion College, Virginia State College at Norfolk, and Frederick College are located. Four-year state-controlled institutions are located in all but one of the seven regions having more than 40 per cent of those high school graduates who continued their education attending four-year state-controlled institutions in Virginia.

Analysis of the geographical areas from which students are derived should have considerable significance for the locations of institutions as the State seeks to improve its service to its citizens in higher education.

Gaps in the Present System of Higher Education in Virginia

The most significant gap in Virginia's present provision of higher education is the lack of any institution of the kind commonly known in other States as the comprehensive community college. The term "community college" is sometimes applied in Virginia to the two-year branches of certain parent institutions. But this is not the usual meaning of the term in other States. In general, throughout the country the comprehensive community college is understood to be an institution with a program of courses carrying a student two years beyond high school graduation, in diversified curriculums which offer considerable opportunity for gaining vocational competence as well as credits that may be transferred toward a bachelor's degree in a four-year college or university.

The comprehensive community college generally has a large element of community participation in its control, and the specific curriculums offered are adapted to the needs of the community in which the institution is located. Besides curriculums of standard "transfer" courses at a freshman and sophomore level in arts and science and technical-vocational courses leading directly to employment, the comprehensive community college offers large opportunities for adult education of the non-credit type, to meet the cultural and vocational needs of citizens who do not intend to study for a bachelor's degree. The community college also typically

recognizes a large service in the counseling of students and other young people in the community, advising them about their educational plans and their abilities, encouraging those who should continue their education and suggesting alternative courses of action for those who seem unable to profit by further education.

The comprehensive community college serves almost exclusively a local group of students. Normally, it does not maintain facilities for student housing, for its students all live at home. Sometimes, however, a community college located in a region of sparse population may have to maintain housing facilities as the only means of providing service to young people who live too far away to commute to college and who need the particular type of instruction offered.

Senate Joint Resolution No. 30 of 1964, which established the Virginia Higher Education Study Commission, specifically directed the Commission to recommend procedures for developing ". . . a state-wide system of comprehensive community colleges which offer post-high school education for terminal vocational and technical training and for college-transfer programs of not more than two years duration." The urgency of this sort of planning is pointed up by the establishment of the new Board of Technical Education and its organization of a system of technical colleges, as previously described. Urgency is also indicated by the operation of a few technical schools under the general auspices of the State Department

of Education. Intensive study was given to the problem of the two-year college by a special task force of the Higher Education Study Commission. The two-year college study was headed by a special staff supplied by the Southern Regional Education Board, and the results are published as Staff Report #4 under the authorship of Dr. A. J. Brumbaugh.

The most urgent need in Virginia's program of higher education is the development of a system of comprehensive community colleges. The highest priority should be given to this development. Supporting this conclusion are the following findings as presented in Staff Report #4.

The facts that have been reviewed in the study of the two-year college in Virginia bring into focus the needs of Virginia for post-high school education below the level of the bachelor's degree, and the major issues on which decisions must be made immediately. These needs and issues briefly stated are:

1. Opportunities for post-high school education in the State must be expanded enormously in the next two decades.
2. Diversified educational programs must be provided to meet the manpower needs of the State and to make available appropriate opportunities for students of widely divergent interests and abilities.
3. Future developments in post-high school education must be

systematically planned in order to provide quality education most economically. In anticipation of what lies ahead, Virginia must use every safeguard in its command to avoid wasteful duplication.

4. The two-year branches of the state-controlled colleges and universities must be modified in purpose, programs, and control if they are to become an integral part of the system of comprehensive community colleges.
5. All available evidence supports the conclusion that additional two-year community colleges and two-year technical colleges must be established. New institutions and new programs that will supplement those already in operation must be so located as to afford easy access for the maximum number of high school graduates. The essential developments of post-high school education will require a larger expenditure per capita than has been made heretofore.
6. There must be formulated a plan for the coordinated development and control of two-year post-high school programs of all types. The present arrangements do not serve this purpose. There is no coordinated planning or control among the branches except in a very broad sense through approvals given by the State Council of Higher Education for Virginia. It is important, moreover,

that the technical colleges and the area-vocational schools which offer programs beyond the high school be combined into a unified and coordinated system under a single state agency.

To achieve these purposes, the following recommendations are made by the Higher Education Study Commission.

1. The development of a state-wide system of comprehensive community colleges should be encouraged, promoted, and carried out as a forward step of highest priority.

2. A single board at the state level, to be known by some suitable designation, such as the State Board for Community Colleges, should be responsible for the establishment, control, and government of all publicly supported two-year post-high school institutions.

3. The State Board of Technical Education should be reconstituted as the State Board of Community Colleges and its membership increased to a total of 12. The membership should be fully representative of the broadened functions allocated to it. Members of Boards or employees of Virginia institutions of higher education, public or private, should not be eligible for appointment to this Board.

4. The major functions of the proposed State Board for Community Colleges should be: To determine the need for two-year post-high school

institutions; to develop a state-wide plan for their location and a time schedule for their establishment; to formulate policies pertaining to their establishment and operation; to have general oversight of their operation; to determine financial needs and to prepare budget requests; and to perform such other functions as may be necessary to assure educational services of a high quality and effective and economical institutional operation. The Board should allow each institution a maximum degree of local autonomy in its operations consistent with the effective coordination of all institutions under its jurisdiction.

5. Steps should be taken immediately to transfer the two-year branches of the state-controlled higher institutions, post-high school area-vocational school programs, and the two-year technical colleges, to the proposed State Board for Community Colleges. George Mason College and Christopher Newport College, both of which are well along toward being converted to four-year degree-granting institutions, should be held in their present status until there is a final decision about developing them as four-year institutions.

6. The State Board for Community Colleges should adopt criteria for the establishment of new two-year post-high school institutions and develop a state-wide plan for the establishment of new publicly supported two-year institutions, delimiting the geographical areas to be served and setting a time schedule for their establishment. In the discharge of this

function, the new Board should take into account criteria and plans that have already been established by the State Board of Technical Education.

7. During the transition period, perhaps the next biennium or longer if necessary, flexible policies should be employed relating to such matters as admission requirements, fees, and program expansion, with a view to arriving ultimately at policies and procedures that will be equitable and consistent for all two-year institutions.

8. The statute creating the State Board for Community Colleges should provide for a local community college board for each community college that is established. This local board should assist in identifying the local educational needs, should enlist the support of the community, and should exercise general operational control over its community college. The local community college board should select and employ the administrative, teaching, and other staff members of the community college, subject to rules and regulations of the State Board for Community Colleges concerning necessary qualifications, and should perform such other services as may properly fall within its sphere of activities.

9. The State Council of Higher Education for Virginia should be the agency through which the system of community colleges is coordinated with the remainder of the publicly controlled programs of higher education in Virginia. The State Council of Higher Education should promote effective articulation between the community colleges and the senior institutions,

public and private, possibly by arranging for the appointment of a joint committee to promote cooperation in such matters as the transfer of students from community colleges to senior colleges, the mutual use of examinations or other measures of achievement, interchange of instruction and services, and other matters of common concern.

10. The State Council of Higher Education for Virginia should adopt policies and regulations to protect and preserve the identity of the two-year community college. It should be the policy of the State to authorize the establishment of a new four-year state-controlled college in a locality only if and after a two-year community college has been in successful operation there. If the need is demonstrated in such a community for an educational program above the two-year college level, a separate institution should be established for that purpose. In such case the two-year community college should be continued, and should maintain the unique educational services it has customarily provided. The new senior college in the same community might provide a program covering the full range of offerings from the freshman to the senior year, or it might offer only an upper-division program covering the junior and senior years, and possibly graduate courses leading to the master's degree.

11. The Commission on Higher Education, in collaboration with the Board of Technical Education and the State Council of Higher Education

for Virginia, should proceed immediately to prepare plans for the orderly transfer of the institutions concerned, and to prepare budget estimates for the 1966 session of the General Assembly. Much of the success of the proposed reorganization and development will depend on adequate financing.

As has been indicated earlier, the recommendations for the establishment of a system of comprehensive community colleges in Virginia is the most important of all the recommendations by the Higher Education Study Commission. Steps for the accomplishment of this goal should constitute one of Virginia's major advances in higher education in the 1966-1968 biennium.

Needed New Four-year Institutions

All the evidence accumulated by this Study of Higher Education in Virginia points to a great need for a four-year state-controlled college or university in Northern Virginia in the general area of Alexandria-Arlington-Fairfax and Fairfax County. It has already been announced that plans are under consideration for converting George Mason College, presently a two-year branch of the University of Virginia, to a four-year institution. Perhaps George Mason College can serve as the foundation on which the kind of an institution needed in Northern Virginia can be developed. There will have to be considerable re-orientation of the present policies of this two-year college, however, if it is to be expanded

to serve effectively as a major university for the area.

Up to this point, George Mason College has developed as a sort of small imitation of the College of Arts and Sciences at the parent institution, the University of Virginia at Charlottesville. Its ideals lean toward selective admission practices, and a limitation of the curriculum to the highly respectable subjects in the liberal arts and sciences. This is not the model for the kind of university that will serve most effectively the present needs of Northern Virginia.

The model to be imitated in Northern Virginia is not the University of Virginia. The State of Virginia has in the University at Charlottesville an institution of high prestige, with national and international recognition, with long traditions of excellence, with a faculty noted for its scholarly productivity in research, and with students carefully selected for their high academic promise. Instead of following this kind of model, the institution to be created in Northern Virginia should be a service university. Its admissions policy should be relatively democratic rather than highly selective. Its curriculum should be attuned to the needs of the area and the State for personnel competent in the various occupations for which preparation can be made at the undergraduate level. The emphasis, at least in the early stages of development, should be on the undergraduate program, though doubtless rather soon there will be need

to develop a program for the master's degree in selected fields, and ultimately the doctor's degree. It would easily be possible for the new university in Northern Virginia, within a decade after its establishment, to have an enrollment of 10,000 students or about 50 per cent more than the parent institution, the University of Virginia, has reached in the century and a half of its history. The progress made by Old Dominion College in Norfolk, since its establishment as a four-year institution, would indicate that a somewhat similar type of university in Northern Virginia would enjoy comparable development and would serve effectively the needs of the area.

One of the great advantages in the Northern Virginia area is the presence in its population of a large number of mature people who have enjoyed the privileges of higher education and who can be expected to want these advantages for their own children. Earlier in this Report, it has been noted that this area sends a larger percentage of its high school graduates to college than any other region of Virginia. But at present, the high school graduates from this area do not go to Virginia colleges in large numbers at all. It is this group of students who now pursue their higher education outside their home State of Virginia, and probably a good many others who would like to go to college but cannot afford to go far from their homes, that the new

institution would also first serve. Eventually, as the new university achieves strength and distinction in its own right, it would attract its share of students from other areas of Virginia and its service would be state-wide in scope. With the development of good community colleges in its area, its admission policies could become increasingly selective at the freshman level.

Another significant advantage of Northern Virginia for the location of a state university is the educational resources that abound there. The use of libraries, museums, art galleries, and other cultural opportunities that are uniquely grouped in the District of Columbia, would do much to enrich the program of the proposed university at a minimum cost to the State of Virginia.

It is recommended that a new state-controlled university be developed in Northern Virginia, in the general area of Alexandria, Arlington, and Fairfax County, to serve the needs of the rapidly growing population in this area of the State. This recommendation of the Higher Education Study Commission is second in priority only to the recommendation for the development of a state-wide system of comprehensive community colleges.

If George Mason College is used as the foundation for a new university in Northern Virginia, there will be urgent need for the development of at least one and probably more than one strong comprehensive

community college in this area of the State. The State Board of Technical Education already has in operation in the fall of 1965 a technical college in Arlington. This should be expanded promptly to a comprehensive community college at the earliest possible date. Undoubtedly there will be need for other two-year community colleges in this same general area of the State in the near future. If George Mason College is to be the foundation upon which the future four-year state university in Northern Virginia is to be established, this institution should be exempted from the general recommendations for the conversion of the present two-year branches of the state universities to comprehensive community colleges.

Another region of Virginia where pressure is developing and plans are being considered for the establishment of a four-year state-controlled college is in the Northside Hampton Roads area. Christopher Newport College, a two-year branch of The College of William and Mary, located in Newport News, has been developing its program with the ultimate objective of becoming a four-year college. Evidence gathered in the course of this Study would support the findings of a need for a four-year state-controlled college in the Northside Hampton Roads area in the near future. Such an institution can take over the services in this area which are now provided by extension courses offered by other major universities.

in Virginia. There is a continuing large demand for part-time attendance by personnel of the military bases in the area. Here, as in Northern Virginia, the need is for a service-type college, without highly selective admission policies, and with curriculums broadly developed to serve the needs of its area. Emphasis should be on the undergraduate programs. Graduate courses, at least to the master's level, will doubtless be justified rather soon after the new four-year college is established.

Before Christopher Newport College is converted to a four-year degree-granting institution, there should be established in the same general locality a comprehensive community college. Christopher Newport College now operates a program of courses of the technical institute variety at a downtown location in Newport News, separate from its regular college campus. This program of technical courses might be developed as a nucleus for a comprehensive community college to serve the needs of the area for general as well as technical education and adult education at the two-year college level. Perhaps Christopher Newport College, which has had valuable experience in the organization of a new institution, could lend its assistance and know-how to the forces in the community that would be responsible for developing the new community college there. When this new community college is established, Christopher Newport College could then be converted to a four-year college or university.

Due consideration might well be given to the establishment of the reorganized Christopher Newport College as an upper division institution, without the usual freshman and sophomore subjects, since subjects in the first two college years would be available nearby in the recommended community college. The reorganized Christopher Newport College could begin its instructional program with courses at the junior and senior level and might possibly offer instruction leading also to the master's degree in some subjects.

Objections may be raised to the establishment of a new four-year college or university in the Newport News area because it would be too close to The College of William and Mary at Williamsburg. The proposed new institution, however, would be of quite different character from the College at Williamsburg. The College of William and Mary is a distinguished institution with long traditions of high quality programs, very selective in its admissions policies, and with a heavy list of applications for admission from all over the country. It is one of Virginia's pretige institutions, and it should be preserved as such. It should not be converted to a mass education university, but should wisely follow the course of its recent development as a high grade college of liberal arts with associated graduate programs.

The proposed new college, by contrast, in the initial stages at least should be a very different kind of institution. It would admit a good many young people who are interested in a four-year degree curriculum but who would not meet the rather rigorous entrance requirements of The College of William and Mary. It would be a distinctively urban university, attuned to the needs of a great industrial and commercial center, rather than a college of the traditional liberal arts type located in a quiet little city, greatly appreciated by throngs of tourists interested in the historical aspects of the atmosphere reconstructed from Colonial days.

Christopher Newport College has been successful in developing a large element of support from its own community. It should be able to continue to attract this support as it develops into a bachelor's degree-granting college or university. At the same time, it should help generate similar interest and support in a comprehensive community college in its locality. The need for the new four-year college in the Northside Hampton Roads area is less urgent than the similar need in Northern Virginia, but with such backing from the community as Christopher Newport College has enjoyed, the conversion to four-year degree-granting status might be accomplished rather soon.

It is recommended that planning be undertaken toward developing a four-year state-controlled college in the North Hampton Roads area, probably on the foundation of the present two-year Christopher Newport College, provided a comprehensive community college is established to serve the broad needs of the area at the two-year college level.

There is some pressure in other areas of Virginia for the immediate establishment of a four-year state-controlled college, but in none of these cases is there convincing evidence of urgency about such a development. The policy that has previously been recommended, namely that a locality should have first a flourishing community college of the comprehensive type, before a new four-year state-controlled college is established, should apply to these other locations in Virginia. For the time being, courses of upper division and graduate levels can be supplied as needed in these localities by extension courses from one or more of the major colleges and universities in the State. After a comprehensive community college has proved successful in the locality, and after there is evidence of need for a substantial program of education beyond the two-year college level, then consideration can be given to the creation of a new four-year college. In such cases, however, the comprehensive community college should be continued for the unique

services that it can render, which cannot be well provided by a college or university that lays its emphasis on curriculums leading to the bachelor's or higher degrees.

Realignments of Existing Institutions

The metropolitan area of Richmond is at present not served by any comprehensive university. There are some excellent privately controlled colleges in the area and they do much to provide educational service, particularly at the undergraduate level. The State has two degree-granting institutions in Richmond, the Medical College of Virginia and Richmond Professional Institute, the latter a relatively young member of the family of state colleges and universities in Virginia.

The Medical College of Virginia is a highly distinguished institution of its kind. It is also one of the very few medical colleges in the United States that are operated separately from a well established university. The separate medical college is generally looked upon with much disfavor by leaders in the fields of medical education. An announcement has been made that no additional institution of this type will be accredited by the national accrediting association in medical education. A medical college affiliated with a strong university draws much strength from the facilities and faculties in non-medical fields. It is usually prohibitively expensive to provide facilities of similar scope and quality for the sole use of a separate medical college.

Richmond Professional Institute offers instruction in the usual fields of the liberal arts, and also a wide variety of curriculums for occupational preparation. Some of these, such as the School of Social Work, are the only such opportunities provided in Virginia and are therefore of great importance to the State. Some graduate courses are offered by Richmond Professional Institute, but there are no approved programs beyond the master's level. In at least one instance, the program leading to the bachelor's degree in nursing, there seems to be a possibility of duplication with the program of the School of Nursing at the nearby Medical College of Virginia.

The great lack in the Richmond area is for a substantial graduate school, which would offer a fairly wide range of subjects leading to both the master's and the doctor's degree. The Medical College of Virginia does offer opportunity for doctor's degrees, but only in the sciences closely associated with health, such as anatomy, biophysics, biochemistry, chemistry, microbiology, pharmacology, and physiology. Union Theological Seminary, a privately controlled institution, offers the doctor's degree in theology. The limited range of doctor's level programs offered in these two institutions is not sufficient to serve the needs of a population in a great urban center such as Richmond, with its heavy industrial and commercial development. Chemistry is probably one of the major fields in which the doctoral programs are needed,

but the curriculum in this subject at the Medical College of Virginia is heavily oriented towards the areas of chemistry that are useful to medicine rather than those with industrial applications.

A committee that has been organized in Richmond to study opportunities for providing better service at the graduate level has recently proposed a plan for pooling the resources of the various institutions in the area, in the hope of achieving sufficient strength to offer a Ph. D. in a number of fields in which there is urgent local demand. The enterprise displayed in this cooperative effort by a number of institutions and agencies in the Richmond area is highly commendable. It is still a question, however, as to whether any one of the institutions in the area has sufficient general strength, within the recognized limits of its present role and scope, to serve as the host for Ph. D. programs in the range of subjects that will be required. In other States, this sort of pooling of resources for high-level graduate programs has usually not been successful unless managed under a university that has already established a fairly broad scope of highly respectable doctoral degree programs. The plans being formulated in Richmond deserve encouragement as an expression of urgent need in the area. But the proposed arrangement can hardly be considered more than a temporary expedient, even if it is successfully carried through.

What is needed in the Richmond area is a bold new development, with

the establishment of a major university under state control. The strongest available institution academically in the area is the Medical College of Virginia, and this could be the nucleus around which the new university could be organized. With it could be merged Richmond Professional Institute, which already has a reasonably strong undergraduate program in arts and sciences and in some of the professional fields. The traditional names and identities of the two institutions could be preserved by continuing to designate sections of the new university by these names. There would be a number of gaps to be filled, however, if the programs of the two institutions are combined, in order to make up a well-rounded instructional program for the proposed new university. Care should be taken to avoid duplication in specialized subject matter fields in which the privately controlled institutions in the Richmond area have developed strength. For example, the new university would not need a law school, for the needs in this professional field are at present served adequately by a privately controlled institution, the University of Richmond.

The new university would need to have a distinctive name, for it would doubtless soon come to be known as one of Virginia's great universities. No recommendations are made here for a suitable name, but leaders in the community could doubtless come up with some ideas on this point. For the purpose of further discussion, it may be temporarily

referred to in this Report as Central Virginia State University.

In effecting the merger of the Medical College of Virginia and Richmond Professional Institute, there should be a single Board of Visitors for the new university. The plans might be worked out so that the membership of the two present Boards would simply be combined as the first step. Then, as memberships expire, new appointments would not be made until the number of members on the combined Board of Visitors is below the number established as proper for the new Board of Visitors.

In creating the proposed state university in the Richmond area, the question of its site will be difficult. The Medical College of Virginia is located on a rather restricted site in downtown Richmond, with barely enough land for its own present activities and expected expansions, and with little or no opportunity to increase the size of its site. Richmond Professional Institute is also located in the central part of the city, in an area where there are old residences, some of which perhaps should be preserved for their architectural qualities. Richmond Professional Institute has been purchasing much property in this area as it comes on the market, but the creation of a university campus in this area would be inordinately expensive and most certainly it would be difficult. Parking alone will demand much more acreage than can be economically provided at the present site of Richmond

Professional Institute.

The best solution probably will involve the acquisition of a new site for the proposed Central Virginia State University. In order to secure sufficient land area, the site will probably have to be on the perimeter of the city or even in the suburban area in Chesterfield, Henrico, or Hanover County. The site should have good transportation facilities and plenty of land for immediate development and future expansions. The minimum would probably be about 1,000 acres to begin with, but there should be undeveloped land adjacent which could be acquired later as needs for expansion become evident, as they most certainly will.

The present Richmond Professional Institute property holdings could be retained for use as a downtown division of the new Central Virginia State University. There will be a heavy and continuing demand for evening classes and other services for part-time students, and facilities in the present downtown location of Richmond Professional Institute can, at least for a number of years in the future, serve this need well.

The Medical College of Virginia, which would become the Medical College of the Central Virginia State University, could remain on its present site and utilize its present plant facilities. As needs for expansion beyond the capacity of the present site develop, however,

some units of the Medical College which do not require close proximity to hospitals, such as the School of Pharmacy, might be moved to the main campus of the proposed new University.

It is recommended that steps be taken at an early date to plan for the establishment of the proposed Central Virginia State University in Richmond.

It is beyond the scope of the present Study of Higher Education in Virginia to work out the details of a plan for the merging of the Richmond Professional Institute with the Medical College of Virginia to create a great University in the Richmond area. The immediate need is for some planning money, and this should be appropriated by the 1966 session of the General Assembly. Further plant development at the present location of Richmond Professional Institute should include only such land area and structures as are urgently needed in the interim before plans can be completed and the new facilities on the new site are put into operation. In the planning of any additional construction on the present site of Richmond Professional Institute, due consideration should be given to the future usefulness of the structures after transfer of the principal operations to the new locations is accomplished.

Another realignment of existing institutions of higher education in Virginia, one that is already well planned, is the conversion of the Norfolk Branch of Virginia State College to independent status as a four-year state-controlled college. It is recommended that the plan for developing

the Norfolk Branch of Virginia State College as an independent institution with its own Board of Visitors be carried out as soon as the institution at Norfolk has achieved sufficient strength to warrant its accreditation as a separate institution. Here also a distinctive name should be chosen to identify the college in Norfolk and to distinguish it from the other members of the family of higher education in Virginia. The development of a distinctive name for the branch of Virginia State College at Norfolk will relieve the awkwardness that now prevails in having to use "Virginia State College at Petersburg" as the designation of the land grant college maintained there.

One other suggestion for a realignment of an existing institution in Virginia may be made, though there is no urgency at present about this step. Mary Washington College at Fredericksburg is operated as a four-year branch of the University of Virginia. As was explained in Staff Report #11, there are few advantages and some handicaps to Mary Washington College in this arrangement. At present, it works well mainly because of the excellent way in which the chief executive officers of the University of Virginia and Mary Washington College cooperate. This harmonious relation is primarily a result of the personalities involved, rather than of the organization itself. As long as the present highly pleasant personal relationships continue, no change needs to be urged. But colonialism is as much a disadvantage to the minor partner in higher education, after full development occurs, as in governmental relationships.

Mary Washington College will not achieve its potential as a distinguished institution until it has its own Board of Visitors and can enjoy equal status with the other state-controlled institutions of higher education in Virginia.

As has previously been noted in this Report, Virginia Polytechnic Institute is the land-grant university for the State of Virginia. Analyses that have been made of the services of this institution indicate that it covers very well the traditional scope of responsibilities usually assigned to land-grant colleges in other States. The name of the institution, however, is unique among the recognized state-controlled land-grant colleges and universities in the United States. The name Virginia Polytechnic Institute does not convey to the average citizen in the United States an accurate conception of the role and scope of the program maintained at Blacksburg.

It is recommended that the authorities of Virginia Polytechnic Institute give attention to the choice of a better designation for the institution, one that will indicate its historic importance as the land-grant university of Virginia. Certainly the word "university" should be incorporated in the title of the institution, and it should be spelled with a capital "U" rather than with a small letter, as in the case of some of the publicity that now comes out from this rapidly developing institution. It is probable that many citizens of Virginia, and certainly those in other States, do not fully realize the progress that has been made in

developing Virginia Polytechnic Institute in recent years. A change of name with the incorporation of the word "university" in the new name would do much to give suitable recognition to the development that has occurred and will continue to occur in this thriving institution.

Another institution that is outgrowing its original name in Virginia is Old Dominion College. This institution is rapidly taking on the characteristics of a university. At some time in the not distant future, it will probably be desirable to substitute the word University for the word College in the title of this institution that is serving so effectively the area of the State in which it is located.

Coeducation

Staff Reports #2, #3, and #11 treat at some length the fact that many of the state-controlled institutions of higher education in Virginia are set up to serve only a single sex of students. This was the traditional pattern in the South for many years, but every other Southern State has abandoned this pattern or has retained it in only one of its publicly controlled institutions of higher education. It is noteworthy also that the State of Virginia has accepted the policy of coeducation in all of its more recently established institutions. There has also been a noteworthy change of policy at the State's land-grant university, Virginia Polytechnic Institute, which recently by its own action began to admit women students to all its curriculums. This has been a highly commendable step. In at

least one other of the present single-sex institutions, Madison College, there has been considerable pressure to become coeducational, but the authorities of the College feel restrained from taking this step by statutory limitations. As has been previously indicated, the 1964 statute setting up the new Boards of Visitors for Madison College, Radford College, and Longwood College, seems to have repealed the former statute in which the restriction to women students was contained. Legal advice should be sought on this situation, so that these three Colleges may know whether or not they are legally free to adopt coeducation.

Evidence is presented in the Staff Reports referred to above that single-sex institutions in general do not serve the State, and particularly their localities of the State, as well as institutions that are coeducational. One of the most serious situations with respect to the single-sex pattern in Virginia is the fact that, at present, the chief institutions that prepare teachers in the State admit only women as undergraduate students. The public schools thus do not have a supply of men teachers, particularly for positions in the elementary schools. Furthermore, in an area of the State having only an institution that admits students of only a single sex, half the high school graduates must necessarily leave home to attend college. Data presented in Staff Report #3 show that such institutions do not induce college attendance from their areas nearly to the extent that coeducational institutions do.

It is recommended that in all state-controlled institutions in

Virginia that are established in the future the policy be continued of setting them up for service to students without limitation as to the sex of those who may be admitted. It is further recommended that existing statutory provisions be examined, to determine the extent to which they require institutions to limit their admission of students to a single sex, and that any statutes making such a requirement be amended to remove it by a suitable act of the General Assembly. It is not recommended that any institution now admitting students of a single sex be required to become coeducational. The change to coeducational status in such institutions should be voluntary on the part of the institution, as determined by its Board of Visitors, its administrative staff, and its faculty. It is believed that, if statutory limitations are removed, most of the present single-sex institutions will ultimately decide to become coeducational, in the interest of the widest possible service to the State and its young people.

Admissions Policies

Currently in the United States institutions of higher education seem to attach much prestige to the maintenance of a high level of requirements for the admission of students. A college takes great pride in being able to say that 90 per cent of its entering students come from the highest quarter of their high school graduating classes, or that applications are considered only from students whose scores on college entrance examinations are above a certain high cut-off point. In institutions under private control this sort of restriction on admission may be entirely fitting and

proper, particularly if the college has no special constituency to which it is peculiarly responsible for educational service.

When a number of state-controlled institutions make such a boast about the high quality of their entering students, some questions need to be asked. What is happening to the high school graduates in the State who do not qualify for admission by the required standards of the institution? Are these young people presumed to be uneducable or unworthy of the attention of a respectable college or university? Can it be shown that no young citizen denied admission by the standards set up by the institution could possibly have succeeded in obtaining a degree from it, if he or she had been admitted?

In Virginia most of the four-year state-controlled institutions have been forced to put limits on their enrollments because of inadequate facilities, especially student housing. Perhaps a restriction on enrollment which is necessary to keep the total student body in balance with the housing facilities may just as well be stated in terms of test scores or rank in high school class as in any other terms. When this is done, however, students who could live at home and do not need dormitory rooms in the college are denied admission if they do not meet the announced admission requirements. Many of the state-controlled institutions of higher education in Virginia could accommodate more students in the present classrooms and laboratories and with their present instructional staffs, as has been shown in Staff Reports # 10 and #5.

These institutions, however, are mostly located away from urban centers, in locations where most students must be accommodated in dormitories, and so the lack of housing facilities for students forces some kind of a limitation on total enrollments.

In general, the faculties and administrative staff members of institutions of higher education are highly jealous of the right to determine their own entrance requirements. It would not be wise in Virginia for the General Assembly or any other state agency to establish laws or regulations, such as are found in some States, requiring the state-controlled colleges and universities to admit all high school graduates without imposing any other academic requirements for entrance. If the state-controlled institutions cannot take care of all the residents of the State who might profit by higher education and who want to attend, some method must be found for limiting enrollments to the number that can be served effectively by the available facilities. The policy of first come first served is hardly suitable, so the institutions in Virginia have used other measures which presumably give the highest priority in admission to high school graduates who show the most promise of success in the college.

Two kinds of criteria for predicting success in college are widely used in American institutions of higher education. One is the applicant's performance in high school, either his general grade average or his rank in high school graduating class. The other criterion consists of scores made on various sorts of tests, such as those prepared by the

College Entrance Examination Board. Studies have shown that the best predictor of future success in college is the high school record, as evidenced by rank in high school graduating class. The addition of other measures adds very little to the accuracy of the prediction. On a statistical basis the best predictive criterion, used singly, provides an estimate of future success only about 15 or 20 per cent better than a random guess, and the best combination of a number of criteria does not push up the prediction to a point where it is anything like 50 per cent better than a random guess.

The measures commonly used are fairly good measures for mass predictions. That is, the higher the rank in high school class and the higher the test scores, the greater the percentage of those who will succeed in college. But on none of the measures commonly used for the admission of students is there a point in the distribution of applicants where one can predict success or failure with 100 per cent infallibility. That is, some students who do not do well in high school or who make low scores on entrance tests, do succeed in college if they are able to gain admission; and there are a surprising number who rank high in high school graduating class, and on test scores, who fail in college. In other words, the usual criteria for admission do not have 100 per cent reliability when applied to individual applicants for the purpose of estimating their probable success in college. It can never be said with absolute certainty about any high school graduate that he could not

possibly succeed as a student in some kind of a college-level program in some kind of a college.

The policy of the State should be to provide every high school graduate who really wants a college education the opportunity to prove he or she can successfully carry a program of college-level studies. To do less than this is not only an injustice to individual citizens but an actual deprivation to the State and the society of the improved quality of service that college trained personnel can render during a lifetime. It should be a function of the institutions of higher education to make accurate estimates of the number of students that will need to be accommodated in the coming years of each biennium and to request appropriations for current support of instructional facilities that will provide for this number of students. A review of such estimates by the State Council of Higher Education for Virginia should give assurance that, on a state-wide basis, the estimates make reasonable provision for all who will want to attend college. It is then the function of the General Assembly and the State fiscal authorities to provide the necessary resources for a program of higher education to the limit of the State's ability. It is only in this way that a truly democratic system of higher education can be maintained in a State such as Virginia.

Maintenance of admission policies such as have been described does not mean that students are to be retained in college who show no aptitude for their studies and whose interests are obviously directed

toward activities other than the pursuit of an education. The State has no obligation to provide higher education for students whose objective in attending college is to engage in social activities or to carry on agitation on social or political problems or to grow a beard. Students whose interests and attainments indicate that they should be somewhere else than in college should be sent away promptly, both for their own good and also in order to avoid waste of public funds. But the State can well afford to provide educational opportunities to any high school graduate who, though possibly a plodder, is genuinely interested in making a contribution to society through the pursuit of studies at the college level.

One of the great advantages of a system of comprehensive community colleges in a State is the opportunity it affords to high school graduates of all levels of competence to continue their education. A comprehensive community college offers diversified curriculums for students with various kinds of interests and abilities. One who cannot do well in foreign language may find it useful to transfer to a curriculum in some occupational field where this attainment is not necessary. A young high school graduate who is greatly interested in becoming an automobile mechanic or a television repairman and is enrolled in a terminal curriculum for such an objective, may be discovered to have real ability in mathematics and science, and may be persuaded to change his course to a transfer program that will prepare him to become an

engineer or scientist. Students of low academic ability can often attain to the upper levels of their interests and capacity in a curriculum of general education of two years or less in length. The counseling service that is normally provided in well managed comprehensive community colleges can keep close touch with the students and advise adjustments in programs to suit the students' abilities and interests. With a completely established system of community colleges in Virginia, the four-year colleges and universities could quite properly follow a policy of selective admission at the freshman level, for citizens of the State would not be deprived of educational opportunity by such policies when there are alternative opportunities for enrolling in college courses.

Until there is a reasonably adequate program of comprehensive community colleges throughout Virginia, it is important that a number of state-controlled institutions of higher education maintain admission policies that do not limit attendance to students who are in the upper half of their high school graduating classes and that do not discourage attendance by earnest seekers after higher education who are in the lower half of their classes. For the most part, the institutions that maintain such "open door" admission policies should be those that are located in urban areas where dormitory facilities are not required, and those that are the newer members of the higher education family in the State that do not have established traditions which would be difficult to

change. There should be no attempt to coerce any institution into lowering of its requirements for admission as presently determined by its faculty, administration, and Board of Visitors.

The Roanoke Situation

One special situation in the institutional pattern of higher education in Virginia, in the Roanoke Valley area, was referred by House Joint Resolution 19 of the General Assembly of 1964 to the State Council of Higher Education for recommendation. It has been re-referred by the State Council to the Higher Education Study Commission for investigation and recommendation. Roanoke is a southwestern Virginia city of approximately 100,000 population, with about 60,000 population in Roanoke County outside the city, according to the U. S. Census of 1960. The situation in higher education there has recently been complicated by plans for the expansion of some of the state-controlled facilities and by the presence of two well established privately controlled four-year colleges in the vicinity.

Currently in the city of Roanoke, Virginia Polytechnic Institute maintains Roanoke Technical Institute, a two-year branch with a college-level program based chiefly on terminal occupational curriculums and various aspects of technology. The necessary supporting courses in the sciences, mathematics, social sciences, and humanities are offered, and plans are underway to extend these offerings so as to provide opportunity for two years of general college courses at the freshman and sophomore level. In the past, Roanoke Technical Institute has attracted chiefly

men students because of the nature of the courses offered, but efforts are being made to broaden the offerings into fields that will be attractive also to women students.

Also in the city of Roanoke the University of Virginia maintains a rather large and well developed Extension Center, offering a wide variety of undergraduate courses and some graduate level studies. Students can readily complete enough courses at the Extension Center there to add up to two full years of college credit or even more. For the most part the courses in the Extension Center are similar to those on the main campus at Charlottesville but other subjects may be offered as demand arises. A full-time director is in charge of the Extension Center, but the teaching is chiefly done by part-time faculty members drawn from the community, and by members of the faculty of the University at Charlottesville who commute to Roanoke for some class teaching.

Hollins College, a privately controlled independent college of liberal arts, admitting only women students, is located a few miles outside the corporate limits of the city of Roanoke. Hollins College stresses a four-year bachelor's degree curriculum in the liberal arts, and limited opportunities are also offered for a master's degree in a few subjects. Hollins College maintains rather high admission requirements and charges a relatively high fee for board, room, and tuition. In the fall of 1964 only 19 per cent of the students at Hollins College

were residents of Virginia. Of the 570 women attending Hollins College only 25, or 3.5 per cent, came from the county and city of Roanoke. A number of members of the Hollins College faculty teach courses on a part-time basis in the Roanoke Extension Center of the University of Virginia.

Roanoke College, a privately controlled church-related liberal arts college, is located in Salem, only a few miles out of Roanoke. Salem is an older town, and is the county seat of Roanoke County in which the city of Roanoke is located. Roanoke College is a coeducational institution with four-year curriculums leading to the bachelor's degree; no graduate courses are offered at present. Approximately 51 per cent of the 864 students of Roanoke College were from Virginia in the fall of 1964. Of these, 261, or 30 per cent of the total student body, came from the county and city of Roanoke. A few years ago Roanoke College set up an evening division for service to part-time students in the area. When this was done enrollments at the Extension Center of the University of Virginia took a sharp drop, from which there has been a gradual recovery until the total enrollments in the Extension Center are now approximately at the former level.

The city of Roanoke has been generous to Roanoke Technical Institute and has provided it an excellent site in an outlying area of the city on one of the arterial highways. Recently there have been additions

to the site, again a gift from the city of Roanoke. The city has also recently given a tract of land, across the highway from Roanoke Technical Institute, to the University of Virginia as a site for a building where the University Extension Center may be located. The city attached a condition to the gift of land, to the effect that the State must construct a building on it for the use of the University Extension Center. This condition has been accepted by the State, with certain limitations.

The plans of Roanoke Technical Institute and the Extension Center of the University of Virginia in the same city present obvious possibilities of duplication in the State's service in higher education in this community. Some alarm has been expressed also by Roanoke College that the development of the state-controlled operations in higher education may compete with the service that College hopes to render in the Roanoke area. Hollins College is not involved in this situation, because service to the local community is not considered an important part of its responsibilities. It may be noted, however, that the development of state-controlled higher education in Roanoke might have some effect on the amount of financial support Hollins College has customarily received from philanthropically inclined citizens of the area.

Any city the size of Roanoke deserves a first rate community college. It is recommended that the two state-controlled operations in the city of Roanoke, viz. , Roanoke Technical Institute and the Extension

Center of the University of Virginia, be merged to form a comprehensive community college, of the kind that has been recommended earlier in this Chapter. The two sites should be developed as a single campus and the program should be operated as a single integral two-year college.

The University of Virginia should continue to operate an extension service in Roanoke, with a program limited to courses of junior and senior and possibly graduate levels, beyond those offered in the community college. The extension service might also offer other courses that may not appropriately be provided by the comprehensive community college. The extension activities of the University of Virginia should be housed in space provided by the comprehensive community college. It is a common practice in other States for the local community colleges to provide classrooms, laboratories, and library facilities for extension classes of the state-controlled colleges and universities. In fact, one of the functions which a community college can perform is the coordination of extension services in its locality, if more than one college or university is providing such services there.

In developing the program of the recommended community college for Roanoke, due care should be taken not to undercut the service which Roanoke College is prepared to offer to the same group of students. For example, the community college should be unselective in its admission policies and could provide opportunity for any high school graduate who

wants to continue his or her education; this would allow Roanoke College to maintain somewhat higher standards for admission than the community college maintains. Activities in recruiting students for the community college should be carefully controlled, so that no direct attempt is made to attract students who might otherwise attend Roanoke College. Strong stress should be laid in the community college on the maintenance of the technical and terminal curriculums, in the tradition already established by the present Roanoke Technical Institute, an area in which Roanoke College does not offer instruction. There will inevitably be some overlapping in the general subjects of the freshman and sophomore years, but the community college should be careful to avoid specialized courses that would duplicate those offered at Roanoke College. It should be possible to work out some mutually satisfactory arrangement for interchange of students so that those at the Roanoke Community College might be allowed to take some courses at Roanoke College and vice versa.

The development of the proposed community college in Roanoke should not appreciably change the present situation insofar as competition between Roanoke College and the Extension Center of the University of Virginia is concerned. The extent to which there may be or is competition between advanced courses offered by Roanoke College and the Extension Center is another matter, one that should have no bearing on the decision for the development of a community college in Roanoke. In

essence, the competition at the advanced level in Roanoke is not different from that observed in most cities of the State where a local privately controlled institution and the extension division of one or more state colleges or universities both maintain courses that may serve the same clientele. It would seem that Roanoke College will have to continue to live with this sort of competition, as it has in the past, and as many other privately controlled colleges are doing in Virginia and most other States. The alternative would be to limit opportunities for college attendance by young people in the area, in the interest of protecting a privately controlled college from competition. This alternative is not a tenable policy on which to build a sound program of higher education for any community or State.

The city of Roanoke would seem to be an ideal location for the operation of an excellent institution of the community college type. It is entirely possible that the Roanoke area may need something beyond this level of service of higher education in the not distant future. If the city and county continue to develop economically and industrially as they have in the past, there will probably be justification for the establishment there of a four-year college under state control at some future time. This is a matter on which a decision does not have to be made immediately, but it is a future prospect that cannot be ignored in the appraisal of the Roanoke situation. Some years hence, after the proposed community college in Roanoke has

become firmly established and has demonstrated the useful service that this kind of an institution can render, steps may need to be taken toward the development of a four-year college. As previously suggested, this should not mean the conversion of the two-year community college into a four-year institution. Rather the successful community college should be continued in order to serve its unique functions, and a separate institution should be established for curriculums leading to the bachelor's degree or possibly eventually to a master's degree.

At some time in the future the prospect of a four-year state-controlled college in Roanoke may not loom as such an important competitive factor to Roanoke College as it would today. There is every probability that Roanoke College will broaden its base of attracting students, and will begin to make its appeal on a national and regional basis, rather than to be preponderantly populated by students from the State of Virginia. Hollins College has already developed to this point, and a large number of other strong liberal arts colleges, not only in Virginia but throughout the country, are already at this stage. Roanoke College can confidently be expected to follow this trend. At any rate, the problem of possible competition between Roanoke College and a prospective state-controlled four-year college located in Roanoke is one to be faced when a decision must be made about the establishment of the four-year state-controlled college there, and this is sometime in the future.

CHAPTER III
SPECIAL AREAS OF CONCERN

The preceding chapter discussed the problems of higher education in Virginia from the point of view of the institutional patterns that are presently established, and the modifications of these patterns that seem desirable. There are other problems that cut across institutional lines, relating to programs of service and to the facilities for higher education in the State. The present chapter of the Report deals with a number of these problems.

Undergraduate Instruction

When one thinks of a college and its functions, the idea that is almost certain to be uppermost is the instruction of undergraduate students. The instruction of graduate and advanced professional students is also important, but this function is largely limited to institutions of the university type. Similarly research is an extremely vital function in the modern society, and institutions of higher education render a most significant service in performing this function. But in most colleges and universities, the volume of research service is relatively small compared with the volume of undergraduate instruction.

In the Study of Higher Education in Virginia, an intensive analysis

has been made of the instructional programs of all the state-controlled institutions based upon data for the academic year 1963-64, which was the last completed academic year at the time the collection of data was undertaken. A number of the privately controlled institutions in the State participated in this part of the Study on a voluntary basis. The analysis of instructional programs covered such topics as the scope of course offerings, the volume of instruction provided, the size of classes, the productivity of faculty, instructional salary cost on a unit basis, and the general level of instructional salaries.

For the purpose of analysis the courses and classes taught were grouped according to academic level, into those for lower division students (freshmen and sophomores), those for upper division students (juniors and seniors), and those for graduate and advanced professional students. Although data for graduate-level courses are included in the analysis, the chief interest attaches to the analysis of undergraduate instructional programs. Courses were also classified according to subject matter, so as to afford opportunity for direct comparisons between and among institutions. Separate analyses were presented for the state-controlled and the privately controlled institutions and for the four-year and two-year colleges of each type. Results of this analysis are published in Staff Report #5.

This is the first time an analysis of instructional programs of this

kind has been attempted on a state-wide basis in Virginia. The data required for the study are somewhat complex, so it is understandable that some of the institutions had difficulty in providing accurate information for the analysis. The processing of the data is also a complicated procedure, and the possibility of errors, both in the original submission of data and in the processing of the tabulations must be admitted, even though every effort was made in the study to check out possible discrepancies.

Because of the complex nature of the data and the possibility that they may contain some errors, no recommendations are made on the basis of the analysis. Instead, the study of instructional programs is looked upon as a trial run for a procedure that might become a regular part of a continuing analysis of the instructional programs for the Virginia institutions, particularly those that are under state control. The model developed in this analysis can be followed in subsequent years by an agency such as the State Council of Higher Education with the objective of producing data that will be useful to the institutions in analyzing their own instructional programs, and helpful also to state agencies in judging requests for financial support of such programs.

The analysis of the undergraduate instructional programs, as presented in Staff Report #5, indicates a wide variation among the state-controlled institutions in the factors investigated. In some cases, there seemed to be a need for attention to what appears an over-

proliferation of courses open to undergraduate students, especially to freshmen and sophomores. Measures of faculty productivity, based on such data as average size of classes, percentage of classes that are too small for economical operation, student-credit-hour production per full-time-equivalent faculty member, and instructional salary costs of producing a student-credit-hour, show a wide variation among the state-controlled institutions. The variations exist not only in institutional averages on such factors, but also when the analysis is confined to inter-institutional comparisons on a given subject at the same academic level, such as freshmen and sophomore courses in mathematics or junior-senior courses in economics.

In many of the institutions, the faculty members carry rather light instructional loads, in terms of the number of student-credit-hours produced annually. In Staff Report #5, the estimate is made that if all the state-controlled institutions in Virginia had an annual student-credit-hour production per full-time-equivalent faculty member equal to the average of the three institutions having the highest productivity (and this criterion is entirely reasonable, judged by data available from other well-managed colleges and universities), a total of approximately 10,000 additional full-time students could have been served in the state-controlled institutions of higher education in Virginia in the academic year 1963-64 by the faculty members that were then in service. The

inability of these institutions to admit more students was not due to the lack of available faculty members, but was apparently a result principally of a shortage of student housing. These 10,000 additional students could have been served without adding a dollar to the State's expenditure for faculty salaries, chiefly by increasing the size of classes in cases where class enrollments were below a defensible limit of size for sound instruction.

The principal conclusion from the study of undergraduate programs is that data of this sort would be very useful in analyzing budget requests of institutions and in determining needs for additional faculty members. The data would also be useful to each institution in organizing its own program on the most economical basis consistent with the supporting funds it is given. It is recommended that the State Council of Higher Education for Virginia collect and analyze data about the instructional programs of the institutions of higher education on an annual or biennial basis.

Graduate and Advanced Professional Instruction

The development of instruction beyond the undergraduate level in the Virginia institutions of higher education can best be described as spotty. That is, there are many fields in which the graduate offerings are meager, and the patronage by students is low. The general conclusion can be drawn that graduate instruction has been developed most

extensively in the sciences and mathematics and in certain professional fields, such as agriculture, business administration, education, engineering law, and medicine. The development of graduate instruction is rather limited in the social sciences and the humanities in the Virginia institutions. On the basis of total credit hours of courses taught at the graduate level, the field of English ranks highest among the subjects in the humanities and the social sciences, but it is far outstripped by almost every field of science and by mathematics, and by almost all the professional fields mentioned above. Spanish is the only foreign language in which any courses open only to graduate students were taught in the state-controlled institutions in 1963-64, and the total annual offering of graduate courses in Spanish amounted to only 6 semester hours of credit in all the state-controlled institutions in Virginia.

As has been indicated in Chapter I of this Report, Virginia ranks low among the 50 States in total production of master's and doctor's degrees. The reasons for the relatively limited development of graduate programs in the Virginia institutions of higher education can only be surmised. The probability is that lack of financial resources has been the important factor in the situation. Graduate instruction is nearly always expensive, especially as new fields of graduate study are opened up, for costly facilities must be provided and library resources strengthened greatly. Additional faculty members of high competence

are required to conduct graduate programs, and to attract these competent faculty members requires higher than average salaries. Especially in the early stages of a new graduate program, student patronage may be light and the unit cost of instruction thus looks almost prohibitively high compared with the cost of undergraduate instruction.

The limited development of graduate instruction in Virginia institutions may therefore be explained as a result of the limited financial support that the institutions have enjoyed. Certainly it would not have been wise to use money urgently needed for undergraduate instruction in order to build up graduate programs, when the resources supplied the institutions apparently have not been sufficient for both the necessary undergraduate instruction and the development of needed graduate programs.

The urgent need in Virginia is for some risk capital that could be used in the development of programs of graduate study considerably more extensive than those now being offered. It is perhaps wise to concentrate the chief development of advanced graduate work at two or three of the major institutions initially, especially as a broad spectrum of subjects begins to be covered. But some of the other institutions should be encouraged to try to develop programs of sound graduate study in a few fields that are particularly related to their role and scope. For example, it would seem appropriate for the institutions in which the major

function is the preparation of teachers to develop master's degree programs in a few subjects commonly taught in high schools, so that teachers may obtain preparation beyond the bachelor's degree in order to become especially well qualified.

At the doctoral level, advantage can be taken of the Federal funds that are now available for the development of new programs of graduate studies and for extensions of present programs at that level. The development of sound programs at the doctoral level in most institutions must be accompanied by the recruiting of some additional faculty members with established reputations as outstanding scholars in their respective fields. This costs money and, as indicated above, the state institutions need some risk capital with which to get started on extended programs of graduate study. In all cases, the development of new graduate programs must be approached cautiously, and particular attention needs to be given to the probable patronage by capable students after a program has been well established. In general, however, the recommendations of this Study would indicate that special encouragement needs to be given in Virginia to the development of strong graduate programs beyond the scope of those now available. It seems particularly important to provide encouragement to developments in the subjects of the humanities and the social sciences, to match the more extended development now available in the sciences, mathematics, and professional fields.

Three instances in which a special concern has been expressed about the development of graduate programs have been reviewed in special studies prepared for the Higher Education Study Commission by consultants. These three special problems of graduate instruction will be discussed separately.

Clinical Psychology

It seems clear that the State of Virginia has a great need for more personnel qualified to serve as clinical psychologists. The preparation for this professional field involves study leading to the Ph. D. degree in psychology, plus suitable internship experience. The shortage of clinical psychologists in Virginia seems almost critical at this time, but no institution in the State has such a program of preparation at the doctoral level.

Some thought has been given to the possibility of developing a program of preparation for the Ph. D. degree in clinical psychology by a combination of efforts in the institutions of higher education in the Richmond area. The plan that has been discussed involves the development of a program under the aegis of Richmond Professional Institute, with suitable assistance from personnel on the faculty of the Medical College of Virginia, and possibly other institutions in the Richmond area. The consultant who made the special study on

this problem for the Higher Education Study Commission recommends negatively on this proposed development, in view of the present very limited resources of the institutions that are involved.

It is very clear that careful planning is needed and much strengthening of both faculty and other facilities which will be required, to establish a sound program leading to the Ph. D. degree in clinical psychology in the Richmond area. If and when there is a strong state-controlled university developed in the Richmond area, as has been recommended in Chapter II of this Report, this would be the ideal location for the much needed instructional program leading to the Ph. D. in clinical psychology.

It is recommended that the State Council of Higher Education for Virginia work with the institutions in the Richmond Area to develop an inventory of present resources, and to identify the points at which these would need to be strengthened in order to provide an acceptable program for the preparation of clinical psychologists. In such a development, it would be important to have consultation with the leading authorities in the national professional association in the field of psychology. A complete discussion of this problem will be found in Staff Report #6.

Library Science

The State of Virginia has at present no curriculums at the graduate

level in library science. The completion of one year of professional preparation in library science beyond the level of the bachelor's degree is required for the lowest grade of professional library work in Virginia's state system of classified service. This is generally recognized throughout the country as the lower limit of requirements for anyone rendering professional service in a library. Some institutions in Virginia that prepare teachers provide the opportunity for students to earn a sufficient number of credits in library science at the undergraduate level to qualify as a school librarian, but this preparation is not acceptable for meeting the requirements for librarianship in the State classified service.

Some strong suggestions have been made about the need for developing a graduate library school at some institution in Virginia. The special consultant, who made a study of the library resources in the Virginia institutions of higher education for the Higher Education Study Commission, did not recommend the establishment of a graduate library school in the State at present. There are a number of well established graduate library schools in the South, and practically all of them are operating considerably below capacity. None of the well-established institutions in Virginia is interested in developing a graduate library school.

While there is a serious shortage of professionally qualified librarians in Virginia, this seems to be due to the relatively low salaries that have prevailed in the past for librarians, rather than to lack of training facilities in the State. In other words, there is no guarantee at all that the establishment of a graduate library school in Virginia would produce more professionally qualified librarians who would be interested in and attracted to positions in Virginia at the prevailing salary rates.

The consultant recommended the plan of encouraging Virginians to get preparation for library service in a school in some other State, possibly with assistance by a subsidy in the form of a scholarship or a leave-of-absence from present position, or through an inter-state agreement made with the Southern Regional Education Board. It was the opinion of the consultant that such a step would be sufficient to make a larger supply of professionally qualified librarians available in Virginia. At some future time, if the demand for professionally qualified librarians continues to exceed the supply, further attention could be given to the development of a graduate library school in one of the established universities in Virginia. The complete report of the consultant on library services in the Virginia institutions will be found in Staff Report #9.

The Master's Degree in Nursing

In the State of Virginia, no institution of higher education offers preparation at the graduate level in the field of nursing. Nurses with this level of preparation are greatly needed for teaching positions in the schools that prepare young women to become registered nurses, and also for supervisory positions in hospitals and for some specialized types of nursing service. Nationally there is an acute shortage of personnel in the whole field of nursing, and the shortage is especially severe for positions requiring advanced preparation at the master's degree level.

Less than half the States have institutions that prepare students for the master's degree in nursing. Most of the universities that maintain programs for master's degrees in nursing, could accommodate much larger enrollments in the advanced curriculums; a surprising number of universities that do have master's programs produce only very small numbers of graduates each year. The difficulty seems to be in finding enough suitably qualified candidates for the advanced year of preparation at the master's level. If Virginia was to carry its fair share of the national production of master's degrees in nursing, there would need to be 10 or 12 such degrees every year from institutions in the State. Considerable thought has been given to the feasibility of establishing a master's degree program in nursing at the Medical College of Virginia,

inasmuch as this institution already has a well established baccalaureate degree program in nursing.

A special study of the desirability of establishing a graduate program in nursing in Virginia was made by the special consultant for the Higher Education Study Commission. Results of this study are reported in Staff Report #6. The consultant was not convinced that there are at present a suitable number of nurses in Virginia qualified for entrance upon a graduate program in nursing and who would be interested in a year of advanced study leading to the master's degree. An earlier study by a member of the nursing profession had reached the same conclusion some two or three years ago.

The consultant for the Higher Education Study Commission suggested that inducements be offered qualified Virginians to enter graduate schools of nursing in other States for advanced preparation. Federal subsidies are available for such students, and an arrangement might also be worked out through contracts negotiated through the Southern Regional Education Board.

The consultant was also not convinced that the Medical College of Virginia would be the best location under present circumstances for the development of a graduate school of nursing in Virginia. Practically all successful graduate schools in nursing in the country are associated with university-type institutions, not with separate medical schools.

Preparation in nursing, in the modern view, requires study in the social sciences as well as in the fields immediately related to health and medical problems. If and when the Medical College of Virginia becomes a part of a great state university in the Richmond area, as is recommended in the preceding chapter of this Report, that new university would be an ideal host for a graduate program leading to the master's degree in nursing.

The consultant, in recommending negatively on an immediate attempt to develop a graduate school of nursing at the Medical College of Virginia, did not intend to close the door forever to such a development. Further studies have already been planned at the Medical College of Virginia to explore the possibilities for a graduate program in nursing, and this further analysis of the situation should be encouraged.

Certainly at some time in the future the State of Virginia should have facilities for the master's degree in nursing. Before starting such a program there should be assurance about an adequate supply of qualified candidates for admission to the program, and about a suitable host institution that can provide the broad range of courses needed both in nursing technology and in the related social sciences. It is recommended that the State Council of Higher Education continue to work with those in Virginia who are interested in developing a master's degree curriculum in nursing, so as to make sure that, when the justification for the pro-

gram is established, it can receive adequate financial support from the General Assembly.

Social Work

The sole program in Virginia for preparing professional personnel for social work is located at Richmond Professional Institute, where a two-year graduate curriculum leading to the master's degree in social work traces its origins back as far as 1917. Until recently the program has been relatively small, with an enrollment in 1963-64 of only 45. Evidence indicates that the number of students in this curriculum at Richmond Professional Institute will rapidly increase in the near future, largely because Federal agencies are so much in need of personnel with this sort of preparation, and have now been granted authority to subsidize the education of social workers. Nine-tenths of the students in schools of social work throughout the country are recipients of stipends and grants to enable them to continue their education. As the funds for such stipends and grants increase, it is clear that the number of students in this field will also increase rather rapidly.

A crisis has arisen in the School of Social Work in Richmond Professional Institute because of the imminent threat of loss of its accreditation by the national accrediting agency. Word of this situation reached the public through the newspapers in May of 1965, which reported action by the Board of Visitors of Richmond Professional Institute directing

the administration of the institution to give highest priority to maintaining the accreditation of the School of Social Work. The accrediting agency, in a rather unusual move, granted one year of time, in which the School at Richmond Professional Institute must meet the national accrediting standards or else be dropped from the list of recognized schools.

Reasons for the action of the accrediting association have not been made public, as is normal in such circumstances, but a crisis clearly exists.

It is well that the Board of Visitors of Richmond Professional Institute is fully informed about the crisis situation in the School of Social Work and is taking vigorous action to meet it. Virginia must maintain a fully accredited program of preparation in this important professional field, where the demands for well qualified personnel are great. It is to be hoped that the actions taken by the Board of Visitors and the administration of Richmond Professional Institute will result, in the spring of 1966, in the lifting of the threat of the loss of accreditation for the School of Social Work. The situation in this School is discussed at some length in Staff Report #6.

Special Areas of Occupational Preparation for
Fields Associated With Health

A special consultant to the Higher Education Study Commission was asked to make a somewhat detailed study of the needs in the State of

Virginia for programs of preparation for certain occupational fields associated with the health professions. The detailed report by this consultant is published as Staff Report #6. The findings and recommendations are summarized here briefly, insofar as they pertain to the service of higher education. The consultant made a number of other excellent recommendations pertaining to conditions of service in Virginia in the occupations that were reviewed, or to training programs in non-collegiate types of institutions; these are not included here in the Commission's Report because they do not seem germane to the immediate problem of higher education. The reader interested in the full treatment of these occupational fields is referred to Staff Report #6.

Audiologists and Speech Pathologists

Audiologists diagnose and treat the defects of hearing; speech pathologists diagnose and treat defects of speech; neither deals directly with the purely medical problems but refers these to physicians. Audiologists and speech pathologists practice in a variety of ways. A majority are in public school clinics; others are in clinics operated by voluntary health associations; a few are in colleges and universities; and others in hospitals and in private practice.

The Virginia Speech and Hearing Foundation has made a recent study of the extent to which school children in Virginia suffer from speech and hearing difficulties. Based upon a considerable sampling,

the estimate is that throughout the State, Virginia has about 28,000 school children with speech troubles, and somewhere between 14,000 and 28,000 with hearing difficulties. The number of professional people to deal with these huge numbers of cases requiring attention is pitifully small. Virginia has two problems. It needs more clinicians to staff present programs and it needs a substantial expansion of programs.

Five colleges in Virginia participate in educating speech and hearing clinicians. Mary Washington College and Longwood College conduct a three-year program after which students transfer to the University of Virginia for the fourth year of the bachelor's degree. Hampton Institute, Old Dominion College, and the University of Virginia provide four-year programs leading to the bachelor's degree. The University of Virginia alone provides a graduate program leading to the master's degree and the doctor's degree. The program at the University of Virginia is preponderantly graduate, with 36 graduates and 4 undergraduate students. It could accommodate 10 to 15 more. Each graduate will receive offers for as many as five jobs.

The following recommendation is made:

1. Provide funds to the University of Virginia for scholarships and for faculty, to increase the number of master's degree graduates from 30 to 40 per year.

Dental Auxiliaries -- Dental Assistants, Hygienists
and Technicians

Dental assistants work with the dentist, primarily at chair side, to make him more productive so that he can handle more patients with the same effort, in effect increasing the number of dentists. Dental assistants do not work by themselves, and they do no work within the mouth of a patient. The American Dental Association certifies dental assistants and approves educational programs. The dental assistant is therefore considered a part of the group of skilled persons who are responsible for dental care. In the United States the 72 formal institutional programs for preparing dental assistants graduate approximately 3,600 assistants annually. No such program is operating in Virginia.

Virginia could probably use over 1,200 trained dental assistants. At present, it is estimated that the State has only 557 in full-time employment, most of whom have been trained by individual dentists in offices rather than in any formal program. A survey made by the Virginia State Dental Association makes it clear that dentists in Virginia would prefer trained assistants.

Dental hygienists are also an accepted part of the group providing dental care. The hygienist is licensed to render parts of dental treatments and to perform such tasks as cleaning teeth, charting a mouth,

and preparing x-ray pictures. He or she can work only under the general supervision of a dentist thereby relieving him of much time-consuming effort. For the desired ratio of one hygienist to each two dentists to be obtained, Virginia would need 900 dental hygienists, but the number in the State is far below that. There are only 63 members of the Virginia Dental Hygienist Association, and the Association estimates that there are no more than 100 hygienists in the State. As far as can be determined, there are only 25 Virginia students in schools of dental hygiene this year. Most of them are enrolled at the University of Pennsylvania and Temple University in Philadelphia. •

Students can obtain a certificate in dental hygiene in two years, or the bachelor of science degree with a major in dental hygiene in four years. The Council on Dental Education of the American Dental Association prefers that the training occur in dental schools but other accredited colleges and junior colleges may also be used.

The need for dental technicians (who do castings and similar jobs) is quite small and a school is scarcely needed to supply this demand in Virginia. Recommendations concerning dental auxiliaries are made as follows:

1. To meet the need for dental assistants, training programs should be established in all the major population centers of the State, preferably in publicly controlled two-year colleges or

technical institutes in those communities, or even better, in the comprehensive community colleges recommended in Staff Report #4. A program should be established at the Medical College of Virginia, primarily devoted to preparing dentists as faculty members for teaching in the dental assistant curricula of the community colleges.

2. A program for preparing dental hygienists should be established at the Medical College of Virginia, where dental students can learn to work with hygienists and vice versa. When comprehensive community colleges are established in Virginia, as recommended in Staff Report #4, consideration should be given to setting up a number of two-year programs for the preparation of dental hygienists in these institutions.
3. Building space should be provided for the two programs at the Medical College of Virginia. They may be a part of a school for dental auxiliaries. Space for such a school may be available in the planned addition to the dental school at the Medical College of Virginia.
4. While the program for preparing dental hygienists is getting underway, the State Council of Higher Education for Virginia should explore with the Southern Regional Education Board where places for Virginia students in dental hygiene can be contracted

for in the schools in the universities of West Virginia, North Carolina, and Louisville.

5. Faculty of the Medical College of Virginia should hold seminars for practicing dentists in the use of dental assistants and dental hygienists as soon as the supply of qualified personnel begins to increase.

Dietitians

Dietitians are skilled in nutrition, having completed what is usually a four-year college course and an additional year in an internship approved by the American Dietetics Association. Students completing the approved internship are certified by the Association. The need for dietitians in Virginia is critical. Some 50 hospitals in Virginia have no certified dietitians, even though the standards of the American Hospital Association require that a hospital must have a certified dietitian at the head of its dietetic department if it is to be approved. As many as 100 dietitians are needed in Virginia hospitals now, and they are also needed on the staffs of nursing schools and in public schools.

The production of dietitians in Virginia does not nearly meet the need. Virginia Polytechnic Institute, Madison College, and Virginia State College at Petersburg, have programs in nutrition and nutritional management, which would qualify graduates for the dietetic internship but only a handful are graduated each year, three or four from Virginia

Polytechnic Institute, two or three from Madison College, and two or three from Virginia State College. In 1964, there were a total of 24 students majoring in dietetics in the colleges of Virginia.

The Medical College of Virginia has the only approved internships for dietitians in the State. It has 12 interns. Even though it gives preference to Virginia students, it attracted only two Virginians for the 12 internships in 1964-65. The Medical College of Virginia finds the shortages so great that it has vacant positions for three dietitians on its own staff. The problem is not with too few facilities. Virginia Polytechnic Institute could easily train four or five times as many undergraduate majors in dietetics as are now trained through the same facilities. Madison College could also do considerably more than it is doing if it received the students.

The role of the dietitian in relation to health is so clear that the State of Virginia should take steps to increase the number of students. Virginia Polytechnic Institute should be encouraged with its experimentation with the cooperative program, but that itself will not attract sufficient persons to make full use of present undergraduate programs or the internships of the Medical College. The recommendations are as follows:

1. State scholarships for dietitians modeled after the state

teacher scholarships already operating should be established.

2. Programs for training dietary aides should be established in the comprehensive community colleges that have been recommended earlier in this Report. The aides, working within sharp boundaries and under supervision, could assist greatly in relieving the dietitian of some of the long night hours they are required to work in this time of shortage. The number of graduate programs and the number of approved internships for dietitians should not be increased until the need for expansion is clearly demonstrated by demands of Virginia students.

Hospital Administrators

There is one school for hospital administrators in Virginia, at the Medical College of Virginia. It is entirely a graduate program and admits students with the bachelor's degree who have gained a B grade average in their undergraduate majors. The School receives some 600 inquiries about admission each year, with over 100 applications completed, out of which some 15 to 18 students are admitted each year. The School accepts almost all the applicants it considers qualified for the program of study. The Medical College of Virginia

graduates about 15 or 16 students per year in hospital administration, some 5 to 6 per cent of the national total. The admissions policy of the Medical College favors Virginia students, but less than half its graduates are from Virginia. A recommendation is made as follows:

1. The School of Hospital Administration at the Medical College of Virginia performs a distinct and useful service for the State. Its program should be continued. No other school of hospital administration should be established within the foreseeable future.

Medical Technologists

Medical technologists function in the laboratories of hospitals, public health agencies, pharmaceutical manufacturers, and sometimes in physicians' offices. They perform various chemical, bacteriological, and microscopic tests, at the direction of physicians who are attempting to diagnose the cause of disease or to measure or arrest its progress. Medical technologists are trained through three years of college work followed by a year of training in a laboratory approved by the American Society of Clinical Pathologists. At the end of the fourth year, the technologist receives a bachelor's degree from the college where the first three years of study were

completed. Eleven hospitals in Virginia provide the fourth year of training; they are fairly well spread throughout the State, and include the hospitals of the Medical College of Virginia and the University of Virginia. Graduates become certified and approved for work in all States by passing the National Registry Examination. They are awarded the title Certified Medical Technologist.

There are too few medical technologists, and they cannot be trained fast enough to meet the demand. It is estimated, for example, that the need in Virginia is for perhaps 2,000 medical technologists, but there are only about 800 in the State. The eleven hospitals in Virginia approved for the fourth year of training draw students from eight affiliated colleges. These eleven internship centers, on which most of the hospitals in Virginia depend, produce only about 50 medical technologists a year, a number that is insufficient to meet the need of replacements caused by turnover, let alone satisfying the needs caused by expansion of laboratory testing.

Although medical technology is a field of considerable shortage, the solution lies more in attracting students than in increasing the number of schools. For example, the University of Virginia now has six students in this curriculum. It expects to increase the number to 15 by adding space and one faculty member. If other schools can increase correspondingly, the number of graduates will rise from 50 to

150 each year. This number, with the addition of certified laboratory assistants, who are high school graduates trained through three months of laboratory work experience, will give the State an opportunity to meet its expanding need in the field. The recommendation is as follows:

1. The number of students entering programs in the State for medical technologists must be increased by three times at least. Recruitment programs such as that conducted by the Health Careers Committee of the Virginia Council on Health and Medical Care will be helpful. In addition, the field must be made more attractive.

Nurses

Of all the health-related fields in Virginia, nursing is the most complex and critical. It is complex, for the educational means of satisfying the needs for nurses lies in a number of different kinds of educational institutions -- in schools of practical nursing functioning as parts of vocational educational programs at a sub-collegiate level; in hospital schools of nursing, operated and financed by the hospitals themselves; in two-year programs in colleges leading to the associate degree; in four-year programs in colleges and universities leading to bachelor's degrees. Beyond the bachelor's degree lie programs leading to the master's or doctor's degrees.

A graduate of a practical nursing school must qualify for license through the State Board of Examiners of Nurses and become a Licensed Practical Nurse (LPN) before she can practice. Graduates of other programs, who are qualified, take the examination for registered nurse and if successful, they can write R. N. after their names as witness of their competence to practice.

After licensing and registration, most of the nurses practice in hospitals, where the duties of the various kinds of nurses may overlap as emergencies arise. A licensed practical nurse can exercise some nursing duties, but not all of them, but anyone with an R. N. is presumed to be qualified to execute all nursing functions. The shortages of nurses are so apparent that it is hardly necessary to search for supporting evidence. The shortage is nationwide and Virginia shares in this unfortunate situation. It is estimated that Virginia needs 2,600 nurses immediately or about 25 per cent more than the State now has. That figure does not look forward to increases in population or to Medicare or to greater use of hospitals, or to a more prosperous condition in the State, whose citizens can purchase greater amounts of health care. It is likely that most of the causes of shortages of nurses are likely to intensify their impact in the near future.

One idea that has been put forward recently in Virginia has been for the introduction of a new grade of nursing certificate, between the licensed practical nurse and the registered nurse. The consultant examined this plan critically, and found it interesting but he does not recommend it for adoption in Virginia. The plan does not appear to contain anything that could not be gained through adding perhaps a year of supervised work study to the minimum program for licensed practical nurses.

In 1954, there were three baccalaureate programs in Virginia for the preparation of nurses. These three programs enrolled 300 students. In 1964, after a fourth program had been established at Old Dominion College, the four schools admitted 225 students and enrolled a total of 436, an increase in five years of over 45 per cent. An increase of this magnitude could hardly be expected to continue each five-year period, but it is encouraging that it has occurred. As in the hospital schools, the need is to make certain that full capacity is used.

Of all the programs for educating registered nurses in Virginia, the type that is least developed is the two-year associate degree program. It is conducted in only three colleges, one of which is giving up the program. The associate degree, two-year program is the

newest of the various plans for educating registered nurses, but it has been used extensively in States where junior colleges, community colleges, or technical institutes of college grade have been established. Programs in the two-year colleges have the added advantage of relating themselves to the smaller hospitals in the various parts of the State. In the smaller cities, the community college could relate itself to several hospitals of its surrounding counties, providing a sort of regional nursing education program. It could give its students the advantage of working in the smaller hospitals, where responsibilities may vary more greatly than in the larger, more highly organized general hospitals. It would attract students to nursing from the immediate locality, so that they would not have to pay the expense of room and board away from home. The two-year program would cost the student no more, therefore, than a program of training in a hospital school in Virginia. The following recommendations are made:

1. A detailed study of the needs for nurses in the State with projections for ten years should be made under the direction of the State Council of Higher Education for Virginia, in collaboration with the State Department of Health, the Virginia State Board of Examiners of Nurses, the Virginia Association of Hospital Administrators, the

State Board of Education, and the new Board of Community Colleges recommended earlier in this Report. The study should make recommendations on ways in which the efforts of Virginia agencies to solve the nurse shortages can be coordinated.

2. Every possible effort should be made by hospital administrators, college officials, and nursing educators to make sure that the quality of educational programs for nurses is sufficiently high to warrant State approval and, where possible, by the National League for Nursing. Graduates of approved schools are generally successful in obtaining registration through examination. Such schools, therefore, avoid the social loss contained in the failure of a graduate to qualify for practice.
3. Every appropriate agency in the State should aid in attracting more persons into nurse training and education. The Virginia Council on Health and Medical Care might well give this field priority in its recruitment efforts. Only for the coming year of 1965-66 has Old Dominion College begun to receive the number of students it hoped to attract, and the two-year programs at the Norfolk Division of Virginia State College and at Shenandoah College could both add a

number of students. The proposed establishment of a four-year degree program in nursing at Radford College should be carefully studied in collaboration with the State Council of Higher Education for Virginia and appropriate nursing groups. If this program is established, every effort should be made to recruit a suitable number of students for it.

4. Junior colleges, community colleges, and technical institutes should consider needs for two-year nursing programs as they organize their curriculums. Two-year programs of nursing education should be accessible to students in all parts of the State and particularly to those parts like southwest Virginia, where the limited size of the hospitals has made it impossible to continue some of the hospital schools. The plan of comprehensive community colleges for Virginia, recommended earlier, would offer important possibilities for expanding the number of two-year programs for the preparation of registered nurses in Virginia.

Occupational Therapists

Occupational therapists assist in the rehabilitation of patients with mental or physical illnesses. The objective is to help the patient regain as much vocational ability as possible, to be independent, and able to take care of himself and do useful work. Occupational therapy

has become a recognized part of care and cure in mental hospitals. Compared to needs in some fields, the needs for occupational therapists are not overwhelming in Virginia. In fact, the one training program in Virginia at the Richmond Professional Institute could supply all Virginia's needs if its output were retained in Virginia. Recommendations are as follows:

1. A pre-occupational therapy program should be developed in the two-year institutions of the State, encouraging students to enter the field and then to transfer to Richmond Professional Institute at the beginning of the third year.
2. The possibility of making the school at Richmond Professional Institute into a regional facility under the Southern Regional Education Board contract should be investigated. At present, at least half the 100 places in the school could be held for students from outside the State with no loss of opportunity for Virginia students. Funds received under such a contract could be used to strengthen the school and to attract Virginia students through award of scholarships.

Physical Therapists

Most physical therapists work in hospitals, helping persons with muscle, nerve, and bone ailments and injuries to gain as much as they can of complete functioning. They use a variety of procedures under the

direction of a physician, particularly through exercise, mechanical apparatus, and applications of massage, heat, light, electricity, or water. Each hospital with at least 150 beds can benefit from having a physical therapy department.

Virginia lacks the number of physical therapists it should have. Throughout the State, there are 50 to 60 budgeted vacancies and at the Medical College of Virginia, which operates the only school offering preparation for this profession in the State, there are seven budgeted vacancies on a staff of 14. Recommendations are as follows:

1. The School of Physical Therapy of the Medical College of Virginia is providing a greatly needed service to the State. Its facilities are obsolete in many respects, however, and it has less space than it did 20 years ago. Its facilities should be improved or replaced.
2. Recruitment efforts should be increased to draw Virginia students into the School, including the establishment of scholarships that will supplement those now available from the Vocational Rehabilitation Service.

Radiologic Technologists

Radiologic technologists are responsible for the use of radiation equipment under the supervision of a radiologist or physician. After training, they are registered through a national examination, although

they can practice without registration if they so desire.

Radiologic technologists, after graduating from high school, complete two years of training in hospitals with approved programs. There are 16 schools in Virginia, all approved.

The number of vacancies in Virginia is estimated at between 50 and 60, but the gap between production and need is not great. An additional 10 to 15 graduates in radiologic technology a year will probably fill the need as long as technologists are permitted to practice without having to become registered. If practice were limited to registered technologists, the number would have to be increased by 50 per cent in order to meet the need. The recommendation is as follows:

1. Some of the larger schools for radiologic technicians should gradually be expanded as applicants and need increase.

Rehabilitation Counselors

The rehabilitation counselor is a professionally trained specialist counseling disabled persons as a means of guiding them to the best possible physical, mental, social, vocational, and economic adjustment that they can make. The profession was established because of Federal legislation in 1955, and remains largely a Federally-supported program of education. Nationally, the number of graduates of schools of rehabilitation counseling does not nearly meet the need; every graduate receives four or five job offers. Washington, D. C. alone has more

openings for new rehabilitation counselors than the Richmond Professional Institute graduates in a year. Fortunately, perhaps, the Virginia need is much less. About 30 per cent of all the graduates of the programs at Richmond Professional Institute, 30 out of 113, have remained in Virginia. Most students in the program in the Richmond Professional Institute come from Virginia; graduates are working in 38 States. The program for training a rehabilitation counselor is a two-year master's degree curriculum of which 80 per cent is in subjects directly related to rehabilitation counseling. The school at Richmond Professional Institute enrolls 25 full-time students and about an equal number of part-time students. From Federal funds, the school receives grants for 20 students a year. Most students are on some kind of stipend.

The recommendation is as follows:

1. The State of Virginia is fortunate in being able to meet most of its present needs for rehabilitation counselors through the program at Richmond Professional Institute. The Institute may wish to consider adding another faculty member to the staff, since the two full-time faculty members have unusually heavy loads to carry in their teaching and administrative responsibilities.

Sanitarians

Sanitarians are mainly employed in public health departments to

investigate conditions of the environment which may be dangerous to health, and to help enforce regulations which have been adopted to improve the health of the community, such as cleanliness of restaurants and hostelryes and harmless disposal of waste. About 300 sanitarians are working in Virginia. Most of them are graduates of Virginia colleges with bachelor of science degrees, but with no special training in sanitary science. The agencies in the State could use perhaps as many as 50 more sanitarians. There are 10 to 12 budgeted vacancies in state agencies alone.

Virginia does not have a program for the education of sanitarians in any of its colleges. It is possible to add to the standard science programs leading to the bachelor's degree sufficient courses to make the curriculums much more useful in the production of sanitarians. This would avoid the necessity of agencies putting on special programs for their new employees in order that they may be competent to discharge their duties effectively. Recommendations are as follows:

1. Courses focused on the functions of sanitarians should be established in at least three colleges, Virginia Polytechnic Institute, Richmond Professional Institute, and Old Dominion College, in the junior and senior years. The necessary basic curriculums are already available in these institutions.

The specialized courses should be organized with the advice

of the public health leaders in the State, but should not be conceived so narrowly that they would be wholly vocational in content. The costs would be small, since for the sharply focused material the colleges could call upon agencies' officers as instructors or part-time lecturers.

2. State scholarships applicable to the junior and senior years, and comparable to the present teacher scholarships, should be established for sanitarians, to draw students into the curricula when they are established.

Veterinarians

Veterinarians deal with the causes and cure of diseases and ailments of animals, both large and small, as well as with such public health concerns as meat inspection and control of diseases transmittable from animals to man. Obtaining the Doctor of Veterinary Medicine (DVM) requires at least two years of college followed by four years of veterinary medical school.

Virginia does not have any institution offering the curriculum for the Doctor of Veterinary Medicine. The State has participated in the veterinary medicine contracts of the Southern Regional Education Board almost from the inception of the program. Under that program, 12 Virginia students are admitted to the University of Georgia as first year veterinary medical students, and places for two students are held

at the Tuskegee Institute in Alabama. It has been possible to fill the quota at the University of Georgia each year, but the places at Tuskegee Institute have not been fully used. The recommendation is as follows:

1. The regional programs in veterinary medicine should be continued, even expanding the quotas if possible, and increasing the per student payments if that becomes necessary. For the foreseeable future, the regional contracts should be the basis for training veterinarians for Virginia.

Medicine, Dentistry, and Pharmacy

Preliminary investigations by the staff of the Higher Education Study Commission indicated that there is at present no important problem concerning education for the professional fields of medicine, dentistry, and pharmacy in the State of Virginia. The State has, at present, excellent institutions offering this sort of preparation. At some time in the future, the facilities in these fields may need to be expanded, but this is not considered a present problem. The present Report, therefore, does not deal in any detail with the opportunities for preparation in the fields of medicine, dentistry, and pharmacy, or with the institutional facilities maintained for this purpose in Virginia.

Research

Research is an important function in the institutions of higher education, and the importance of the contribution that research can make to the national welfare and security is widely realized by responsible citizens everywhere in the United States. There are agencies in the country other than institutions of higher education that carry on research, particularly in fields related to the immediate needs of industry and government. Institutions of higher education, however, are particularly responsible for what is commonly known as basic research. This term is applied to investigations that are not generated out of some situation where the solution to a specific problem is necessary. It is also in the institutions of higher education that most research is carried on in the fields not related to the immediate needs of industry and government such as the humanities and the social sciences.

Research activities of the institutions of higher education may be divided into three broad categories. One is the kind of research that is related to the processes of higher education itself, and is carried on by the individual institutions; it is usually designated as institutional research. Another category is the sort of research that is closely associated with the instructional activities of the departments of the institutions, usually subsidized by an annual budget from institutional funds or by the release of faculty members from some of their normal

teaching load, or even carried on by faculty members as an individual load beyond the regular teaching duties. The third kind of research is that which is supported by grants and contracts from sources outside the institution. This research is usually directed towards specific problems in which the agencies making the grants have a particular interest. It is referred to as contract research or as sponsored research.

Information about the extent of each of these three kinds of research in the Virginia institutions was gathered for the Higher Education Study Commission. The full report of that part of the Study will be found in Staff Report #7. The findings are here briefly summarized.

Institutional Research

Institutions of higher education need to know a great deal about themselves and their operations in order to function effectively and efficiently. To produce this information is a function of institutional research. The need is one that is currently felt in most large scale operations in industry and other forms of human organization. Industrial concerns in recent years have frequently allocated from two to five per cent of their total expenditures to so-called research and development activities. Institutions of higher education have been slow to adopt research procedures concerning their own operations, but in

the past decade or two a great many universities and some smaller colleges have set up special offices or bureaus of institutional research.

In Virginia, only one of the state-controlled institutions, the University of Virginia, has set up a special agency for institutional research. It is known as the Office of Institutional Analysis. It has a relatively small budget for its support. Five of the other state-controlled institutions and three of the privately controlled colleges report some arrangements for institutional research. Budget support for institutional research in the institutions other than the University of Virginia is relatively informal, and the function is carried on by various members of the regular administrative staff without special titles designating the research responsibility.

Further development in institutional research is clearly warranted in the Virginia institutions. Each of the larger state-controlled colleges and universities could well set up a special bureau or office for this service, as the University of Virginia has already done. Adequate staff and budgetary support are essential for an effective program of institutional research, but the money spent on the maintenance of this function pays good dividends in increasing the efficiency and effectiveness of an institution's operation. In Virginia, the State Council of Higher Education can well perform on a state-wide basis some of the functions that are performed by bureaus of institutional research in States where

no coordinating agency has been set up for this purpose.

Departmental Research

A special inquiry was made among the colleges and universities in Virginia concerning the extent to which departmental research has been developed as a recognized function, with specific budgetary allotments of institutional funds. Eight of the state-controlled institutions reported such allotments, although they were of substantial amounts only at Virginia Polytechnic Institute, the University of Virginia, and Old Dominion College. The eight institutions reported a total of almost \$5,000,000 in annual expenditures for departmental research, with 236 full-time-equivalent faculty members being involved. The bulk of the departmental research that was reported is carried on by Virginia Polytechnic Institute in subject matter fields closely associated with the traditional services of the land-grant university. Only two of the privately controlled colleges in the State reported substantial amounts budgeted for departmental research; one of these is a highly specialized institution with research as its principal function.

There is undoubtedly much departmental research being conducted in the colleges and universities in Virginia for which figures in terms of dollars of budgetary support and staff members committed to this function have not been reported. In the financial accounting, departmental research is frequently mingled with instruction, so that the two cannot

be separated either in terms of dollars or of manpower. It would be highly advisable for the colleges and universities to institute a plan of separating the accounting and budgeting of departmental research from that of instruction. Only in this way can there be a full understanding of the extent of the time, effort, and money devoted to this function, and adequate appraisal within the institution of the results obtained from this expenditure of manpower and financial resources.

Contract or Sponsored Research

The special inquiry conducted among the Virginia colleges and universities about the volume of their contract and sponsored research programs indicates that 12 of the 13 state-controlled institutions and seven of the privately controlled institutions have varying amounts of research supported by special grants or contracts. The state-controlled institutions reported a total of about \$23.7 million of research contracts in effect, with expenditures from such programs of more than \$10 million in 1964-65. In the privately controlled institutions, the amounts are smaller and the total grants in effect amount to only \$161,000; annual expenditures in 1964 were \$139,000. More than half the research contracts in effect in the State of Virginia, and also more than half of the expenditures on contract research in 1964-65, were at the University of Virginia. The second largest volume of contract research is reported from the Medical College of Virginia. The volume of contract research

is also large at Virginia Polytechnic Institute, and it is fairly sizable also at The College of William and Mary. At Old Dominion College and at Virginia Military Institute, the total dollar volume of research contracts in force reaches six figures. At none of the other state-controlled institutions were the annual expenditures on research contracts in 1964-65 as large as \$20,000.

The great bulk of research contracts in the Virginia institutions are with the Federal Government, and more than 90 per cent are in the fields of medicine and health, science, and engineering. Agriculture and home economics are the only other fields in which the amounts of contract research are substantial.

Ability to attract large grants of funds for sponsored research has become a status symbol among American universities. Virginia can be proud of the research activities of its universities. At the same time, it is only fair to note that the total research funds received by the Virginia institutions from sources in the Federal Government is a relatively small percentage of the total Federal grants to institutions throughout the United States. The surest way to attract large grants of contract research funds is to maintain faculty personnel with the highest qualifications. Salary ceilings have to be high in order to maintain this kind of scholar on a university faculty.

Virginia, at present, operates under a budgetary plan for its

state-controlled institutions of higher education which effectively limits the average salary paid to faculty members at each institution to the average of similar institutions throughout the United States. This plan makes it difficult to pay a relatively few high salaries that are necessary to attract and retain outstanding research scholars on a university faculty. If it is desired to retain the present plan of budgetary control over faculty salaries, a rather simple adjustment might be made in the plan. By allowing the exclusion of a small, limited number of the highest salaries (possibly 2 to 5 per cent of all salaries) in the calculations of the average for institutions engaged in significant research programs, a relatively small additional amount in the salary budget would do wonders in assisting the institutions to build the kind of faculty that will successful attract large research grants. The advantages to the State of Virginia in being able to attract such grants are so obvious as to need no defense.

Extension Services

A well recognized function of institutions of higher education in the United States is the extending of educational resources to citizens who are not able to be in attendance as regular students in campus classes. Extension education, as this function is called, is rather widely developed in Virginia institutions of higher education.

A broad range of activities is included under the heading of extension service. Evening classes may be offered on the campus for the benefit of part-time students. Courses taught by institutional faculty members or others chosen by the respective academic departments on the campus, may be offered in almost any location in the State where a sufficient number of students are interested in enrolling in the course. In some locations where large numbers of extension students are being served, a formal extension center may be organized, with a local manager or director in charge. Institutions may conduct many short courses, conferences, forums, institutes and work shops, mostly of a non-credit variety for the benefit of interested groups who may attend such meetings on the campus or in other locations where the programs are scheduled.

In Virginia, all the state-controlled institutions of higher education maintain some kinds of extension services except the four that were originally teachers colleges, that is Longwood College, Madison College, Mary Washington College, and Radford College. Only four of the privately controlled colleges in the State report the maintenance of any extension services. Data were gathered and analyzed for the Study of Higher Education in Virginia concerning the extension programs in the institutions maintaining such services. The analysis of the information is presented in Staff Report #7. The findings are here briefly summarized.

A total of 1,268 courses were taught in 1964-65 in off-campus extension programs, other than those in organized extension centers; 22,560 students were enrolled in these courses. About 3/4 of this total number of courses and almost 3/4 of the students were in extension courses under the University of Virginia. The extension program of The College of William and Mary had the second largest number of classes and student enrollments in off-campus classes other than in organized centers.

There is no clear cut definition of what constitutes an extension center and hence there cannot be an accurate report on the number of extension centers maintained by the various institutions in Virginia or the number of courses and students taught there. At some of the so-called centers, the program is more or less limited to courses given in the specific location away from the main campus. The term is also used, particularly at the University of Virginia, to designate a decentralization of the extension services, whereby a local director coordinates the activity for a rather wide area of the State, the classes not being held at one center but rather distributed throughout the territory.

One of the obvious features of the pattern of extension activities, particularly in extension class teaching and in the maintenance of extension centers in Virginia, is the lack of any inter-institutional coordination of such programs. The Council of Higher Education for Virginia has not interpreted its statutory authority as giving it the power to coordinate

extension work. With each institution free to enter any territory in the State with any kind of extension class it may wish to set up, there is a clear opportunity for duplication, not only between the extension services of the various institutions, but also between the extension offerings and the resident offerings of established colleges in the same cities throughout the State.

Staff Report #7 presents a rather long list of locations in the State where extension classes are maintained by two or more state-controlled institutions, or by at least one such institution when there is also an established college or university in that location. A critical analysis was made of all extension courses offered at every location where two or more institutions were providing extension service. Out of some eleven hundred classes offered in such locations in 1964-65, only five cases were found in which the titles of the courses seem to indicate the probability of duplication and where enrollments in at least one of the duplicating classes were small, so that the duplication might be considered as wasteful or objectionable. This analysis does not take into account the possibility of duplication between residence programs of the established colleges and universities in the cities where extension classes are offered by other institutions.

The lack of coordination or supervision of extension programs on a state-wide basis is significant for another reason. Extension programs represent the growing front of educational services in the State. The

demand for higher education in a community often is first made evident by the response to the offerings of extension courses. The sequence of development in Virginia, as deduced from the trends over recent years, seems to be somewhat as follows:

1. A college or university comes into a new location to conduct one or more extension classes, probably at the invitation of some local group.
2. The number of offerings at this location increases to a substantial cluster.
3. The location is designated as an organized extension center, with some permanent staff and physical facilities, as numbers of courses offered and students enrolled reach substantial figures.
4. The extension center becomes a two-year branch; advanced courses may be continued by the parent institution on an extension basis in the same locality, but not as a part of the two-year branch.
5. A two-year branch is allowed by the parent institution to offer third year courses in some subjects.
6. There is pressure, usually successful ultimately, to convert the branch to a four-year degree-granting program.

7. The four-year branch becomes an independent state institution, with its own board of control.

At some stage in this development, generally at the end of the third step or at the beginning of the fourth, state recognition and a separate state appropriation are secured.

The stages shade almost imperceptibly into one another, and the State has another full blown college almost before it realizes what has happened. The State may be faced with a fait accompli and feel obliged to provide support, even through the previous decisions have been made by the institutions without consulting state authorities. This is not to suggest that the institutions have taken any steps which are not in good faith and fully justifiable, but the effect of the procedures are likely to produce undesirable confusion and unnecessary disarray in the State's system of higher education.

Two relatively simple proposals would alleviate the danger that exists in this present uncoordinated and possibly chaotic situation in the development of extension programs. One of the proposals is the establishment of a State Board for Community Colleges as proposed earlier in this Report. This Board would govern the two-year branches now in operation and any additional institutions established later to provide instruction at the level of freshman and sophomore years of college. It would transform the present branches, as may be

appropriate, into true community colleges. The community colleges would be an excellent agency for coordinating the extension services maintained by various institutions in its immediate community.

The second proposal concerns cooperative planning for extension and related services. There should be established an extension and public services advisory committee to the State Council of Higher Education for Virginia, appointed by the Council, for the purpose of providing reliable information concerning the extension and public services offered to the citizens of the State, and for the purpose of assisting the State Council of Higher Education and the colleges and universities in achieving a rational pattern of these services. The Advisory Committee would have no authority to fix institutional policies in regard to extension and public service, but would be expected to review or formulate proposals and recommendations, which would be presented to the State Council of Higher Education and to the various state-controlled colleges and universities. The Advisory Committee would seek to gather pertinent information from the privately controlled colleges offering extension and public services, so that as much cooperation as possible can be achieved. Further details about the proposed Advisory Council on Extension Services will be found in Staff Report #7, pages 28-36.

The proposed Advisory Committee on Extension and Public Service should assist the State Council of Higher Education in setting

up a system of collecting current information each year about the extension programs in each of the state-controlled institutions of higher education. It is clear that there is some point in the development of clusters of extension courses in a given location where the State Council should be apprised of the probability of the formation of an organized center or branch. The proposed Advisory Committee should assist the State Council of Higher Education in determining where this point in the concentration of courses in any one locality should be set. The State Council should then adopt a rule that any additional offerings of extension courses beyond this point at a single location may be done only with the explicit approval of the Council. This point should be set low enough so that the Council may be fully aware of the trends toward developing an organized center long before that kind of an organization is announced by the institution. This would seem to be the only way to avoid a chaotic and uncoordinated development of extension centers or branches, which may later mature in an unplanned manner into full-blown colleges.

If there is doubt about the statutory authority of the State Council for the exercise of such coordination, an opinion might be sought from the Attorney General; if his opinion is negative, efforts might be made to have the General Assembly amend the basic statute to give the State

Council this authority.

It is recommended that the State Council of Higher Education for Virginia undertake to coordinate the programs of extension class teaching in off-campus locations. The first step should be to secure complete current data each year about the extension class teaching operations of each of the state-controlled institutions. The second step should be to set a point in the numbers of courses maintained in a single off-campus location where the approval of the State Council will have to be obtained for adding any more extension courses in that location. The legal authority of the State Council to coordinate extension programs should be assured, either by an opinion from the Attorney General, or if necessary by an amendment to the basic statute under which the Council operates.

Although it seems imperative for some coordinating influence to be exercised in the development of off-campus extension classes by the Virginia colleges and universities, it must also be recognized that these developments have in the past been motivated, in the main, by a desire to render the maximum service in higher education to the citizens of the Commonwealth. Extension service literally means "extending" the resources of the institutions to people who cannot become full-time students on the campus. As previously noted, it represents the growing edge of higher education in the State. It is

perhaps the best example in all higher education of the typical American spirit of enterprise, for it seeks to find places where there are needs for service and to fill those needs. The recommendation made above is not intended to curb this commendable spirit, but only to provide a coordinating direction for it, so that the extension activities of the institutions may be fitted into well considered and soundly conceived plans for the orderly development of higher education in the State of Virginia.

Another kind of extension service, one that does not enter into the problem of coordination on a state-wide basis, consists of Saturday classes and evening classes on the campuses of institutions so situated as to serve part-time students. Evening classes and Saturday classes are maintained by nine of the four-year state-controlled institutions in Virginia, and by one of the two-year state-controlled institutions. A total of 851 courses were offered in such programs in 1964-65, with almost 15,000 students enrolled. Considerably more than half of the courses and student enrollments in such programs were at Richmond Professional Institute. The second largest program of this kind in Virginia was at the Norfolk Branch of Virginia State College. The College of William and Mary offered more evening and Saturday classes at the graduate level than any other institution in the State. In general, evening classes on the campus are distinguished from day classes

only by the nature of the students; most of those in evening classes are part-time students carrying a full load of employment while continuing their part-time studies. As previously indicated, evening and Saturday classes are most appropriate in institutions located in urban centers, where there are large numbers of people who can easily commute to classes after completing a day's work on their jobs.

Another form of extension services consists of short courses, institutes, forums, and similar activities, usually of a non-credit variety. The volume of this kind of service rendered by the Virginia institutions is impressive. As would be expected from its status as a land-grant university, Virginia Polytechnic Institute is by far the most active institution in the State in this form of extension service, with a total attendance at its various activities of this kind amounting to almost 350,000 in 1964-65.

A college or university is a vast reservoir of talent which should be made available to citizens of the State who are not interested in pursuing courses for degree purposes. Surprisingly large numbers of adult citizens are interested in continuing their education, whether their concerns relate to industry, or labor, or agriculture, or home-making. In some cases, attendance and successful completion of a workshop or conference of this sort may be dignified by the granting of a special certificate to those who attend. In most cases, however,

the reward of attendance is in the mental stimulation and the information that are received from the experts of the institution's staff who provide the substance of the programs in these conferences.

Correspondence study, another form of extension service, is offered by the University of Virginia and Virginia State College, and by one of the privately controlled colleges in Virginia. The privately controlled college offers only five courses by correspondence, all in the field of the Bible and religion. The University of Virginia offers 48 courses, with active enrollments totaling 546 in 1964-65. At Virginia State College 15 courses are offered by correspondence, with a total of 141 active enrollments in 1964-65.

There seems to be relatively little demand in Virginia for correspondence study. Actually, a university does not render any unique service in providing a few correspondence courses, when there are already many institutions in the United States which can supply this need and which maintain extensive and effective programs of correspondence study. Correspondence courses offered by institutions in New York City or Chicago or any of the other major university centers in the country are just as available to residents in Virginia as the courses offered by the University of Virginia. It does not seem necessary at this time to recommend any expansion of Virginia's program of correspondence study.

In many States, educational television has become an important medium for university extension service. Virginia, at present, has no state-wide facilities for educational television. A few regional centers for educational television have been developed in Virginia, but their programs have been limited to the elementary and secondary schools, and there is no state-wide coordination of the broadcasting service. Some of the colleges and universities in Virginia are experimenting with educational television by closed circuit as an instructional medium. None of the Virginia institutions had developed a program of broadcast educational television at the time data for this Study were collected, in the summer of 1965. Subsequently, it has been learned that in the fall of 1965, three institutions, the University of Virginia, Richmond Professional Institute, and Old Dominion College, are each broadcasting one college-level course by educational television. In addition to the offering of credit courses by educational television, many institutions throughout the country have developed important programs of adult education, mostly in non-credit courses, which have been broadcast by television and received by an amazing number of viewers. This is a form of extension education with which the Virginia institutions of higher education might well experiment.

It may be expected that, in line with the progress in other States,

Virginia will at sometime have a state-wide network of educational television, in which the institutions of higher education will be active participants. In the planning that is underway in some other States, the prospect is that ultimately as much as 50 per cent of the instruction from the first grade through the sophomore year of college will be available on a state-wide educational television network. Virginia has an Advisory Council on Educational Television which will probably play a central role as the advantages of this new educational medium are developed in this State.

Faculties

Staff Report #8 presents information on the faculties of the colleges and universities in Virginia, which is here briefly summarized. Every institution in Virginia, 24 state-controlled and 30 privately controlled colleges -- furnished detailed data for the study of faculties; over 5,400 individual faculty members participated. Men comprise about 80 per cent of the four-year state-controlled faculty members and about 73 per cent of the faculty members of the four-year privately controlled colleges. In the two-year colleges of Virginia, 75 per cent of the faculty members in the state-controlled colleges are men; the situation is reversed in the privately controlled two-year colleges with 56 per cent of their faculty members being women. Since seven of the eleven privately controlled two-year colleges admit only women

as students, they might be expected to employ a preponderantly female faculty.

Age and Length of Service

The average age of all faculty members included in the Study is 42.3 years. There is little variation among types of institutions in the average age of faculty members, except that those in the two-year state-controlled colleges are about 4.5 years younger than the average age for other kinds of institutions.

Half the faculty members in both the state-controlled and the privately controlled institutions have a total period of service in higher education of nine years or less. In the privately controlled two-year colleges, half the faculty members have had only five years or less of total service in higher education. In the state-controlled two-year colleges, half the faculty members have had two years or less experience as teachers in institutions of higher education. The short median length of service for the faculties of the state-controlled two-year colleges is doubtless due to the relatively recent establishment of some of these institutions. It is clear that the leaders in the two-year state-controlled institutions of higher education have an important responsibility for the orientation of inexperienced faculty members.

Academic Rank

In the four-year state-controlled institutions 21.1 per cent of the faculty members hold the rank of professor; the professors in these institutions have an average age of 50.3 years, and 65.2 per cent hold a doctor's degree. In these institutions 21.3 per cent of faculty members are associate professors; these have an average age of 41.3 years, and 44.6 per cent have an earned doctorate. Assistant professors in these institutions comprise 27.9 per cent of the combined faculties; they have an average age of 36.5 years, and 24.4 per cent have a doctor's degree. This same general pattern is also found in the four-year privately controlled colleges, but these institutions have a higher percentage of professors than the state-controlled institutions, and also a higher average age and a larger percentage holding the doctorate in the rank of professor. The higher average age and higher percentage with an earned doctorate holds true for all academic ranks in the privately controlled institutions.

In the two-year state-controlled colleges, there are only 139 faculty members holding the rank of instructor or above. Seven of these (5.0 per cent) are professors, 20 are associate professors (14.4 per cent), 40 are assistant professors (28.8 per cent), and 72 are instructors (51.8 per cent). The average ages for the various ranks in the two-year state-controlled colleges are; professors, 46.5 years; associate professors,

48.0 years; assistant professors, 42.0 years; and instructors, 32.3 years. In the two-year state-controlled colleges the percentage of faculty members holding the doctor's degree are: 23.6 for professors; 45.0 for associate professors; 10.0 for assistant professors. It is evident from the data that in the two-year state-controlled colleges those holding the higher academic ranks are somewhat more mature in age than those in corresponding ranks in the four-year state-controlled institutions, but that faculty members holding ranks of professor and assistant professor in the two-year colleges have considerably lower qualifications, as measured by percentage holding the doctor's degree, than their counterparts in the four-year state-controlled institutions.

Degrees Held

Although many factors enter into the maintenance of high quality in institutions of higher education, the achievements of faculty members as measured by the highest earned degree is an important criterion in any objective analysis of faculty quality. In the four-year state-controlled institutions, 31.5 per cent of the faculty members have earned doctorates, 57.1 per cent have earned master's or graduate professional degrees; and 11.2 per cent have bachelor's degrees or lower. In the four-year privately controlled colleges 40.6 per cent have earned doctorates, 46.7 per cent have master's or graduate professional degrees, and 12.7 per cent have

bachelor's degrees or lower. In the faculties of the two-year state-controlled colleges, 11.4 per cent have earned doctorates, 60.9 per cent have master's or graduate professional degrees, and 27.7 per cent have bachelor's degrees or lower. In the two-year privately controlled institutions, 3.7 per cent have earned doctorates, 67.3 per cent have master's or graduate professional degrees, and 30 per cent have bachelor's degrees or lower.

It is clear that as a group the four-year colleges and universities of Virginia have reasonably well qualified faculties on the basis of highest earned degree. It is also noteworthy that the percentage holding the doctorate in the four-year privately controlled institutions in Virginia exceeds the percentage in the four-year state-controlled institutions.

When the qualifications of new teachers employed in 1964-65 by all institutions of higher education in Virginia are contrasted with those of new teachers employed by over 1,000 universities and colleges across the United States, it appears that Virginia has not been able to match the nationwide standard. Of all new teachers employed in 1964-65 in Virginia, 20 per cent had doctor's degrees, 55.3 per cent had master's or graduate professional degrees, and 24.7 per cent had bachelor's or first professional degrees. In the more than 1,000 universities and colleges participating in the 1964-65 nationwide study,

27.2 per cent of the newly employed faculty members had doctor's degrees, 60.3 per cent had master's or graduate professional degrees, and 12.5 per cent had bachelor's or first professional degrees.

Sources of Highest Degree Earned

Five of the state-controlled two-year colleges have faculties with 50 per cent or more members who earned their highest degree in Virginia. The privately controlled two-year colleges tend to have the great majority of their faculty members with the highest degree earned from institutions in other States; none of these institutions has a faculty with less than 60 per cent of the members having the highest degree earned from institutions outside Virginia.

The percentage of faculty members having their highest earned degree from the institution in which they are presently serving is commonly used as an index of the questionable condition known as educational "inbreeding." No national norms or standards are available to suggest how high this percentage may go without being considered undesirable. At each of three Virginia institutions, more than one-fourth of the faculty members have their highest degree from the institution where they are at present located. The highest percentage is at the Medical College of Virginia, but the analysis there is complicated by the inclusion of large numbers of part-time faculty members in the calculations. At both the University of Virginia and Virginia

Polytechnic Institute, the tendency toward faculty inbreeding seems rather pronounced.

Faculty Salaries

Surveys of a national scope have been made of faculty salaries by various organizations. One of the most comprehensive is that prepared each year by the staff of the American Association of University Professors. Their most recent survey, for the 1964-65 school year, is reported in the June 1965 AAUP Bulletin. The AAUP has established institutional ratings that are based on "compensation" rather than salary. Compensation includes certain fringe benefits -- retirement, (if the benefits become vested in the faculty member within 5 years), insurance paid by the institution, housing allowances, tuition waivers for faculty children, etc. Since institutional practices vary greatly, the extent to which these items are reported and counted also varies.

With respect to average compensation of faculty members, the AAUP gives 18 institutions in the United States an "A" (highest) rating, and 75 additional institutions a rating of "B." The only Virginia institutions in either of these groups (both rated "B") are the University of Virginia and Washington and Lee University. Two other state-controlled four-year institutions, Virginia Polytechnic Institute and the Medical College of Virginia, along with two privately controlled

colleges, received a "C" rating. The other colleges and universities of Virginia were rated "D" or "E." It is commendable that Virginia has two institutions among the highest hundred in the country on the basis of this AAUP rating. It should be noted that both of these institutions have heavy endowments that furnish supporting income for faculty salaries.

In rating each institution for salaries at each of the four chief academic ranks, the Virginia institutions rated somewhat better for the two lower ranks. The University of Virginia, Hampden-Sydney College, Hollins College, Sweet Briar College, and Washington and Lee University were rated "A" for instructors and 11 others in the State were rated "B" for this rank.

Faculty Recommendations and Conclusions

This area of the Study does not require any lengthy set of recommendations. The facts speak for themselves. They tell of the magnitude of the task of faculty recruitment, a task which is certain to be in the forefront of the concerns of the academic world, in Virginia, and throughout the nation for the years that lie ahead. College and university presidents, deans, and department heads have lived with this problem for some years and have consistently sought to alert the public to its importance.

There are those who believe that the situation can be met only by much larger allocation of money for faculty salaries. They see

faculty recruitment as a simple economic circumstance -- the law of supply and demand. The demand for faculty members, they argue, has outstripped the supply, so the classical economic necessity is to raise salaries which will, in the first instance, permit an institution to outbid the competition of other employers, and, in the longer run, serve to increase the supply of faculty members until balance is restored. They concede that this solution will take some years to achieve equilibrium because of the time needed to educate a faculty member and the rapid growth in competitive opportunities for employment of personnel with the kind of talent required for faculty membership. Meanwhile, the States and the institutions with the most money will bid against each other for qualified staff.

The economic aspect of the problem cannot be minimized, and it is important that the citizens of Virginia be informed of the necessity of devoting substantially greater funds to the support of higher education. The urgency of this has been recognized by the public officials of the State, and this Report can only emphasize it further. Specifically it is recommended that Virginia continue, and augment, its well-conceived program for increasing the general level of faculty salaries. The State Council of Higher Education for Virginia should assist in developing guide-lines to insure equity among the institutions in the salary levels that are maintained. The guide-lines should

specifically provide differential treatment among institutions suitably based upon differences in program and function. Institutions with heavy commitments to graduate and professional instruction need greater allocation of funds for faculty salaries than colleges that have mainly an undergraduate program. Other special considerations will need to be taken into account in developing guide-lines with an appropriate degree of sophistication. The state-controlled colleges and universities should advise and assist the State Council of Higher Education for Virginia in preparing an orderly proposal.

Besides the action that seems necessary at the State level, as indicated in the recommendation above, there are some steps that ought to be taken within the autonomous authority of each institution. Because these steps pertain to the internal management of the institutions, they are put forward as suggestions only, for consideration by the appropriate authorities of the institutions.

It would be well for the Virginia institutions to take steps to produce a greater number of persons qualified for faculty memberships. While Virginia is able to recruit faculty members in considerable numbers from other States, it ought to produce its full share of the national total, and if it did, its own recruitment problems would be eased. This means expanding graduate enrollments, especially in the areas of short supply. Since doctoral-level education everywhere

is necessarily heavily subsidized, this will require that the universities with advanced graduate programs be allocated more funds for graduate fellowships and assistantships. It may be possible to find funds for this purpose by reducing the institutional emphasis on lower-division instruction, since the latter can be provided by the two-year colleges.

Some comprehensive universities seek to achieve a balance, with approximately one-third of their credit-hour production at the lower-division level, one-third at the upper-division, and one-third at the graduate and professional level. This can be done by limiting freshman admissions and diverting many beginning students to the two-year colleges. This would be appropriate in Virginia, where most two-year colleges have low enrollments, and where several metropolitan areas have not yet realized the full benefit of community colleges. The College of William and Mary produces almost two-thirds of its total credit hours in courses open to freshmen and sophomores and only 6 per cent at the strictly graduate level. All the four-year colleges except the Medical College of Virginia produce more than half of their total credit hours at the lower-division level. The College of William and Mary alone produced more lower-division credits in 1963-64 than the eleven state-controlled two-year colleges combined.

It is suggested that as the community college program develops in Virginia, the institutions with doctoral-level programs consider

taking steps to increase their graduate commitments by reducing the share of their resources devoted to lower-division instruction. Furthermore, Staff Report #5 indicates that they already offer graduate programs, generally with small-sized classes, in the fields, except for foreign languages, where the faculty shortages are most critical. Thus the chief need is to draw more students into these programs.

There is need to counsel more students into college teaching. While high salaries are the sine qua non for attracting able young people into college teaching, there is also a proper place for sympathetic counseling. Here the college faculties hold the key position. If they, themselves, down-grade college teaching, if they urge their best students to seek employment in industry, government service, or elsewhere, faculty recruitment becomes still more difficult. Over-emphasis on full-time research assignments may yield the same result.

While college teaching of undergraduates may not be as glamorous or as financially attractive as some of the alternatives, it offers rewards fully adequate to challenge the best talent. It is suggested that colleges and universities seek to encourage the most capable young people to choose college teaching as their career.

Care must be exercised to enlist all available talent for college teaching without rejecting capable persons because of custom or

tradition. It is likely that capable and well-trained women have been passed by for faculty employment because of antiquated notions and prejudices. In some cases, positive steps might be taken to persuade persons not now engaged in teaching, including women, to qualify for employment or to accept employment, if qualified. Some might be attracted by part-time positions. In any case, no sources of competent faculty members ought to be overlooked.

Colleges and universities also might reappraise their practices in refusing to employ two or more persons from the same family, and their provisions for mandatory retirement if these practices unduly inhibit faculty recruitment.

Colleges and universities can help solve the problem of faculty shortages by persuading their faculty members to teach more students. Staff Report #5 points out that several of the state-controlled institutions of Virginia have a relatively low instructional productivity per faculty member. While a low teaching load may serve to assist faculty recruitment of scholars devoted to research, as well as teachers who are just plain lazy, it might be that a higher teaching load, in terms of students but not class hours per week, coupled with higher salaries would be much more useful. This is referred to in Staff Report #5. It will be argued that this suggestion runs counter to the current mores in higher education, where one observer has

stated that academic leaders are developing the "cult of the non-teacher." What seems to be needed is a division of labor, with most of the faculty devoting themselves primarily to teaching, while others emphasize their scholarly research. Both kinds of faculty members should be well-compensated.

Colleges and universities will also need to apply their ingenuity to the exploration of new techniques of instruction. Some bold and imaginative steps might be taken during the next decade to minimize the faculty shortage. These include such procedures as self-study, credit by examination, television instruction, the use of tutors and teaching assistants, team teaching, programmed instruction, honors programs, and others. Experience may demonstrate on the one hand that some or all of these techniques are inappropriate. On the other hand, the traditional techniques of classroom instruction may also prove inadequate. Here is a fruitful field for experimentation. Virginia colleges and universities could make a distinctive contribution and alleviate their own problems by attempting to discover and validate new procedures for the instruction of students.

Libraries

A library is often referred to as the heart of an institution of higher education. The importance of an analysis of library facilities

in the Virginia institutions of higher education was recognized early in the progress of the work of the Higher Education Study Commission. A special committee of the Commission was appointed to give attention to this subject; it was combined with a standing committee serving the State Council of Higher Education, to form a joint advisory committee on libraries. With the assistance of this joint advisory committee, an agenda for the study of libraries was worked out, and a special consultant was chosen to make the study. His findings and recommendations are presented in Staff Report #9. The reader is referred to that document for the full treatment of the subject.

Many of the consultant's recommendations are related to adjustments that lie within the province of the institutional administrations rather than in the domain of state-wide concern by such agencies as the General Assembly or the State Council of Higher Education. The principal findings and recommendations of the consultant relating to matters of state-wide concern are summarized herewith.

Much of the success of the college library service is dependent on the quarters in which the library is housed. In all but two of the state-controlled colleges and universities the libraries were housed in a separate building devoted to solely library functions; in one of these two the complete occupancy by the library of its building is awaiting future college construction so that the non-library activities can be moved out.

In five of the state-controlled college and university libraries the stack space is already filled to capacity or more than filled. These institutions are Madison College, Medical College of Virginia, Radford College, Richmond Professional Institute, and the University of Virginia. In most of these five libraries materials are so crowded together that they are hardly usable or are stored in unsafe and inaccessible places. Radford College and the Medical College of Virginia will have additions to their libraries that will be available soon, and at the University of Virginia additional stack space will soon be under construction.

At Madison College there is urgent need for additional library facilities and also at Richmond Professional Institute, though at the latter institution the decision about library plans should await the larger decision about the ultimate location for the great state university in the Richmond area, as suggested in Chapter II of this Report. At Virginia State College at Norfolk the library is not well housed and is very crowded, although there still is a little space left for additions to the book collection in the stacks. At the other institutions there is adequate room for expansion for a number of years because of recent new buildings or additions to existing buildings. At Old Dominion College the entire library building should be turned over completely to library purposes at the earliest possible date. Plans for revision of the use of portions of the library building at Virginia Military Institute should be pushed.

A number of the library buildings have been planned with inadequate work space for the staff.

Only four of the state-controlled institutions have sufficient reading room capacity to seat one-third of the students at one time, the minimum seating which is considered essential. New libraries at Richmond Professional Institute, Old Dominion College, and Virginia Polytechnic Institute fall below the standard, probably because of the rapidly increasing enrollments of these institutions.

Of the 14 privately controlled colleges which reported on their library facilities, only two or three have seemed to be in as critical a situation as seven of the inadequate state-controlled college libraries. Only four of the 14 privately controlled institutions are seriously crowded for seating capacity for readers in their libraries, and they provide more satisfactorily for staff work space than most of the state-controlled institutions do.

It is to the credit of the State of Virginia that in recent library buildings and additions there have been wise planning and functional modern designs. Recently installed furniture and equipment has likewise been functional and attractive. Specific information about the library plant and needs in the Virginia institutions is given in Staff Report #7:

Library Book Collections

The book collections in the libraries of the four-year state-controlled institutions of higher education in Virginia range from the 1,159,809 at

the University of Virginia down to the 59,814 at Virginia State College at Norfolk. Library authorities have developed standards for the number of library books that a college centering its program chiefly on undergraduate work ought to have as a minimum, in proportion to the number of its students. The following Virginia institutions fall below the standard to the extent indicated:

Richmond Professional Institute	100,000 volumes
Old Dominion College	100,000 volumes
Virginia State College, Norfolk	50,000 volumes
Longwood College	19,000 volumes
Radford College	12,000 volumes

Of the privately controlled colleges reporting, only three failed to meet the minimum standards for institutions of their size.

Standards for minimum number of library volumes cannot well be applied to institutions with well developed programs of graduate studies, for the collections in such institutions need to be extensive in the highly specialized areas in which advanced graduate courses are offered. The Commonwealth of Virginia must be careful, less its pride in the unusual library resources of The College of William and Mary and the University of Virginia in certain specialized fields, blind it to the fact that rich library resources must be provided in all fields in order to enable the institutions to continue to be outstanding graduate and research universities.

One cannot but be impressed with the care with which the Virginia college and university library collections have been built up. In the older institutions, the book collections are truly outstanding in many fields, and one is impressed with the good qualities of materials which one finds on the shelves of the Virginia libraries. Though there are gaps and weaknesses, as pointed out above, the care that has been exercised in the selection of the books in the libraries has been notable. With proper support, the library collections can become even more extensive and useful in the Virginia institutions of higher education.

Administration and Management of the College Libraries

Some of the recommendations on administration and management of the libraries of the Virginia colleges and universities, as made by the consultant, relate to matters that are of concern to the institutional authorities rather than to state-wide agencies. The recommendations of this sort appear in Staff Report #9, and are not reproduced here. The present discussion is limited to a few matters that need attention at the state level.

It is to the credit of all concerned that there is a remarkable spirit of cooperation and good feeling between library staff members and the state purchasing machinery. Though library purchases are cleared through the central state office, the librarians unanimously

commend the expeditious treatment given their orders.

In the case of three categories of materials, there seems to be room for improvement in the purchasing procedures. First, the State of Virginia quite properly wishes to make use of the products produced in its penitentiary, and in some instances has urged these for library furniture and equipment, when it would have been better to depend upon standard library equipment suppliers. In some instances, such substitutions can be unduly costly. It is therefore recommended that standard library equipment and supplies be purchased from established commercial dealers, except in cases where it is abundantly clear that penitentiary products completely meet library specifications and standards.

Second, there seems to be a little uncertainty in some of the libraries as to whether or not state regulations for purchasing permit libraries to take advantage of discounts in ordering periodical subscriptions. These discounts are achieved by pooling subscription orders with one jobber and by placing subscriptions for more than one year -- that is for two, three, or five years or even "till forbid." It is recommended that the state purchasing procedures make possible a pooling of subscription orders and the placement of subscriptions for whichever multiple years would result in the greatest cash advantage.

Third, there is some uncertainty as to how libraries may carry forward book orders from one fiscal year to the next. Many librarians

believe that book orders may not be placed in one fiscal year for books that will not be paid for in that fiscal year. It is recommended that the college and university libraries be permitted to let their outstanding orders remain active, even though the filling of some of these orders may come within a different budget year from that in which the order was placed.

Library Expenditures

Analyses of a considerable body of data on library expenditures, plus direct observations in the libraries and testimony from responsible library staff members, leads to the conclusion that the Virginia state-controlled college and university libraries are operating with inadequate funds. The needs of the library for books and other materials, for better salaries for library staff, and for additional library positions, call for substantially increased funds. Failure to provide such funds now will result in an accumulation of arrearages and gaps that will be impossible to make up later.

As has been pointed out, funds for books and periodicals are the life blood of a college or university, providing the institution with the necessary materials to underwrite the educational program of the college. If these funds are not adequate and are not regularly increased to meet increased costs and the needs for additional enrollments, and curriculum expansions, the institution must surely suffer. It is

recommended that the book and periodical funds in the Virginia college libraries be increased annually to enable the libraries to keep up with the demands of scholarship in the state-controlled institutions.

The Virginia institutions that offer extensive programs of graduate study constitute a special problem. The library budget of the Medical College of Virginia needs to be increased, due to three factors: (1) additional salary funds to meet the increased salary scales that must be adopted, plus modest annual additions for additional staff as the library grows; (2) increasing need for additional periodicals and serial subscriptions, additional book purchases, and the increased cost of these materials; (3) the need to fill in some of the back files of important journals and serials that the library has been unable to purchase in the past.

In each of the three other major institutions that offer extensive graduate studies, there are peculiar circumstances which accentuate the problems of support. At Virginia Polytechnic Institute, a special fund has been available recently, which means that its library expenditures during the past two years are substantially above the average of previous years. At the University of Virginia and The College of William and Mary, there are special funds which have been built up over the years from gifts and donations. If these funds were separate from the library expenditures figures, the picture would be even darker

than it is. Such special funds help the library, but they are not the same as unrestricted regular funds that can be applied to the entire library program. In many instances, they are committed to special projects and special resources and, valuable as special collections are to the institution's resources, they do not substitute for the basic research and scholarly materials that must be provided in other fields. It is recommended that in the institutions with extensive graduate programs the special funds available for library support be used for the strengthening of areas of outstanding excellence, and that adequate funds be provided for the general basic excellence of the library collections in other fields of graduate study and research.

Library Personnel

Data presented in Staff Report #9 clearly indicates that the libraries of the state-controlled universities and colleges in Virginia are understaffed. It is recommended that funds be provided to increase the library staffs in the Virginia colleges and universities and that each institution adopt a program of proposed additions to the staff each year until the number of staff members is adequate in size to provide imaginative and efficient library service.

It is further recommended that, in the state classified service, salary rates for Librarian A and Librarian B be increased, so that the Virginia institutions can compete on a reasonable basis with other States

for the employment of well qualified librarians.

It is further recommended that all professional library positions in Virginia college libraries except Librarian A and Librarian B be classed as teaching and research, and placed under the personnel conditions governing the teaching and research faculty at the respective institutions. It is believed that this step will enable Virginia libraries to recruit and retain better qualified librarians and to assign them duties and responsibilities in accordance with their qualifications. It is interesting to note that all the 12 privately controlled college libraries reporting on this point accord faculty status to at least some of their professionally qualified librarians.

It is further recommended that Virginia establish liberal conditions of leave for graduate studies so that younger members of the library staff interested in librarianship can attend library schools in other States, perhaps with partial salary.

Inter-Library Cooperation

More and more today, libraries are trying to develop inter-library cooperation as a means of helping to meet some of the pressing problems of library service occasioned by increased demands, the "explosion" of knowledge, and inadequate finances. The greatly increased production of scholarly literature, together with increased cost of materials, has placed great strains on library budgets. Inter-library

cooperation is one way in which libraries may extend their services without unnecessary duplication of services and facilities. In recent years, Virginia has taken significant steps in the direction of cooperative activity, to the credit of the State's leaders and librarians.

Through the initiative of the Governor of Virginia, a special fund was established in 1964 for a cooperative purchasing program for books for the Virginia college libraries. Fifteen institutions are at present participating, including 9 of the four-year and 6 of the two-year state-controlled colleges. The brief experience with this experiment in cooperative purchasing seems to have been successful. Virginia is to be commended for introducing this experiment. It is recommended that the plan for cooperative purchasing of library books be continued and its volume increased, with perhaps a substantial increase in the amount appropriated and the addition of several more subject fields to those in which books are supplied through the cooperative purchasing procedure. Continuation and extension of the project is especially needed to provide added experience as a basis for a decision regarding long-term operation in the next few years. It is also recommended that each of the state-controlled institutions participate in the cooperative purchasing of library books, and that the policy of extending this service to privately controlled institutions, at no expense to the State, be continued and encouraged.

In 1964, an experimental TWX network was set up, so that an institution might quickly ascertain if a needed book, not available in its own library, could be borrowed by inter-library loan from another cooperating college. This service is available not only to the colleges, but on a wide basis to industrial and other concerns throughout the State.

Only four of the libraries visited in the course of this Study reported the use of TWX networks, and if the cost per call were computed from the first year of operation, it would indeed be a high figure. The four libraries reporting the use of the network all attest to its usefulness. As one bit of evidence, the time required for inter-library loans by TWX users has dropped from 10 days or 2 weeks to 17 or 48 hours. To balance this saving against unit cost is difficult.

Again, it should be clear that a program such as the teletype network cannot be fully assessed in the brief period in which it has been operating. That it has saved many hours of time is evident; that its unit cost is high is equally evident. Cost could be lessened by elimination of low use stations, but this should be done only if such stations have little to gain and little to contribute by being a part of the system. It may be some time before the installations can realize their true worth. It is recommended that the library TWX installations be continued and expanded. In addition to the better service that will result, library

cooperation among Virginia libraries will be encouraged, and this alone may be worth the cost of installations. The service provided outside the field of higher education by this TWX network is also a valuable asset throughout the State.

In two regions of the State of Virginia, there have been respectable collections and exchanges of information regarding library resources and holdings. In the Richmond area, though no formal cooperation seems yet to be organized, there is a great deal of common knowledge among libraries and librarians regarding the special resources of the various important library collections in the area. In the Norfolk area, during the past year, there has been an extensive exchange of information about the assets of the 60 or more libraries in that area. These situations are greatly to be commended. They indicate a spirit among Virginia libraries of a willingness to cooperate and regard for the needs of the scholar and the student, whether on their own campus or elsewhere. There seems to be a very salutary climate in Virginia for further cooperation to extend and improve library service.

While there is a most encouraging atmosphere of willingness to cooperate among Virginia libraries, there needs to be further opportunity and further stimulation. Librarians of the Virginia colleges are sufficiently engrossed in their important local responsibilities and cannot be expected automatically to look beyond their own walls for additional

problems. Some arrangements and some incentives are needed to enable Virginia libraries to move forward in the various activities outlined.

To this end, it is recommended that under the State Council of Higher Education, there be continued the Library Advisory Committee. It is further recommended that its membership include one person from each of the state-controlled four-year college libraries, and that there be considered the possibility of handling some of its business through a small executive committee.

Libraries in the Two-year Colleges

A review of the library situation in the state-controlled two-year colleges indicates that the library resources of these institutions are "developing," and have not yet reached acceptable standards for two-year college libraries. If these institutions were to be continued under the present management, the parent institution should assume responsibility for a rapid building up of library collections and the maintenance of adequate professional staff in each of the two-year branch colleges. When these institutions are transferred to the proposed Virginia Board for Community Colleges, as recommended earlier in this Report, it will be an important responsibility for the central state agency to see that adequate library resources are maintained in each of the comprehensive community colleges.

Storage and Retrieval of Information

The whole area of library service is probably on the threshold of important development due to the introduction of electronic computer methods for retrieving stored information. It is recommended that at least two institutions in the State of Virginia, probably the University of Virginia and Virginia Polytechnic Institute, be provided special funds to add to the staff of each library one person who has had some training and experience in modern methods of information storage and retrieval, so that these libraries can study, experiment, and adopt new methods as they become practical.

Physical Plants

To many people the most important image brought to mind by the words, university or college, is a group of impressive buildings on an attractive campus, probably dominated by a football stadium. The physical plant of an institution of higher education is undoubtedly an important part of its equipment for service, but most educators would rate it below the faculty, the library collections, and the scientific equipment, insofar as relative importance to the quality of an institution's program is concerned. In other words, with an excellent faculty, a strong library, and adequate scientific equipment, a college or university can maintain excellent service in a fairly shoddy set of

buildings; by contrast, an institution with a vast spread of excellent buildings, and carefully manicured campus, cannot amount to much as a university if it maintains only a mediocre faculty, a weak library, and inadequate instructional equipment.

The important fact about the physical plant of a college or university is that it is costly -- costly to build in the first place, and costly to operate and maintain. For each student enrolled, the average college or university in the United States needs about \$5,000 invested in its physical plant, an amount roughly equal to the entire current cost of educating the student for a four-year period. The annual cost of operating and maintaining the educational plant of a college or university usually will amount to 15 or 20 per cent of the total budget for educational and general purposes. Every new building added to the physical plant, if not a replacement, imposes an additional burden upon the annual operating budget.

Pressures within an institution are always in the direction of expanding the physical plant. New buildings are such a visible evidence of growth and prosperity that the presidents of institutions are sometimes led to measure their own success as administrators by the number of new buildings constructed since they took office, rather than by the number of outstanding scholars who have been added to the faculty. Within the academic units of a college or university, there is likely to

be pressure for new buildings, and a department or school within a university feels that its prestige is considerably enhanced by a new building that is designated for its use. Philanthropically inclined donors, in many cases, seem to get more satisfaction out of a large contribution for the construction of a new building (which may bear the name of the donor), than from a similar contribution to the endowment fund for the purpose of improving faculty salaries. The growing enrollments of students must be housed; many of these students must have dormitory accommodations, and even commuting students must have snack bars, student unions, and other facilities; all students must have enough classroom seats, laboratory desks, and library carrells or chairs in the reading room. It is not to be wondered, therefore, that on almost every college or university campus in the United States, new construction is proceeding at an unprecedented rate, for most institutions, particularly those under public control, are already considerably behind in the race to expand facilities as rapidly as enrollments are increasing.

Because of the importance of physical plant facilities to the orderly growth and development of the State's institutions of higher education and the large amounts of money involved in the provision of plant facilities, special attention was given to this problem in the Study of Higher Education in Virginia. A team of consultants, both

with broad experience in the analysis of institutional plant facilities and needs, were brought in to make this part of the Study for the Higher Education Study Commission. Their report is published as Staff Report #10. The findings of this Report are summarized here briefly. In this part of the Study, the principal attention is given to the four-year colleges and universities under state-control in Virginia.

Planning for physical plant development must be a long-range affair. Buildings last for a half century or more, and acquisitions of land for campus purposes usually must be made well in advance of actual needs if the required acreage is to be obtained economically. The construction of a new building, from the time planning money for it is authorized until it is ready for occupancy, is spread over a period of some years, so needs must be anticipated by several years if facilities are to be kept adequate. It is important, therefore, as a first step in the planning for future plant development, to estimate the number of students who will have to be accommodated at various periods in the future.

As was indicated in Chapter I of this Report, estimates have been made of the number of students who will be attending colleges in Virginia up to 1980, based on estimates of the college-age population in the State, and forecasts about the percentage that college enrollments will be of the college-age population in future years. A conservative

forecast of enrollments in Virginia colleges and universities indicates that the 1964 enrollments of 78,041 students will increase to about 121,000 in 1970, to 152,000 in 1975, and to 182,000 in 1980.

In 1964, 29.3 per cent of the total students attending colleges in Virginia were in privately controlled institutions. This percentage has been declining over the past decade or two in Virginia, as in almost every other State. The estimate is made that by 1980, only 20 per cent of the total enrollments in Virginia will be in the privately controlled institutions. These institutions will increase their enrollments considerably beyond the 1964 level during the coming years, it is estimated, but not as rapidly as the total enrollments in the State. Thus the facilities of the publicly controlled institutions of higher education in Virginia will have to be increased somewhat more rapidly than the rate of increase of total enrollment in the State.

The 1964 enrollments in the publicly controlled institutions of higher education in Virginia are estimated to increase by about 80 per cent by 1970, 110 per cent (more than double) by 1975, and by about 170 per cent by 1980. Some of the enrollment increase will be cared for in the two-year colleges of the comprehensive community college type, if the major recommendation of this Study for the creation of a system of such institutions in Virginia is carried out, as proposed earlier in this Report. It is difficult to estimate the extent to which

the expected increases in enrollments will be cared for in the two-year colleges, partly because the creation of such facilities will in itself add to the number of students who will be attending college. In other States where comprehensive community colleges are well-developed, they are currently carrying around 15 per cent of the total enrollment, but the percentage is increasing. It will be some time before Virginia begins to realize the full impact of a system of comprehensive community colleges, so it would seem probable that somewhere between 10 and 15 per cent of the total enrollment in publicly controlled institutions of higher education in Virginia may be in such institutions by 1980.

Three factors other than the numbers of students to be accommodated in the state-controlled institutions must be taken into account in projecting future needs for physical plant facilities. One of these factors is the need for renovations and improvements in the existing plants to make them suitable for the numbers of students now attending. The team of consultants visited each of the four-year state-controlled institutions in Virginia for first hand observations of existing plant facilities. These consultants were able to check the ideas of the institutional administrators about the need for improvements, alterations, and replacements. A detailed report for each of the institutions is presented in Staff Report #10.

A second factor that must be taken into account is the inadequacy of certain facilities in the present plants. Perhaps the most important deficiency, found in almost all the Virginia institutions, is the lack of sufficient office facilities for faculty members. The planning for the future should envision a separate office room for each member of the faculty; only one of the Virginia colleges now approaches this ideal. There are other deficiencies, such as library space and research space, that must be cared for in the planning of future plant facilities.

The third factor that must be taken into account in estimating future plant needs is the extent to which the institutions utilize their instructional facilities. The State Council of Higher Education for Virginia has made biennial studies of the utilization of instructional space in the state-controlled colleges and universities, and the results of such a study for the fall term of 1964 were available for this Report. The findings from the utilization study indicate that several of the institutions have instructional facilities for more students than are presently enrolled. In terms of the average number of class periods per week that rooms are in use, and the average number of class periods per week that classroom seats and laboratory desks are occupied by students, only four or five of the Virginia institutions are using their instructional facilities as fully as might be expected, based on norms from institutions throughout the United States. Wide variation

was found in the extent of the instructional space utilization among the Virginia institutions, leading to the conclusion that the needs for instructional plant facilities have not been equitably met in the past.

A review of the utilization data for previous years in the Virginia institutions indicates that the utilization is being increased, but not to the extent that should be possible. The consultants concluded that in planning for future plant construction, the institutions should be expected to continue to raise the rate of utilization of their instructional space until it reaches a point 20 or 25 per cent above the present state-wide average of utilization levels. This would mean that by 1980, on a state-wide basis, each 1,000 students enrolled would need only as much instructional space as is now provided for each 800 students. Much of the increased utilization can come from increases in the size of small classes, and by increasing the number of periods per week that classes are scheduled, to include the noon hour and more use of afternoon hours for classes.

In general, the institutions in Virginia that have the highest utilization of instructional space are those located in urban areas, where many of the students live at home. Richmond Professional Institute, Old Dominion College, and Virginia State College at Norfolk, are in this group. There has been an obvious advantage to the State in developing these new institutions in urban centers, where dormitory

facilities are not required and where classrooms and laboratories can be scheduled for use through a rather long day. The data for Radford College indicate that high utilization of instructional space can be achieved in a college that is chiefly residential, for Radford College is also in the group having the highest rates of utilization in Virginia.

Many of the Virginia institutions that have low rates of utilization are located away from centers of population, where almost all students must have dormitory facilities. In several of these institutions, it seems the classrooms and laboratory facilities are out of balance with facilities for student housing -- that is, with all dormitory rooms filled to capacity, the institution still has a low utilization of its instructional space. From the standpoint of economy in the provision of plant facilities, the State will be wise in limiting the establishment of future four-year colleges to areas in which there is a substantial concentration of population, so that large numbers of students can attend without needing dormitory facilities.

On the basis of all the factors that should be taken into account, the consultants made careful estimates of the number of square feet of floor area in new buildings and the probable cost of such buildings that will be required by the state-controlled institutions in Virginia each biennium up to 1970 and for two five-year periods thereafter, up to 1980. It is rather hazardous to make estimates in terms of

dollar costs of additional plant facilities, because future changes in the cost for construction will probably affect the actual amounts that will be involved. There are many other variables on which estimates and assumptions must be made, to come out with a total figure for new plant construction for future years. The possibility of errors in these estimates and assumptions affects the validity of the total dollars of cost or total square feet of floor area that are needed. The estimates that have been made by the consultants have been filed as a model that can be followed in the long-range planning for future plant development in Virginia. They are not presented in this Report because of the confusion that might result if actual figures were presented that were later found to be based on inaccurate estimates or assumptions.

With all factors considered, the consultants concluded that the present total square footage of instructional plant space in the state-controlled institutions of higher education in Virginia (almost 5,000,000 square feet of gross floor area in 1964) will have to be tripled by 1980. This is a rough approximation to the total plant needs that must be met. This estimate would include the instructional plant facilities for new four-year colleges and universities, as recommended earlier in this Report. This increase may seem staggering at first glance, but it is not far out of line with past experience in the growth rate of Virginia's institutions of higher education. It seems highly probable

that the financing of this expansion of physical plant facilities for the state institutions of higher education will not be an unusually difficult problem for the expanding economy of the State.

Computer Services

An area of concern in the program of higher education in almost every State is the manner in which computer services can best be provided. The rapid growth in recent years of technology in this field and the accelerated rate at which new and increasingly complex equipment is becoming available, makes the problem of computer service a difficult one. Computer services are costly and, in general, the expense of installing and operating computer equipment cannot be expected to be retrieved by savings in the wages of personnel or other reductions in operating expenses. The computer services are valuable, not because of their replacement of manpower or their savings in space requirements or in cuts in payroll, but because of the vast amount of information such service makes available and the speed with which the information is provided.

In institutions of higher education computers serve three important functions. One of these, and generally the one that leads to the first installation of computer service, in a college or university, is as a tool of management. Financial accounting, budgetary control,

student records, and other internal fact compilations and record keeping can be done much more expeditiously by computers than by the older methods, especially where the volume of work is as substantial as it is in the larger universities. Ideas about the size of an institution that can profit by computer service have undergone considerable change in recent years, for with the central data processing services now available throughout the country, even a small college can afford to take advantage of computer methods for many of its routine operations.

The second area where computer services are almost mandatory today is in research, especially research in the fields of science and in the professional fields that are based on science, such as engineering, medicine, and agriculture. Increasingly, research in the social sciences is leaning toward computer methods for its statistical data, and the humanities are also showing trends in this direction. An institution that conducts research on its own problems, referred to earlier in this Report as institutional research, needs effective computer service. An institution that attempts to carry on any volume of contract research or that considers research one of its important functions, must today have computer service, and often very elaborate installations are required.

A third area where computer services are needed today by

colleges and universities is in the instructional program, for the preparation of personnel who can operate computers. There is a huge demand for well prepared computer operators. The preparation requires training at the college level, and an increasing number of colleges and universities are providing opportunities for their students to learn the intricacies of this exciting new field of study. An interesting example of this trend is found at the Virginia Military Institute. Modern military service practically requires every commissioned officer to have a thorough knowledge of computer services, to be qualified as a computer operator, and especially to be thoroughly familiar with the possibilities of the application of computer services to military problems. Thus, Virginia Military Institute feels it necessary to require every student to take one or two courses in computer science; the equipment required for such an instructional program is both extensive and expensive.

Computer equipment and services are relatively expensive, both to acquire and to operate. Obsolescence is rapid, for improvements come out frequently, making it necessary to replace machines that only three or four years earlier were proudly looked upon as the latest. The economical use of computer services requires that installations be utilized fully. That is, computers do not have to limit their work to an eight-hour day or a five-day week, and in well

managed installations the computers are operated around the clock and on week-ends as well as on other days of the week. Clearly it might be possible to coordinate the installations of computer services in some manner that would reduce the total costs, while giving each institution all the services its program needs and requires.

In Virginia, the coordinating agency for all state use of computers is located in the Office of the State Auditor. This office must approve the acquisition of any new computer equipment by any state agency, including the institutions of higher education. This agency in the Auditor's office has had remarkably capable direction, and has displayed a fine cooperative and sympathetic attitude toward the needs of the institutions of higher education for computer service. As in many other States, there is some apprehension about the future burden the State may be called upon to assume for the extended use of computers in state agencies and particularly in the institutions of higher education.

The Southern Regional Education Board has been giving some attention to the problem of coordinating computer services within the various educational agencies of a State and throughout the entire South. The staff of the Southern Regional Education Board was requested by the Higher Education Study Commission to prepare a memorandum concerning its ideas about plans for coordinating computer

services that could be recommended for the Virginia institutions of higher education. The memorandum that was submitted stresses the rapidly expanding nature of the problem and makes a concrete suggestion for a state-wide committee, representative of the institutions of higher education, which would consider computer problems and make recommendations about specific installations in specific institutions. This seems to be excellent advice for Virginia. The State Council of Higher Education should have staff representation on such a joint committee, as well as various institutions that are interested.

Concern has been felt in some quarters that at some later time the state agency in Virginia, which is based in the office of the State Auditor, would not understand the manifold uses the institutions of higher education make of computer service, particularly in some of the research programs that grow more and more complex from year to year. The State Auditor's office can be expected to be fully aware of computer uses in such fields as financial accounting, but some of the research uses of computers are far away from the problems of financial accounting. The joint committee that has been suggested would be helpful in keeping the state agency advised of new developments in the instructional and research programs of the institutions that require computer service. It is recommended that a joint committee on computer services be appointed by the State Council of Higher Education for Virginia, and

that this Committee work closely with the agency in the office of the State Auditor about future developments of computer services in the State's institutions of higher education.

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CHAPTER IV

CONTROL AND COORDINATION OF HIGHER EDUCATION IN VIRGINIA

The present study of higher education in Virginia is limited, insofar as the analysis of the control and coordination of the programs of higher education is concerned, to the institutions operated under state control. The privately controlled colleges and universities are not included in the analysis. As noted previously, all the publicly controlled institutions in Virginia are under direct state control, for the State has no municipal university, and no local or district community or junior colleges such as are common in many other States.

The analysis in this Report is limited to what may be designated as the external controls of the institutions of higher education. It was agreed by the Higher Education Study Commission, when the outline of the Study was first developed, that there would be no investigation of the internal administrative structure or organization of the various institutions. This decision was influenced by three considerations. In the first place, such an analysis would have required much more time than has been available for completion of the present Study. In the second place, the internal administrative pattern of a college or university is normally a matter for determination by the authorities of the

institution itself, rather than a general or continuing concern of State authorities or agencies, such as the General Assembly and the various executive offices of the State. In the third place, there seems to be no reason to believe that there is anything very radically wrong at present with the internal arrangements of the institutions for their own operation and control. For these reasons the treatment in this Report begins with some analysis of the Boards that are in charge of the institutions and proceeds to the agencies at the state level that exercise functions of control and coordination over institutional programs.

In any institution of higher education the method of its financing becomes an important consideration in the analysis of the controls under which it operates. Although the present Study did not have the means for making an intensive analysis of the finances of the Virginia institutions, a few of the major features of the plan for their support are considered here in connection with the discussion of institutional controls.

An extended analysis of the control and coordination of higher education in Virginia is presented in Staff Report #11. The reader is referred to that document for the details and the supporting evidence on which the presentation here is based.

Institutional Boards

The pattern of institutional control through boards whose members are not employees is almost universal in the United States, though not

widely followed elsewhere in the world. A variety of titles is used for the designation of boards of control of institutions of higher education, such as board of trustees, board of regents, or board of governors. Virginia has been unique in using the title, "Board of Visitors," as the designation for the boards that have been set up for the control of each of its state institutions of higher education. Although the designation, Board of Visitors, as used in Virginia, might seem to imply that the Boards have little authority in the affairs of their institutions, in actual practice in Virginia these Boards exercise all the powers and carry all the responsibilities usually lodged in boards of control of institutions of higher education in other States.

Each member of the Boards of Visitors of the Virginia institutions is either appointed by the Governor of the Commonwealth or is *ex officio* a member by virtue of holding some other office in the State government. Appointed members are subject to confirmation by the Senate or the General Assembly. The State Superintendent of Public Instruction is *ex officio* a member of each of the Boards of Visitors. In addition, the Adjutant General is *ex officio* a member of the Board of Virginia Military Institute. Similarly the President of the Board of Agriculture and Immigration is *ex officio* a member of the Board of Visitors of Virginia Polytechnic Institute. The appointment of Board members in Virginia is similar to the pattern followed in many other States.

The thirteen four-year institutions and the eleven two-year colleges in Virginia are under the control of eleven Boards of Visitors. Each of the four-year colleges has its own Board of Visitors with two exceptions: Mary Washington College is operated under the Board of Visitors of the University of Virginia; Virginia State College at Norfolk is operated under the Board of Visitors of the Virginia State College at Petersburg. The eleven two-year colleges are branches of one of three parent four-year institutions, and are operated under the respective Boards of Visitors of the parent institutions.

The present pattern of Boards of Visitors represents some important changes that have been made in recent years. Formerly the institutions that served as state teachers colleges were all under the control of the State Board of Education. This was changed recently so that each of these institutions now has its own separate Board of Visitors. This was a commendable move and is in line with progress in several other States.

At one time, Radford College was operated under the Board of Visitors of Virginia Polytechnic Institute as a branch college, but later a separate Board of Visitors was set up for Radford College and the relationship with Virginia Polytechnic Institute was severed. Radford College seems to have flourished under its own Board of Visitors.

The institutions now known as Old Dominion College and Richmond

Professional Institute had origins in the extension programs of The College of William and Mary. These programs grew in strength and in volume of enrollment to the point where four-year degree-granting curriculums were established. Separate institutions were then created, each with its own Board of Visitors and the relationship with The College of William and Mary was severed. In the case of Richmond Professional Institute, there was a merger with a privately controlled institution whose name was preserved in the new state-controlled institution in Richmond.

Recommendation has been made earlier in this Report to the effect that the branch of Virginia State College at Norfolk, as soon as it attains sufficient strength for accreditation in its own right, be established as a separate institution with its own Board of Visitors and with a distinctive name; suggestions have also been made earlier in this Report that at sometime in the future, it may be advisable to provide a separate Board of Visitors for Mary Washington College, making it an institution independent of the University of Virginia.

The pattern that has been generally followed in Virginia, in giving each degree-granting institution its own identity and its own Board of Visitors, is entirely sound. Experience in other States clearly leads to the conclusion that a degree-granting institution can seldom attain distinction if it is operated as a branch of another college or university,

even if the mother institution be a very strong one. The parental care of a strong, well-established college or university may be advantageous in the initial development of a new college, but to continue this subordinate or colonial relationship too long almost inevitably slows the development of the dependent college and usually limits the pattern of service which it provides. Leaders in Virginia should be commended for having maintained the general policy of providing each degree-granting institution with a separate Board of Visitors. This policy should be continued as new centers for four-year curriculums in higher education are developed in the State.

Four of the Virginia Boards of Visitors have 12 members, one has 13 members, two have 14, three have 15, and one has 17. In general, the Boards are larger than in most other state-controlled colleges or universities throughout the country. In theory, a board with five to nine members is considered of ideal size, with about eleven the maximum for effective action as a group. Beyond such limits, the group is likely to be too large to give each member opportunity for expression on an issue and the tendency in the larger boards is to develop a series of small committees which practically take over the separate functions of the board. A large board nearly always has to have an executive committee to which large powers for immediate action are delegated.

Although the observation is made that the Boards of Visitors of the Virginia institutions have more members than is usually considered desirable, this does not indicate need for any action at present to change the situation, except as a request might arise from one or more of the institutions. The point of size is raised here rather to guide the future policy. It is suggested that, when new Boards of Visitors are established for institutions not now having them, consideration be given to a limitation on the number of board members to a range of five to nine. It is further suggested that in setting up future Boards of Visitors no provision be made for ex officio members. The disadvantages of ex officio membership are discussed at some length in Staff Report #11.

In the case of three of the Virginia institutions, the Governor's choice of new board members is restricted by statute, so that a certain number of the appointments must be from the institution's alumni. At the University of Virginia 11 of the 16 appointive members of the Board of Visitors (68.7 per cent) must be alumni of the University. At Virginia Military Institute 10 of the 13 appointive members (76.9 per cent) must be alumni. At Virginia Polytechnic Institute 6 of the 13 appointive members (46.2 per cent) must be alumni. Similar restrictions are not imposed on the Governor's choice of Board members for any of the other Virginia institutions.

The proportion of alumni memberships that are required on the

Boards of the three institutions mentioned above seems excessive. It is true that most alumni have a great interest and deep affection for their alma mater, though this attitude is often expressed more with respect to athletic sports than the academic program. The general criticism of excessive alumni control is that it often tends to be ultra-conservative. Too many alumni want their institution kept as it was when they were students, opposing change to meet new conditions and new demands,

In the normal course of events, the Governor can be expected to find a great many outstanding citizens in the State who are alumni of an institution and suitable for appointment to its Board of Visitors; furthermore, the provisions for nominations for new appointments by alumni groups should keep the Governor well informed about the presence among alumni of men and women who would be suitable for board membership. These channels of alumni influence should be sufficient, without the legal requirement that the Governor must appoint to the Board of a specific institution a large number of persons who are its alumni. It is commendable that this provision has been dropped in the more recently enacted statutes setting up Boards of Visitors, and this policy should be continued in future enactments.

The Virginia statutes are uniform in providing that each Board member is appointed for a four-year term. The provision is also uniform for all institutions that a Board member cannot be reappointed

immediately after he has served two four-year terms. The length of terms of board appointments is entirely satisfactory and the provisions for limiting board membership to two successive four-year terms is also wise.

With the exception of two institutions, the appointments for board memberships are effective every two years, and approximately half the appointed members might be new to service on a Board of Visitors at the beginning of each two-year period. The exceptions to this general rule are Virginia Polytechnic Institute and the Medical College of Virginia.

Because of the heavy responsibilities the Boards of Visitors carry for the general direction of policy control in the institutions, it is important to have a considerable element of stability in the membership of each Board. Studies in other States have shown that at least one-third of the membership should always have at least one year of experience in service on the Board, and appointments should be staggered in such a way as to make such provision. It would be simple in the case of the Virginia Boards to make a change to accomplish the purpose of spreading the beginning dates of board memberships, so that at any one time not more than one-third of the board members would be new to service on the Board. If appointments by the Governor and approvals by the General Assembly or Senate at each biennial session

are divided, so that half begin service in the year the appointment is made and half the following year, the desired element of continuity of board memberships would be provided. The changeover could be made by a proscription of the years for which appointments are made. It is recommended that the practice be instituted of appointing members to the institutional Boards of Visitors in Virginia so that approximately one-fourth of the terms expire each year instead of half every two years as at present.

One of the great strengths of American democracy is the willingness of outstanding citizens to render public service of various kinds, often at some sacrifice to their own immediate personal interests. Higher education in the United States has particularly benefited by the willingness of citizens to serve as members of boards controlling colleges and universities. The state-controlled institutions of Virginia are no exceptions to this general rule, and the roster of those who have served or are serving on the various Boards of Visitors is most impressive. The service takes time. It involves much careful study of reports and other documents. It entails heavy responsibilities. Board members frequently bear much criticism because of actions taken or not taken. Service on the Board of Visitors of a distinguished institution of higher education is a real honor, but the rewards and the emoluments for such service are intangible, though often deeply

satisfying to those who can see their institutions serving effectively in the education of youth, in the development of new knowledge and research, and in the various forms of public service.

The Commonwealth of Virginia has been fortunate in having so many capable citizens willing to serve as members of the Boards of Visitors of its colleges and universities, men and women who unselfishly devote their time and attention to this important public duty. They deserve the appreciation and thanks of every citizen in the Commonwealth for their service.

Financing Higher Education

A thorough analysis of the financing of the institutions of higher education in Virginia was not feasible as a part of the present Study. The chief obstacle to making a complete analysis is the lack of uniformity in the financial accounting and reporting by the various institutions. Steps were being taken at the time this Study was initiated to improve the uniformity of financial reporting by the state-controlled institutions, but the revisions could only go into effect with the fiscal year 1964-65, and the final financial reports for that year were not available in time for use in this Study.

Currently, another Commission of the General Assembly has been working on the policies of financial accounting and reporting by institutions of higher education and other state agencies, in the interest of improving

the form in which budgetary requests are submitted and analyzed. There has been considerable consultation between staff members of that Commission and the staff members of the Higher Education Study Commission. It is believed that the recommendations affecting financial reporting by institutions of higher education to be made by this other Commission will be effective in producing data suitable for sound analyses of institutional income and expenditure.

Level of Financial Support

The general level of Virginia's financial support of its institutions of higher education seems to have been improving in recent years. This is commendable and it is appreciated, not only by those who are concerned with the operation of the institutions but by all citizens who have a high regard for the ultimate welfare of the State. It must be remembered, however, that improvements are taking place rapidly in higher education throughout the entire country. A report on state tax appropriations for the support of higher education in each of the 50 States over a period of the past six years shows that the rate of increase in Virginia is only half that for the United States as a whole. In the most recent biennium, Virginia's rate of increase in state tax appropriations for higher education is only one-third that of the 50 States combined.

This Study of Higher Education in Virginia does not make any specific recommendations about the appropriations the State should

make for the current support of its institutions of higher education, or for any of the individual institutions. This is a problem for the budget makers and the budget review agencies. The only counsel that seems warranted by such limited data as have been reviewed by the Higher Education Study Commission is that the Commonwealth of Virginia is by no means lavish in its support of higher education. Careful attention should be given to the requests of the institutions for improvements in their financial support from public funds.

Budget Analysis

One difficulty that the Commonwealth of Virginia faces in its provision for financial support of its institutions of higher education is the lack of any provisions for professional scrutiny of institutional budget requests by a competent agency at the state level. This function is performed at present by the Division of the Budget, but as previously indicated, the financial data at present available for the Virginia institutions do not permit this sort of critical analysis, because of the lack of uniformity in the financial accounting and reporting. Furthermore, the Division of the Budget does not have any regular staff member who would be recognized as an authority on the finance of higher education, or competent to exercise professional insights in analyzing college and university programs and budget requests and recommending amounts to be appropriated. Competence of this sort is nearly always to be found

in the staff of an agency such as the State Council of Higher Education, but in Virginia, the State Council of Higher Education rather curiously has been forbidden by statute to spend any of its supporting appropriations on the making of analyses of institutional budgets and finances. It would seem entirely normal for the members of the General Assembly, in such circumstances, to doubt whether the funds recommended for appropriations are really needed. Without competent analysis, it is difficult to judge whether the various institutions are being fairly treated in their recommended appropriations. The remedy for this situation seems clear. It is recommended that uniform budgetary forms and procedures be developed and adopted for the institutions of higher education in Virginia, as provided in Chapter 144, Acts of the General Assembly, Regular Session, 1964.

It is recommended that the State Council of Higher Education be required to make a thorough analysis of the budgets of each of the institutions and be provided with funds and staff competent for this purpose. The findings from this analysis should be transmitted to the Governor for consideration when final determinations are made regarding the appropriations to each institution. The Governor and the members of the General Assembly should receive the recommendations for institutional appropriations from the State Council of Higher Education and the State Council should furnish supporting evidence in the form of the fiscal and program analyses

it has made. The recommendations and analyses of the State Council should be accompanied by the original requests and justifications as submitted by the institutions themselves, so that the Governor and the General Assembly can see what modifications have been made by the Council, and can have the benefit of reasons for these modifications.

Experience in other States indicates that when the state budget office and the legislature are given this sort of professional analysis and recommendation, their confidence is greatly increased in the financial needs expressed by and for the institutions of higher education. There is likely to be a feeling that proposed appropriations are distributed among the institutions as fairly as is humanly possible. The result is that the legislative body is more generously inclined to provide adequate support of the institutions than when actions are taken without convincing supporting evidence from a professional analysis of the budget requests.

Control of Faculty Salary Levels

A recently adopted policy of the State, which affects the financing of higher education, is the decision to base institutional faculty salaries on the average of faculty salaries in comparable institutions throughout the United States. Each institution in Virginia is placed in a category consisting of what are supposed to be similar institutions. For budget purposes and in actual practice the average salary of faculty members at each institution is to be the same as that for the average of comparable

institutions throughout the United States. This procedure has the great advantage of being objective. The adoption of this policy, moreover, constituted a "great leap forward" for Virginia, insofar as faculty salaries are concerned, and the institutions are grateful for the recognition given their needs. Once these average faculty salaries levels are attained, however, as is practically the case now, some disadvantages in the policy begin to appear.

One of the principal disadvantages of the present arrangement is the difficulty that institutions find in paying salaries that are really attractive to a few outstanding scholars. This situation has been commented on earlier in this report, in connection with the discussion of research programs in the institutions. Suggestion has been made there that in computing its average salary a Virginia institution be allowed to exclude a small percentage of the higher salaries paid, so that these "above the scale" salaries can be used to attract and hold outstanding scholars on the faculty.

One difficulty with the present arrangement for basic faculty salaries is the proper placing of institutions in categories for comparisons with other colleges and universities throughout the United States. Some of the Virginia institutions feel that their competition for well qualified faculty members is with a different group of institutions from that in which they are placed for the average salary determinations. It

is pointed out also that almost every institution, in seeking well qualified faculty members, must not only meet but must exceed the average, if it is to be successful in attracting and holding the best teaching and research talent. To meet only the average salary is likely to tend toward mediocrity rather than excellence. Sooner or later the Virginia institutions ought to aspire to something higher than just an average position in American higher education.

Again it must be recognized that the policy of maintaining average faculty salaries in the Virginia institutions at the national average for the class of each institution was, when it was introduced, a most important improvement and it has been an excellent policy as far as it goes. The point of this discussion is that the time has now arrived when this policy needs further development. It is recommended that state salary policy be extended to permit the institutions in Virginia to meet the kind of competition that prevails in the national market for able personnel.

Solicitation of Funds from Private Sources

In recent years, when there has been great pressure from the institutions for increased financial support, the State of Virginia has sometimes followed the policy of providing only partial support for some desired projects for improvement, with the understanding that the institutions would have to find elsewhere the remainder of the necessary funds. For example, the improvement in faculty salaries, that came

about from the policy of allowing each institution to maintain an average salary equivalent to the national average for its class, was based on a provision that the State would furnish half the money to make these salary improvements and each institution would have to find from other sources, such as increases in the student fees or private gifts, the remainder of the necessary supporting funds. This policy, plus the unwillingness of the General Assembly to provide funds as rapidly as the pressures upon institutions seem to demand, have more or less forced the state-controlled colleges and universities to seek funds for support from private sources.

The privately controlled institutions of Virginia have developed considerable resentment at the intrusion of state-controlled institutions into the area of raising funds from private sources. Contacts with leaders in the privately controlled institutions indicate that the complaints are not merely isolated incidents, but are widespread throughout the entire privately controlled sector of higher education in Virginia. Activity in the raising of funds from private sources is more pronounced in some of the state-controlled institutions than in others, but the whole policy of encouraging the state-controlled institutions of higher education to depend upon this source of supporting funds is seriously questioned by leaders among the privately controlled institutions.

It should be borne in mind that the privately controlled colleges and

universities in 1964 educated 29% of the students at this level in Virginia. This important service is provided without a penny of state funds. If these students had to be educated at public expense, many millions of dollars in additional appropriations would be required. Tuition fees at privately controlled colleges usually do not cover the full costs of education, and the difference must be made up by voluntary gifts from private sources. It is recognized by the privately controlled institutions that gifts will be made to state-controlled colleges and universities by individuals, foundations, and business corporations for special purposes. What they have objected to is the policy of the General Assembly which has forced state-controlled institutions to seek money regularly from private sources simply to perform their primary mission.

It would seem that the best remedy for the situation that is complained against would be the encouragement of state authorities and the General Assembly to provide adequate supporting funds for the state-controlled institutions. Certainly the practice of making matching appropriations, which require the institutions to get funds from other sources, should be discontinued. It is recommended that the policy of providing additional financial support to state-controlled institutions by partial appropriations, that must be matched or supplemented by income from other sources, be discontinued and adequate funds be provided for education of high quality in appropriations to the institutions by the

General Assembly in the future. Such a step would remove much of the pressure now on the state-controlled institutions for the solicitation of gifts from private sources.

It is difficult to suggest any other steps for the positive prevention of what is considered an intrusion by the state-controlled institutions into the area of raising funds from private sources. For example, it does not seem feasible to pass a law forbidding officials of the state-controlled institutions to seek outside funds or forbidding philanthropically inclined citizens of the State from making gifts to the state-controlled colleges and universities.

The Virginia economy is certainly capable of providing much more support for higher education than it has ever done in the past. Those who work in encouraging the trend in philanthropic giving are benefiting not only their own institutions, but all other colleges that depend on private sources for financial support. In the present situation in Virginia, it seems sufficient to call the attention of the state-controlled institutions and the General Assembly to the severe criticism of their fundraising activities that is voiced by the privately controlled colleges and universities. Members of Boards of Visitors, who are appointed by the Governor to represent the public interest, should be particularly diligent to see that their institutional officials do not exceed the bounds of whatever may be considered proper in seeking to raise supporting

funds from private sources. Further discussion of the problem of fund-raising by the state-controlled institutions will be found in Staff Report #11.

Tuition Fees and Scholarship Funds

Like most comparable institutions in other States, the Virginia state-controlled institutions of higher education have been practically forced to raise tuition fees sharply in recent years in order to get sufficient funds to meet the increasing costs of operation. A great many leaders in publicly controlled higher education throughout the United States feel that the trend toward higher tuition fees is wrong and should be reversed. At the moment, however, there seems to be no means of getting the necessary operating funds without the resort to higher tuition fees. Happily at some time in the future, it should be possible for the publicly controlled institutions of higher education in the United States to return to the earlier policy of charging very low fees or no fees at all to residents of the State. In some States, the publicly controlled community or junior colleges are now tuition free. The General Assembly of Virginia should encourage the state-controlled colleges to keep fees low by making adequate appropriations for support from public funds.

There is some pressure for the State of Virginia to create new scholarship funds for aiding students to attend college. This device is used to a limited extent at present in Virginia in certain fields, such as

teacher education, in order to entice students to prepare for a kind of service that is at present inadequately supplied with competent personnel. The privately controlled institutions have suggested that these scholarship provisions might be extended to students attending such institutions. The present legal opinion is that this would be unconstitutional in Virginia, so the teacher education scholarships are limited to students attending state-controlled institutions.

Except as a device for recruiting students for kinds of service where competent workers are in short supply, state scholarships are not recommended as a means for overcoming the barrier created for college attendance by high tuition fees. The General Assembly would be better advised to use the available funds for the direct support of the institutions, so that the tuition fees can be kept low, rather than for the support of a few students by means of scholarships.

Financing Student Housing Facilities

One final situation in the financing of higher education in Virginia should be mentioned. For a great many years, the state policy in Virginia did not allow institutions to issue revenue bonds for construction of self-liquidating projects. Thus, for the past fifteen years, while Federal funds have been available at low rates of interest, with long maturities, for the financing of construction of student housing facilities at colleges and universities, Virginia has been appropriating state tax

money for building such facilities. As a result, some funds which might have been used for extending plant facilities for instruction and research in Virginia's colleges and universities have been diverted to the construction of dormitories. Furthermore, the dormitories that have been constructed with the limited funds available have by no means kept pace with the rapid increase in applications of students for admission.

It has only been in the past biennium that this situation has been changed, following a recommendation by the State Council of Higher Education. The governmental authorities of Virginia should be commended highly for having made it possible for the institutions to finance dormitories and other self-liquidating projects by means of bond issues. Under the new arrangement, the faith and credit of the State are not pledged, and the security of a bond issue is the pledge of the revenues from the operation of the facilities. It will take many years for the state-controlled institutions of Virginia to catch up with the student housing facilities that have been developed in other States where there have been no scruples against borrowing for self-liquidating plant projects.

Borrowing for new building construction in colleges and universities is wisely limited to self-liquidating projects. Some States have in recent years developed a policy of building academic buildings, such as classrooms and libraries, on the basis of bonds which are financed

by an agreement to charge a building fee to students. Under this plan, the cost of providing new buildings for instructional purposes is loaded on the students who are attending and who will be attending the institutions in future years. In view of the previous criticism of increased tuition fees and the high cost of attending college, this plan does not seem a desirable one except in extreme emergencies. It is not recommended that Virginia authorize the building of college facilities, other than dormitory and associated structures, by means of bond issues.

State Agencies with Responsibilities
Touching Higher Education

As in every State, the General Assembly of Virginia, the chief legislative body, has much to do with shaping the destiny of each of the state-controlled institutions. The General Assembly authorizes the establishment of every institution and provides a legal basis for its government and operation. At each biennial session, the legislative body acts on each institution's request for supporting funds and appropriates from tax sources and from institutional revenues the funds for current operations and capital outlay. Basic changes in all other agencies which affect higher education can be made only by the General Assembly, which is subject only to constitutional limitations on its powers. In other words, the final authority on higher education in the Commonwealth is lodged in the General Assembly.

In Virginia, the Governor's office occupies a somewhat more central position than similar officials in some other States. As one of only three elected state officials in Virginia, the Governor is actually the only officer with executive powers who is responsible directly to the electorate. Thus, the Governor and the agencies under his immediate direction have much to do with the ultimate controls of the State's institutions of higher education.

As previously noted, the Governor nominates members of the Boards of Visitors, and by custom his nominees are always approved by the General Assembly or the Senate. Institutional requests for supporting funds in the form of a biennial budget are submitted to the Division of the Budget, an agency of the Governor's office, and ultimately the decision about the amounts to be recommended for appropriations to each institution by the General Assembly are the responsibility of the Governor. Similarly, capital outlay projects require the attention of the Governor's office and its agencies. In practice in Virginia, the General Assembly tends to follow the Governor's recommendations rather closely in making appropriations for the support of the state-controlled institutions of higher education.

Virginia has a commendable system of classified personnel service that applies to state employees. The Division of Personnel is organized directly under the Governor's office. The institutions of higher education come under the provisions of the classified service

for all employees except those classified as faculty members and a few specially exempted administrative officers. Even for faculty members, the Division of Personnel must approve the salary scale followed by each institution. The Division of Personnel is responsible for seeing that the average salary in each institution conforms to the average of comparable institutions throughout the United States, in accordance with the general state policy, as has been previously described.

The Division of Personnel is in capable hands, and there is a general attitude of commendable flexibility in dealing with special problems of personnel in the institutions of higher education. It is only natural that there are a few points of friction at the line of juncture between positions that are in the classified service and those that come under the category of "faculty," the latter being exempt from the general provisions of the classified service. Some adjustments in the classified service have been made in the definition of "faculty," and other adjustments may be warranted, particularly in the area of librarianship. As long as the system in Virginia is administered as competently and as flexibly as it has been in the immediate past, it seems that minor difficulties in applying the classified service rules and regulations to the institutions of higher education can be worked out satisfactorily without any basic change in the Virginia system.

Virginia has a state agency, known as the Art Commission, which is responsible for the aesthetic appearance of all state buildings. Plans for each new building for any state agency, or for the remodeling of an existing building, must be approved by the Art Commission, which attempts to insure architectural harmony and grace as a college or university develops its plant facilities. The Art Commission also has to approve acquisitions of paintings, statuary, or other works of art in the state-controlled institutions, whether they are received by gift or purchase.

The diligence of the Art Commission will doubtless save Virginia from developing many of the architectural botches that are now too frequently found on many college and university campuses throughout the United States. The chief complaint against the operations of the Commission arises from the delay that is often imposed upon the initiation of building construction, while the members of the Commission study and analyze the plans prepared by the architect.

Other state agencies may be mentioned as having some responsibilities touching the program of higher education. The Virginia College Building Authority was established to handle the borrowings of institutions of higher education for student housing. The Virginia Commission on Higher Educational Facilities is charged with the responsibility of distributing Federal funds granted to the

State for building construction in institutions of higher education.

The Virginia Advisory Council on Educational Television is at present largely a promotional agency for the development of educational television in the public schools; in the past the state-controlled institutions of higher education have not been using or supplying broadcast educational television, but in the future there may be some developments along this line. The State Educational Assistance Authority was created to provide an agency for guaranteeing loans made by private lending concerns to students attending state-controlled colleges in Virginia.

The General Assembly in 1964 established the Board of Technical Education and gave it responsibility for setting up a state system of two-year institutions, which are coming to be known as technical colleges. The Board of Technical Education has gone about its task diligently and at least one institution was opened under its general direction in the fall of 1965. Others are expected to be ready shortly. At present the plans for operating the technical colleges envision a rather highly centralized control under the Board of Technical Education and its staff at the state level.

Earlier in this Report, the recommendation is made that the Board of Technical Education be reconstituted and expanded, with a

change of name, so that it may become the State's agency for developing and coordinating all publicly controlled two-year colleges in the State. The recommendation lays particular emphasis on the development of comprehensive two-year community colleges throughout the State, instead of the separate technical institutes or branch colleges as at present. Recommendations are also made for the manner in which programs conducted under this Board might be coordinated with the rest of the State's program of higher education through the State Council of Higher Education for Virginia.

Like every other State, Virginia lodges authority over its public school system in the State Board of Education. The State Superintendent of Public Instruction is the chief executive officer of this Board, and a staff of specialists is employed for carrying out the necessary supervisory duties over the public schools. There are two major areas in which the State Board of Education and its professional staff have dealings with institutions of higher education. The first of these areas is in the preparation of teachers, which is an important function in several of the state-controlled colleges and universities. At present, the relations between the State Board of Education and the colleges and universities of Virginia seem to be harmonious and cooperative in the area of teacher education.

In one respect the teacher education forces in the State are dissatisfied with certain of the institutions that prepare teachers. This dissatisfaction rises because of the policy of these institutions with respect to limiting attendance to students of a single sex. The four colleges in the State that were formerly teacher's colleges admit only women students, with a few exceptions in certain cases for local residents. The State thus affords very limited opportunities for young men to prepare as elementary school teachers. This deficiency has been the subject of many complaints by leading educators throughout the State. Continued maintenance of institutions of higher education that are limited to a single sex is an anachronism peculiar to the State of Virginia. In practically all other States, the single-sex institutions that were formerly maintained have become coeducational, although in some States one separate college for women has been retained. In the interest of providing the best possible service in the preparation of teachers in Virginia, the institutions that offer curriculums for this purpose might well be reorganized on a coeducational basis.

The second area in which the State Board of Education and its professional staff affect higher education is in the approval of the kinds of degrees granted by each of the colleges and universities of the State. By statute the State Board of Education is given authority

to approve degrees, and institutions are forbidden to offer a degree that has not been approved by the State Board of Education. The State Board of Education also has a procedure and standards for accrediting institutions of higher education. The State Board of Education has not been provided with staff or appropriations that would enable the employment of professional personnel to carry out this responsibility, so it has generally fallen as an added duty to the staff member serving as Director of Teacher Education.

The approval of the State Board of Education for the granting of degrees is required alike for state-controlled and privately controlled institutions in Virginia. There is some confusion about the exact powers of the State Board of Education and the application of those powers to institutions that were established by statute prior to the granting of the responsibility to the State Board of Education. This is a matter that should be clarified. Certainly some agency in the State needs to have full power and authority over programs of all institutions in the State to prevent the development of the diploma-mill type of operation.

Some questions have also been raised as to whether the State Council of Higher Education for Virginia might not be a more appropriate agency for approval of degrees offered by the institutions in Virginia. It is pointed out that, in the exercise of its function of

coordination, the State Council of Higher Education is required to pass upon each new program as proposed by a state-controlled college or university. It may seem something of a duplication to have a degree program that has been approved by the State Council of Higher Education pass again under the scrutiny of the staff of the State Department of Education. The State Council of Higher Education for Virginia, however, has coordinating responsibility over only the state-controlled institutions, and it does not have similar relationships to the institutions under private control. This would argue that the present approval of programs should not be disturbed.

Presumably the responsibility of the State Board of Education in the approval of a degree and the Board's accrediting procedure are intended chiefly as a safeguard of the quality of the degrees that are granted. While this is also a concern of the State Council of Higher Education, it does not hurt to have two independent agencies exercising this sort of judgment. It does not seem desirable at present to make any recommendation for transfer of power now given the State Board of Education for approval of degrees in institutions of higher education. It is recommended that the State Department of Education be provided with funds for the maintenance of a suitable staff to carry out its statutory authority for approval of degrees granted in institutions of higher education, so that the citizens of the State may be protected against the

operation of institutions of the type commonly known as diploma mills.

The State Council of Higher Education for Virginia

Virginia is one of the States that in the period since World War II has set up a single state board for higher education with powers limited to coordination. The State Council of Higher Education for Virginia was established by statute in 1956. The step was in line with the progress in many other States. Leaders in Virginia should be commended for having adopted it. Quite wisely, too, the State did not eliminate the Boards of Visitors for the individual institutions, but continued them with the same powers as they previously held over the operations of the institutions.

The purpose of the State Council of Higher Education as set forth in the statute is ". . . to promote the development and operation of a sound, vigorous, progressive, and coordinated system of higher education in the State of Virginia." The membership of the Council consists of eight persons appointed by the Governor, subject to confirmation by the General Assembly plus the State Superintendent of Public Instruction, ex officio. Appointed members of the Council serve four-year terms, two memberships expiring each year. After having served for two successive terms, a member may not be appointed again for two years. The statute further sets up safeguards to protect the membership of the State Council of Higher Education from bias,

prohibiting any member of the Council from being "an officer, employee, trustee, or member of the governing board" of any institution of higher education.

The statute prescribes that the Council of Higher Education shall constitute a coordinating council for the state-controlled institutions of higher education in Virginia. The Council is charged with the duty of examining data and, with the aid of the Boards of Visitors of the several institutions, preparing plans under which the several institutions shall constitute a coordinated system. The Council is further required to study questions affecting state-wide policies in higher education and to make recommendations with respect to such questions.

The statute is relatively comprehensive. At the same time, some of the references are a bit vague. For example, in Section 23-9.10, which is concerned with "determinations and reports as to branch institutions and extension work," the reference to extension work is not entirely clear. As previously noted, the State Council has not in the past interpreted its authority as including responsibility for extension courses or the development of extension centers, until such organizations were ready for formal recognition as branches of the parent institution. At a number of other points the interpretation of the statute seems to be somewhat unclear; these are mentioned and discussed in Staff Report #11.

Perhaps the most significant feature of the statutory grant of authority to the State Council of Higher Education for Virginia is that which originally gave the Council duties of reviewing the biennial budget requests of the institutions. This provision is absolutely essential to effective efforts toward the coordination of institutional programs of higher education in the State. The provision of this section, however, has been nullified each biennium since 1960 by a rider attached by the General Assembly to the Appropriation Act, providing that none of the funds appropriated for the support of the State Council of Higher Education for Virginia may be used for the coordination of institutional budgets.

As a result of its loss of responsibility for reviewing institutional budgets, the State Council of Higher Education has also lost much of its control over program expansions and extensions in the institutions. In some cases, a program expansion has been planned and fully financed by an institution before being presented to the State Council for formal approval. In such case, the State Council seems to be without power to discourage or disapprove a new program that may seem unwise or duplicative of the efforts of some other college or university.

The very nature of the responsibility for coordination is likely to generate some irritation or antagonism among the affected agencies and organizations. Action taken in the interest of coordination is often interpreted as restraint or restriction. In fact, a coordinating agency that does

not occasionally meet some evidences of dissatisfaction with its decisions is probably not doing its whole job. Currently in Virginia it is no secret that there has been criticism of the State Council of Higher Education. The nature of these criticisms and some estimates of the rationale behind them are presented in Staff Report #11. The State Council of Higher Education for Virginia seems fully aware of the points at which it has been criticized, and is taking effective steps to clarify misunderstandings about its role and function. During the past year the State Council has worked out a well considered statement of its policies and procedures to guide its own actions and those of its staff.

It is imperative that Virginia retain a sound plan for state-wide coordination of higher education. It is hardly conceivable that the need for effective coordination at the state level of Virginia's 24 state-controlled institutions of higher education could be denied. The present statute under which the State Council of Higher Education operates is basically sound. Some improvements could be suggested, but they are relatively minor and in the nature of clarification rather than substantive change.

Fundamental to the effective operations of the State Council of Higher Education for Virginia is the removal of the rider on the Appropriation Act that prevents it from making analyses and recommendations on institutional budget requests. It is recommended that hereafter the

General Assembly not attach to subsequent Appropriation Acts a rider restricting the State Council of Higher Education from using its appropriated funds for reviewing institutional budget requests.

The State Council of Higher Education should continue the policy of maintaining a professional staff headed by an outstanding educator, one who is thoroughly familiar with the broad problems of higher education, one whom the institutional presidents can and do respect as an equal. The salary paid the chief executive officer of the coordinating agency should be on a par with that paid the presidents of the universities in the State. It is recommended that the State Council of Higher Education be provided an operating budget sufficient to maintain a staff of well qualified persons, adequate in number for the discharge of the functions that must be performed.

In the past, the State Council of Higher Education has made use of advisory committees, with members from the personnel of the institutions, to assist it in formulating policy and in studying special problems. This plan is commendable and should be continued. In other sections of this Report suggestions are made about areas in which advisory committees seem to be particularly needed, such as the problems of extension and public service, the two-year community colleges, and computer services. The State Council of College Presidents has in the past constituted a valuable top level advisory committee to the

State Council of Higher Education on major problems, and this relationship may be expected to continue. In turn, the Council of College Presidents should share with the staff of the State Council of Higher Education their thinking about desirable lines for future development as seen from the institutional point of view.

It is recommended that the State Council of Higher Education serve as the chief advisory body to the Governor and the General Assembly in the development of state-wide policies in higher education, in formulating long-range plans to meet future needs, and in coordinating present activities with future planning. The State Council can coordinate the institutions of higher education by interpreting state-wide policies and plans to the Boards of Visitors and the officers and faculty members of the institutions, and by analyzing and interpreting institutional planning and programs in the light of state-wide policies and plans.