UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
OFFICE OF EDUCATION
WILLIAM JOHN COOPER, Commissioner

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SURVEY OF PUBLIC HIGHER EDUCATION IN OREGON

SURVEY COMMISSION:
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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF EDUCATION,
Washington, D. C., May 13, 1931.

SIR: I transmit herewith a manuscript recently submitted to the Board of Higher Education of the State of Oregon which embodies findings and recommendations concerning the public institutions of higher education in that State. Following usual practice, your commissioner appointed this survey commission at the request of the properly constituted authorities of the State and recommends publication of its findings in accordance with an agreement made before the commission began its work.

I believe that the publication of this report will not only help to clarify a complex situation for many thoughtful and earnest citizens of Oregon, but also will be useful to members of the legislatures and responsible educational executives in other States where somewhat similar problems are involved.

A few guide posts for the general reader may be in order. I offer these:

First: A survey report supplies such facts as appear to experts to be pertinent to the solution of problems before the responsible executives; these data could be challenged only by establishing their inaccuracy or by showing that other facts have been overlooked by the investigators or concealed from them and that such facts are pertinent to the issues involved.

Second: A survey report may, and frequently does, involve the best opinions of the staff as to how these problems are to be solved. The plan offered, however, does not relieve the administrative board from its responsibilities. Such board must determine whether a correct solution is possible or feasible; and, if it possible and feasible, whether it should be made effective at once or gradually be put into operation over a period of years.

Third: The reader of the Oregon report, uninformed of local conditions, should have in mind a State originally agricultural in its interests, with its population concentrated in the rich Willamette Valley. It early placed its three chief institutions of higher education in the heart of this valley, the university and the agricultural college 40 miles apart, and the normal school only 18 miles from the

latter. But with the passing of years two other agricultural areas have developed, one in the south and the other in the east, and a great commercial and industrial city has developed in the north. Normal schools have recently been established in the two newly developed agricultural sections, one at Ashland, the other at La Grande. The State's major professional schools and numerous extension courses have been located in Portland.

Obviously unification rather than further diversification is the next step. The State rather than competing regions must have first consideration. Impressive as are the claims of the big city for a collegiate institution, the survey commission took the attitude that the people of Oregon at present feel keenly the expense resulting from attempts to serve communities by locating institutions in them. The vote to place all institutions under a single board of higher education is regarded as a mandate to put State interest first, and demands frank recognition of the one University of the State of Oregon with units, for the present at least, located at Ashland; Corvallis, Eugene, La Grande, Monmouth, and Portland. The commission recommends maintaining junior colleges of arts and sciences at Corvallis and Eugene, and at the distant campuses at Ashland and La Grande; training for elementary-school teachers at Ashland, La Grande, and Monmouth; senior colleges (upper division work), graduate instruction, and related professional schools at Corvallis and Eugene; and certain professional schools and adult education in Portland.

The future may indicate other lines of development, but the commission believes that the State's interest is served at present best by conserving the strengths of each campus, providing nonduplicating goals for the several units within the one greater university, and establishing no new units.

Alumni and others whose thinking is limited to the old University of Oregon and to the old Oregon State College may have difficulty adjusting themselves to such a program. Those, however, who are able to think in terms of a university of the State of Oregon with six campuses should have little difficulty in adjusting themselves to the program outlined by the commission.

Fourth: The feature of the commission's recommendations which may strike the reader as novel is that all upper division and graduate work in the biological and physical sciences be placed in one institution, and all the upper division and graduate work in humanities and social sciences in another. In fact, however, the only novelty in the proposal is the separate campuses. Several American universities with all the work on one campus, have divided the courses between a school of arts and a school of science with a separate dean in charge

of each. Such is the case at the University of Washington, for example. In 1930, the University of Chicago established four separate schools or divisions—biological sciences, physical sciences, humanities, and social sciences—with a dean over each, whereas the commission recommends only two divisions in Oregon. An examination of the data offered in support of this proposal in the report reveals how few are the students who could not, under the proposed arrangement, get while attending the institution of their choice exactly the courses which they now take for graduation.

It is recognized that there are no universally applicable principles governing the organization and administration of higher institutions. Each case must be decided in the light of all the facts which bear upon it. It is pretty generally recognized, however, that competition rather than cooperation among the several State-supported institutions of higher education is the prevailing spirit in most States, and no entirely satisfactory solution of the problem has been found in any of the States which may be recommended to the others.

Respectfully submitted.

WM. JOHN COOPER,
Commissioner.

The SECRETARY OF THE INTERIOR.

Preface

On November 3, 1929, C. L. Starr, president of the Oregon State Board of Higher Education, sent the following telegram to William John Cooper, United States Commissioner of Education:

> Oregon State Board of Higher Education desires to have survey made of State institutions of higher learning, including normal schools. Can the Bureau of Education make the survey during 1929 and 1930?

Commissioner Cooper immediately indicated by telegram the willingness of the United States Office of Education to cooperate in the study requested and referred the matter, with authority to act, to Dr. Arthur J. Klein, Chief of the Division of Collegiate and Professional Education in the United States Office of Education. Doctor Klein at once communicated with the president of the Oregon State Board of Higher Education and arranged for a preliminary conference with the board at Portland on January 10, 1930. He also conferred during November, 1929, with Arnold Bennett Hall, president of the University of Oregon, and W. J. Kerr, president of the Oregon State College, at Chicago, concerning the situation in Oregon. Both expressed most cordially their desire that the Office of Education undertake the study and their willingness to cooperate in the work of the survey.

On January 10, 1930, Doctor Klein met with the State board of higher education at Portland, all members of the board being in attendance. At this meeting a tentative memorandum of agreement was prepared describing the conditions under which the Office of Education would conduct the work, the scope of the survey, and the terms of cooperation between the board and the Federal office in the selection of the survey staff. This agreement, which was made binding by the signatures of Commissioner Cooper and the president of the State board of higher education on January 25, 1930, provided:

> 1. For the services of the regular personnel of the staff of the United States Office of Education without salary compensation by the State of Oregon.
>
> 2. That the Office of Education should print the entire report, or such portions thereof as would be of national interest and furnish the State board of higher education, without charge, 500 copies of the report as printed, together with typewritten copies of the entire report if portions should be omitted from the printed bulletin.

3. That the State board of higher education should pay the travel and subsistence expenses of all members of the survey staff and provide an honorarium for members of the staff when they were not regularly upon the pay rolls of the United States Department of the Interior.

4. That the survey work should be carried on by a responsible commission of three members, assisted by such technical specialists as might be required.

5. That Dr. Arthur J. Klein should serve as director of the survey and a member of the commission, the other members to be selected by agreement between the State board of higher education and the director.

6. That technical assistants should be selected by the commission with the approval of the board.

7. That information secured from the institution by the survey staff by means of questionnaire and letter should be authenticated by responsible institutional representatives designated for the purpose.

8. That the field work of the survey should be carried on during the month of May and be followed immediately by a confidential conference with the State board of higher education in regard to the progress of the work.

9. That the director of the survey should spend the month of October, 1930, in the State and present to the board an oral report on the major conclusions of the commission at the end of this period.

10. That "the survey should undertake to study the economic and social ability of Oregon to support education and to suggest assignment of a practical proportion of the State's income to higher education with reference to other obligations of the State. The fields of higher education needed by the State will be studied and the extent to which each field should be developed will be presented in terms of both support and numbers. Recommendations will be made in regard to the instructing and research functions of the existing institutions with reference to these needs. These recommendations will be based upon examinations of the present facilities and activities of the institutions and will include suggestions for such modification as will better adapt the work of the institutions to the needs of the State. The report will study in addition the standards of administration and service of each of the institutions. Finally, a summary statement of a long time, flexible program of organization and development of higher education in the State will be suggested."

11. That "the survey commission shall have entire freedom of inquiry and judgment and that the Office of Education shall be free to publish the facts as they are found and also to publish such conclusions and recommendations as may be reached by the commission."

Immediately following the January meeting with the State board of higher education, the director of the survey spent approximately two weeks in visiting the State's higher institutions and in conferring with the board and State officials. This period was spent in collecting printed and mimeographed material already available and in arranging for the assembly of further information by means of an extensive system of questionnaires.

In accordance with the terms of the agreement between the board and the United States Office of Education the survey commission and staff were constituted as follows:

Commission: Dr. Arthur J. Klein, director, formerly Chief of the Division of Collegiate and Professional Education, United States

Office of Education, now professor of higher education, Ohio State University; Dr. George A. Works, formerly president of the State College of Connecticut and now professor of higher education, University of Chicago; and Dr. F. J. Kelly, formerly president of the University of Idaho and now lecturer in higher education, University of Chicago.

Special assistants: Dr. Palmer Johnson, University of Minnesota; Dr. Thomas A. Benner, Teachers College, Columbia University; Dr. E. E. Lindsay, University of Pittsburgh; Dr. Victor H. Noll, University of Minnesota; Benjamin W. Frazier, United States Office of Education; John H. McNeely, United States Office of Education; and Walter J. Greenleaf, United States Office of Education.

All the members of the staff except Doctor Johnson and Mr. McNeely participated in the field work in Oregon that was carried on during the month of May. The field work was preceded by two months of study and summarization at Washington of data secured from printed sources and from an elaborate system of questionnaires filled out by the institutions, faculty members, students, and graduates of the institutions.

Upon the basis of these preliminary investigations the inquiry during the field work was carried on by means of individual and group interviews with institutional officers, and was harmonized by almost daily conferences of the survey staff. These conferences served to keep the commission constantly informed concerning the discoveries and conclusions of the technical assistants and to develop and coordinate the conclusions ultimately reached by the entire staff. Thus it was possible for the commission to meet with the State board of higher education on May 22, 1930, to report the trends of the investigation and to give the board ample opportunity to advise the commission concerning modifications of emphasis and scope which would make the survey report of more value to the State.

Work upon details and upon tentative drafts of certain chapters was continued by members of the staff during the summer of 1930. All this material was assembled by the director of the survey, who then spent the period from October 1 to November 7 in the State writing the report, checking factual statements, and conferring with various representatives of the institutions, the board, and the public. During the months of December, 1930, and January, 1931, Mr. John H. McNeely, of the staff of the United States Office of Education, was assigned to the task of preparing tables and charts and of assisting the director of the survey in the final work of writing and revising the report. This draft was then submitted to the members of the responsible commission and, after such modifications as resulted from discussion by the commission, was submitted to the United

States Commissioner of Education as embodying the unanimous recommendations of the survey commission.

The commission and all members of the survey staff wish to acknowledge the hearty assistance of institutional administrations and faculties, of State officers (especially that of Mr. Sam Kozier, director of the budget, and Mr. C. A. Howard, superintendent of public instruction), of the members of the board, and of private organizations and individuals. Special mention should be made of the time and effort consuming assistance of all the private colleges of the State in the special study that was made of the composition and social background of the student bodies in Oregon's institutions of higher learning.

SURVEY OF PUBLIC HIGHER EDUCATION IN OREGON

Chapter I

Introduction

The task assigned to the State board of higher education by the law which created it is that of unifying the activities of the five publicly supported higher institutions. These five institutions are the University of Oregon, the Oregon State College, and the normal schools at Monmouth, Ashland, and La Grande.

Analysis of the law and of the circumstances that led to its passage makes it evident that the legislature and the governor reflected the desire of the people of the State, first, to secure more effective expenditure of the public funds devoted to higher education; second, to prevent undesirable duplication of higher educational offerings; and, third, to create an agency of control with responsibility and authority to conclude and to prevent in the future the institutional rivalries and bickerings that have wearied the State and excited its distrust.

Undoubtedly, the relationships most prominent in the mind of the State and of the sponsors of the bill, were those that had developed between the university and the Oregon State College, but it is also apparent that the law intended to recognize the possibilities of conflict and rivalry between the three normal schools and between the normal schools as a group and the other two higher institutions.

In other States where the land-grant colleges and the State universities are separate institutions, difficulties similar to those in Oregon have not been uncommon. In some States more recently the major discords have been those caused by clashes between the distinctively teacher-training institutions as a group and the State university or the land-grant college or both.

Various types of unified control have been tried where these difficulties have arisen.

In the States of Alabama, California, Connecticut, Idaho, Louisiana, Maryland, Massachusetts, New Hampshire, New York, Oklahoma, Tennessee, Virginia, West Virginia, Vermont, and Hawaii, the same State agency that supervises elementary and secondary education also controls the normal schools and teachers colleges.

In the States of Maine, Michigan, Minnesota, Mississippi, Nebraska, and Wisconsin, the teacher-training institutions are controlled by a single board without other duties, although the control is not identified with that of the State board of education or of the State department of education.

In the States of Florida, Idaho, Iowa, Kansas, Montana, New Jersey, New York, North Dakota, Oregon, and South Dakota, all State higher institutions of whatever character or type are under common control. This tendency to secure greater unity through single control is further illustrated by the fact that there are only eight States without some form of common control of two or more institutions that are separated by considerable distance. Oregon, therefore, had ample precedent in the establishment of the State board of higher education.

Are the provisions of the law such as to insure the accomplishment of the purposes for which it was passed? In the opinion of the survey commission this enactment is better suited to the accomplishment of the unification of the State's higher education than any similar provision found in other States that have attempted to deal with the question by legal means. The reasons that lead the commission to this opinion may be summarized under four points:

(1) It creates and places the control of the higher institutions in the hands of a "department of the government of the State." The agency of control is not, therefore, simply a board of trustees with limited institutional jurisdiction, but a real arm of state-wide responsibility.

(2) This department is removed from the shiftings of political influence that have worked so disastrously upon the educational programs of many of our States in the past. The department is conducted under a board of nine directors, appointed by the governor with the consent of the senate for a term of nine years, one member retiring each year. "The governor may remove any member of the board at any time for cause, after notice and public hearing had, but not more than three members shall be removed within a period of four years, unless it be for corrupt conduct in office." Thus, assuming that the members of the board are upright citizens who realize their responsibilities to the State and who can not be intimidated personally by the threats of self-seeking politicians, the continuity and integrity of the State's educational program can not be destroyed as it has sometimes been in the past in States which failed to provide safeguards of the kind the Oregon law contains. Further, political influence and activities on the part of the institutions are discouraged by provisions that forbid the governor to appoint to the board any person "in any way connected with the University of Oregon, the Oregon State Agricultural College, or any of the

State normal schools, nor shall more than three alumni of these institutions, nor more than one alumnus from the university, the Oregon State Agricultural College, or the normal schools, be a member of the board at any time, nor shall any member of the board be selected from the residents of any city in which the principal office of any of the institutions of higher education hereinbefore mentioned is situated." For the same purpose the law provides that: "All relationships and negotiations between the State legislature and its various committees and the institutions of higher education shall be carried on through the department of higher education. No subordinate official representing any of the separate institutions shall appear before the legislature or any committee except upon the written authority of the board."

(3) The department of higher education is given ample power.

(*a*) It is given control "of all records, books, papers, equipment, and supplies, and of all lands, buildings, and other real property and personal property" of the institutions.

(*b*) It is given "control of the use, distribution, and disbursement of all funds, appropriations, and taxes" for the support of the institutions of higher education.

(*c*) It is required "to prescribe for all State-supported higher educational institutions a standardized system of accounts and records."

(*d*) It is given authority to allocate to the respective institutions all funds that are or shall in the future become available.

(*e*) It is required to assume responsibility for all the publicity of the institutions in order that "the citizens of the State and prospective students may obtain a fair and impartial view of the higher educational facilities provided by the State and the prospects for useful employment" in the fields for which the institutions prepare.

(4) The law provides that the board shall have expert and competent assistance in securing information in regard to technical educational problems upon which it may base its policies. This is a very important point that many of the laws providing for unified control of higher institutions have neglected. The Oregon law requires the board—

(*a*) To secure the assistance of some nationally recognized, impartial authority "in making a complete survey covering the present conditions and future needs of all branches of State-supported higher education and scientific research in Oregon."

(*b*) To "hire an executive secretary, who shall be thoroughly qualified by educational training, ability, and experience to keep the members fully informed at all times regarding the progress of the work of the department."

These four points make it evident that the department of higher education may undertake the serious duties imposed upon it with a minimum of legal restriction and a maximum of necessary information and authority. There is, therefore, laid upon the board that controls this department of the State's government, a correspondingly large responsibility to proceed with vigor and courage to the execution of its duties.

In compliance with the provisions of the law the State board of higher education invited the United States Office of Education to conduct a survey of the State's higher educational institutions. This report is that of the commission appointed by the United States Commissioner of Education to carry on the work. The survey commission has been controlled by the terms of the law and by a vivid sense of the importance of its task not only for higher education in Oregon, but also for higher education in other States which are awaiting the results of Oregon's courageous experiment in the hope that they may find in its development the solution to some of their own problems.

The commission found, as has been already indicated, five institutional factors whose present condition and future destinies had to be considered with reference to the development of a single unified higher educational program in Oregon. Its investigation had not proceeded far, however, until it was compelled to add a sixth factor not mentioned by the law creating the department of higher education. This factor is the office of the superintendent of public instruction and the public-school system.

The law makes no provision for coordination of the public-school system with the State's higher educational institutions. Yet a very large proportion of the teachers in the public schools of the State are the products of its five higher educational institutions and practically all of the students who enter the higher institutions are the product of the public schools. The survey commission soon discovered that many important and strategic problems of higher education in Oregon could not be considered or solved without direct reference to the service, supervision, and control that are commonly exercised over the public schools in other States by State authority. Subsequent chapters will present in some detail the various situations that compelled the commission to consider the entire public educational program of the State as one problem. The matter is mentioned here for the purpose of calling attention to the fact that the commission could perform its task with reference to the higher institutions only by extending its attention to the relations between these institutions and the public-school system of the State. The commission's report, therefore, was prepared from the standpoint that the entire public educational program of the State is one problem

involving six major agencies: (1) The university; (2) the Oregon State College; (3) the normal school at Monmouth; (4) the normal school at Ashland; (5) the normal school at La Grande; and (6) the office of the State superintendent of public instruction and the public schools.

Between every one of these agencies of the State's educational program and all the others incoordinations exist, or are likely to develop, that are as important as those that have been most prominent in the consciousness of the State.

The educational task of Oregon is determined by the size and nature of its population and by its industrial and social organization. Oregon's task with its 953,786 people is quite different from that of Nevada with 86,390 people and that of New York with 12,587,967. In order to make a valid appraisal of Oregon as compared with other States, it is necessary to consider States in more or less the same class with Oregon. A list of 17 States ranging in population from 225,000 to 1,500,000 has, therefore, been selected for this purpose; with respect to size of population at least their problem is similar to that of Oregon. All the Western States similar in size to Oregon have been included. It is also advantageous to compare Oregon with the entire United States to ascertain whether the State exceeds or falls below the average for the Nation as a whole. Table 1 shows the population of Oregon in 1930 according to the latest Bureau of Census figures, the population in 1920, the increase between 1920 and 1930, and the percentage of increase as compared with the 17 other selected States and the United States as a whole. The latter is also presented in graphic form in Figure 1.

TABLE 1.—*Population of Oregon in 1930 and percentage of increase since 1920 as compared with United States as a whole and 17 other selected States*

Name of State	Population in 1930	Population in 1920	Increase, 1920 to 1930	Percentage of increase
United States	122,775,046	105,710,620	17,064,426	16.1
Oregon	953,786	783,389	170,397	21.8
Arizona	423,317	334,162	62,967	17.5
Colorado	1,035,791	939,629	96,162	10.2
Delaware	238,380	223,003	15,377	6.9
Florida	1,468,211	968,470	499,741	51.6
Idaho	445,032	431,866	13,166	3.0
Maine	797,423	768,014	29,409	3.8
Montana	537,606	548,889	[1] 11,283	[1] 2.1
Nebraska	1,377,963	1,296,372	81,591	6.3
New Hampshire	465,293	443,083	22,210	5.0
New Mexico	423,317	360,350	62,967	17.5
North Dakota	680,845	646,872	33,973	5.3
Rhode Island	687,497	604,397	83,100	13.7
South Dakota	692,849	636,547	56,302	8.8
Utah	507,847	449,396	58,451	13.0
Vermont	359,611	352,428	7,183	2.0
Washington	1,563,396	1,356,621	206,775	15.2
Wyoming	225,565	194,402	31,163	16.0

[1] Decrease.

Oregon is a rapidly growing State. The increase in its population between 1920 and 1930 was 21.8 per cent. Among the 18 States selected for comparison, Oregon is fifth in size of population. Only one, the State of Florida, showed a greater percentage of increase, while the next largest gain made by any State was 17.5 per cent, or 4.5 per cent below Oregon. As compared with the percentage of increase in population for the United States as a whole, the excess of Oregon was 5.7 per cent.

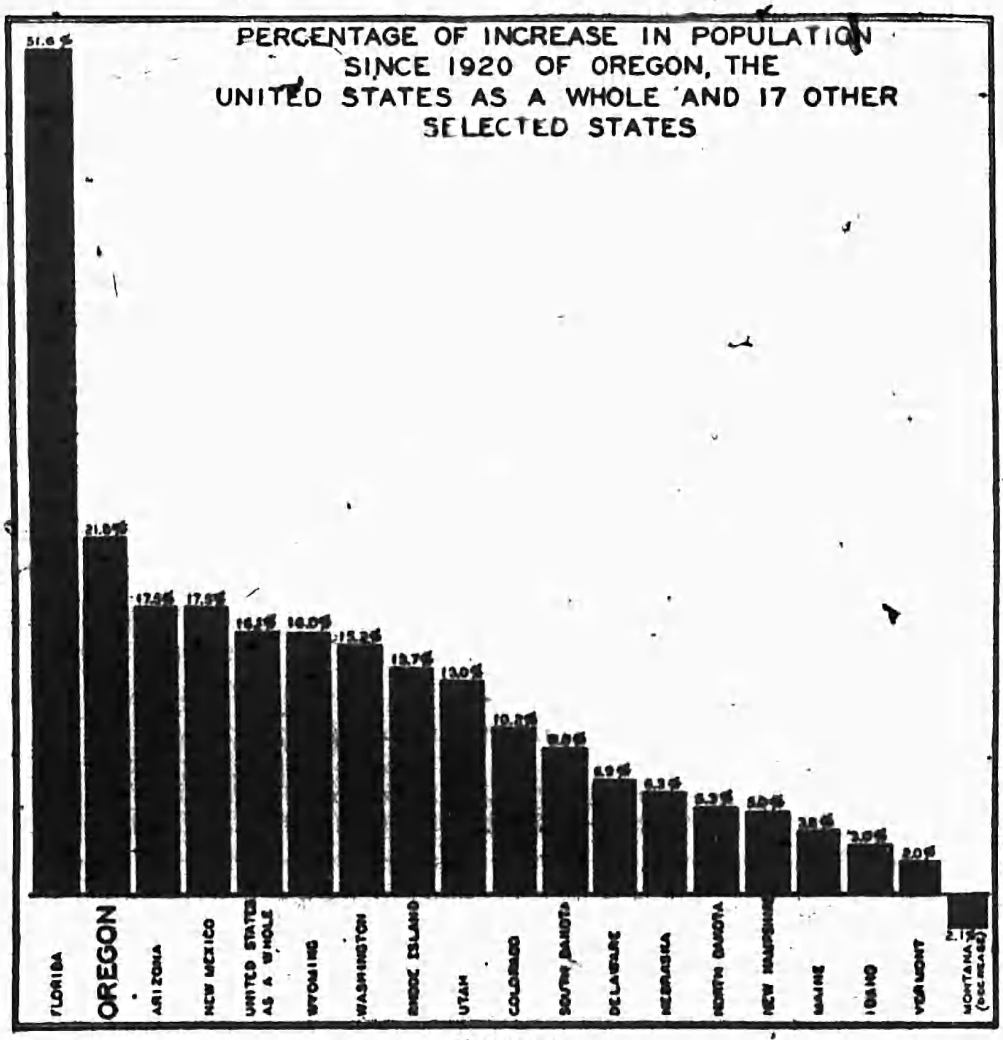

FIGURE 1

Public education deals not only with the present but also with the future. Since the State has shown a high rate of growth in the past as compared with other States, it may be assumed that the increase will continue in much the same proportion in the future if Oregon still offers natural and economic advantages that are likely to attract people and capital. The probability of such continued growth must be considered in planning for the State's educational program in the future.

The educational task of Oregon with a population that is relatively homogeneous is different from that in States with a large negro or

foreign element. In Table 2 are presented the racial and color characteristics of the population of Oregon in terms of percentages as compared with the United States as a whole and the 17 other selected States.

TABLE 2.—*Racial and color characteristics of Oregon's population in percentages as compared with United States as a whole and 17 other selected States*

Name of State	Percentage of—				
	White	Negro	Indian	Chinese	Japanese
United States	89.7	9.9	0.2	0.1	0.1
Oregon	98.2	.3	.6	.4	.5
Arizona	87.2	2.4	9.9	.3	.2
Arkansas	73.0	27.0			
Colorado	98.3	1.2	.2		.3
Delaware	86.4	13.6			
Florida	65.9	34.0	.1		
Idaho	98.6	.2	1		.1
Maine	99.7	.2			
Montana	97.3	.3	2.0	.2	.2
Nebraska	98.7	1.0	.2		.1
New Hampshire	99.8	.1		.1	
New Mexico	92.9	1.6	5.5		
North Dakota	98.9	.1	1.0		
Rhode Island	98.3	1.7			
South Dakota	97.3	.1	2.6		
Utah	98.3	.3	.7		.7
Vermont	99.8	.2			
Washington	97.3	.5	.8	.1	1.2
Wyoming	97.8	.8	.8		.6

It is evident that Oregon's population is characterized by a high degree of racial homogeneity. Of the entire number of inhabitants, 98.2 per cent are Caucasian as compared with 89.7 per cent for the United States as a whole. Only a few of the States in the list have a greater proportion of whites. There is a marked absence of negroes in the population of Oregon, the percentage being 0.3. Although one of the older Western States in which it might be expected that a large number of Indians would be found, the actual percentage is low, amounting to but 0.6 per cent of the total population. The number of Orientals residing in Oregon is also extremely limited, the proportion of both Chinese and Japanese being only 0.9 per cent. Oregon is freed from the need to provide special schools for its non-Caucasian inhabitants such as have been found to be desirable in States where they constitute relatively large groups in the population.

Hardly less influential than difference of color in its effect upon educational and social development in some States is the presence of a large foreign-born population. Among foreign-born groups are likely to be found standards of living far different from those that prevail among native Americans and social backgrounds that are ill adapted to place in proper perspective free public education as it has developed in the United States. Table 3 shows that Oregon

has approximately the same percentage of foreign born as prevails in the United States as a whole, while among the 17 States listed there are 7 with smaller percentages of native born and higher percentages of foreign born. Oregon, therefore, is essentially an American State. Further a large proportion of its foreign-born population comes from countries most closely akin to the United States—from Canada, England, Ireland, and Scotland and from Germany, Austria, Norway, Sweden, Denmark, and Switzerland. Emigrants from southern Europe comprise an insignificant portion of the State's population.

TABLE 3.—*Percentage of native and foreign born in Oregon's population as compared with United States as a whole and 17 other selected States*

Name of State	Percentage of—		Name of State	Percentage of—	
	Native born	Foreign born		Native born	Foreign born
United States	86.8	13.2	Nebraska	88.4	11.6
			New Hampshire	79.4	20.6
Oregon	86.3	13.7	New Mexico	91.7	8.3
Arizona	75.9	24.1	North Dakota	79.6	20.4
Colorado	87.3	12.7	Rhode Island	71.0	29.0
Delaware	91.1	8.9	South Dakota	87.0	13.0
Florida	94.4	5.6	Utah	86.8	13.2
Idaho	90.6	9.4	Vermont	87.4	12.6
Maine	86.0	14.0	Washington	80.4	19.6
Montana	82.6	17.4	Wyoming	86.3	13.7

Closely related to nativity is the prevalence of illiteracy. Table 4 shows the percentages of illiterates in Oregon divided as to sex and age.

TABLE 4.—*Percentage of illiterates, male and female, over 10 and 21 years of age in Oregon, as compared with United States as a whole and 17 other selected States*

Name of State	Percentage of—			
	Illiterate males 10 years or over	Illiterate females 10 years or over	Illiterate males 21 years or over	Illiterate females 21 years or over
United States	6.0	5.9	7.0	7.3
Oregon	1.6	1.3	2.0	1.6
Arizona	13.9	17.1	14.5	18.8
Colorado	2.9	3.6	3.5	4.6
Delaware	6.2	5.5	7.7	7.0
Florida	9.6	9.5	10.6	11.3
Idaho	1.7	1.3	2.1	1.6
Maine	3.9	2.5	4.7	3.1
Montana	2.3	2.3	2.7	2.8
Nebraska	1.3	1.4	1.7	1.8
New Hampshire	4.5	4.2	5.6	5.3
New Mexico	12.7	18.9	14.7	21.1
North Dakota	1.9	2.4	2.5	3.2
Rhode Island	6.0	7.0	7.6	8.6
South Dakota	1.5	1.9	1.9	2.3
Utah	2.1	1.6	2.8	2.2
Vermont	3.6	2.4	4.5	3.0
Washington	1.7	1.6	2.1	2.1
Wyoming	2.5	1.5	2.9	1.8

Of the entire population over 10 years of age, of Oregon, only 2.9 per cent are unable to read and write as compared with 11.9 per cent for the United States as a whole. Illiterate males over 10 years of age in the State represent 1.6 per cent of the total, and there are only 2 other States in the list of 17 States with as low a percentage. Similarly the proportion of illiterate females over 10 years of age is 1.3 per cent, Oregon ranking first among the 17 States, except for Idaho, which has the same percentage. The table also shows the adult illiteracy. Again it is found that Oregon stands high with but 3.6 per cent of its inhabitants over 21 years of age unable to read and write. In the case of the United States as a whole, the percentage is 14.3. Whatever the significance attached to the low illiteracy rate in Oregon, it is perfectly evident that a very high proportion of the people of the State value education, and that the young people of the State have in larger numbers than is common secured one of the most important tools for further education.

A State with a disproportionate percentage of adult population, such as may result from pioneer conditions or from reduction of the birth rate, has quite a different educational task than one in which the percentage of the population that is of school age is normal or large. Table 5 shows the number of persons of school age in Oregon and the percentage of the total population as compared with United States as a whole and the 17 other selected States.

TABLE 5.—*Number of persons of school age in Oregon and percentage of total population as compared with United States as a whole and 17 other States*[1]

Name of State	Number of persons of school age (5–17 years)	Percentage of total population	Name of State	Number of persons of school age (5–17 years)	Percentage of total population
United States	30, 887, 167	25. 7	Nebraska	382, 749	25. 7
Oregon	207, 545	23. 0	New Hampshire	103, 485	22. 7
Arizona	119, 200	25. 1	New Mexico	119, 469	30. 4
Colorado	271, 116	24. 8	North Dakota	230, 695	35. 9
Delaware	54, 639	22. 4	Rhode Island	158, 281	22. 1
Florida	322, 213	22. 8	South Dakota	190, 789	27. 0
Idaho	152, 776	27. 9	Utah	157, 526	29. 6
Maine	189, 627	23. 8	Vermont	85, 336	24. 2
Montana	186, 737	34. 0	Washington	361, 034	22. 7
			Wyoming	61, 901	25. 6

[1] Compiled from Bulletin 1930, No. 3, United States Office of Education.

As revealed by the tabulation the proportion of Oregon's population of school age is less than that of 12 States included in the list. For the United States as a whole the percentage of the total population of school age is 25.7, as compared with 23 per cent for Oregon. Further light may be thrown upon this question by an analysis of the State's population on a basis of actual age distribution, including sex of different ages. The facts are presented by Figure 2.

The number of male inhabitants in Oregon under 19 years of age is 35.5 per cent of the total male population, according to the chart. Female inhabitants below this age represent 37.6 per cent of the female population. Such percentages are low and indicate that the adult population of Oregon is proportionately large. Whether this is due to the existence of pioneer conditions or to low birth rate can not be accurately ascertained without a detailed sociological study that is unnecessary for the purposes of this report.

It is apparent that a lower percentage of dependent children relieves the adult portion of the population of the responsibilities of supporting large families. The educational problem is likewise materially affected since the State is called upon to furnish education

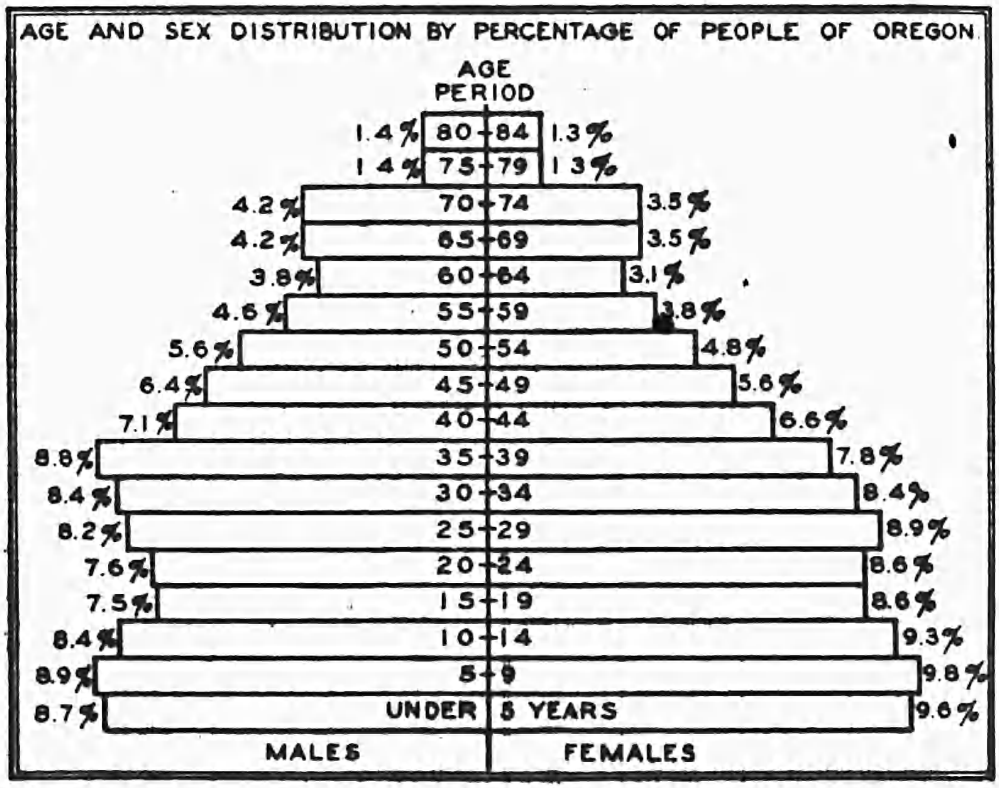

FIGURE 2

to a smaller number of persons. Other things being equal, therefore, a superior system of publicly supported education should be provided. The portion of the population that is economically productive is large and should be able to expend more for each child to be educated, than is the case in the States where the number of adults is relatively small as compared with the number of children.

Much the same effect results when the population of a State contains a disproportionately large number of women. In spite of the entrance of women into industry a much larger percentage of women than men is dependent upon the economic efforts of others for their livelihoods. The distribution of population by sex is also important for a State's educational program in that the character of educa-

tion demanded by women is very different from that demanded by men, especially in the higher levels of training, and also in that girls tend to remain in school for longer periods than is the case of boys.

Under our American system of public education a State with a large percentage of female population will be called upon to provide a larger number of child years of education than will a State in which the proportionate distribution of the sexes is reversed. Table 6 shows that only 4 of the 17 States selected for comparison have smaller percentages of female population than Oregon, and that the percentage is smaller in Oregon than the United States as a whole.

TABLE 6.—*Oregon's population by sex in percentages and the number of males per 100 females compared with the United States as a whole and 17 other selected States*

Name of State	Percentage of—			Name of State	Percentage of—		
	Males	Females	Males to 100 females		Males	Females	Males to 100 females
United States	51.0	49.0	104.0	Nebraska	51.9	48.1	107.9
				New Hampshire	50.1	49.9	100.5
Oregon	53.1	46.9	113.4	New Mexico	53.1	46.9	112.1
Arizona	51.9	48.1	121.9	North Dakota	52.8	47.2	112.0
Colorado	52.4	47.6	110.3	Rhode Island	49.2	50.8	97.0
Delaware	51.0	49.0	104.1	South Dakota	52.9	47.1	112.6
Florida	51.1	48.9	104.7	Utah	51.6	48.4	106.8
Idaho	54.1	45.9	118.2	Vermont	50.7	49.3	103.0
Maine	50.8	49.2	102.5	Washington	54.1	45.9	118.1
Montana	54.6	45.4	120.5	Wyoming	56.7	43.3	131.3

The proportion of the total population consisting of males is 53.1 per cent and of females 46.9 per cent. The ratio of males to females in Oregon is 113.4 males per 100 females. For the entire United States the ratio is 104 to 100. All of the 17 States have a smaller ratio of males to females than Oregon with the exception of Arizona, Idaho, Montana, Washington, and Wyoming. There is a direct relation between the excess of males in the State and the comparatively small number of persons of school age previously cited. Further, the proportion of the population that is economically productive tends to be higher and the years of schooling demanded tends to be lower.

A State with a high density of population or one that is predominantly urban will have quite a different educational task than one that is sparsely settled or largely rural. In Table 7 is shown the population per square mile and the number of acres per inhabitant in Oregon as compared with the United States as a whole and the 17 other selected States.

TABLE 7.—*Density of population of Oregon per square mile and number of acres per inhabitant in 1930 as compared with the United States as a whole and 17 other States*

Name of State	Population per square mile	Number of acres per inhabitant	Name of State	Population per square mile	Number of acres per inhabitant
United States	40.5	15.5	Nebraska	17.9	35.6
			New Hampshire	51.5	12.4
Oregon	9.8	64.2	New Mexico	3.4	183.7
Arizona	3.8	166.8	North Dakota	9.7	65.8
Colorado	9.0	64.0	Rhode Island	644.0	.9
Delaware	121.3	5.4	South Dakota	8.9	71.2
Florida	26.7	23.9	Utah	6.1	104.6
Idaho	5.3	119.6	Vermont	39.3	16.2
Maine	26.4	23.9	Washington	23.2	27.5
Montana	3.6	178.1	Wyoming	2.2	277.1

Oregon has a moderately low density of population and a situation that is extremely advantageous to its future welfare and development. As compared with Rhode Island with 644 people per square mile of area and to Delaware with 121.3 people per square mile, the State's population per square mile is 9.8. The number of inhabitants per square mile for the entire United States is 40.5, or 30.7 in excess of Oregon. In the list of States, Oregon ranks tenth in density of population. Expressed in terms of acreage only seven of the States listed have a larger number of acres per inhabitant, among them being Arizona, Idaho, Montana, New Mexico, South Dakota, Utah, and Wyoming. The number of acres per inhabitant for these States ranges from 71.2 to 277.1 as compared with 64.2 for Oregon. In most cases the States exceeding Oregon in this respect are either semiarid or are located in part in frigid climates. In the United States as a whole the acres per inhabitant amounts to 15.5, a number only one-fourth that of Oregon.

If it be assumed that the natural resources represented by Oregon's land area are only equal to the average for the United States, it follows that the possibility for economic growth is large and capable of supporting a much larger population. This means, of course, that the State may look forward with confidence to educational development; it has by no means utilized to the maximum the resources that must be drawn upon for the support of education and other purposes. Further, it means that plans for the future must contemplate the probability that the State will be called upon to provide much more extensive educational opportunities to meet the demands of increased population and a more diversified and complex economic structure.

Of considerable influence upon the economic and educational future of Oregon are the proportions of the population that live in urban and rural areas. The division into rural and urban population is

shown by Table 8 in comparison with the United States as a whole and the 17 other selected States.

TABLE 8.—*Population of Oregon divided into urban and rural on percentage basis as compared with the United States as a whole and 17 other selected States*

Name of State	Percentage of—		Name of State	Percentage of—	
	Urban	Rural		Urban	Rural
United States	51.3	48.7	Nebraska	31.2	68.8
Oregon	49.9	50.1	New Hampshire	63.1	36.9
Arizona	35.1	64.9	New Mexico	18.0	82.0
Colorado	48.2	51.8	North Dakota	13.6	86.4
Delaware	54.1	45.9	Rhode Island	97.4	2.6
Florida	36.7	63.3	South Dakota	16.0	84.0
Idaho	21.7	78.3	Utah	47.9	52.1
Maine	39.0	61.0	Vermont	31.2	68.8
Montana	31.3	68.7	Washington	55.2	44.8
			Wyoming	29.5	70.5

The population of Oregon is approximately half urban and half rural, the proportion of urban inhabitants being 49.9 per cent and

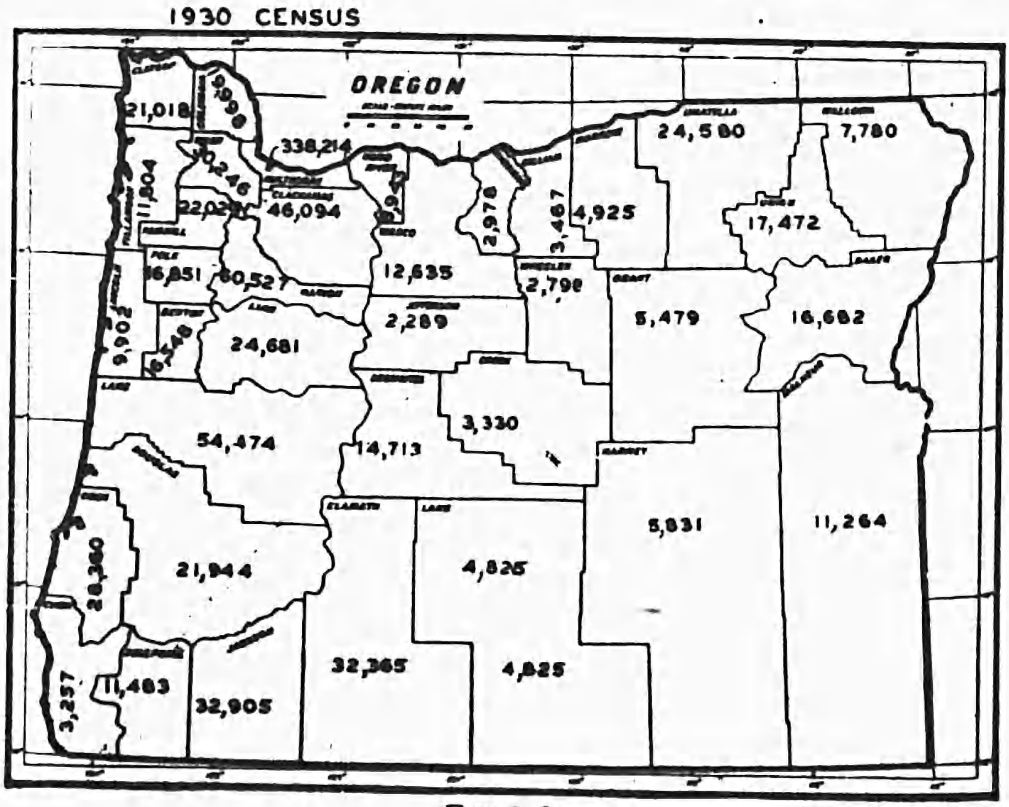

FIGURE 3

of rural 50.1 per cent. A similar distribution exists for the United States as a whole, with an urban population of 51.3 per cent and a rural population of 48.7 per cent. All of the 17 States selected upon the basis of population for comparison with Oregon show a larger

percentage of rural population except Delaware, New Hampshire, Rhode Island, and Washington. Oregon's problem of providing educational opportunity for the rural population is therefore only slightly greater than the average for the United States, and the additional expense of providing education in sparsely settled areas should be less burdensome in Oregon than in 13 of the 17 States of approximately the same population.

The fact that Oregon is subject to no more disadvantage in respect to its division of population between town and country than is typical of the United States as a whole is further emphasized by the regional concentration of the State's population. Figure 3 shows

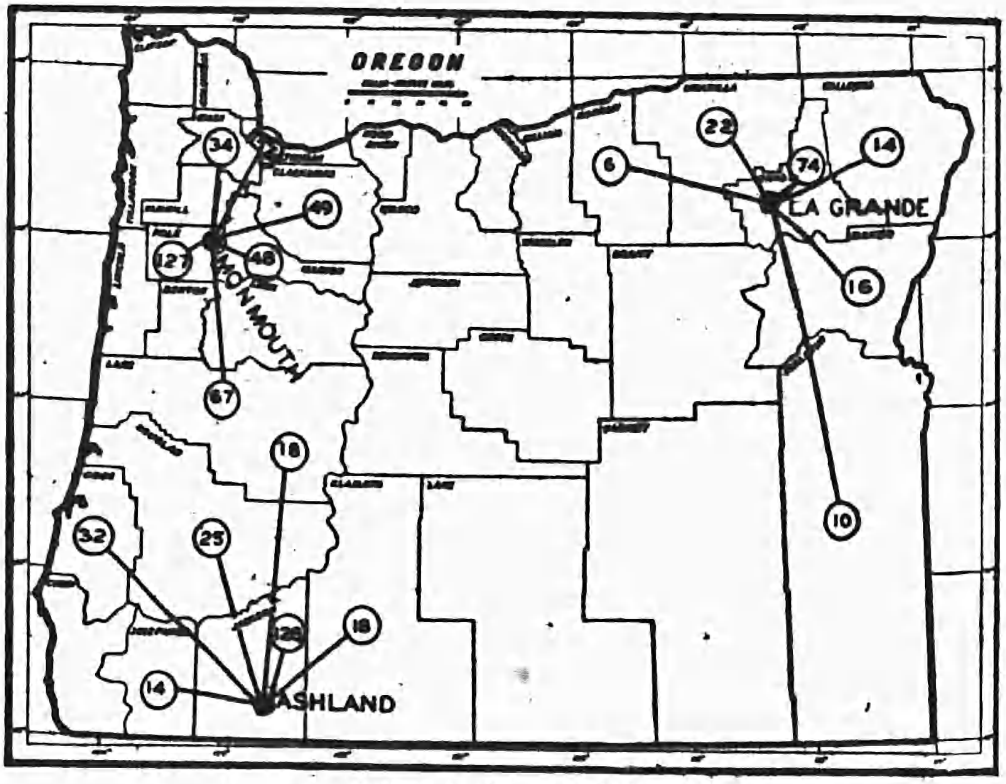

FIGURE 4 (See page 121)

the distribution of the inhabitants of Oregon by counties, according to the census of 1930.

Including Wasco County, which is contributory to the Portland territory, approximately 80 per cent of the population of Oregon is concentrated in the narrow region west of the Cascades. This region contains the fertile Willamette Valley and in it are located four of the five cities in the State with populations exceeding 10,000—Portland with 301,890 inhabitants, Eugene with 18,893, Salem with 18,299, and Medford with 10,847. Four of the five public higher institutions are found in this section—the university, the Oregon State College, and the normal schools at Monmouth and Ashland. The private colleges of the State are also in this territory.

Klamath and Deschutes Counties, east of the mountains and to the south, constitute another center of population but contain less than 5 per cent of the State's population. The fifth city of more than 10,000 population, Klamath Falls, with 16,053 people, is found in this area. Baker, Union, and Umatilla, in the northeast corner of the State, contain slightly more than 6 per cent of the population of the State and form a third center of concentration. In this region is the fifth of the public higher institutions, the normal school at La Grande. The southeastern portion of the State, containing approximately one-third of its land area, is arid and so thinly populated that its educational service is a problem of very special character. With the exception of this region, Oregon's distribution of population is even more favorable to provision of education than is indicated by the fact that about the same proportion of its inhabitants are urban as is the case for the United States as a whole.

In order to avoid the confusion that may arise in the reader's mind from the preceding presentation of facts and inferences concerning the size and distribution of Oregon's population, it is desirable to pause at this point in the examination of the social background of the State's educational development to summarize the more significant features of the facts presented. Because the survey staff so frequently found in Oregon a high enthusiasm for, and belief in, the future of the State combined with a somewhat uncritical conviction that its size and the distribution of its population tend to hamper educational and social development, the commission undertook to examine some of the population factors that influence the nature and cost of such development. For this purpose Oregon was compared with 17 other States and with the United States as a whole.

Upon almost every count these comparisons reveal that Oregon is typical of the general situation in the United States and in many respects enjoys advantages greater than those found in the entire Nation and superior to a large proportion of the individual States that have populations not greatly dissimilar in size. Oregon's population is growing more rapidly than that of the United States and more rapidly than any of the 17 States with which it is compared except in one instance. The educational and other social opportunities offered by the State are by no means the least of the attractions, which induce the immigration from other States that accounts in part for this increase in population. The relative sparsity of population in areas capable of supporting many more people and offering opportunities for the profitable investment of capital may be inter-

preted to mean that the educational structure of the State has by no means been completed.

It appears to be the part of wisdom to plan educationally for a greater commonwealth. The State is not handicapped socially by having to plan for an educational system to care for a population that in color and in birth differs strikingly from that of the United States as a whole; indeed with respect to color and nativity Oregon is happily freed from the expensive task of providing for the educational and social assimilation of discordant elements. The people of the State are more generally literate than in the rest of the Nation and since a high degree of literacy and a high degree of economic productivity march hand in hand, it may be assured that the population of Oregon is especially capable of providing the wealth needed to develop superior intellectual and cultural training. Relatively large adult and male population as compared with the number of minors to be educated tends to make the burden of the productive portion of the population less acute than when a few producers are confronted by the task of supporting and educating a relatively large number of the economically dependent. Although Oregon is less densely populated than the United States as a whole, the distribution of its population between town and country is nearly the same as that throughout the Nation and the larger part of the population is sufficiently concentrated in relatively compact areas to give the State an advantageous position in meeting the cost of providing educational opportunities.

Having examined the social characteristics of Oregon's population, it is now proposed to appraise its economic and industrial organization. A State's educational task will vary in accordance with the occupations which its people pursue in order to earn their livelihood, with the number of farms found within its borders, and the proportion of them that are owned by their occupants as contrasted with the number of manufacturing establishments and the wage earners employed by them. Such data disclose whether the economic interests of the population are centered wholly in the single industry of agriculture or whether manufacturing has been developed upon a considerable scale. Table 9 presents the percentage distribution of occupations of the people of Oregon based on the census classification as compared with the United States as a whole and the 17 other selected States.

TABLE 9.—*Occupations of people of Oregon over 10 years of age on percentage basis, as compared with the United States as a whole and the 17 other selected States*

Name of State	Percentage engaged in—								
	Agriculture, forestry, and animal husbandry	Extraction of minerals	Manufacturing and mechanical industries	Transportation	Trade	Public service	Professional service	Domestic and personal service	Clerical occupations
United States	26.3	2.6	30.8	7.4	10.2	1.9	5.2	8.2	7.5
Oregon	28.5	.7	27.4	9.0	11.5	1.4	6.8	7.8	6.8
Arizona	27.7	11.8	18.4	8.9	8.7	6.4	5.5	7.8	4.8
Colorado	27.3	6.4	20.2	8.8	12.5	1.9	6.8	9.0	7.1
Delaware	19.4	.1	38.0	8.7	8.9	1.7	4.6	9.5	9.1
Florida	32.2	.8	26.1	7.6	9.2	2.0	4.5	13.5	4.0
Idaho	47.5	3.3	16.0	7.3	9.0	1.1	5.8	6.0	4.0
Maine	24.9	.2	38.8	7.3	8.9	1.8	5.4	7.8	4.9
Montana	39.7	7.8	15.2	8.8	9.0	1.4	5.9	7.3	4.9
Nebraska	40.9	.1	18.4	8.0	12.0	1.2	6.6	6.8	5.9
New Hampshire	15.8	.2	51.5	6.4	7.6	1.5	4.9	7.3	4.8
New Mexico	45.1	6.0	13.2	9.0	6.7	5.3	5.1	6.9	2.9
North Dakota	57.9	.6	9.3	6.0	9.2	.8	6.3	6.4	3.6
Rhode Island	3.0	.1	58.9	5.8	9.7	3.1	4.4	7.0	8.1
South Dakota	54.2	.7	12.1	5.9	10.2	.9	6.4	6.1	3.6
Utah	29.0	6.8	22.5	8.3	11.1	1.7	6.7	6.8	7.1
Vermont	22.0	1.4	32.3	6.7	7.9	1.3	5.5	8.4	4.6
Washington	22.7	1.5	31.0	9.2	11.6	2.2	6.3	8.2	7.2
Wyoming	31.9	10.8	18.8	12.1	7.5	1.9	5.1	7.5	4.3

Oregon is a State of diversified economic interests. This is the most striking feature of the table showing the occupational status of its population. In the classification of occupations, the distribution in Oregon corresponds closely with the United States as a whole, which indicates that its people are not dependent exclusively upon one type of productivity or activity for their livelihood. The proportion of the State's population engaged in agriculture, forestry, and animal production is 28.5 per cent as compared with 26.3 per cent for the entire United States, only a slightly greater per cent. Of the 17 States, there are 9 that have larger percentages engaged in agriculture, forestry, and animal production. In the extraction of minerals Oregon with 0.7 per cent not only falls below the average for the United States, which is 2.6 per cent, but 10 other States show greater proportions of their populations pursuing this occupation. Oregon still thinks of itself largely in terms of an agricultural and mining State with a preponderance of its people devoting themselves to these extractive industries. As a matter of fact, not an overly large percentage is so engaged.

The survey commission was impressed by the frequent laments about the slight development of manufacturing in Oregon. According to the table, the percentage of its people pursuing manufacturing is 27.4 or almost as large a proportion as are engaged in agriculture, forestry, and animal production. Of the entire population of the United States, but 30.8 per cent earn their livelihood through manu-

facturing, a proportion only 3.4 per cent in excess of Oregon, and there are only six States in the list that have greater percentage of their people following manufacturing pursuits. It is evident, therefore, that Oregon has made splendid progress in the development of manufacturing, particularly in view of the fact that its primary interests at one time were concentrated in agriculture. Moreover, exceptional opportunities exist for great expansion of manufacturing in the future thereby enhancing the potential wealth of the State.

Among the other occupations of its people, transportation and trade stand out prominently. The proportion of the State's population engaged in transportation is 9 per cent as compared with 7.4 per cent for the United States. There are 11.5 per cent of the people of Oregon pursuing trade as an occupation while the percentage for the United States is 10.2. Only 2 other States making up the list of 17 States have greater proportions engaged in transportation and in the case of trade but 3 of the States show a larger percentage of their populations pursuing this occupation. The proportion of Oregon's population engaged in clerical occupations is 6.8 per cent as compared with 7.5 per cent for the United States.

Special stress must be placed upon the diversity of occupations of the people of Oregon. Of paramount significance is the fact that Oregon's ability to support social agencies, including education, is not dependent upon a single type of occupation or upon a single line of productivity. As a consequence, a varied program of higher education should be offered corresponding to the diversity of occupations in which the people are engaged in earning their livelihood and covering practically the entire range of activities found in a complex civilization in order to meet the real needs of the State. As Oregon's percentage distribution of occupations is approximately the same as that of the United States as a whole, it may be expected that the State's enrollment of college students in the different fields of higher education will be much the same as the enrollments in the various fields for the entire United States. At a later point in the report it will be necessary to refer to the distribution of enrollments in Oregon's higher institutions, particularly as they compare with the country as a whole and as they correspond with the actual occupations in which the people of the State are engaged.

Further light is thrown on the economic structure of Oregon by an examination of the actual number of farms and farm owners and of the number of manufacturing establishments and wage earners. In Table 10 are given the number of farms, farm owners, tenants, and percentage of tenancy in Oregon as compared with the United States as a whole and the 17 other States.

TABLE 10.—*Number of farms, farm owners, and tenants in Oregon with percentage of tenancy in Oregon as compared with United States as a whole and 17 other selected States*

Name of State	Total number of farms	Number of farm owners	Number of farm tenants	Percentage of tenancy
United States	6,371,640	3,912,187	2,459,453	38.6
Oregon	55,911	46,518	9,393	16.8
Arizona	10,802	8,480	2,322	21.5
Colorado	58,026	40,096	17,930	30.9
Delaware	10,257	6,585	3,672	35.8
Florida	59,217	46,604	12,613	21.3
Idaho	40,592	30,688	9,904	24.4
Maine	50,033	48,332	1,701	3.4
Montana	46,904	35,633	10,271	21.9
Nebraska	127,734	67,266	60,468	46.4
New Hampshire	21,065	20,054	1,011	4.8
New Mexico	31,687	26,267	4,520	17.1
North Dakota	75,970	49,839	26,131	34.4
Rhode Island	3,911	3,438	473	12.1
South Dakota	79,537	46,530	33,007	41.5
Utah	25,992	23,107	2,885	11.1
Vermont	27,786	25,202	2,584	9.3
Washington	73,267	61,325	11,942	16.3
Wyoming	15,512	12,736	2,776	17.9

Within the borders of Oregon are 55,911 farms, of which 46,518 are owned by their occupants. The State ranks twelfth among the 17 States in number of farms and eleventh in number of farm owners, although several States exceed Oregon in land area. In the United States as a whole the proportion of farm tenancy is 38.6 per cent, while in Oregon it is only 16.8 per cent. With four exceptions, all the other States included in the list have a higher percentage of tenancy. Needless to say, the educational task in Oregon is made less difficult by the fact that the viewpoint of such a vast majority of its farming people is that of owners rather than tenants.

Table 11 shows the number of manufacturing establishments, wage earners, and average number of wage earners per establishment in Oregon as compared with the United States as a whole and the 17 other selected States.

TABLE 11.—*Number of manufacturing establishments and wage earners with average number of wage earners per establishment in Oregon as compared with United States as a whole and 17 other States*

Name of State	Number of establishments	Number of wage earners	Average number of wage earners per establishment	Name of State	Number of establishments	Number of wage earners	Average number of wage earners per establishment
United States	191,866	8,349,755	43	Nebraska	1,277	26,110	20
Oregon	1,779	57,179	32	New Hampshire	1,028	65,482	63
Arizona	300	8,967	29	New Mexico	200	4,653	23
Colorado	1,483	31,997	21	North Dakota	307	3,206	10
Delaware	446	21,234	48	Rhode Island	1,497	120,009	80
Florida	1,912	61,219	32	South Dakota	472	5,551	11
Idaho	470	13,513	28	Utah	556	13,585	24
Maine	1,426	68,142	48	Vermont	880	26,241	29
Montana	585	14,242	25	Washington	3,344	104,468	31
				Wyoming	229	5,577	24

It has already been pointed out in describing the occupations of the people of Oregon that manufacturing has become an important factor in the State's economic advancement. Additional substantiation of this situation is found in Table 11. Oregon has 1,779 manufacturing establishments, or a little less than 1 per cent of the entire number in the United States. Only 1 of the 17 States has a greater number, although several of them are distinctly manufacturing States. Oregon also stands third on the list in the number of wage earners in manufacturing occupations. It is interesting to note that there are 55,911 farm owners and farm tenants in Oregon as shown by Table 10 as compared with 57,179 such wage earners in the State. In other words, the number employed in the manufacturing establishments approximately equals the number of farmers. That a great development of manufacturing may be expected in the future is indicated by the average number of wage earners per establishment in Oregon. For the United States as a whole the average per establishment is 43. In Oregon it is but 32. All the States in the list in which manufacturing is the predominant industry have a larger number of wage earners per establishment. No educational program can be planned for Oregon without taking full cognizance of the almost equal division between farmer and wage earner and of the almost certain development of manufacturing upon a larger scale in the future.

The financial ability of a State to support education without neglect of its other fundamental obligations is measured by its social and economic income. Although the wealth of Oregon as represented by the value of its manufactured and farm products, fisheries, and lumber production is only an indication of potential income, the figures, in comparison with other States, are of value. Other things being equal, the State with the largest income from these sources may now or in the future be better able to support its activities. In Table 12 will be found the value of the manufactured and farm products of Oregon as compared with the United States as a whole and the 17 other selected States.

TABLE 12.—*Value of manufactured and farm products of Oregon in 1925, as compared with United States as a whole and 17 other selected States*

Name of State	Value of manufactured products	Value of farm products	Total value of manufactured and farm products
United States	$62, 718, 347, 000	$9, 797, 553, 000	$72, 515, 900, 000
Oregon	342, 852, 000	87, 468, 000	430, 320, 000
Arizona	117, 624, 000	31, 993, 000	149, 617, 000
Colorado	278, 221, 000	113, 143, 000	391, 364, 000
Delaware	129, 900, 000	18, 152, 000	148, 052, 000
Florida	218, 790, 000	32, 643, 000	251, 433, 000
Idaho	82, 256, 000	72, 709, 000	154, 965, 000
Maine	372, 093, 000	54, 372, 000	426, 465, 000
Montana	203, 503, 000	116, 203, 000	319, 706, 000
Nebraska	420, 296, 000	362, 048, 000	782, 344, 000
New Hampshire	327, 528, 000	24, 569, 000	352, 097, 000
New Mexico	20, 183, 000	33, 186, 000	53, 369, 000
North Dakota	47, 003, 000	311, 833, 000	359, 836, 000
Rhode Island	592, 233, 000	7, 693, 000	599, 926, 000
South Dakota	83, 001, 000	224, 529, 000	307, 530, 000
Utah	163, 118, 000	42, 797, 000	205, 915, 000
Vermont	134, 030, 000	50, 789, 000	184, 819, 000
Washington	677, 914, 000	135, 187, 000	813, 101, 000
Wyoming	85, 368, 000	31, 074, 000	116, 442, 000

The value of Oregon's manufactured products amounts to $342,852,000, or one-half of 1 per cent of the total for the entire United States. Maine, Nebraska, Rhode Island, and Washington are the only States in the list with manufactured products the value of which is greater than Oregon. The value of the State's farm products is $255,384,000 less than its manufactured products, although the State stands high in agricultural production. Of the 17 States there are but 6 that exceed Oregon in value of farm products. In the total value of both manufactured and farm products Oregon with $430,430,000 ranks fourth among the 17 States. The figure represents 0.6 per cent of the value of all manufactured and farm products in the United States. Fisheries and lumber are important industries in Oregon that contribute to the resources of its people. Of the 17 selected States only Florida, Maine, and Washington have greater annual fishery products than Oregon. With the exception of the State of Washington, Oregon produces more lumber annually than any one of the other selected States.

Manufactured, farm, fisheries, and lumber products are only partial measures of the wealth and income of Oregon upon which the ability of the State to support education is based. To secure a more accurate measure it is necessary to consider other barometers, such as available and accumulated money, volume of trade and business. Saving deposits indicate the financial resources of the people of moderate means, the class that strongly favors education and actually seeks it. A State with large saving deposits, therefore, is in a better position to obtain and improve its educational program than a State with small saving deposits. The question of whether

saving deposits have increased over a period of years and the percentage of the increase is highly important, serving to show whether financial resources of this character are growing or diminishing. For the purpose of presenting data on this point Table 13 has been prepared giving the saving deposits in Oregon in 1920 and 1929, with amount and percentage of increase between these years, together with similar figures for the United States and the 17 other selected States.

TABLE 13.—*Saving deposits of Oregon for 1920 and 1929 showing increase and percentage of gain as compared with United States as a whole and 17 selected States*

Name of State	Saving deposits, 1920	Saving deposits, 1929	Increase between 1920–1929	Gain (per cent)
United States	$15,314,100,000	$28,270,464,000	$12,956,364,000	84.6
Oregon	76,100,000	123,398,000	47,298,000	62.1
Arizona	37,000,000	35,664,000	[1] 1,336,000	[1] 3.6
Colorado	102,900,000	116,575,000	13,675,000	13.2
Delaware	35,900,000	62,928,000	27,028,000	75.2
Florida	65,100,000	127,299,000	62,299,000	95.7
Idaho	32,500,000	34,174,000	1,674,000	5.1
Maine	204,600,000	316,567,000	111,967,000	54.7
Montana	75,500,000	77,493,000	1,993,000	2.6
Nebraska	155,400,000	167,260,000	11,860,000	7.6
New Hampshire	147,800,000	236,986,000	89,186,000	60.3
New Mexico	13,200,000	11,820,000	[1] 1,380,000	[1] 11.6
North Dakota	121,500,000	66,775,000	[1] 54,725,000	[1] 45.0
Rhode Island	215,400,000	360,405,000	145,005,000	67.3
South Dakota	134,900,000	71,178,000	[1] 63,722,000	[1] 47.2
Utah	51,680,000	75,319,000	23,719,000	45.9
Vermont	133,100,000	211,475,000	78,375,000	58.9
Washington	159,400,000	211,193,000	51,793,000	32.4
Wyoming	21,000,000	26,341,000	5,341,000	25.4

[1] Decrease.

The saving deposits of Oregon were not quite large in 1929, but the percentage of gain between 1920 and 1929 was substantial. For the United States as a whole, saving deposits increased by 84.6 per cent. For the State of Oregon, the gain was 62.1 per cent. Although the increase was less for Oregon than for the United States, the State's saving deposits increased at a greater rate than any of the other States making up the list with the exception of Delaware, Florida, and Rhode Island. The unusually strong position occupied by Oregon is shown by the fact that four States actually suffered losses in saving deposits between 1920 and 1929 and the percentage of gain of four others was less than 14 per cent. In view of the large amount of savings deposits and the great percentage of gain, it is obvious that with such resources Oregon should be able to provide adequate educational facilities to meet all its needs.

Another index of wealth and income is found in postal receipts, which represent the volume of business activity and of trade. The postal receipts are presented on a per capita basis in Table 14 for Oregon in 1920 and 1929, together with per capita increase during

this period, as compared with the United States and the 17 other selected States.

TABLE 14.—*Per capita postal receipts of Oregon for 1920 and 1929 with increase as compared with the United States as a whole and 17 other selected States*

Name of State	Per capita postal receipts, 1920	Per capita postal receipts, 1929	Per capita increase, 1920–1929	Name of State	Per capita postal receipts, 1920	Per capita postal receipts, 1929	Per capita increase, 1920–1929
United States	$5.99	$5.71	$1.72	Nebraska	$4.24	$5.10	$0.86
Oregon	[1] 4.24	5.88	1.64	New Hampshire	3.39	4.98	1.59
Arizona	2.82	3.04	.22	New Mexico	1.88	2.66	.78
Colorado	4.67	5.97	1.30	North Dakota	3.18	4.29	1.11
Delaware	3.67	4.96	1.29	Rhode Island	3.35	4.57	1.22
Florida	3.27	4.09	.82	South Dakota	3.24	4.00	.76
Idaho	3.23	2.73	[1] .50	Utah	3.21	4.45	1.23
Maine	3.73	4.86	1.13	Vermont	3.46	4.83	1.37
Montana	3.67	4.57	.90	Washington	4.15	5.46	1.31
				Wyoming	3.66	4.07	.41

[1] Decrease.

Oregon's postal receipts show a high per capita figure. In 1929 the per capita postal receipts of the State were $5.88 as compared with $5.71 for the entire United States. The per capita postal revenues for Oregon were, therefore, 17 cents higher than for the Nation as a whole. Among the 17 selected States, Oregon stands second on the list, Colorado being the only State having higher per capita postal receipts in 1929. Of considerably more importance than the postal receipts for a single year is the gain made over a period of years. Such a figure reveals the rate of expansion of the State's business, commerce or trade, which has a direct relationship to its financial and economic resources.

Between 1920 and 1929, the per capita increase of postal receipts in Oregon was $1.64. For the United States it was $1.72, an amount only 8 cents in excess of Oregon. Thus the postal receipts in the State are increasing at much the same rate as in the United States as a whole. In comparing the gain for Oregon with the 17 selected States, it is found that Oregon leads every one of them, and its increase in per capita postal receipts is more than double those of a number of other States. This indicates a vigorous and stimulating state of its trade and commerce. Again the conclusion is reached that the activity of business in Oregon, as shown by the postal receipts, is proportionately the same as for the country at large and that the State is in relatively the same position as the United States as regards ability to defray the costs of education.

Another partial measurement of the social and economic income of a State is disclosed by an appraisal of the expenditures of its people for luxuries. A population lacking accumulated wealth and healthy income can not be expected to expend large sums in the aggregate for passenger automobiles, tobacco, chewing gum, amusements, jewelry, and similar articles not absolutely necessary to the

maintenance of human life. At the same time a prosperous and advanced society with surplus earnings beyond the needs of actual living costs will have extra money to utilize in buying luxuries. Consequently a comparison of the expenditures made by Oregon for luxuries with other States and the United States as a whole provides a more or less reliable index of its financial resources. Table 15 gives such comparative figures of expenditures for various kinds of luxuries together with the total and the expenditure per capita in 1928.

TABLE 15.—*Expenditures for automobiles, tobacco, soft drinks, candy, and similar luxuries by people of Oregon in 1928, compared with similar figures for United States as a whole and 17 other selected States*[1]

Name of State	Passenger automobiles	Tobacco	Soft drinks, ice cream, candy, and chewing gum	Theaters, movies, and similar amusements
United States	$12,500,000,000	$2,141,220,000	$1,850,240,000	$1,082,790,000
Oregon	130,660,700	19,913,346	17,207,232	10,069,947
Arizona	50,082,500	6,209,538	5,365,696	3,140,097
Colorado	150,673,300	19,270,980	16,652,160	9,475,110
Delaware	23,854,300	3,854,196	3,330,432	1,949,022
Florida	171,685,900	15,202,662	13,136,704	7,687,889
Idaho	54,695,700	6,851,904	5,920,768	3,464,928
Maine	81,788,200	12,204,954	10,546,368	6,171,993
Montana	60,480,000	9,421,368	8,141,056	4,764,276
Nebraska	203,091,000	24,838,152	21,462,784	12,560,304
New Hampshire	51,796,000	7,708,392	6,660,864	3,898,044
New Mexico	36,489,600	3,640,074	3,145,408	1,840,748
North Dakota	85,613,100	8,779,002	7,585,984	4,439,409
Rhode Island	64,911,300	13,917,930	12,026,560	7,038,135
South Dakota	96,867,800	10,920,222	9,436,224	5,522,229
Utah	48,330,900	7,922,514	6,845,888	4,006,208
Vermont	46,839,800	4,924,806	4,255,552	2,490,417
Washington	200,933,600	33,188,910	28,678,720	16,783,264
Wyoming	28,411,300	4,496,562	3,885,504	2,273,889

Name of State	Jewelry, perfumes, cosmetics, etc.	Sporting goods, toys, etc.	Total for luxuries	Per capita expenditure for luxuries
United States	$827,740,000	$499,660,000	$13,901,650,000	$154
Oregon	7,697,982	4,646,838	190,196,045	200
Arizona	2,400,446	1,449,014	68,647,285	176
Colorado	7,449,660	4,496,940	208,288,150	201
Delaware	1,489,932	899,388	35,377,270	148
Florida	5,876,954	3,547,586	217,147,615	147
Idaho	2,648,768	1,598,912	75,180,980	170
Maine	4,718,118	2,848,062	118,277,605	148
Montana	3,642,056	2,198,504	88,647,260	165
Nebraska	9,601,784	5,796,056	277,350,140	201
New Hampshire	2,979,864	1,798,776	74,841,940	161
New Mexico	1,407,158	849,422	47,372,405	119
North Dakota	3,393,734	2,048,606	111,859,865	166
Rhode Island	5,380,310	3,247,790	106,522,025	154
South Dakota	4,221,474	2,548,266	129,516,215	193
Utah	3,062,638	1,848,742	72,017,005	142
Vermont	1,903,802	1,149,218	61,563,595	171
Washington	12,829,970	7,744,780	300,159,178	193
Wyoming	1,738,254	1,049,256	41,854,765	197

[1] Data compiled from September Research Bulletin, 1930, National Education Association.

The people of Oregon expend large sums for luxuries. In the purchase of automobiles the State ranked sixth among the 17 States. Oregon's expenditure for tobacco was the third largest of any of the

States. It also stood third on the list in the amount expended for soft drinks, ice cream, candy, and chewing gum, while the people of only two other States in the list expended larger sums for theaters, movies, and similar amusements. Oregon ranked third in expenditures for jewelry, perfumes, and cosmetics, as well as for sporting goods and toys. In the total amount expended for luxuries, the State occupied fifth place in the list of States. The per capita expenditures of Oregon for luxuries is unusually high, being $200. In the United States as a whole the per capita figure is $154 so that the State actually expended more per person than is the case in the country at large.

A comparison with the other States in the list shows that Oregon has the third largest per capita expenditures for luxuries. The only States exceeding Oregon are Colorado and Nebraska. It is not the purpose of the survey commission in citing these figures to give the stock-worn advice that the people of Oregon should expend more for education and less for luxuries. The real reason for presenting the expenditures for luxuries, as already indicated, is to utilize them as far as possible in determining the economic resources of the State and its ability to support education on a scale commensurate with its needs.

An additional barometer of the wealth and income of Oregon is the income tax as paid by the people of the State to the Federal Government. In Table 16 are found the number of income-tax returns for both corporations and individuals of Oregon in 1927 with the amounts of taxes paid as compared with the United States and the 17 other selected States.

TABLE 16.—*Federal income tax returns for Oregon for 1927 as compared with the United States as a whole and 17 other selected States*

Name of State	Corporations		Individuals		Grand total of income tax paid
	Number reporting net income	Amount of income tax paid	Number reporting net income	Amount of income tax paid	
United States	259,849	$1,130,674,000	4,101,547	$830,639,000	$1,961,313,000
Oregon	3,028	2,494,000	33,903	1,921,000	4,415,000
Arizona	668	865,000	11,059	698,000	1,563,000
Colorado	3,144	5,647,000	31,727	3,307,000	8,954,000
Delaware	845	15,548,000	9,266	7,970,000	23,518,000
Florida	3,443	3,413,000	40,080	6,047,000	9,460,000
Idaho	1,014	587,000	10,673	247,000	834,000
Maine	2,072	4,327,000	18,710	3,301,000	7,628,000
Montana	1,837	1,361,000	18,651	868,000	2,229,000
Nebraska	2,958	2,981,000	32,170	1,428,000	4,409,000
New Hampshire	754	1,240,000	14,484	1,825,000	3,065,000
New Mexico	495	418,000	6,462	283,000	701,000
North Dakota	1,695	399,000	9,758	187,000	586,000
Rhode Island	1,536	5,791,000	25,184	6,332,000	11,123,000
South Dakota	1,665	387,000	10,969	210,000	597,000
Utah	1,589	1,952,000	13,029	851,000	2,803,000
Vermont	683	1,164,000	8,268	847,000	2,011,000
Washington	5,355	[1] 7,222,000	62,200	[1] 2,914,000	10,136,000
Wyoming	788	492,000	8,870	275,000	767,000

[1] Including Alaska.

Oregon had 3,028 corporations paying income tax to the Federal Government in 1927. Only three other States in the list had a greater number of corporations reporting taxable incomes. The amount of taxes paid by the corporations of Oregon was $2,494,000, the State standing seventh among the 17 States. The fact that Oregon has a larger number of corporations which pay a less amount of taxes that some of the other States would seem to indicate that a considerable proportion of its corporations are small in size. Opportunity, therefore, exists for expansion. That the wealth of Oregon is widely distributed among its people rather than concentrated in a few individuals is indicated by the number of individual tax returns, which are shown at 33,903. There were but two other States, Florida and Washington, having a greater number of individuals paying Federal income taxes. The amount paid by individuals on their incomes was $1,971,000, the State being seventh on the list. Oregon's total income tax paid to the Federal Government by both corporations and individuals represented 0.2 per cent of the entire amount for the United States as a whole. With $4,415,000 the State ranks eighth among the 17 States.

Having considered various indices that may serve as a basis for estimating the economic power of Oregon to support education, it is now proposed to consider the actual per capita wealth and per capita income of the State including the percentage the per capita income is to per capita wealth as compared with the United States and the other 17 selected States. These data are presented in Table 17.

TABLE 17.—*Per capita wealth and per capita income of Oregon with percentage per capita income is to per capita wealth as compared with the United States as a whole and the 17 other selected States* [1]

Name of State	Per capita wealth	Annual per capita income	Percentage per capita income is to per capita wealth	Name of State	Per capita wealth	Annual per capita income	Percentage per capita income is to per capita wealth
United States	$2,918	$698	24.2	Nebraska	$4,004	$644	16.0
				New Hampshire	3,074	709	23.0
Oregon	4,182	837	20.0	New Mexico	2,299	479	20.7
Arizona	3,512	800	22.7	North Dakota	3,692	502	13.6
Colorado	3,295	786	23.9	Rhode Island	3,086	908	29.4
Delaware	2,728	730	26.7	South Dakota	4,482	660	14.7
Florida	2,358	496	21.0	Utah	3,247	597	18.3
Idaho	3,301	694	21.0	Vermont	2,389	637	26.6
Maine	2,586	658	25.4	Washington	3,600	847	23.5
Montana	3,691	509	13.8	Wyoming	4,663	786	16.9

[1] Compiled from Research Bulletin, Vol. IV, Nos. 1 and 2, National Education Association.

Both the per capita wealth and per capita income of Oregon are ample. Moreover, the State occupies a strong position as indicated by these fundamental elements of economic welfare. Its per capita

wealth is $4,182, as compared with $2,918 for the United States at large. The State's per capita wealth thus exceeds that of the entire country by $1,264. In the whole list of 17 States, only 1 has a larger per capita wealth than Oregon, a point of considerable significance. Oregon's per capita income is also high, the amount being $837, as contrasted with $698 for the United States. This is an excess in favor of Oregon of $139 per person. Comparing its per capita income with the other States, it is found that 2 States—Rhode Island and Washington—have a greater per capita income, while the remaining 15 States fall below Oregon. The per capita income of Oregon is approximately 40 per cent higher than five of these States with lower incomes. In the relationship between wealth and income, the percentage that the per capita income of Oregon is to its per capita wealth is 20. For the United States as a whole the percentage is 24.2, a slightly higher figure. Oregon's percentage is lower than 11 of the States given in the tabulation and higher than 6 of the States.

At this juncture it is deemed advjsable to review the preceding data relating to the economic organization and the financial resources of Oregon as indicative of its ability to support education. The people of the State earn their livelihood through diversified industries, of which agriculture and manufacturing stand out as the principal occupations. Although regarded as an agricultural State, manufacturing is developing so rapidly that a great increase in the wealth of the State is certain from this source. Oregon's distribution of occupations is much the same as for the United States at large and is highly advantageous to its future growth. The number of farms and farm owners in the State reflect further a highly satisfactory situation with a very low percentage of tenancy. That the State ranks high in manufacturing is shown by the large number of manufacturing establishments and wage earners.

Due principally to the diversity of occupations found among the people, Oregon is a wealthy State with a proportionately large income. The value of its farm, manufacturing, fisheries, and lumber products ranks far up in the list of 17 States with which comparisons were made. Business, trade, and commerce, as indicated by savings deposits, postal revenues, and expenditures for luxuries, present additional evidence of the State's superior position in economic resources. Oregon's savings deposits gained at a faster rate between 1920 and 1929 than most of the other States, while its postal revenue per person is slightly higher than for the United States as a whole. The surplus earnings of the people of Oregon over the actual costs of living are such that a great deal of money is available for the purchase of luxuries as revealed by the large expenditures for this pur-

pose. Analysis of State's corporation and individual income returns and the amounts of income tax paid to the Federal Government prove that corporate profits and private earnings are large. An appraisal of Oregon's actual per capita wealth and per capita income offers final confirmation of its economic and financial prosperity. Both the State's per capita wealth and per capita income are higher than for the entire United States, and with several exceptions exceed the States with which direct comparisons are made.

The conclusion, therefore, may be drawn that Oregon possesses the ability and resources, without crippling other State activities, to support an effective system of public education from kindergarten to professional school that is equal to that of any other State. Considering its present economic strength and future prospects, the State may likewise look forward with confidence to a healthy educational growth and development. The next questions are:

(1) Is Oregon making expenditures for higher education proportionate to its wealth and income?

(2) Is the State securing the fullest returns for the money it expends for higher education?

(3) Are the funds provided by the State being properly distributed among the different major fields of study and higher educational enterprises?

The answers to these questions involve the determination of the higher educational task confronting Oregon and of the extent to which the State is fulfilling the task by affording higher educational opportunities comparable with other States and the United States as a whole.

Expenditures of a State for higher education depend in part upon the assessed valuation of real and personal property and the tax rate levied by the State government. It is not the intention of the survey commission, however, to study Oregon's tax system as it affects the distribution of the tax burden and the support given State universities, colleges, and normal schools, but rather to appraise the income of the State itself, accruing from taxes and the amount of that income devoted to higher education. From such figures it is possible to ascertain whether funds apportioned to higher education represent a fair share of the State's income and whether its expenditures for higher education are large or small. In Table 18 are shown the per capita State income of Oregon for 1928, the per capita State expenditure for public higher education, the share on a percentage basis of the State's income expended for public higher education, and the State's expenditures per student attending the State's higher educa-

tional institutions as compared with the United States and the 17 other selected States.

TABLE 18.—*Per capita State income of Oregon, per capita State expenditure for public higher education, percentage of per capita State income expended for higher education, and State expenditure per student as compared with United States as a whole and the 17 other selected States*

Name of State	Per capita State income [1]	Per capita State expenditure for public higher education [1]	Percentage of per capita State income expended for public higher education [1]	State expenditure per student enrolled in State higher educational institutions [2]
United States	$14.99	$1.66	11.1	$214.92
Oregon	25.88	3.12	12.1	276.99
Arizona	17.06	2.40	14.1	255.14
Colorado	15.24	2.24	14.6	195.64
Delaware	32.31	1.78	5.5	295.36
Florida	20.44	1.34	6.5	441.27
Idaho	15.37	2.69	17.5	344.87
Maine	22.02	.99	4.4	192.44
Montana	16.00	1.84	11.5	254.03
Nebraska	12.44	2.03	16.3	195.55
New Hampshire	17.14	1.81	10.5	212.15
New Mexico	17.95	1.99	11.1	185.86
North Dakota	30.30	2.58	8.5	171.84
Rhode Island	15.04	.74	4.9	219.92
South Dakota	23.58	1.88	7.9	125.89
Utah	21.36	1.75	8.2	181.55
Vermont	20.46	.45	2.2	116.90
Washington	22.75	2.55	11.2	238.80
Wyoming	36.76	1.90	5.2	216.08

[1] Based on population.
[2] Capital outlays excluded.

The per capita income of Oregon, which represents its annual revenue from taxes per unit of population to defray the cost of the entire State government, is unusually high. Although considerable doubt may be entertained concerning the validity of the comparison because of the variety of ways in which figures are compiled by different States, the figure in Oregon is apparently $25.88 as compared with $14.99 for all the States in the United States. In other words, the per capita tax income of the State of Oregon exceeds the average of that of the States of the Nation at large by $10.89. Moreover, in the entire list of 17 States there are but three others that have a larger per capita income. These States are Delaware with $32.31, North Dakota with $30.30, and Wyoming with $36.76. Among the 13 States with lower per capita incomes there is one the income of which is less than one-half of Oregon's income, while a number of others have per capita incomes from 10 to 30 per cent less. The size of the State income of Oregon indicates that the people are contributing liberally in taxes for the support of their government, although faults in the basic statistics used for comparison make it

unwise to regard the State's generosity in relation to other States as conclusively shown. The important question then concerns the portion of this income that is being allotted to the State's higher educational system.

An examination of the table shows that the amount is large. For Oregon the per capita expenditure for public higher education is $3.12, the highest of any of the 17 selected States and far in excess of a number of them. The average expenditure for all the States of the United States for public higher education amounts to $1.66 per capita, which is only about one-half that spent by Oregon.

The percentage of the State income expended for public higher education provides a further criterion of the extent to which the State is supporting public higher education. As already shown, the per capita State income of Oregon is $25.88, of which $3.12 is expended for higher education. This represents a percentage of 12.1. For all the States of the country the percentage is 11.1 or 1 per cent less than Oregon. Among the 17 States Oregon ranks fourth in percentage of per capita State income devoted to higher education, the States with a greater proportion being Arizona, Colorado, and Florida.

Another method of securing an estimate of the contribution of the State to higher education is the State expenditure per student enrolled in its higher educational institutions. As revealed by Table 18, Oregon expended $276.99 in 1928 for every student attending its institutions of higher learning while the average for the United States as a whole amounted to $214.92. The State's excess over the country at large was $62.07. With the exception of Florida, which expended $441.27 per student, and Idaho, which has a per student expenditure of $344.87, Oregon leads every one of the other States making up the list. Using these figures as a basis, it is evident that Oregon is not only spending generously for higher education but its annual expenditures represent a substantial proportion of its State income.

Whether the State is supporting public higher education on a large or small scale may be approached from another angle. This consists of comparing the receipts for public higher education with the receipts for private higher education. Table 19 shows the receipts for public and private higher education in Oregon in 1928 with the percentage for each as compared with the United States and the 17 other selected States.

TABLE 19.—*Public and private receipts in 1928 for higher education in Oregon with percentages for each as compared with the United States and the 17 other selected States*[1]

Name of State	Receipts for public higher education [2]	Per cent	Receipts for private higher education [2]	Per cent
United States	$234, 738, 942	48.7	$241, 130, 689	51.3
Oregon	4, 306, 580	80.6	1, 036, 369	19.4
Arizona	1, 728, 597	97.7	41, 500	2.3
Colorado	3, 622, 065	74.1	1, 262, 479	25.9
Delaware	594, 933	100.0		
Florida	2, 685, 797	76.3	833, 995	23.7
Idaho	2, 095, 325	92.9	158, 779	7.1
Maine	1, 543, 704	59.1	1, 065, 281	40.9
Montana	1, 842, 531	94.5	105, 918	5.5
Nebraska	4, 381, 040	71.2	1, 768, 798	28.8
New Hampshire	1, 624, 036	52.2	1, 486, 280	47.8
New Mexico	1, 635, 570	100.0		
North Dakota	2, 880, 502	95.9	120, 185	4.1
Rhode Island	650, 816	28.2	1, 645, 239	71.8
South Dakota	2, 231, 593	74.9	744, 914	25.1
Utah	1, 416, 190	74.0	496, 246	26.0
Vermont	938, 814	51.8	679, 232	48.2
Washington	6, 109, 597	91.4	501, 197	8.6
Wyoming	796, 440	100.0		

[1] Compiled from Bulletin, 1930, No. 16, United States Office of Education.
[2] Capital outlays omitted; teachers colleges and normal schools included.

Receipts for public higher education in Oregon are large, comprising 1.8 per cent of the total receipts for the entire United States. The State has the third largest receipts for public higher education of any of the 17 States, being surpassed only by Nebraska and Washington. In receipts for private higher education, Oregon ranks fairly high since but five States outrank the State in this respect. The important point, however, is the proportion of the receipts for public and private higher education. For the United States as a whole the percentage of receipts for public higher education is 48.7 and for private higher education 51.3. In Oregon the receipts for public higher education are 80.6 per cent and for private higher education 19.4 per cent, showing that the State carries a far larger proportion of the burden of higher education than is the case in the Nation, as a whole. Comparing Oregon with the other States it is found that, outside of three States which have no private universities and colleges and consequently no private higher education, there are five other States with greater percentages of receipts for public higher education. In making provision for the higher education of its people, the State, therefore, has taken the lead and has not depended upon private universities and colleges supported through private contributions. On the contrary, Oregon has developed its own institutions of higher education by making unusually large expenditures out of State public funds.

As the preceding compilations deal only with the current costs of operating institutions and the contributions of the State to defray them, an appraisal of the capital outlays as shown by the value of

physical property will provide further evidence as to the extent to which State support is being given to public higher education. In Table 20 are shown the value of the property of the public higher educational institutions of Oregon per $1,000,000 of wealth and the value per 1,000 population as compared with the United States and the 17 selected States.

TABLE 20.—*Value of property of public higher educational institutions of Oregon per $1,000,000 of wealth and per 1,000 population as compared with United States as a whole and 17 other selected States* [1]

Name of State	Value of property per $1,000,000 of wealth [1]	Value of property per 1,000 population [1]	Name of State	Value of property per $1,000,000 of wealth [1]	Value of property per 1,000 population [1]
United States	$2,500	$6,314	Nebraska	$2,743	$10,563
			New Hampshire	3,139	9,122
Oregon	3,935	13,241	New Mexico	5,951	10,899
Arizona	4,600	12,881	North Dakota	3,824	13,853
Colorado	4,319	13,046	Rhode Island	1,789	5,000
Delaware	5,378	13,935	South Dakota	2,410	9,555
Florida	3,759	6,226	Utah	2,728	7,940
Idaho	4,213	13,133	Vermont	3,909	8,902
Maine	1,646	4,127	Washington	2,777	8,846
Montana	3,112	12,051	Wyoming	4,648	13,947

[1] Compiled from Bulletin, 1929, Nos. 14 and 38, United States Office of Education.
[2] Includes normal schools and State teachers colleges.

For every $1,000,000 of its wealth, Oregon has invested $3,935 in capital outlays for its public higher educational institutions as shown by the value of their property. In the United States as a whole, the amount invested is $2,500. The State, therefore, has an excess over the entire country of $1,435. In the case of the other selected States, Oregon does not appear in such a favorable light. There are six States that have made larger capital outlays per $1,000,000 of wealth in their public higher educational institutions, among the list being Arizona, Colorado, Delaware, Idaho, New Mexico, and Wyoming. The value of the higher educational property of many of the States is greater than the average for the United States at large. A probable explanation of the smaller figure for Oregon is the fact that the physical plants of its normal schools have not been developed on such a large scale as some of the other States. In the value of its public higher educational property per 1,000 population, however, the State occupies a high position. The figures as given in the table are $13,241, an amount double that of the entire United States, which is $6,314. Oregon outranks 14 of the other States in the value of higher educational property per 1,000 population. Only the States of Delaware, North Dakota, and Wyoming stand higher than Oregon in the list.

In view of the foregoing discussion, no doubt exists that Oregon is making expenditures for higher education on a scale proportion-

ate with its wealth and income. Not only is a large percentage of its public revenues being utilized for higher education, but as compared with other States and the Nation at large, the State has been exceedingly liberal in the support of public higher education. As already indicated, Oregon ranks at the very top of the list of States in most instances. Regardless of the basis upon which its higher educational expenditures are computed, the State exceeds in practically every case the average of the United States. A paramount question is whether Oregon is securing the fullest returns for the money it is expending and whether the higher educational opportunities and services afforded its people are of the character and type to be expected from such large expenditures.

One of the means of determining the extent to which the State is providing educational opportunities, which has significant bearing on the returns for the money expended, is the number of students actually being educated in the public institutions as compared with the private institutions. Considering its liberal support, it is to be presumed that a far greater percentage of the college students in Oregon would be enrolled in its public rather than its private institutions. Figures showing the situation in the State as well as the United States as a whole and the 17 other selected States are presented in Table 21.

TABLE 21.—*Number and proportion of college student body of Oregon enrolled in public and private institutions in 1928 as compared with the United States as a whole and 17 other selected States*[1]

Name of State	Student enrollment				
	All higher educational institutions[2]	Public institutions[3]		Private institutions	
		Number	Per cent	Number	Per cent
United States	1,158,763	586,919	50.6	571,844	49.4
Oregon	13,473	10,150	75.3	3,323	24.7
Arizona	4,218	3,945	93.5	273	6.5
Colorado	14,910	10,623	71.2	4,287	28.8
Delaware	707	707	100.0		
Florida	5,489	3,511	63.9	1,978	36.1
Idaho	4,649	3,859	83.0	790	17.0
Maine	5,687	3,803	66.8	1,884	33.2
Montana	4,225	3,877	91.7	348	8.3
Nebraska	19,577	13,078	66.7	6,499	33.3
New Hampshire	5,355	2,829	52.8	2,526	47.2
New Mexico	2,968	2,968	100.0		
North Dakota	9,292	8,746	94.1	546	5.9
Rhode Island	4,123	1,426	34.7	2,697	65.3
South Dakota	8,103	6,044	74.5	2,059	21.5
Utah	6,872	4,287	62.3	2,585	37.7
Vermont	2,478	1,360	54.8	1,118	45.2
Washington	17,972	15,237	84.7	2,735	15.3
Wyoming	1,386	1,386	100.0		

[1] Compiled from Bulletin, 1930, No. 3, United States Office of Education.
[2] Includes universities, professional schools, colleges, normal schools, and teachers colleges.
[3] Includes normal schools and teachers colleges.

Oregon has 13,473 students enrolled in its higher educational institutions, both public and private, in 1928, or approximately 1.2 per cent of all the college students in the United States. With the exception of Colorado, Nebraska, and Washington, the State has the largest number of college students of any of the 17 selected States. That Oregon is providing higher education to a vast number of young men and women can not be gainsaid. Of the State's 13,473 college students, 10,150 were attending the higher educational institutions maintained by the State. This proportion is large, being 75.3 per cent. For the United States as a whole, the percentage of college students being educated in the publicly supported institutions is 50.6, so that Oregon is educating 24.7 per cent more college students at State expense than is the average for the entire country.

Three of the States contained in the list—Delaware, New Mexico, and Wyoming—are without any private universities and colleges, with the result that all their college students, except those who seek education outside the State, are enrolled in State institutions. Of the remaining States, the compilation reveals that there are five which have a greater percentage of college students receiving their higher education in public institutions than is found in Oregon, although the actual number of students, except in one instance, is smaller. As the proportion of college students enrolled in private institutions varies in direct ratio to the students attending public institutions the percentage of students in private colleges of Oregon is correspondingly low. The fact that for the United States at large 49.4 per cent of the college students are being educated in private institutions as compared with only 24.7 per cent for Oregon offers further substantiation of the great extent to which the State is furnishing higher education to its people.

While the number and percentage of students enrolled in its publicly supported universities, college, and normal schools present an index to the quantity of higher education provided by the State, probably a better basis of measurement of the number of young men and women who actually take advantage of the opportunities for public higher education in Oregon is the proportion of the inhabitants who attend college or the number of people for each college student. As students must first attend high school before being permitted to enter college, the number of college students per 100 high-school students affords additional evidence on the point. By such computations it is possible to ascertain whether Oregon with its large expenditures is in reality providing college education in relative proportion to its population and to the number of students enrolled in its high schools compared with the United States and the 17 other selected States. In Table 22 are contained these data.

TABLE 22.—*Number of people for each college student and number of college students per 100 high-school students in Oregon as compared with the United States and 17 other selected States*

Name of State	Number of people per college student in public institutions	Number of college students in public institutions per 100 high-school students	Name of State	Number of people per college student in public institutions	Number of college students in public institutions per 100 high-school students
United States	208	15	Nebraska	105	20
Oregon	93	24	New Hampshire	163	21
Arizona	98	31	New Mexico	133	32
Colorado	97	24	North Dakota	77	32
Delaware	337	11	Rhode Island	482	9
Florida	418	25	South Dakota	111	21
Idaho	114	16	Utah	119	15
Maine	204	13	Vermont	264	12
Montana	135	18	Washington	101	19
			Wyoming	161	13

One of every 93 people in Oregon there is 1 attending its public higher-educational institutions. In the case of the entire United States the number of persons for every college student enrolled in publicly supported universities, colleges, and normal schools is 208. It is evident, therefore, that a proportion of the population of Oregon, over twice as large as in the country as a whole, is taking advantage of the higher education afforded by the State. No better evidence can be found that the State is receiving returns in the way of student attendance for its expenditures. Oregon leads all the 17 selected States in the number of people per college student in public institutions, and in only a few instances do any of the other States begin to compare with the State in this regard. For such States as Delaware, Florida, Maine, Rhode Island, and Vermont there are between 204 and 482 inhabitants for every college student in public institutions, as compared with 93 for Oregon. The State ranks high also in college students attending public institutions per 100 high-school students. The number in Oregon is 24, while the average for the United States is 15. Oregon stands fourth in the list of States. In those States with a higher number of college students per 100 high-school students, the situation is due, in part at least, to small high-school enrollments and the absence of private universities and colleges, which has the effect of raising the figure for college students.

An important factor in evaluating the returns of the State from its liberal support of higher education is whether a gain has occurred in the number of college students being educated in its institutions. With increasing annual expenditures there should also be a corresponding enhancement of student enrollment, if the State is receiving proper returns for its money. Considering the fact that Oregon is making greater proportionate appropriations for the main-

tenance of its higher educational system, the rate of increase in college students should likewise exceed that of the United States as a whole and the other selected States. In Table 23 are shown the number of students per 10,000 population attending public higher educational institutions in 1900 and 1928 for Oregon, together with the increase over this period and similar data for the entire Nation and the 17 States.

TABLE 23.—*Number of college students per 10,000 population for 1900 and 1928 in Oregon public institutions with increase as compared with the United States and the 17 other selected States*

Name of State	Number of students per 10,000 population		Increase 1900–1928	Name of State	Number of students per 10,000 population		Increase 1900–1928
	1900	1928			1900	1928	
United States	14	49	35	Nebraska	16	93	[illegible]
				New Hampshire	11	62	[illegible]
Oregon	18	112	94	New Mexico	4	76	[illegible]
Arizona	8	84	72	North Dakota	10	140	[illegible]
Colorado	25	97	72	Rhode Island	22	20	[illegible]
Delaware	6	29	23	South Dakota	14	86	[illegible]
Florida	4	39	35	Utah	8	80	[illegible]
Idaho	31	71	40	Vermont	14	39	[illegible]
Maine	16	48	32	Washington	3	96	[illegible]
Montana	5	70	65	Wyoming	8	57	[illegible]

[1] Decrease.

The number of students in public higher educational institutions of Oregon per 10,000 population was 18 in 1900. For the entire United States the number was 14. Oregon thus exceeded the Nation as a whole as early as 1900 in proportionate student enrollment of publicly supported higher institutions. With the exception of Colorado, Idaho, and Rhode Island, the State had a larger number of students per 10,000 population in this year receiving higher education at public expense than any of the 17 States. As shown by the table, Oregon had 112 students per 10,000 population in 1928. As the number for the United States in 1928 was only 49, the State far surpasses the average for the whole Nation. Oregon's number of students attending public institutions in 1928 is also proportionately greater than any other State making up the list with the single exception of North Dakota. The actual increase in students per 10,000 population in Oregon between 1900 and 1928 was 94. This is almost three times the increase for the entire United States. Again, except for North Dakota, Oregon is far ahead of all the 17 States in the rate of increase of students enrolled in public higher educational institutions.

Another criterion that has a significant relationship to the efficacy of State supported higher education is the number of students lear-

ing the State to attend universities and colleges in other States. In the event that Oregon has an extensive migration of college students, it would appear that its own institutions are not meeting the highest standards or are lagging behind in requisite service. Similarly, the question of the number of students migrating from outside the State to attend public higher educational institutions in Oregon is important in revealing the character and type of education being provided in its institutions. The significance of the figures are even more pronounced when a comparison is made with other States. In Table 24 are given the number of Oregon students attending institutions in other States and the number of out-of-State students attending Oregon's institutions with percentages for each as compared with the United States and the 17 selected States.

TABLE 24.—*Number of students migrating from Oregon and number migrating to Oregon for college education with percentages as compared with the 17 other selected States* [1]

Name of State	Number of Oregon students attending institutions in other States	Percentage of total college students	Number of students from outside State attending Oregon institutions	Percentage of total college students
Oregon	771	11.3	1,613	22.4
Arizona	365	26.6	299	22.9
Colorado	1,403	18.5	1,241	16.8
Delaware	441	51.6	105	28.3
Florida	1,254	37.4	239	10.3
Idaho	1,096	36.5	216	10.2
Maine	1,444	40.2	735	25.6
Montana	1,016	32.5	225	9.7
Nebraska	1,665	15.6	2,176	19.8
New Hampshire	1,055	50.8	2,130	67.6
New Mexico	500	46.0	152	20.7
North Dakota	1,214	32.6	283	10.2
Rhode Island	956	34.8	1,402	43.9
South Dakota	1,322	40.4	227	10.5
Utah	643	13.2	472	10.1
Vermont	733	39.1	766	40.4
Washington	1,901	18.3	1,210	11.9
Wyoming	467	54.3	84	18.4

[1] Compiled from Bulletin, 1926, No. 11, United States Office of Education.

College students leaving their home State of Oregon and attending colleges in other States total 771. This is a small number. In many of the other States, large migrations of students are found, the number running as high as 1,901 in the case of the State of Washington. There are six States in which the number of students attending colleges outside their home State is less than Oregon, but in most of these instances the higher educational facilities offered by the State fall considerably below those of Oregon. The lack of migration from Oregon is further shown in the percentage of students leaving the State for their college education. For Oregon the per-

centage is 11.3, which is the smallest of the entire list of 17 States. As a number of other States have from 30 to 50 per cent of their college students leaving their States to go to outside institutions of higher learning, Oregon's low percentage is of special significance.

These data may be interpreted as meaning that the reputation and standing of the university and college of the State attract students from outside of the State; or that standards are such that students who are not eligible for admission to the institutions of their own States come to Oregon. It is one of the tasks of subsequent chapters of this report to determine which interpretation should be placed upon Oregon's out-of-State attendance. According to Table 24, students from outside Oregon attending its institutions total 1,613. There are only two others among the 17 States having such a large number of out-of-State students enrolled in their colleges. In percentage of students migrating to the State Oregon likewise ranks high with a proportion of 22.4 per cent. The State stands in sixth place in the list of States, being exceeded only by Arizona, Maine, New Hampshire, Rhode Island, and Vermont.

In analyzing the returns of the State of Oregon from its heavy expenditures for higher education, the discussion up to this point has been confined to a consideration of the quantitative results attained by the institutions, such as number of students attending them. A question of far more importance is whether the higher education program is meeting the genuine needs of the State, whether the fields of study follow its industrial and economic interests, and whether opportunities exist within the State for the students to realize on the preparation and training received in the institutions after the completion of their college work. The characteristics of the State of Oregon have been described previously in detail. Does its higher educational system, which is costing the taxpayers large sums annually, provide a program of higher education in conformity with its characteristics? In other words, do the different fields of study making up the higher education program correspond to the occupational opportunities existing in Oregon or have some fields of study been emphasized beyond the economic development of the State along these particular lines? A similar situation may apply with regard to the underemphasis in needed fields of study.

The survey commission has gone to a considerable amount of labor in the collection of basic data which may serve to answer this question. It has already been shown that Oregon is a State of diversified industries and that its economic structure differs to a wide extent from many of the 17 States selected for comparison with it. While some of the other States are predominantly agricultural or manufacturing in character, the resources of Oregon are divided almost evenly between these two interests. Trade and commerce, as re-

vealed by the occupations of the people, are more important factors in Oregon than in some of the other States. In comparing Oregon with the United States, the discovery was made that the State's economic organization is much the same as that of the Nation at large and that approximately the same proportions of its population are engaged in the different occupations. It may be presumed, therefore, that the proportionate number of students enrolled in the major fields of study conducted by the higher educational institutions of Oregon will vary from the other States in accordance with the difference in their industrial interests while they would be approximately the same as for the entire United States. Table 25 gives the percentages of students enrolled in the major fields of study in the case of Oregon as compared with the country as a whole and the 17 other selected States.

TABLE 25.—*Percentages of total student body enrolled in major fields of study in Oregon as compared with the United States as a whole and 17 other selected States*

Name of State	Percentage in—								
	Graduate	Liberal arts	Agriculture	Commerce and business	Engineering	Law	Medicine	Pharmacy	Miscellaneous
United States	4.5	51.8	4.7	7.0	10.1	4.1	3.0	1.6	13.2
Oregon	3.9	20.5	7.0	21.7	14.3	1.1	3.2	2.8	25.5
Arizona	1.8	40.4	7.7	12.8	16.5	5.0	.....	.....	15.8
Colorado	2.6	50.4	4.2	10.7	12.6	5.4	1.3	.7	12.1
Delaware	3.0	40.8	5.6	.....	22.0	.....	.....	.....	28.6
Florida	1.6	49.7	4.5	2.1	6.8	10.9	.....	.....	24.4
Idaho	1.4	66.5	5.9	.....	7.0	1.9	.....	.....	15.4
Maine	1.5	60.2	7.1	.....	16.7	.....	.....	.....	12.5
Montana	1.8	48.2	6.3	6.7	16.5	2.2	.....	1.8	16.5
Nebraska	2.7	51.9	2.4	8.7	5.6	3.3	3.4	1.9	20.1
New Hampshire	2.3	57.2	10.4	.....	18.3	.....	.....	.....	11.8
New Mexico	.5	55.3	5.0	.8	27.3	.....	.....	.....	11.1
North Dakota	1.8	52.3	2.2	1.7	5.7	1.0	1.1	1.7	32.5
Rhode Island	5.7	51.0	1.9	5.7	7.3	.....	.....	11.1	17.3
South Dakota	.5	69.4	4.1	3.8	7.3	2.8	1.1	2.7	8.3
Utah	2.5	34.4	3.0	5.7	9.7	2.4	.7	.....	41.6
Vermont	.....	51.2	5.3	12.2	19.4	.....	6.1	.....	5.8
Washington	4.3	42.8	3.8	12.4	12.3	2.0	.....	3.1	19.3
Wyoming	1.2	28.3	7.3	5.1	11.3	.....	.....	.....	36.8

Oregon has a proportion of college students in the field of graduate work representing 3.9 per cent of its total student body. Except for Rhode Island and Washington, the State leads all the other States in the list. In the field of arts and science, it is found that Oregon falls far behind every one of the 17 States. Its percentage of students pursuing liberal arts study is 20.5 per cent, a proportion so low as to raise the question whether this field of study is not being neglected to a grave extent in the State's higher educational program. This deficiency is explained in part, however, by the fact that at the

State college a very large number of students who are in fact pursuing arts and science work are enrolled and reported as home economics and commerce students. While many of the States differ from Oregon in social characteristics and on this account more or less wide variations may be expected in fields of study in higher education, no reason seems to exist why the other States should have a much larger percentage of liberal arts enrollments.

In the field of agriculture the proportion of students for Oregon is 7 per cent; Oregon ranks fourth in the list of 17 States in this field of study and its percentage exceeds that of a number of them, the dominant interests of which are centered in the agricultural industry. For instance, Oregon stands higher than Idaho, Nebraska, North and South Dakota. It is in the field of commerce and business, however, that a marked discrepancy is found in Oregon's percentage as compared with the other States. According to the table, the proportion pursuing commerce and business courses is 21.7 per cent, or almost one-fourth of the entire enrollment of college students in the State. Part of this enrollment is accounted for by the fact that students at the State college whose major interest is arts and sciences are reported as commerce students. An analysis of the occupations of Oregon's population shows only a slightly larger percentage of its people pursuing commerce and business as such for a livelihood than the other States. Yet in this field Oregon's percentage is almost twice that of any of the 17 States. In two States no commercial and business courses are offered, while in seven others the proportion of students enrolled in them is less than 10 per cent in contrast to 21.7 per cent for Oregon.

The State's percentage of college students pursuing work in engineering is 14.3. Of the 17 States there are 7 with higher proportions of students enrolled in the field of engineering and 10 with less. The percentage of Oregon's students in the field of law is extremely low, being only 1.1 per cent. As disclosed by the table, eight of the other States have no law schools, but of the others every one has a greater percentage of students studying in the field of law with the single exception of North Dakota. Oregon ranks fairly high in the proportion of its students enrolled in medicine among the seven States having medical schools. The State's percentage is 3.2, which exceeds that of any of the other States except Nebraska, where the percentage is 3.4. The percentage for Oregon in pharmacy is 2.8 per cent, and Washington and Rhode Island are the only States having greater proportions of students in this field of study. In miscellaneous fields Oregon ranks fourth among the States.

Up to this juncture the percentages of college students enrolled in the major fields of study have been compared as among States.

It is now proposed to make a comparison between Oregon and the entire United States. The distribution of Oregon's population is very similar to the United States as a whole in racial and social characteristics, urban and rural communities, manufacturing and agriculture, occupations and economic interests. There should, therefore, be no great variance between the proportions of students pursuing work in the different fields of study. A wide disparity, however, is found. In the field of graduate study 4.5 per cent of the students of the United States are pursuing graduate work, or 15.3 per cent more than Oregon. The State, therefore, appears to be backward in this field. For the country at large, the proportion of students enrolled in liberal arts is 51.8 per cent. This is a percentage which is 31.3 greater than that of Oregon, a glaring discrepancy, whose explanation must be found, in part at least, in arts and science enrollments that are reported under other classifications as has already been indicated. The percentage of students pursuing agriculture in the United States is 4.7 per cent. Oregon has a larger percentage in this field, its excess over the Nation as a whole being 2.3 per cent, although the proportionate number of its people engaged in agriculture is approximately the same as in the United States at large.

A similar situation exists in engineering. Oregon has a proportion of 14.3 per cent of its college students enrolled in the field of engineering as compared with 10.1 per cent for the entire Nation, a surplus of 4.2 per cent. The field of law seems to be the subject of serious neglect in the higher educational program of the State as but 1.1 per cent of its college students are pursuing law courses while for the United States the percentage is 4.1. Oregon's medical students comprise 3.2 per cent of its college students. In the country as a whole, the proportion of students studying medicine is 3 per cent. Although having a slightly larger percentage, medicine seems to be the only field in which Oregon has approximately the same proportionate distribution of students as the United States. As regards the field of pharmacy, the State has almost twice as large a percentage, the proportion being 2.8 per cent for Oregon and only 1.6 per cent for the Nation at large, a difference of 1.2 per cent.

The probable overdevelopment of certain major fields of study and the underemphasis of others are shown further in the actual number, rather than percentage, of students enrolled in each field of study in Oregon and the number the State would have if it educated the same proportion in each field as are being educated in all the higher educational institutions of the United States. In Table 26 are presented these figures.

TABLE 26.—*Number of students in each field of study in Oregon and number it would have if the State educated the same proportion in each field as is being educated in all the higher education institutions of the United States*

Educational fields	Number of students enrolled in Oregon	Number that State would enroll if same proportions existed as in entire United States	Educational fields	Number of students enrolled in Oregon	Number that State would enroll if same proportions existed as in entire United States
Graduate	289	328	Law	85	299
Liberal arts	1,496	3,785	Medicine	235	219
Agriculture	518	344	Pharmacy	202	117
Commerce and business	1,588	512	Miscellaneous	1,856	965
Engineering	1,037	737			

The number of graduate students in Oregon is 289. If the State had the same proportionate number as in the entire United States, it would have 328 or 39 more graduate students. In the field of liberal arts, Oregon's enrollment is 1,496 or 2,289 less than would be studying in this field if the same proportion existed as in the United States as a whole. This exceedingly large deficiency, however, is lessened somewhat by arts and science enrollments that are reported under other classifications. Oregon's students enrolled in agriculture number 518 as compared with 344 that the State would have providing its proportion was the same as the Nation at large, a difference of 174. In this instance an overdevelopment of agriculture is disclosed.

The field of commerce and business shows an extremely wide discrepancy, Oregon having 1,588 students pursuing such work. If the State enrolled the same proportion as the United States, the number would be only 512, or 1,076 less students. Again this excess is explained in part by the arts and science students reported under commerce. An excess of 300 students is likewise found in engineering. In the field of law, Oregon is far behind in the number of students that should be enrolled in law courses if the same proportion was maintained as in the country as a whole. The State has only 85 law students as compared with 299 representing the proportion for the United States, a deficiency of 214 students. Figures on medical students for Oregon and for the United States computed on the proportionate basis are much the same, the State having 235 medical students as against 219 for the entire Nation, the difference being only 16. The students studying pharmacy in Oregon exceeds by 85 the number that would be enrolled if the same proportion prevailed as in the United States, while for the miscellaneous fields the State has a surplus of 1,091 students.

The foregoing presentation indicates that Oregon's higher educational program is considerably distorted. Instead of a distribution

of students among the major fields of study in accordance with the economic and occupational requirements of its people, grave deficiencies are found in a number of the fields while others have been expanded to an exaggerated degree. This does not mean that the State is not receiving large returns on the money expended for higher education as it has already been shown that the total number of college students actually being educated is exceedingly high, but it raises the question of whether the funds provided by the State are being apportioned properly between its different educational enterprises. While all these figures must be used with caution and specific conclusions should not be drawn from them, they serve to indicate profitable lines of further inquiry. The policy which permits the emphasizing of some fields of study regardless of their importance in the economic and social structure of the State to the detriment and neglect of other fields may obviously be due to an absence of fundamental coordination in the State's public educational program.

Summary

This chapter has sketched the powers and duties of the board of higher education. It is perfectly evident that the action that created the board was inspired by no lack of belief in higher education or by any desire to retard its growth. Examination of the facts concerning the population of Oregon, its wealth and resources, and the extent to which it is attempting to perform the educational task confronting the State tends to indicate:

(1) That the people are of a type that realize the benefits of education and want it.

(2) That the character of the population is such as to present no serious obstacles to the task of educating them.

(3) That the State may look forward to an expansion economically and in population which implies development of education in the future.

(4) That Oregon as compared with other States is performing its higher educational task upon a large scale.

(5) That it is performing this task expensively.

(6) That the higher educational program is incoordinated with the State's needs as measured by the distribution of occupations and economic interests of the people.

(7) That the primary task of the survey is to study the causes of such incoordination and to suggest the necessary remedies.

In the ensuing pages the different phases of higher education in Oregon, which when combined determine the efficiency and effectiveness of the entire program, will be approached especially from this point of view.

Chapter II

Fundamental Coordination

Introduction

Undoubtedly the situation that caused the most concern in the State and which was most influential in securing the passage of the law creating the department of higher education was that of the relations between the university and the Oregon State College. During 20 years hundreds of pages of "briefs" had been submitted at various times to the State board of higher curricula by the university and by the State college, each in defense of its own claims and in refutation of the claims of the other. It is not necessary to charge either institution with bad faith in order to account for the conflict of interest which has so largely characterized the relationship of these two great educational centers in the past. Institutional pride and ambition and their less praiseworthy sister, institutional jealousy, dominate these briefs in many cases to the neglect of the interests of the State and of the individual students.

There would seem to be little value for the purposes of this survey report to review the history of this conflict and competition between the university and the State college. Its interest is now purely historical. A new situation has been created. The new department of higher education supersedes the board of higher curricula with more extensive powers and responsibilities than were exercised by the old board. The new board is not an arbiter of institutional contests; it is a creator of a State-wide educational policy with control over all activities that are necessary to put these policies into effect. Whatever the past may have justified in the way of institutional ambition, the future must contemplate one great system of higher education in the State, with its several units not competing but cooperating to make the single enterprise most effective. The problem now is a matter of defining the functions of the several units so as to secure a single coordinated system which will best serve the purposes of education in the State of Oregon.

Guiding Principles

In approaching this problem not only with reference to the relations between the university and the Oregon State College, but with

reference to the relations among the six agencies that constitute the educational factors in the situation, the commission has adopted six guiding principles that it believes are self-evident and in harmony with the purposes of the law creating the department of higher education:

First, certain functions having to do with this enterprise as a whole must be performed through a central office rather than from any of the campuses. For example, all relationships with high schools and high-school students, such as educational guidance conferences and all advertising of higher education.

Second, past rulings of the board of higher curricula should not be binding for the future. These rulings were made to harmonize the interests of competing institutions, limited as they were by separate legislative appropriations. The new set-up contemplates a different theory of operation, and the future development should not be hampered by past rulings. In meeting its responsibilities the board should not be influenced by the arguments of priority in the field, or institutional interest. Only the arguments of efficiency, economy, and better State service should weigh in the decisions of the future.

Third, the assignment of functions to the several campuses should be determined by major services required by the State, with provision for flexibility among all the details so that changes from year to year can easily be made in the light of the shifting educational needs of the State and interests of the students.

Fourth, distribution of functions should be on the basis of life careers. The career motive is dominant in higher education. This does not mean that all higher education courses are vocational or professional, but rather that some time before the completion of higher educational study almost all students feel impelled to prepare for some career.

Fifth, the assignment of functions to the several campuses on the career basis must have regard for the fact that the best training for a career calls for wide cultural training also and that the function of any institution of higher learning, especially a State institution, is first to fit its students to be good neighbors, friends, and citizens, and then to provide specialized education needed to prepare them for occupational careers.

Sixth, the dominant factor in determining the assignment of functions among the several units is the influence such assignment will have upon the ultimate future development of the unified system. Not for next year nor the next five years is the State now building, but for the next 25 and the next 100 years. What arrangement will assure ultimately the greatest educational service capable of being administered most efficiently at the least cost, is the all-important question. If this arrangement calls for a departure from the typi-

cal American organization of education, the State should not hesitate at such departure.

Historical Basis for Solution

Certain general applications of these principles to the specific situation found in Oregon are facilitated by decisions and tendencies that are already fairly well determined. For example, it is obviously the purpose of the State that the normal schools shall train the elementary teachers and that the university and the Oregon State College shall prepare the high-school teachers. These purposes of the State are accepted by the commission as reasonable and legitimate. To this extent, therefore, the problem of the commission is simplified.

The character of the university and of the Oregon State College as reflected in their spirit and educational offerings are not identical. The circumstances of their founding, their histories and the work of the State board of higher curricula have all tended to produce institutions that in very major respects are different, have different objectives and characters, and use different means for accomplishing their purposes. Each is devoted to large areas of educational endeavor that are peculiarly its own and within which it has no competition from the other State institution. One of the problems of the commission is to suggest measures that will in the future prevent new and hitherto unheard of invasions of these areas. No fact stands out more clearly, however, than that the distinctive characteristics and purposes of the institutions as they have developed and as they are understood by the people of the State have occupied a larger part of the field of vision and effort of the university and the Oregon State College than do the areas of conflict. Naturally, the points of clashing cause irritation and bulk large in the consciousness of the institutions and of the State. Yet, essentially the university's major attention is given to the humanities and the social sciences and to their applications in various professions, while the major activities of the Oregon State College are directed to the sciences and their technical application in a wide range of occupations.

The recommendations of the survey commission have attempted in so far as possible to preserve the distinctive characteristics of the two institutions that are the outgrowth of time and about which considerable worthy sentiment is centered. At certain points, however, historical growths have had to be somewhat ruthlessly amputated in the interests of economy and in order to secure and to insure preservation of the general unity of the educational system of the State of Oregon. In its treatment of the areas of conflict between the two institutions the commission has been restrained by no con-

siderations of historical development within the institutions and by no sentimental loyalties that in its opinion are antagonistic to the best interest of the State as a whole; the sole purpose has been to suggest solutions for these difficulties that are educationally sound and that will best and most economically serve the needs of Oregon.

Evidence Examined by Commission

The recommendations of the commission are based upon study of a vast mass of documentary evidence and upon discussions with hundreds of the staff members of the five institutions, public officials, and private citizens. The survey staff has studied the financial and student records of the institutions; personnel data with reference to faculties; curricula offerings and course schedules; size of classes and their composition; buildings, grounds, and equipment; management of student affairs and the nature of self-directed student activities; programs of institutional specialization and of preparation for life occupations. It has examined both published and unpublished institutional records and reports of deans and presidents. It assembled and studied hundreds of pages of statistical material compiled by the institutions at the commission's request. It gave careful consideration to many statements prepared by administrative officers of the institutions in explanation or in defense of institutional policies and procedures. It has had full access to the files and official records. The commission has studied the educational needs of Oregon and its educational standing in comparison with other States and the United States. The natural and human resources of the State, its wealth, its tax burden, and its tax system have all been considered from the standpoint of the light that they might throw upon the ability of the State to support education and its other necessary functions and the extent to which that ability has been utilized. Specialists in various fields have contributed of their knowledge and skill in the interpretation of these data. Thousands of pages of preliminary studies have been made. All this material was used by the commission. Many of the facts and a great deal of the evidence thus assembled will be found in this report; to have presented it all would have required several volumes and would have merely served to confuse and discourage the reader. The problems dealt with are complex; the solutions proposed are based on consideration of a wide range of fact and opinion.

A statement at this point of the major conclusions and recommendations of the commission, freed from encumbering evidence and argument, will, it is believed, enable the reader to understand the nature of the solutions proposed and serve to clarify the more detailed treatment of certain topics by subsequent chapters.

The statement that follows refers primarily to undergraduate college instruction, but the principles are applicable to a considerable degree to the assignment of professional schools to the institutions and to emphasis upon graduate instruction.

The commission recommends the following assignment of major functions to the various institutions:

1. The training of teachers for the elementary schools should be done at the three normal schools.

2. Unspecialized freshman and sophomore work (hereafter referred to as lower division work) in all the arts and sciences should be available on essentially identical terms at Eugene and Corvallis. The purpose of this lower division work shall be to afford the broad, general education needed by men and women without respect to the careers they will follow, and to provide service courses needed in the many professional curricula.

3. A great school of science should be developed at Corvallis based upon lower division work that may be pursued at either the university or the Oregon State College. This school of science should provide curricula leading to undergraduate and graduate degrees in the various sciences, including botany, zoology, geology, chemistry, physics, astronomy, and mathematics and statistics.

4. A great school of art, literature, and social sciences should be developed at Eugene, based upon the lower division work that may be pursued at either the Oregon State College or the university. This school of the arts, literature, and social sciences should provide curricula leading to undergraduate and graduate degrees in the various arts, literatures, and social sciences, including art, English language and literature, the foreign languages and literatures, speech, history, economics, political science, sociology, and psychology.

5. The professional schools resting essentially upon the natural sciences should be located at Corvallis. These include engineering, agriculture, forestry, mines, women's careers in the realm of foods, and teacher training in the sciences and their applications. Because of the presence of facilities for it, pharmacy should be continued at Corvallis, at least temporarily.

6. The professional schools resting essentially upon the arts, literatures, and social sciences should be located at Eugene or at Portland. These include architecture, music, law, medicine, public health, nursing, social service, journalism, business administration (including commerce), teacher training in the arts, literatures, and social sciences and their application.

Each of these points will be discussed briefly. Points that can not be presented in sufficient detail within the compass of this chapter are discussed at length by the chapters that follow. They

are included here in order to make clear the coherence and unity of the commission's recommendations.

Elementary Teacher Training

The number of teachers needed in the elementary schools justifies the maintenance of three essentially duplicating institutions. Their basic curricula may well be practically identical, and their major function of teacher training kept strictly to the important task of keeping the State supplied with adequately trained teachers for the elementary schools. The number of teachers trained by each institution annually should be determined by scientific study of the changing requirements of the regions in which the schools are located. (See Ch. III, Preparation of Teachers.) Maintenance of units of efficient and economical size at Ashland and La Grande should be secured by encouraging them to perform the functions of regional junior colleges. (See discussion in Ch. III.)

Lower Division Work

NECESSITY FOR LIBERAL EDUCATION

Dovetailing with and continuing the work of the high school, courses of a general character must be available in all the arts and sciences on whatever campus students are expected to pursue non-professional work beyond the high school. Every college student needs these broad contacts with liberalizing studies no matter what his professional career is to be. More and more the professional schools are becoming upper-division schools requiring two years of general college work for admission. A well-marked line between the lower and upper divisions in most 4-year college curricula is being increasingly recoghized in American higher education.

LOWER-UPPER DIVISIONS AT EUGENE AND CORVALLIS

The institution at Eugene has already inaugurated the plan of a distinct division between lower and upper divisions for the primary purposes of insuring to all students the elements of a sound general education during their first two years; second, of delaying specialization until the junior and senior years and then encouraging it to a high degree; and, third, of providing students with a period of exploratory contact which will prevent unwise selection of specialization too early in their educational life and which will enable the institution to guide them to such selection upon the basis of their abilities and aptitudes. The institution at Corvallis has designated its courses according to the year of college in which they are supposed to be taken and has provided for a junior certificate as a prerequisite to passing from sophomore to junior standing.

The commission does not recommend the specific application of the plan in force at Eugene for adoption as the state-wide interpretation of the principle of upper-lower division organization. It is probable that details of the plan at Eugene will need to be modified in order to make it conform to the requirements of the unified State system.

ADVANTAGES OF ARRANGEMENT

The survey commission does not advocate for Oregon that such a division should remove students from the administrative control of the professional school deans and faculties during the first two years except where the professional school chooses to go upon an upper division basis. It does recommend, however, that curricula for all schools be made upon a lower division and upper division basis.

(*a*) Such arrangement will tend to provide better for those students who find themselves unsuited to go on with the 4-year course. The lower division work will be more an end in itself and less solely a preparation for the upper division work.

(*b*) Such arrangement will allow better for making standards of admission to the upper division courses such as to discourage or even exclude those students who have demonstrated that they probably could not succeed in the given profession if they continued four years or more in preparation for it.

(*c*) Such arrangement will tend to penalize less the student who delays the final choice of a career until he has had opportunity, with the aid of the college faculty and personnel advisers, to study his own aptitudes and abilities.

(*d*) Such arrangement will make easier the transfer from one campus to another of those students who find by the end of the first two years that such transfer will better afford them the work for which they are suited.

AGREEMENT NECESSARY IN DEFINING LOWER-DIVISION COURSES

The recommendation of the survey commission that lower-division work in all the arts and sciences be offered upon essentially identical terms by the two units of the system at Eugene and Corvallis, implies considerable modification of present practice and course content at both institutions and a serious adjustment of the requirements of some of the professional schools. The offerings in the lower division of the two institutions should be practically identical and so designed as to permit a student to transfer from either institution to the other for continuation in the upper-division specialization of his choice without loss of time or credit.

METHOD OF SECURING AGREEMENT

The modifications and adjustments that are necessary should be secured by the agreement of joint committees of the two institutions. The executive secretary of the State board of higher education should be an ex officio member of all such committees.

At the present time courses at one institution that are very similar to courses at the other are in the one case listed as lower-division work and in the other as belonging to the junior and senior years. This may be illustrated by the courses in organic chemistry offered by the two institutions. The university lists in its 1930–31 catalogue no lower-division courses in organic chemistry; the Oregon State College, including the courses in biochemistry, lists six 1-term lower-division courses in organic chemistry. The catalogue description of the university's first upper division course in organic chemistry reads as follows:

> The chemistry of the compounds of carbon. Deals with compounds which are important from the theoretical, technical, and biological standpoints. The first two terms are devoted to aliphatic compounds and the third term to those of the aromatic series.

The Oregon State College description of its courses in general organic chemistry reads:

> Ch. 124. General Organic Chemistry. Primarily for students enrolled in production departments of the school of agriculture. Covers systematically the customary grouping of carbon compounds and emphasizes the agricultural and biological significance of the acids, alcohols, carbohydrates, fats, and proteins.
>
> Ch. 221. Organic Chemistry. Study of occurrence, methods of preparation, characteristic reactions, and properties of the more common organic compounds.
>
> Ch. 226, 227. Organic Chemistry. A 2-term sequence in the chemistry of the carbon compounds; the aliphatics, aromatics, and derivatives.

The university lists as upper-division work two courses in biochemistry described as follows:

> Ch. 450, 451, 452. Biochemistry. A general course dealing with the chemistry of both plant and animal organisms, their tissues, constituents, nutrition, and metabolism. Prerequisite, organic chemistry.
>
> Ch. 453, 454, 455. Biochemistry Laboratory. To accompany, optionally, courses 450, 451, 452.

The two lower division courses in biochemistry at Oregon State College are described as follows:

> Ch. 222. Biochemistry. A study of proteins, carbohydrates, and fats; qualitative and quantitative analysis of these food products and chemical changes which they undergo in the process of digestion and metabolism.
>
> Ch. 251. Agricultural Biochemistry. Undertakes to lead the student to an understanding and appreciation of chemistry at work in the field of agriculture. An insight is gained of the chemical principles involved in crop growth and of

the chemical nature and economic importance of crop compounds. The laboratory work is partly quantitative but not fundamentally so.

The similarity of the descriptions given for upper-division courses at the university to those given for lower-division courses at Oregon State College are striking. If, as may not be the case, the actual courses are as much alike as their descriptions indicate, the accompanying difference in prerequisites for entering these courses is entirely unnecessary and the differences in the length of time given to them at the two institutions difficult to account for.

It is impossible to define precisely in terms applicable to all specific situations just what the proper characteristics of lower-division courses should be. It is possible for the teachers and administrators of an institution to arrive at practical judgments concerning the courses that for the purposes of general education and the uses of succeeding specializations may be regarded as lower-division work. As educational objectives and standards change these practical judgments need to be revised from time to time. The tendency is for specialists in highly technical fields to force more and more courses downward from the upper to the lower divisions; it is the tendency of believers in general education to extend the areas and time required for the accomplishment of their purposes into the upper division. Practical solutions constantly demand compromise between these opposing tendencies.

These compromises can be secured only by discussion between the persons charged with the responsibility of teaching; they may be facilitated by authoritative direction that agreement must be reached within the limits of definite policies such as those recommended by the commission. In any case lower division courses should be so defined as to permit inclusion of courses designed to perform the following three functions:

First, they may be courses to be taken for their cultural value and may bear no other necessary relationship to courses to be taken by the student in following out his specialized or professional curriculum. These courses may be prescribed by one or more of the curricula or may be taken to satisfy electives in the several curricula. The only limit to be imposed upon the number of such courses is that of cost determined by enrollment. No such course should be maintained for fewer than an average of 20 students.

Second, lower-division courses may provide the tools or equipment needed in the specialized work of the several curricula. As illustrations may be mentioned the necessary languages, both English and foreign, mathematics, statistics, and drawing. The limit to be imposed on these departments depends upon the standards set

by the several curricula. No such courses should be offered beyond those needed to bring students to these standards.

Third, when the necessity is clearly shown, lower-division courses may be used to satisfy curriculum prescriptions or prerequisites to curriculum prescriptions. As examples, chemistry prerequisite to the medical curriculum, psychology to the teacher-training curriculum, and economics to the pharmacy curriculum may be cited. The limits of such offerings are set by prescriptions themselves, which are in turn determined by the judgment of the departments concerned.

The claim is sometimes made that national or professional bodies that control admission of students to graduate or higher professional work in effect impose limitations upon the judgment of local institutions. This is the case to only a minor degree and does not seriously affect the liberty of higher institutions with respect to lower-division offerings.

LOWER-DIVISION WORK AT ASHLAND AND LA GRANDE

As rapidly as lower-division offerings and curricular requirements are determined the normal schools at Ashland and La Grande should be furnished with the personnel and facilities that will permit them to offer junior college instruction upon substantially the same basis as that afforded at Eugene and Corvallis. It appears desirable not to recommend junior college offerings identical with lower-division work at Eugene and Corvallis, since it will undoubtedly be necessary for the latter institutions to offer in their lower divisions a few special courses (the number should be kept to the minimum) as prerequisite to highly technical upper-division specializations that could not be given economically at institutions without the staff and equipment for upper-division work in these fields. The survey commission recommends the offering of junior college work at Ashland and La Grande in order to insure educational units of efficient size and in order to provide lower division work most economically to a large number of students.

No one knows what is the most efficient size for an institution from the standpoints of instruction and economy. Probably there is no one size that is most economical under all conditions. Studies have established the fact, however, that savings, although not at a uniform rate, tend to result from growth of enrollment up to about 750 students; thereafter increased numbers of students in a single division or school do not result in further savings. As is indicated in Chapter III, the survey commission does not believe that the needs of their regions for elementary teachers will justify the State in permitting the normal schools at La Grande and Ashland to develop into

teacher-training institutions of economical size. The training-school facilities available in their communities will for some time to come limit the number of teachers they can train annually to a number that provide them with student bodies considerably less than are needed for most economical instruction. Some source of students other than those preparing to become teachers in the elementary schools must be provided if these institutions are to be developed economically.

Both the university and the Oregon State College now have student bodies of such size in their lower-division courses that the addition of more students will not result in lowered public expense. Provision of junior college training at La Grande and Ashland, even though it attracted some students who would otherwise attend the university or the Oregon State College, would do these institutions no harm and would probably be advantageous since the greatest proportion of students fail during the first two years.

Table 1 shows the number of students attending the university and Oregon State College in 1929 from the two groups of counties served by the normal schools at Ashland and La Grande. This is evidence that there is in these counties a considerable number of boys and girls who go to college. They are a source of students for junior college work in the local State institutions at Ashland and La Grande. If their attendance for this purpose served to make these institutions educational units of more economic size, the State would profit; and if such attendance at the same time relieved pressures upon the university and Oregon State College to accommodate an even greater body of students, no loss of efficiency would result in the expenditure of the sums they now receive from the State. Further, the citizens in the southern and eastern regions who send sons and daughters to college would profit from the difference in cost between attendance at local institutions and at the university or Oregon State College. No doubt also many young people of these regions who by economic inability are now denied the privilege of higher education in other fields than teaching would be able to take advantage of the junior college opportunities offered locally. The survey commission is strongly influenced by another consideration. It believes that elementary teachers should have not merely an education that is little more than trade training, but that they should be given opportunity to acquire a broad general education. This opportunity can not be afforded unless a rich and extensive series of courses is available in the normal schools. Junior college work at Ashland and La Grande would supply these subject-matter offerings to prospective teachers, to future upper-division students of the university and Oregon State College, and to those who could not or did not desire to go beyond the second year of college.

TABLE 1.—*Number of students enrolled in the University of Oregon and Oregon State College in 1929 from area or group of counties served by normal school of Ashland and of La Grande*

Name of counties	Number enrolled in—		Name of counties	Number enrolled in—	
	University of Oregon	Oregon State College		University of Oregon	Oregon State College
Ashland area:			La Grande area:		
Coos	78	67	Baker	22	33
Curry	6	4	Grant	10	13
Douglas	40	72	Morrow	7	12
Jackson	72	70	Umatilla	72	71
Josephine	19	25	Union	40	30
Klamath	53	49	Wallowa	13	16
Lake	30	27			

LOWER-DIVISION WORK AT MONMOUTH

The question will be asked, "Why not develop junior college work at Monmouth also?" The commission believes that the attendance of prospective elementary teachers at Monmouth derived from the needs of the more populous region in which it is situated will provide a student body sufficiently large to insure a unit of efficient size. Further, there is no need for a junior college in this region, for the university and the Oregon State College now to a considerable degree meet its needs for junior college instruction, and under the plan of organization proposed by the commission will in the future be even more directly prepared to function in serving all the legitimate functions of junior colleges. The necessary enrichment of the teacher-training course at Monmouth may be accomplished by offering courses specially designed for that purpose, but of a range and character that will make it impossible, or at any rate inadvisable, for the student to select the institution as the means of securing junior college education.

LIFE CAREER BASIS FOR FUNCTIONAL ASSIGNMENT

Prior to somewhat extended consideration of specific duplication of offerings by the institutions, and of the application of the commission's recommendations to these specific cases, it is desirable to discuss the principle previously stated, that functions to be performed by the State's higher educational program should be distributed to the different units in the system upon the basis of the life-career motive, the desire to prepare for a specific vocation or profession. It is especially desirable to emphasize at this point the relationship that this principle bears to the commission's proposal to concentrate the arts, literatures, and social sciences with their

applications at Eugene and the sciences with their applications at Corvallis.

SUGGESTED APPLICATIONS

Schools preparing for the vocations and professions divide themselves naturally into two groups, namely, (1) those dealing essentially with material things, and the laws of the material universe as disclosed in the natural sciences; and (2) those dealing with human beings and the principles governing their actions as disclosed in the arts, literatures, and the social sciences. This is evident in Oregon in the general emphasis now given in the work of the institutions. It is in harmony with the popular conception of the functions of Eugene and Corvallis and was recognized by the old State board of higher curricula. This natural grouping suggests for one campus engineering, agriculture, mines, forestry, and those professions for women which rest essentially upon the natural sciences; and for the other campus painting, sculpture, architecture, music, medicine, law, social service, journalism, business administration, and those professions for women which rest essentially upon the arts, literatures, and the social sciences. Of course, preparation for the teaching of any subject must be given where the subject itself is studied.

VALUE IN DETERMINING COURSE OFFERINGS

When it is proposed to divide the specific course offerings in accordance with these general types of student interest in the vocations and professions, it is clear that the principle is an extremely useful one. On whatever campus a professional school is located, the sciences basic to it must be located. The schools of agriculture and mines require advanced courses in all of the physical and biological sciences. As long as these professional schools are located at Corvallis, strong departments in the various sciences must be maintained at Corvallis. If strong science departments are maintained also at Eugene in order to have there a typical and complete college of arts and sciences, there must be extensive duplication in the sciences between the institutions. In like manner the schools of social service and journalism at Eugene require strong departments of economics, political science, and sociology. If strong departments in these social sciences are maintained also at Corvallis in order to care for a school of commerce, there must then be extensive duplication. Similar conditions govern through practically the entire list of vocations and professions. Therefore, if extensive duplication is to be avoided, the basic sciences and arts upon the upper-division level must be divided between the two campuses along the same lines as the professional schools which rest upon them.

LIMITATIONS OF PRINCIPLE

If the schools must be divided between two campuses and two administrations, this is the most useful and most easily applicable classification available. However, it is not 100 per cent inclusive. The medical profession is both a scientific and a social activity. Professional agricultural economics and agricultural journalism both require upper-division preparation in the physical and social sciences. Architecture has its major emphasis in the realm of art but is essentially dependent upon structural engineering. The commission fully recognizes that division of function upon the career basis does not provide completely for certain situations and needs that exist, and must continue to exist, by virtue of the demands of the professions concerned. Solution of these problems requires devices and procedures that supplement assignment of upper-division science to one institution and the humanities and social sciences to another.

The solutions proposed by the commission are:

1. Exchange of professors between institutional units of the system, or, phrased in another way, joint service of two or more units by a single faculty member when the number of students makes this the economical procedure.
2. Division of the residence of students between two institutional units when curricular adjustments can be made which permit this arrangement.
3. Transportation of students between the two institutions in rare instances in which this is the only possible method by which a student may secure courses that he needs in his special field.
4. Extending the period of training required for certain professions such as agricultural economics, to the graduate level as is done in the case of medicine.

In the case of the individual student two or more of these methods may be combined in order to accomplish his specific purposes. These devices will be given specific application by subsequent discussion of the professional and vocational schools; they should be kept in mind in considering the treatment of duplications that follows.

FIELDS OF DUPLICATION

The largest amount of duplication between the courses offered at present at the university and at the State College is found in (*a*) courses taken by students preparing to teach; (*b*) courses in the lower-division service departments of one institution, and the corresponding 4-year departments of the other institutions; (*c*) courses in upper division social science departments organized under the school of commerce at the State college, and organized under the

college of literature, science and the arts, the school of business administration, or the school of applied social science at the university; and (*d*) miscellaneous courses including music, physical education, journalism, and architectural engineering, including rural architecture. These will be discussed in turn.

DUPLICATIONS IN TRAINING HIGH-SCHOOL TEACHERS

The detailed discussion of the duplication between the university and the Oregon State College in the field of teacher training is presented in Chapter III. A brief statement is made at this point to indicate the nature of the problem. Teachers preparing at the State college may choose combinations of science and English or industrial arts and physical education, or almost any other sort of combination which strikes their fancy. These combinations are not dictated by any specific demands for them in the high schools of the State. They serve, however, to build up a demand for a large number of courses for which there would otherwise be but slight demand. The same may be said with reference to teachers being trained at the university. They do not confine their combinations to related departments.

It does not seem worth while to attempt to tabulate the extent of these duplications, and perhaps the task would be impossible. The fact that they exist in large numbers is well known. The commission proposes, therefore, that the high-school teacher-training work of the one institution be limited to subjects within its major field of the arts, literatures, and social sciences and their applications, and in the other institutions to subjects and combinations of subjects within its major field of the sciences and their applications. This division should be enforced in part by strengthened certification requirements for new high-school teachers. (See Ch. III.) The commission is assured that such combinations would satisfy all the requirements of the high schools of the State. Indeed, it is claimed by many that such combinations would be much more effective than the combinations at present used. The proposed division of functions, therefore, seems not to be prejudicial to the interests of teacher training, while the removal of this source of demand for duplicated courses will simplify the problem on both campuses very materially.

DUPLICATION OF LOWER-DIVISION COURSES

By lower-division service courses are meant courses given during the first two years for purposes of providing general education and for training directly prerequisite to prosecution of some field of

specialization during the upper-division period. Lower-division courses offered in the service departments at one institution must inevitably duplicate lower-division courses offered in the corresponding regular departments of the other institution. In institutions the size of the University of Oregon or of the State college such duplication is not expensive. In practically all cases there would need to be a sectioning of the group wanting any one of these lower division courses if both units were upon one campus. Therefore, to offer them on both campuses does not add to the expense. In fact these elementary courses constitute a foundation for any later specialization and should be generally duplicated in order to serve best the students who do their first two years of college work on either campus.

Duplication of Upper-Division Courses

Much duplication is found between the upper-division courses given upon the two campuses. This is a more serious matter than duplication of lower-division work because classes are smaller and instruction more expensive. In order to obtain a fairly accurate basis for estimating the extent of such duplication of upper-division work the descriptions of all upper division courses found in the catalogues of the two institutions were arranged in parallel columns by subject-matter fields. Courses in the two columns that showed considerable similarity of description were then connected by lines and a count made of the linked pairs. Table 2 summarizes the results of this examination.

TABLE 2.—*Total number of upper-division courses with duplications and percentages in different fields of study given at the University of Oregon and Oregon Agricultural College*[1]

Fields of study	University of Oregon			Oregon Agricultural College		
	Total number of upper-division courses given	Number of same or similar courses given at Oregon Agricultural College	Percentage of courses duplicated	Total number upper-division courses given	Number of same or similar courses given at University of Oregon	Percentage of courses duplicated
Social sciences	151	59	39.1	97	53	54.6
Natural sciences	95	24	25.2	91	26	28.5
Humanities	96	16	16.6	31	15	48.3
Mathematics and engineering	54	12	22.2	24	13	54.1
Journalism	24	8	33.3	8	8	100.0
Psychology	27	3	11.1	7	4	57.1
Home economics	21	11	52.3	49	13	26.5
Arts and music	36	6	16.6	11	5	45.4
Health and physical education	25	7	28.0	16	11	68.7
Total	529	146	27.6	334	148	44.3

[1] The failure of numbers of courses in column 3 to correspond to the number in column 6 is due to the fact that in many instances 2 courses given at 1 institution carry descriptions that are similar to a single course given at the other institution.

While it is fully recognized that similarity of catalogue description does not necessarily mean that courses are complete duplications the table makes it perfectly evident that if all the work of the two institutions was offered upon one campus it would be possible to reduce the number of upper-division classes to a very considerable extent by combining some courses and by eliminating altogether some others that are so similar as to constitute virtually complete duplication. Since, in the opinion of the survey commission, it is now impossible to bring the institutions to one campus, it is proposed that the economies of such union be secured by an allocation of upper division work which will concentrate upon one campus or the other all students who seek upper-division work in a specific field.

DUPLICATION OF UPPER-DIVISION SCIENCE COURSES

Instruction in upper-division science is expensive. Duplication in this area is, therefore, of special concern. It is proposed to confine all the upper-division science work to the Oregon State College. Examination of the enrollment of majors in science at the university shows that concentration of upper-division science at Corvallis will affect in only a slight degree the attendance of senior college students at Eugene. Enrollments in upper-division science classes at the university are small.

Except for the course in organic chemistry in which 63 students were enrolled, none of the upper-division classes in chemistry contained more than 11 students in 1929 at the university. The records show that there was 1 class with 11 students, 2 classes with 10 students, and 1 class with 9 students while the remainder had less than 5 students each. In the upper-division physics classes, 2 of them enrolled a maximum of 13 students, the other classes being 5 or less students in size. Animal biology courses in the upper division had 3 classes of fairly large size, 1 containing 60 students, another 37, and a third 29, but the fourth enrolled only 11 students, and the fifth but 1 student. The upper-division classes in plant biology, however, were unusually small in size with the exception of the course in sanitation, which contained 50 students. A check on the enrollment of the other courses in this field disclosed 1 class with 7 students, 1 with 5 students, 2 with 3 students, and 1 with 2 students. Of the upper-division courses in geology conducted at the university, there was 1 class with 27, while in 8 others the size varied from 1 student up to 10 students. At Corvallis the classes in upper-division science are not so large as to require the organization of new sections in order to accommodate the increase that would result from the transfer of all upper-division science majors from Eugene to Corvallis.

BEARING ON PREPARATION FOR MEDICAL SCHOOL

Attention is called to the relationship that this change has to preparation for admission to the medical school. The medical school is located at Portland and is administratively a division of the university. This fact has tended to establish the idea in the minds of certain university officials and perhaps in the minds of others not so familiar with the conditions of admission to medical schools, that the university is thereby given a monopoly or at least a prior claim to preparation for entrance to Oregon's school of medicine. As a matter of fact the administrative connection does not either in theory or practice give the university any special rights or advantages so far as preparation for admission to the medical school is concerned. Table 3 shows the number of students in the medical school in four different classes from 1929 to 1932, who had their previous preparation at Eugene, at Corvallis, at private institutions within the State, and at institutions outside of Oregon.

TABLE 3.—*Number of students in the Oregon medical school in 1929 and the institutions in which they had their previous training*

Institution	Class of 1929	Class of 1930	Class of 1931	Class of 1932	Total for each institution
University of Oregon	38	28	30	28	124
Oregon State Agricultural College	3	2	4	4	13
Private institutions in Oregon	3	4	10	11	28
University of Idaho	5	0	3	6	14
University of Washington	5	6	10	7	28
State College of Washington	1	1	0	4	6
University of California	1	0	1	0	2
Yale University	1	0	0	0	1
Utah Agricultural College	1	0	0	0	1
University of Manitoba	1	0	0	0	1
University of North Dakota	0	1	0	0	1
University of Saskatchewan	0	0	1	0	1
University of South Dakota	0	0	1	0	1
College of Idaho	0	0	1	0	1
College of Puget Sound	0	0	1	0	1
University of Southern California at Los Angeles	0	0	1	0	1
Stanford University	0	0	0	3	3
University of Montana	0	0	0	2	2
University of Pittsburgh	0	0	0	1	1
Total	59	42	63	66	230

It is evident from Table 3 that a large number of students attending the Oregon Medical School do not obtain their premedical training at the University of Oregon. Of the students making up the class of 1929, 64 per cent were prepared for entrance to the medical school by the university as compared with 64 per cent for the class of 1930, 46 per cent for the class of 1931, and 42 per cent for the class of 1932. According to these percentages, the university is preparing a smaller proportion for each successive annual class at the medical school rather than an increasing number. In all the four classes shown in the compilation, there was a total of 230 students

of which 124 students attended the university for their premedical work, or 54 per cent, while 106 students, or 46 per cent, secured their premedical training at other institutions. Only 6 per cent of the students took their premedical work at the Oregon State College, a very small number. In the case of the private colleges of Oregon, they furnished 12 per cent of the students. Universities and colleges outside of the State, therefore, provided premedical training for as much as 28 per cent. In view of these figures, it can not be claimed that the University of Oregon enjoys by any means a monopoly in the preparation of the students for entrance into the medical school.

The Oregon Medical School is a class A school in accordance with the rating by the American Medical Association and enjoys a very high reputation in the profession. It is, in fact, a regional medical school, serving the entire northwest territory. In 1930–31, 300 students applied for admission who could satisfy the quantitative requirements for entrance. Of these, 138 were from the Pacific northwest, 70 from other Western States (chiefly California), and 92 from Eastern States. The total number of Oregon applicants was 84. Of these, 63 had three or more years of college training in Oregon public institutions, 12 in Oregon private institutions, and 9 in both public and private institutions of the State. It was possible to admit to the first-year class only 65 of the 300 applicants.

It is apparent that admission to the Oregon Medical School is a highly selective process. The selection is not made by the university administration at Eugene but by a committee of medical school officers under the direction of its dean. As stated by the dean, "it is felt that the obligation is chiefly to the Pacific northwest and especially to the State of Oregon, so that in the lower groups definite preference is given to taxpayers' sons and bona fide residents of the State of Oregon."

Two requirements for admission to all medical schools are thorough scientific training and an increasingly wide cultural education. The university has compiled from the courses of the various regular departments three and four years of offerings intended to prepare for entrance to the medical school. Upper division science constitutes an important element in these offerings. The commission's recommendation that all upper division work in science be transferred to the Oregon State College will not prevent a student taking a 2-year premedical course at Eugene, but it will make impossible the taking of a 3 or 4 year premedical course. Students who desire to enter the medical school will have to transfer to the unit at Oregon State College in order to do more than two years. Students at the Corvallis unit will be able to secure at that institution all the general education needed for premedical work in the

lower divisic It will not be necessary for them to attend the Eugene unit.

DUPLICATIONS OF UPPER-DIVISION SOCIAL SCIENCE COURSES

Upper-division courses in the departments of economics, sociology, political science, and history are found in both institutions.

In this area, as in the scientific offerings, similar courses do not mean necessarily complete duplication, but in a great number of cases they are so much alike that the removal of all upper-division social science courses to one campus would permit the elimination of many courses on the other campus. The proposed assignment of functions will remove practically all these courses to the university, thus making possible combinations in a great many of them.

MISCELLANEOUS DUPLICATIONS

Many duplications occur between upper-division courses in music, physical education, journalism, and architectural engineering. However, in the opinion of the survey commission, the principal issue in those instances is not one of saving by means of eliminating duplication, but rather one of building up one strong department of music, one strong department of physical education, one strong department of journalism, and one strong department of architectural engineering. It is clear that in practically all these cases if the advanced courses were confined to one campus and students were to choose the campus where the work is offered, superior training would be available at less cost than at present. Each of these fields will be discussed in turn.

Music.—Though one of the fine arts, music has an almost universal human appeal. Music must be given its full chance to pervade the many campuses of the higher educational system of Oregon, and to wield its influence in the lives of all students. Beyond this institutional service function music should be developed at only one place, and that should be the university, the center of art development. No individual music lessons for which the students pay special fees should be provided on other campuses. Only one great music school can be built up in the State, and there should be no division of high-class musical talent, either student or teacher, any more than there should be a division of the high-class talent in the field of electricity. The fact that music may be made largely self-supporting is quite beside the point. If developed in two places, these places are just as competitive as though they drew their support from taxation, and it is the purpose of the proposed plan of administration to avoid competition and to develop cooperation among the several units of the State system.

Health and physical education.—Both the university and the State college are to be commended for the development of divisions of health and physical education. To maintain the student body at the highest level of physical fitness, to train the students so that they will keep themselves well throughout life, and to inculcate in them an active interest in the problems of community health are among the primary responsibilities of any institution of higher learning. To go beyond that and prepare persons for positions as health supervisors or physical-education teachers, requires the staff and facilities provided by the schools of public health and nursing, as well as the staff and facilities of the school of science; in other words, this should be a joint curriculum, requiring attendance at both institutions.

Journalism.—The State's school of journalism is located at Eugene. At Corvallis is a service division of industrial journalism. Duplication of courses upon an upper-division level is evident from the lists of such courses offered by the two institutions.

The commission is inclined to question the desirability of offering at Corvallis lower-division courses in journalism as electives; it strongly recommends that the extent of the present offerings be reduced and that the training of professional agricultural and industrial journalists be accomplished by other means. The commission suggests two methods: First, 4-year curricula for agricultural and industrial journalists may be devised by drawing upon the offerings of the units at Eugene and Corvallis and given by appropriate division of the students' time during this period between the two campuses; or, second (and this is, in the opinion of the commission, the more desirable solution), preparation for industrial and agricultural journalism may be placed upon the graduate level with division of time between the two institutions, say, for example, three years at Corvallis (during which the lower-division courses in journalism would be taken) and two years at Eugene, during which upper-division work in journalism, the humanities, and social sciences would be covered, or if the student who has specialized in journalism at Eugene wishes to become an agricultural journalist, the division of time might be three years at Eugene and two at Corvallis. The exact division of time that consultation would reveal as desirable is not the important consideration, but the fact that curricula may be devised which utilize the offerings of the two units and that students may reasonably be required to divide their work between the two campuses. The number of students involved is not large; it is not economical to enter into or to continue costly duplication even though the legitimate demands of these students might be used as an argument for duplication.

Agricultural economics.—Agricultural economics is a highly specialized profession requiring intensive training both in agriculture and in economics. The attempt to prepare agricultural economists at Corvallis during a 4-year course or under any arrangement requires courses in economics and the social sciences upon the upper-division level and in excess of those demanded by any other professional or vocational function which would be retained upon that campus under the plan proposed by the commission. The commission recommends, therefore, that students who desire to become agricultural economists be required to pursue at least a 5-year curriculum divided between the two campuses, so arranged that students may pursue the work whether their original registration be at Corvallis or Eugene.

Miscellaneous subjects.—It would confuse presentation and render no assistance to the State board of higher education and to the institutions to extend in detail the discussion of other fields in which the solutions are similar in principle to those suggested with reference to journalism and agricultural economics.

The commission believes that it will be possible to maintain the upper-lower division distinction and the major assignment of functions proposed even in the occupational specializations that require upper-division service in fields assigned to different campuses by means of joint use of professors, division of the time of students between the two campuses and by placing certain professional occupations upon the 5-year basis. The fields of rural sociology, rural art and architecture, industrial management, and architectural engineering are further examples of areas in which earnest attempts to secure solution by means of conference between the faculty specialists concerned and administrative officers from both institutions and from the department of higher education should result in definite and constructive programs within the limits of the recommendations of the commission.

What would be the effect upon students of the recommendations made by the commission? Would students be able to get what they need? These are fundamental questions. Study of actual work done by students as revealed by the registrars' records at the two institutions leads the commission to believe that the application of the general principles stated above to the curricula at the University of Oregon and at the Oregon State College would result in insignificant interference with what the students now study. Four groups of students are involved:

(1) University students specializing in science. Those students at the university specializing in any of the sciences. Under the recommended division of functions, these students would transfer to the State college, at least for their upper-division work. The question

then is, "Would these students be able to get at the State college what they now get at the university?" Table 4 answers the question. Of those graduating at the university during the past year with a major in one of the sciences, excluding those preparing to teach in high schools, less than half of the students took more than 6 quarter hours of credit in the upper division courses in a single nonscience department. As compared with 35 who took more than 6 upper-division quarter hours in a nonscience department, 41 took 6 or fewer quarter hours. Almost as many students took no upper-division nonscience courses as took more than 12 quarter hours of upper division work in all the nonscience departments combined.

(2) The second group of students involved is composed of those at the State college specializing in any of the arts, literatures, or social sciences, including commerce. Under the recommended division of functions these students would transfer to the university at least for their upper division work. The question then is, "Would these students be able to get at the university what they now get at the State college?" Table 5 answers this question. No students, according to institutional reports, graduated from the State college in 1930 with a major in one of the arts or literatures. Of those who majored in the social sciences, including commerce but excluding those preparing to teach in high schools, only one student took more than 9 quarter hours of credit in upper division courses in any one of the sciences; 33 did not take any upper division science courses.

TABLE 4.—*Distribution of graduates of the University of Oregon, 1930, who specialized in one of the sciences (excluding those students preparing to teach in high schools) according to (a) the highest number of quarter hours of credit in upper-division courses they took in any single nonscience department; and (b) the total number of quarter hours of credit in upper-division courses they took in all the nonscience departments combined*

	Number of graduates specializing in—			
	Botany and zoology	Chemistry	Physics	Other sciences
(a) Number of graduates whose highest total of quarter hours of credit in upper-division courses in any of the nonsciences was:				
6 or less	32	6	.....	3
7 to 9	11	.....	.....	2
10 to 12	10	1	.....	1
13 to 15	1	1	.....	1
16 or more	5	1	1	2
(b) Number of graduates whose total quarter hours of credit in upper-division courses in all nonscience departments combined was:				
0	22	.....	.....	1
1 to 6	6	3	.....	2
7 to 12	14	4	.....	1
13 to 18	4	.....	.....	2
19 to 24	4	.....	.....	.....
25 or more	9	2	.....	3

TABLE 5.—*Distribution of graduates of the State college of Oregon, 1930, who specialized in one of the arts, literatures, or social sciences, including commerce (excluding those students preparing to teach in the high schools) according to (a) the highest number of quarter hours of credit in upper-division courses which they took in any single science department, and (b) the total number of quarter hours of credit in upper-division courses they took in all the science departments combined*

	Number of students specializing in—		
	Arts	Languages, and literatures, including English	Social sciences, including commerce
(a) Number of graduates whose highest total of quarter hours of credit in upper-division courses in any of the sciences was:			
6 or less			[illegible]
7 to 9			22
10 to 12			1
(b) Number of graduates whose total quarter hours of credit in upper-division courses in all science departments combined was:			
0			33
7 to 12			6

(3) The third group of students is that made up of those at the university specializing in one of the arts, literatures, or social sciences, or in the professional schools resting upon them. Under the recommended division of functions these students would be unable to get at the university upper-division courses in the sciences. The question then is, "Would these students be able to get what they now get?" Table 6 answers that question. Of the students graduating at the university in 1930 with a major in one of the arts, literatures, or social sciences, or in one of the professional schools of the university, excluding those who were preparing to teach in the high schools, only 23 took more than 6 quarter hours of credit in upper-division courses in any one of the sciences, while 196 took less than 7 quarter hours; 71 per cent took no upper-division courses in the sciences.

TABLE 6.—*Distribution of graduates of the University of Oregon, 1930, who specialized in one of the arts, literatures, or social sciences, or one of the professional schools (excluding those students who were preparing to teach in the high schools) according to (a) the highest number of quarter hours of credit in upper-division courses they took in any science department, and (b) the total number of quarter hours of credit in upper-division courses they took in all the science departments combined*

	Number of graduates specializing in—			
	Arts	Languages, and literatures, including English	Social sciences, including applied social science and business administration	Other professional curricula
(a) Number of graduates whose highest total of quarter hours of credit in upper-division courses in any of the sciences was:				
6 or less	21	19	107	52
7 to 9	.....	2	7	4
10 to 12	.....	.....	3	.....
13 to 15	.....	1	.....	.....
16 or more	3	.....	3	.....
(b) Number of graduates whose total quarter hours of credit in upper-division courses in all science departments combined was:				
0	21	13	83	42
1 to 6	.....	6	20	10
7 to 12	.....	2	13	3
13 to 18	1	.....	3	1
25 or more	2	1	1	.....

(4) Those students at the State college specializing in one of the sciences or in one of the professional schools resting upon the sciences, such as agriculture, forestry, mines, or engineering. Under the recommended division of functions these students could not get at the State college upper-division courses in the arts, literatures, or social sciences. The question then is, "Would these students be able to get what they now get?" Table 7 answers this question. Of the students graduating at the State college in 1930 with a major in one of the sciences or in one of the professional schools, excluding those who were preparing to teach in the high schools, only 24 per cent took more than 9 quarter credits in the upper-division courses in any one of the arts, literatures, or social sciences; only 43 per cent took as many as 18 quarter hours of credit in upper-division courses in all the arts, literatures, and social sciences combined. The larger percentage is due to the school of home economics that is in fact a form of liberal arts and sciences education.

It will be noted that in all the four groups listed above there have been excluded those students who were preparing to teach in the high schools. This seems fair because all the evidence shows that the combinations of departments which high-school teachers should prepare for are to be found in the recommended division of func-

tions. Combinations such as English and botany are not advantageous. Combinations among the sciences and their applications at the State college, and other combinations among the arts, literatures, and social sciences, and their applications at the university will serve best to prepare teachers for Oregon high schools. Of course, the professional courses in education, to meet the undergraduate training needs of these prospective teachers, will have to be given at both the State college and the university.

TABLE 7.—*Distribution of graduates of the State College of Oregon, 1930, who specialized in one of the sciences, or in one of the professional schools (excluding those students who were preparing to teach in the high schools) according to (a) the highest number of quarter hours of credit in upper-division courses they took in any nonscience department, and (b) the total number of quarter hours of credit in upper-division courses they took in all the nonscience departments combined*

	Number of graduates specializing in—						
	Chemical engineering	School of agriculture	School of engineering	School of forestry	School of home economics	School of mines	Pharmacy
(a) Number of graduates whose highest total of quarter hours of credit in upper-division courses in any of the nonscience department was:							
6 or less	6	23	60	6	7	2	10
7 to 9	11	9	23	8	29	4	4
10 to 12		3	4	4	19		
13 to 15			2		12		
16 or more	1	1	2	3	9		1
(b) Number of graduates whose total of quarter credits in upper-division courses in all nonscience departments was:							
1 to 6	1	10	9	1	2		5
7 to 12	1	8	45	6	4	2	4
13 to 18	8	10	15	8	4	2	4
19 to 24	3	2	12	3	17	1	1
25 or more	5	6	10	3	49	1	1

From the statements above, it is clear that if the upper-division work is assigned between the two campuses, the science departments at Corvallis, and the art, literature, and social science departments at Eugene, the students will have little difficulty following out essentially the same sorts of curricula as they have followed in the past, provided lower division work in all departments is available on both campuses.

Objections to the Commission's Plan

One point in connection with the recommendations of the commission has no bearing upon the proposed major division of functions, but arises from the supplementary suggestion that students spend part of their time on one campus and part upon the other. Intercollegiate athletics demand the presence of students upon one campus for the entire four years. This objection will bulk large in

the minds of some students and in the consciousness of those large groups of alumni and sportsmen whose sole conception of a higher educational institution is that it is a nursery for football teams. Probably this argument will have less influence upon the administrative officers of the institutions except as they are affected by the pressure brought to bear and by the disturbances created by sport enthusiasts and newspaper writers. The commission wishes to call to the attention of the board of higher education, the legislature, and the citizens of the State certain facts in regard to the extent of the influence that the commission's proposals may have upon intercollegiate athletics in the two institutions.

In 1929 there were 59 students upon the university football squad, 1.9 per cent of the total student body, and in 1930, 68 students, 2.2 per cent of the student body. Similar figures for the Corvallis football squad are: 1929, 51 and 1.5 per cent; 1930, 62 and 1.8 per cent. For the basketball squad at the university similar figures in 1929 were 31 and 1 per cent; 1930, 48 and 1.5 per cent; and at Corvallis, 1929, 13 and 0.3 per cent; 1930, 25 and 0.7 per cent. For the baseball squad at the university in 1929, 32 or 1 per cent; 1930, 37 or 1.2 per cent and Corvallis, 1929, 33 or 0.9 per cent; 1930, 40 or 1.2 per cent. It is perfectly evident that these figures taken together, although there are very large numbers of athletes who are on all three squads in a single year, constitute a very small number and a very minute proportion of the student body.

It is not a question, however, as sportsmen may argue, of whether the people of Oregon will be compelled to choose between outstanding athletic teams and revision of their higher-education program. Devices for securing educational economy and efficiency recommended by the commission will affect a very small percentage of the entire student body and an even smaller percentage of the athletic squads of the two institutions. Further, the effect is not, as has been suggested to the commission, that of losing 4 years or even 3 years of athletic service. Students in residence at a single unit of the Oregon higher-educational system for 3 years may engage in intercollegiate contests during 2 years, those resident 2 years are eligible for 1 year of intercollegiate sport. Thus, even for the small number affected, the loss of athletic service is not complete. It remains to be seen, of course, whether outside promoters of the athletic prowess of one or the other institution who assist deserving athletes through college will be willing to continue to do so for less than three years intercollegiate play.

Securing Lower-Division Instructors

Another difficulty and probable objection to the proposed division of functions between the two institutions arises from the fact that

the plan will result in both institutions giving certain subjects upon the lower division level only. It is stated that it is difficult to secure high-type instructors who will be content to confine themselves to lower-division work; college teachers desire to teach the more advanced and graduate courses in their fields. The best ones will not take positions where there is no opportunity to do so. Lower-division students as much as upper-division ones need scholarly instructors. Advancement in their fields means to college teachers the opportunity to teach courses in the upper levels.

It would be difficult, it is claimed, for the unit at Eugene to secure the best type teachers of chemistry, for instance, if their work is confined strictly to lower-division classes without opportunity to teach advanced students and carry on research; similarly at Corvallis in the field of history or economics. This objection has considerable force, but is not insurmountable. In the first place, it is possible, as has been demonstrated many times, to secure instructors whose primary interest is in teaching lower-division students just as there are well-qualified men who prefer high-school teaching. In the second place, the plan proposed by the commission for the development of research work provides opportunities for qualified lower-division teachers to participate in research projects. In the third place, under the proposed system of joint use of faculty members by both campuses, there is no reason why, in certain cases, such lower-division teachers upon one campus should not be used to teach upper-division courses upon the other campus. The commission freely admits that the fact that the two units are under entirely separate administrations makes difficult the effective use of this device. However, it is perfectly obvious that if the two units were combined upon one campus, no administration would fail to make the fullest possible use of its lower-division teachers in upper-division work that was needed. The commission is also persuaded that if the two units, although on different campuses, were under one administration, very extensive use of single-faculty members upon both campuses would be developed. This is now done quite extensively between the two campuses of the university at Eugene and Portland, although the handicap of distance is much greater than between Eugene and Corvallis. The very pertinent question may therefore be asked whether even though two administrations should be retained, the State has not a right to expect such cooperation between them as to secure many of the advantages of single-executive direction. If such cooperation can not be obtained under dual administration, the State would be justified in placing both campuses under a single president.

Difficulties of Maintaining

Still a third objection to the proposal is the difficulty of maintaining it. These difficulties are tremendously increased by the fact of dual administration of the two units; hearty cooperation between them is absolutely essential; the State will be justified in taking such action as may be necessary to secure it. It is, of course, possible to set up more or less mechanical devices and restrictions, but rules and regulations break down when the persons charged with their enforcement do not attempt heartily to observe their spirit. The difference between finding reasons why things can not be done and finding how they can be accomplished is dependent upon human attitudes. The attitudes of the administrative officers of the two institutions will largely determine the success or failure of any reorganized program adopted as the policy of the State board of higher education.

Graduate and Research Work

The division of function proposed is applicable to a considerable extent to the graduate field as well as to the undergraduate, although discussion so far has been concerned primarily with its application to undergraduate work. The parallelism and duplication of graduate offerings upon the two campuses have already been shown by our examination of upper division and graduate courses offered by the institutions. Duplication upon this level is especially serious from the standpoint of expense. Graduate work requires more expensive equipment and other facilities than is the case in undergraduate instruction. An instructor can handle fewer graduate students than undergraduate, hence cost per student, even assuming that men of the same caliber teach both, is higher. Direction of graduate work requires more expensive men than those who can do much of the undergraduate instruction most satisfactorily. Hence, it is especially important that duplications in the graduate fields be reduced to the minimum. This is made easier in Oregon because graduate specializations have not as yet been highly developed in the State. It is still possible to prevent much of the waste that would arise from ambitious attempts on the part of the institutions to excel in the same fields of research.

The commission's division of function between the two campuses should extend into the graduate field. That means that in the humanities and social sciences and their applications graduate work should be offered at Eugene, while at Corvallis should be concentrated the graduate work in the sciences.

This plan imposes no handicaps upon students or upon institutions within the areas of their specializations as long as graduate work

does not go beyond the master's degree, although, as has been pointed out, 5-year curricula may, in certain fields, such as agricultural economics, make it necessary for the student to spend part of his time on each of the campuses. But this more or less automatic assignment of graduate functions loses much of its value upon the higher level represented by the Ph. D. This degree implies the prosecution of independent research which results in contributions to scholarly knowledge. It implies, therefore, development in an atmosphere of research and under the direction of men who are themselves engaged in research. Graduate work for the Ph. D. may, in consequence, be discussed most profitably in connection with consideration of the State's research program.

Research Agencies in Oregon Institutions

The State has three major research services organized as such, the agricultural experiment station at Corvallis, conducted in cooperation by the State and the Federal Government and the bureaus of business research and of educational research located at Eugene, supported by institutional funds derived from the State and private sources. In addition, both institutions carry on research work in the various departments and major divisions for which, in general, no special funds are provided, although the teaching loads of certain instructors may be lightened somewhat in order to permit them to give attention to these investigations.

It is not the purpose to describe here the detailed scope of the work of these agencies or the methods of unifying departmental and individual research within the institutions themselves. The purpose is to consider only certain aspects of the research of the two institutions as they relate to coordination of the State's program of research and to the prosecution of graduate work for the Ph. D. The cases chosen for this purpose are merely illustrative; they do not present exhaustively the areas of duplication.

Necessary Overlapping of Investigations

The agricultural experiment station at Corvallis, with its branches at various points in the State, is concerned with research that affects the welfare of agriculture and rural people. The purposes of a considerable portion of the funds expended are limited and defined by the terms of the Federal acts which provide them. One of these funds, the Purnell fund, is intended for research in the marketing of farm products, in rural sociology, and in rural economics. Among the primary functions assigned to the institution at Eugene are those of business and the social sciences (including economics and sociology); its major research organization is that of business research

and the major emphasis on institutionally supported departmental research is in the fields of sociology and economics. In the one case part of the agricultural experiment station's program is determined by the purposes of Federal funds received by the State; in the other it is determined with entire propriety by the primary purposes for which the institution exists. Yet there is obviously opportunity for duplication of research effort with consequent waste of money. The difficulty does not end here. If the institution at Eugene is to carry on its research functions in the fields of business and economics, it will of necessity deal with the business and economics of farm products as well as with those of manufacturing. Indeed, it can not deal with manufacturing in Oregon without considering sources of raw material which are in this State largely products of the land. The marketing of almost any farm product immediately leads into questions of financing, into problems of transportation, into problems of quality, grading, and keepability.

In the same way the school of forestry is located at Corvallis and deals with one of the most important resources of the State. It is entirely appropriate that this school should be upon this campus in close relationship to the college of agriculture and develop research in the problems that concern so much of the capital of Oregon in close cooperation with the agricultural experiment station, which is constantly concerned with pests that destroy and the soil that nourishes the forests of the State. Yet the research problems of forestry include those of supply, care, methods of milling, utilization of waste, marketing, credit, and transportation, taxation, and State policies in regard to reclamation of cut-over land. To many of these problems the business and economic research service of the institution at Eugene should be prepared to contribute; they can not be solved without developing research in many fields. Both from the standpoints of the individual owner and the State these problems are so inextricably interdependent that research upon one aspect utterly fails to meet the need. So also with respect to the field of health and sanitation; the problem of sewage disposal involves interests of the chemist, the engineer, the legislator, and the student of municipal and State finance. No practical solution can be reached by any one of these specialists alone.

The point illustrated by these examples is that as soon as the field of research is entered specializations become less self-sufficient; they are dependent upon other specializations. No research problem ultimately is without both scientific and social implication. This is especially the case when research is intended to solve practical problems that affect the State as a whole; it is primarily the solution of these problems that the State hopes to secure when it supports

research. Even the discovery of a method for controlling an insect pest is not complete until the cost or practical use is determined and those who suffer from the pest persuaded and instructed to apply the remedy.

Solution for Research Overlapping

It should be perfectly obvious that there are large areas in which any field of research overlaps other fields and that only by combining the efforts of all can the solutions of their common problems be attained. Research in bacteriology is involved in research in economics; research in economics is involved in research in chemistry. Research in music and physics are closely connected. Separation of the functions of its higher educational units will complicate and not solve the State's problems of social and scientific research. Solution lies, however, not in abandoning functional distinctions between institutions, but in finding a method of unifying and coordinating that lies outside and beyond institutional limitations. The commission believes that it can suggest such a method. This suggestion is based upon perfectly simple propositions:

First, the practical research problems of the State in large part involve the cooperative effort of many fields of knowledge.

Second, these practical problems in their larger aspects are well known or easily determined.

Third, the layman may readily determine who the men are in the institutions and in the State best fitted to define these problems in terms of their parts and relationships.

Fourth, the social, physical, and biological scientists who constitute the group best fitted to analyze a practical problem are more concerned with the advancement of knowledge than with institutional advantage.

Fifth, these men are, therefore, the best qualified persons available to select the men to attack different phases of the general problem.

Sixth, they should be able to prepare an articulated program of attack upon a general research problem and to estimate the cost of such work and to select a qualified person to supervise the entire related program.

It is not the desire of the commission to supersede the present research agencies developed by the two educational units at Corvallis and Eugene; it is proposed, rather, to utilize them as the institutional centers through which coordination may in large part be secured. In addition to the functions that they may exercise cooperatively, each will be occupied with many research projects that are not and perhaps may never become the subjects of cooperative effort. For instance, recurring to an example already used,

the agricultural experiment station and the business research bureau may both be working on appropriate phases of a problem in the manufacture and marketing of a farm product previously agreed upon, cooperatively analyzed, and suitably apportioned to the specialists available in the two research organizations. At the same time, the agricultural experiment station may be conducting highly scientific investigations in the field of agriculture and the business research bureau carrying on research in the field of business that are entirely dissociated from cooperative projects. There will always be a great many highly desirable research projects that for the time being at any rate, may be prosecuted in isolation, that do not demand such dual definition; but the problems that demand cooperation are those that are of widest interest and value to the State. How shall this be secured?

It is proposed that a cooperative research council be set up to consist of representatives of the State board of higher education of the institutions and of the State department of education. This council should take the initiative by consulting with the scientific and professional staffs of the institutions, with agricultural, industrial, and social leaders and with such other official and private agencies of research as may be of assistance, in selecting three or four areas of research of prime importance to the State that can be handled effectively only by bringing to bear upon them the combined efforts of several fields of knowledge. To discover such problems will not be difficult; to choose the three or four that among them all promise the largest return to the welfare of Oregon and that can be carried on with the money available will engage the full wisdom and all the knowledge of those concerned. Having by such conference selected the problems upon which cooperative attack is to be made by the combined resources of the State's higher educational, and other agencies of research, the research council should select for each problem the small group of persons most competent in the State to define, analyze, and plan the research attack. The latter process requires technical knowledge; it can be done adequately only by men trained in various specialities assisted by the criticism and suggestion of practical administrators. These groups should each be asked to submit and "sell" to the research council a very definite plan of procedure from the standpoints both of research organization and finance. When any such project is approved by the council it should recommend approval by the presidents of the institutions and allotment of time and funds for prosecution of the work. The presidents should then recommend to the State board of higher education the allocation of the necessary funds for expenditure under the supervision of the research

council. The board and the administrators may not be able to comprehend all the technical points involved, but they should be able to understand the general purposes of each element of research and the financial requirements for its prosecution. They will be responsible for the financing and allocation of the time of staff members to the project; the research council will be responsible for preliminary examination and approval of the project and for its supervision; the scientists and specialists will be responsible for the work itself.

Prior to the inauguration of the plan of procedure here suggested the board should set aside from the research funds available to the institutions a substantial sum for the purpose of such cooperative research. The institutions and all persons concerned should be informed of the amount thus held for allocation and its purpose. After plans for specific research have been perfected and have been approved by the council and by the institutional heads the board should budget the funds available to the projects approved. These funds should be subject to the request of a director of each project, who should be chosen by the technical group concerned. Thereafter other funds budgeted to the research bureaus or to the institutions should not be available for investigations that duplicate aspects of the approved project, except upon certification by the research council, that the research proposed is supplementary and contributory to an approved project and desired by the director of such project. Upon such certification, approved by the directors of the institutional research agencies and the presidents of the two institutions, the amounts that it is proposed to expend should be transferred to the fund of the project concerned and expended under the same conditions as is the original grant of the board.

The procedure here described may seem complicated and difficult of administration. The commission is not concerned that the exact methods here proposed be those adopted; it is earnest in its recommendation that considerable sums be set aside for research that cuts across institutional lines and that the procedures adopted insure allocation of funds to specific phases of a single problem rather than split two ways upon institutional lines. The commission believes that the procedures proposed will in practice not prove so involved as they appear through description. The difficulty of arranging cooperation, especially cooperative research, is always great and is possible only when it is realized that its benefits are more than commensurate with the troubles involved. As time passes it is hoped that an increasingly large proportion of the State's research funds may be expended upon projects of the kind. Such projects are possible; they have been undertaken and are now under way

in Oregon in the fields of forestry and stream pollution and are proposed for research in the field of municipal government and taxation. All that is required is leadership, a bringing together of the scholars concerned, and funds to carry on; the institutions and the State board of higher education are able to provide these things and they are under obligations to the State to do so.

Relationship of Solution to Ph. D.

The relationship of students who seek the Ph. D. to this plan of cooperative research is obvious. They should be encouraged and assisted to enlist as workers upon elements of such projects. Further, capable teachers in the institutions who now carry on research in isolation, and often under the most discouraging conditions, should, wherever possible, be affiliated with these wider projects.

Chapter III

Coordination of Teacher Preparation

Teacher Preparation a State Function

Teacher training is a State, not a local function. Local institutional demands, no matter how urgent, must be subordinated to the general educational needs of the whole State. The five State-supported teacher-training agencies and the entire public-school system must be considered as a unit in the development and perfection of any teacher-training program.

The nature of the problems created by failure to regard teacher preparatory agencies and the public schools as one unit is indicated by the fact that between 1924 and 1928 the number of students in Oregon preparing for teaching increased by 60 per cent, while the number of teaching positions in the State increased during the same period by only 10 per cent.

Factors Determining Size of Task

The teacher-training program of Oregon should be based primarily upon the needs of the public schools of the State for trained teachers. These needs depend upon the rate of replacement of the existing teaching force, upon the rate of growth in the school system, which creates new positions, and upon changes in the preparation demanded of new teachers and of teachers already in service. Each of these factors is influenced by very complex social and economic conditions. For instance, higher salary scales or depressed economic conditions that make teaching attractive, tend to lessen resignations and withdrawals from the service, hence the demand for new teachers will be less than it would when teaching competes with other and perhaps better paying opportunities. The rate of growth in the school system is affected by the birth rate in a State, by immigration and emigration, and by improved methods and organization in the school system itself. The effects of higher levels of preparation are influenced by the competence of administrative and supervisory agencies, by the type of instruction provided to afford such preparation and by the social respect in which teachers are held. The situation and needs of Oregon must be considered in some detail with respect to all these matters.

Out-of-State Opportunities for Oregon Teachers

But the needs of the Oregon public schools are not the sole basis for determining the development of the State's program of teacher training. In 1930 the university and the Oregon State College secured 74 positions for Oregon's young people in other States at salaries generally higher than those paid in Oregon for comparable preparation and experience. The number of such out-of-State placements of teachers was probably greater than the number of teachers from out-of-State teacher-training institutions that secured Oregon positions. The State is as much interested and has as large responsibility that its young people who desire to become teachers be given an opportunity to prepare themselves to exercise that profession in other States as it is in affording similar opportunities to young people who wish to become business men, lawyers, engineers, or physicians in States other than Oregon.

The extent to which Oregon may expect to continue to prepare and send its young men and women out to remunerative employment as teachers in other States depends on conditions that are quite different from those that govern out-of-State opportunities in other employments. Teaching is more largely controlled by State regulation. California and Washington, for instance, have set up teaching-certification requirements that make it difficult for Oregon students to qualify. In many States the number of teachers trained is now more than their own schools can absorb, so that they, too, are seeking out-of-State opportunities in competition with Oregon trained teachers. Indeed, some States by legislative enactment or by regulation are requiring preferential employment of home-trained teachers. Such restrictions, of course, tend to produce inbreeding and stagnation within a narrow circle that is harmful; teacher-training institutions that do not need to compete with similar institutions in other States will be in danger of allowing the character of their work to deteriorate. These facts make it evident that the State and the institutions that prepare teachers should have available and furnish the information which will enable young people to understand and to measure their chances for employment as teachers both within and outside the State.

For these reasons and because of the importance to the State that it have an adequate supply of well-trained teachers for its public schools, the needs of the State remain the primary factor in determining the character of the teacher-training program. We may, therefore, turn at once to consideration of the factors that determine the number of teachers that should be prepared each year.

Enough has already been said to indicate that this is by no means a simple problem, nor one that can be answered with mathematical

precision. Many facts are lacking that are necessary to even approximate exactness. The best that can be done is to present the available information that throws light upon the subject and to indicate additional information that may be collected and applied when Oregon provides the necessary facilities for securing it.

New Positions Annually

The number of new positions that are created by the growth of the schools and the number of withdrawals from teaching work by reason of death, marriage, removal from the State, etc., do not serve to reveal entirely the demand for new teachers and hence the number that should be prepared each year. But these factors would, if they were known, afford much useful information. It can be predicted tentatively what will be true in the future from some of the information available.

Rate of Past Growth

The number of elementary and high school teachers reported biennially in Oregon from 1917 to 1928 is shown in Table 1. Assuming for the moment that the rate of increase shown for these 12 years will continue for the next 10 years, rough estimate may be made of the number of teachers on the single basis of past growth. During the 12 years the number of elementary teachers increased by 412, or approximately 35 per year, and the number of high-school teachers by 1,058, or approximately 90 per year. However, it would be a mistake to assume that in the future the schools will have on the average these numbers of new positions each year.

TABLE 1.—*Number of elementary and secondary teachers employed, 1917–1928*

Year	Number of teachers	Elementary	High schools	Year	Number of teachers	Elementary	High schools
1917–18	6,470	5,421	1,049	1923–24	7,192	5,558	1,634
1919–20	7,778	6,420	1,358	1925–26	7,663	5,758	1,905
1921–22	6,900	5,416	1,484	1927–28	7,940	5,833	2,107

Factors That Affect Future Growth

There are many well-known factors that point in the opposite direction. During the period covered by these figures the number of children in Oregon of school age (5 to 17) increased 6.4 per cent. But in the same years the number of enrollments in elementary schools increased 17.6 per cent and in high school by 92.9 per cent. It is perfectly apparent that during 1917–1928 attendance in both elementary and high school grew more rapidly than the number of

children of school age. This rapid increase in school attendance, of course, demanded rapid increase in the number of teachers required.

Point of Maximum Attendance

Will this growth be continued in the future? A number of factors indicate that it will not. In the first place, Oregon is now in the upper quarter of the States in respect to the proportion of pupils of school age enrolled in the public schools, ninth or tenth among the States of the Union. The percentage of the total population enrolled in 1928 in the public schools was 21.1 per cent for the United States as a whole and 20.7 per cent for Oregon. The higher percentage of pupils enrolled in the United States as a whole is probably explained partially by the fact that relatively a larger proportion of adults are to be found in Oregon than in a majority of the States.

Oregon ranks particularly high among the States of the Union in respect to the proportionate number of students enrolled in high school. In Table 2 is shown the number of 4-year high schools in Oregon with the enrollments and number of graduates from 1920 to 1928.

TABLE 2.—*Increase in number of high schools, high-school enrollments, and numbers of graduates, 1920–1928* [1]

School year ending—	Number 4-year high schools	High-school enrollment	Number graduating from high school	School year ending—	Number 4-year high schools	High-school enrollment	Number graduating from high school
1920	233	23,223	2,830	1925	256	36,419	5,708
1921	221	29,235	2,030	1926	264	37,889	6,477
1922	235	30,196	4,795	1927	269	41,258	6,670
1923	246	32,603	4,840	1928	275	42,238	7,107
1924	253	34,719	5,199				

[1] Twenty-eighth Biennial Report of the Superintendent of Public Instruction of the State of Oregon, 1928.

Since 1920 the number of high schools has increased 23 per cent, enrollments 82 per cent, and the number of graduates 151 per cent. The increase in the number of high-school graduates from 1920 to 1928 in the United States as a whole was 105 per cent. The large gain in the number of high-school graduates in Oregon has an important bearing not only upon the growth of demand for new teachers but also upon the development of higher education as a whole.

Upon the basis of school attendance alone, and assuming that Oregon has had a normal increase in population with reference to the entire United States, it appears very probable that Oregon can not expect a rate of increase in the number of children attending public schools (hence an increase in the number of new teachers needed)

much beyond that of the United States as a whole. Dr. Frank M. Phillips [1] has shown that elementary schools tend for the entire country to reach a period of actual decline and that high-school attendance also tends to approach stabilization with reference to size of population.

Many considerations indicate that both these conditions now exist in Oregon and will continue to exist if no extraordinary and unpredictable economic development results in large immigration into the State. Upon the basis of these conditions it does not seem likely that the number of new teaching positions will in the future increase as rapidly as they have in the past.

Reorganization and Consolidation of Small Schools

Certain other conditions and probable developments, if Oregon public schools develop in harmony with experience elsewhere in the United States, tend to indicate that the number of new teaching positions will actually decrease.

Urban and rural nature of the population.—It is estimated that 414,920 of the population of Oregon live in the open country or in villages of 2,500 people or less. This constitutes 46 per cent of the total population of the State. The proportion of the population of the United States as a whole dwelling in the open country or in communities of less than 2,500 is approximately 43 per cent, not far from that of Oregon. However, Portland, the one large city in Oregon, has a population of 301,890, nearly one-third of all the people in Oregon. Outside of Portland, less than 21 per cent of the population of the State live in cities of more than 2,500 population. The density of population of the State, as determined by dividing the number denoting inhabitants by the number denoting land area, was 9.8 per square mile in 1930, as compared with 40.5 for the United States as a whole. Oregon ranks fortieth in density of population among the States of the Union. If the population of Portland were not considered, the actual sparsity of population in most of the State would be even more strikingly indicated.

This has resulted in a great number of very small schools. In 1928 Oregon had 1,536 1-room schools and 309 two-room schools. In 1928–29, 123 high schools in Oregon had an enrollment of less than 50 students, 78 had from 50 to 99, 30 had from 100 to 199, while only 49 high schools had more than 200 students each. In other words, 82.5 per cent of Oregon high schools had less than 200 students, and almost 44 per cent had an enrollment of less than 50 students. It

[1] Statistics of State School Systems, Bulletin, 1930, No. 5, United States Office of Education.

may be stated that 85 per cent of the entire school population of Oregon may be placed in consolidated schools. At present 27.7 per cent are in schools of less than 100 pupils. A large proportion of the new positions created during the past 10 years have resulted from the development of small schools.

Savings in the number of teachers required are being secured by consolidation of elementary and high schools throughout the United States. There is every justification for Oregon to undertake many consolidations of schools. Indeed, since State taxes are contributed to the support of local schools, the State would seem justified in the interests of economy upon insisting that, where savings would result, such consolidations be made as a condition of receiving State taxes. Determination of the exact localities where savings in plant and operation would exceed costs of transportation and other new expense resulting from consolidation is not a function of this survey but should be the subject of special scientific study. So also the question of whether savings from consolidation should be used to reduce the tax burden or to improve and enrich the school offerings is matter for a survey of public education. The present survey commission is concerned with these problems (1) from the standpoint of the possible effects of consolidation upon the number of teachers that the higher institutions will be required to train each year; (2) from the standpoint of whether the teacher-training institutions will continue to be required to devote a large portion of their efforts to preparation of teachers for small, low-salaried positions in rural schools; and (3) from the standpoint of the quality of the product of the public schools that the higher institutions receive as their student bodies.

Number of New Positions Annually

Thus far we have discussed only the probable effect of increase in number of new positions upon the number of new teachers that must be prepared each year. It is the opinion of the survey commission that the rate of increase will be considerably less than it has in the past. To suggest actual numbers is hazardous, since further factual information concerning present plans of local schools is needed for reasonably accurate estimates; but the survey commission is inclined to believe that in the immediate future new positions in the elementary schools will not be likely to increase more than 20 per year and in the high schools about 30 per year.

Teacher Replacements—Turnover

We may now turn to consideration of the number of teachers that must be prepared annually to replace teachers who withdraw from

teaching in the schools of the State. This constitutes the major annual task of the teacher-training institutions. Unfortunately, information that is of very much value in determining the number of such vacancies is almost entirely lacking. In spite of the fact that all of the 7,940 teachers employed in the State are paid from public funds no record exists anywhere to show how many leave teaching annually, or even what the average tenure of positions is. If a planned program of State preparation of teachers is to be followed, it is essential that this basic information be collected and studied by some State agency such as the State department of education. Special studies in other States indicate that high-school teachers on the average retain their positions for approximately six years. Although there is little certainty that these proportions hold in Oregon, this ratio would indicate that in order to maintain the high-school teaching body at its present size would require each year one new teacher for each six positions, or approximately 350 new high-school teachers each year. If to this number be added the estimated number of teachers required for new positions, the annual total would be 380. It would be necessary, therefore, if these figures are approximately correct, for the higher institutions of Oregon to prepare 380 high-school teachers each year. But since many who plan to teach change their plans at the last moment and since many will probably always succeed in completing the training who, for one reason or another, are not acceptable to the employers of teachers, it would probably be wise to estimate that the higher institutions should annually prepare students for teaching in high school somewhat in excess of this number. Probably 425 altogether would allow sufficient margin for the cases mentioned and to fill positions in other States in excess of the positions in Oregon that will be secured by students trained outside the State. This estimate gives a ratio of one new high-school teacher each year to each 4.9 positions and compares rather closely with the ratio proposed by Tonning for Minnesota of 1 to 5 or less; and fairly closely with the ratios proposed by Paulu and Peik[3] for South and North Dakota.

It is somewhat more difficult to make a reliable estimate concerning the number of elementary teachers that will be required annually to replace teachers who leave the service. It is known, however, that the tenure of elementary-school teachers is somewhat less than that of high-school teachers, hence, that the proportion of positions open each year to the total number of positions is somewhat larger. Various estimates based upon more or less careful studies have been made in the United States and various ratios have been suggested.

[3] The Training of Teachers in North Dakota; W. E. Peik, 1930 Bulletin, University of Minnesota.

Including new positions as well as replacements, the most reliable estimates range from the ratio of 1 to 4 to the ratio of 1 to 5. Upon the basis of these proposed proportions Oregon would require annually somewhere between 1,150 and 1,450 new elementary-school teachers each year. For purposes of an estimate that must in any case be subject to constant revision as more facts become available as a result of continuous study, it will be assumed that the approximately correct number lies midway between these two figures and that 1,300 new elementary teachers will be required each year to care for the growth of the school system and to replace teachers who leave the service.

The survey commission assumes tentatively, therefore, that if the public and private institutions in Oregon furnish 425 high-school teachers and 1,300 elementary teachers annually, the needs of the State will be adequately cared for. These figures do not, however, provide a satisfactory basis for a teacher-training program for the individual, publicly supported institutions of Oregon; they merely afford a point of departure for consideration of the needs that must be met by these institutions.

Demand for Teachers Prepared in Public Institutions

The demand for elementary teachers and the demand for high-school teachers may be considered as separate problems. At the present time the university, the Oregon State College, and eight private institutions are preparing high-school teachers to enter the Oregon public schools, as shown by Table 3.

TABLE 3.—*Proportion of high-school teachers (1929–30) trained in different types of institutions*

	Total	Per cent
Oregon State Agricultural College	389	19.4
University of Oregon	565	28.2
Normal schools in Oregon	37	1.9
Private colleges in Oregon	426	21.3
Colleges outside of Oregon	583	29.2
Total	2,000	100.0

Contribution of Private Colleges

In so far as the private colleges and universities are preparing high-school teachers satisfactorily for this public service under present standards of certification, they are relieving the public from the expense involved.

It is not the purpose at this point to discuss the character of these standards nor of the preparation afforded by the private institu-

tions of Oregon. It is assumed that it is the function of the State to determine the standards of training that shall be attained by the teachers of its children and that the private colleges and universities will desire to meet these standards. Experience in other States shows, however, that as standards of training are raised, especially with reference to more rigid requirement of practice work as an element in the teacher-training program, the private institutions find greater difficulty in complying with the requirements for certification. Additions to their education staffs, more adequate practice facilities, and curricular reorganization prove to be great burdens on many private institutions with limited income. This fact frequently leads the private institutions to oppose changes in certification requirements. Such advances in standards tend to handicap them in their competition with the public institutions for students and make it more difficult for their students to qualify as public high-school teachers.

The nature of certification of high-school teachers in Oregon will be discussed in some detail by a subsequent portion of this chapter; it is the purpose at this point merely to call attention to the fact that better standards of preparatory training which will undoubtedly be required in Oregon in the future will make it more difficult for some of the private institutions to satisfy the demands of the certification regulations. It is, therefore, improbable that the private institutions will in the future furnish a larger proportion of the high-school teachers of the State than they have in the past. Upon this basis the State may depend upon them to supply 20 per cent of the annual demand, or 85 teachers, leaving to the public institutions and to the institutions outside the State preparation annually of 80 per cent of the high-school teachers.

Distribution of Demand by Subjects

This figure does not, however, accurately define the task of the public higher institutions. A high-school teacher is prepared to teach a specific subject or subjects, not to teach all the subjects offered in high school. It is necessary, therefore, to consider the total demand for high-school teachers in order to determine how many teachers of each subject will be needed annually. This would be a relatively easy task if each high-school teacher taught only one subject, as is commonly the case in large city high schools. But this is not true in a large proportion of the high schools of Oregon. As has already been pointed out, 82.5 per cent of the high schools of the State enroll less than 200 students each. In the largest of these small schools it is necessary that a single teacher teach two or three subjects,

and in the 44 per cent of Oregon's high schools enrolling less than 50 students it may even be necessary for a single teacher to teach four or five subjects. The survey commission believes that it is impossible to secure instruction of the quality that should characterize a modern high school and that will afford satisfactory college preparation when teachers must spread their preparation and teaching work over more than three subjects. But the condition actually exists in Oregon and can be changed only by the people of the State over a considerable period of years. The survey commission has no means of determining how rapidly or how generally this change will be brought about by means of consolidation of small schools into larger ones and by accompanying State regulation which will limit and prescribe the combinations of subjects for which teaching certificates will be issued.

Need for Continuous Study of This Demand

It is apparent, therefore, that the task of determining for any given year the probable demand for teachers of specific subject combinations will demand continuous study by some central State agency, preferably the State department of education. That economy in the amount that the State spends through its higher institutions for the education of high-school teachers demands scientific determination of how many teachers will be needed should be self-evident. If it costs the State approximately $1,200 to give a single student four years of preparation as a high-school teacher, there seems little reason why it should spend $60,000 in educating 50 such teachers when $30,000 would pay for the preparation of the 25 teachers that it will need. But the argument from the standpoint of economy is not the sole or the most important reason for discovering how many teachers are needed; the State is not justified in permitting and encouraging its ambitious young people to spend four years in preparation for employment in the State's public service in much greater number than the State will have positions.

Further, the institutions that prepare high-school teachers should know, at least approximately, what these needs are likely to be in order that they may avoid indiscriminate recruiting of students. Since the State and its political subdivisions are for all practical purposes the sole employers of high-school teachers, an obligation rests upon the State to determine how many will be required and to limit the public expense of training and the enrollment of students in such fashion as to avoid waste of money and of human effort.

This obligation is quite different in the case of teachers than in the case of preparation for private employment although many students of society are now advocating that public authority study and fur-

nish institutions and young people with information in regard to the nature and limitations of all kinds of occupational opportunities. It is argued that the expense of public education demands increasingly that the taxpayer should not be burdened with the cost of preparing young people for occupations in numbers in excess of the opportunities that will be available. The force of this argument can not be escaped with reference to the occupation of teaching in which employment and preparation for employment are both under the control of the State. The survey commission can not recommend too strongly that the State department of education be provided with the funds, staff, and authority to determine the annual needs of the State for teachers of all kinds.

Pending such provision for securing complete information the State is confronted with the practical problem of dealing with an immediate situation. The survey commission is therefore obligated to afford such assistance as it is able to render upon the basis of information now available.

Relation of Demand to Supply

Two questions demand attention: (1) What is the present situation in Oregon with respect to supply and demand for high-school teachers; and (2) how can the State limit preparation for high-school teaching to the approximate number that the public schools demand annually?

Number Graduated No Measure of Supply

If it is assumed that Oregon public higher institutions may reasonably be expected to prepare 425 high-school teachers each year, one method of determining relationship of supply and demand in the State is to compare with this figure the number of high-school teachers actually prepared at the university and the Oregon State College. The layman may assume that the number graduated from the school of education at the university and from the school of vocational education at the Oregon State College gives a basis for this comparison. But this is not the case. In 1928–29 the university school of education granted bachelor's degrees to 76 students; the placement service of the university reports that it placed 140 students in teaching positions who received bachelor's degrees in 1928–29. The Oregon State College reports that in the same year 60 students completed the course in the school of vocational education; but the placement service reports that it placed 180 graduates.

This difference is accounted for by the fact that under present provisions of State certification a student enrolled in any division

or school of either the university or the State college may receive a certificate to teach in high school by completing a certain prescribed number of hours (23 quarter credits) in educational subjects. Approximately one-fourth of the students of both the university and the Oregon State College registered in schools or divisions other than that of education are thus preparing for eligibility as high-school teachers. Not all of those who thus qualify as teachers actually seek employment in the high schools of the State, but that a considerable proportion do so is evident from the fact that while only 136 students were graduated in education from the university and agricultural college, 320 were placed in school positions.

Number Failing to Secure Positions

Of more importance, however, in considering relationship of number trained to the needs of the schools of the State is the number of students who qualified and desired positions but who were not placed. The University of Oregon placement service reports that only 51 per cent of those registered with the appointment bureau reported placement. Probably some of the remaining 105 students registered as desiring positions secured them but did not report the fact to the placement service. Nevertheless, 45 of the 105 whom the appointment service did not place were members of the graduating class of 1928–29. At the Oregon State College the placement service reported 186 members of the senior class registered for placement in teaching positions. Positions were not found for 40 of these applicants.

It should be understood that the placements made include positions outside as well as within Oregon; hence the number of positions that were filled in Oregon was considerably less than these totals. In this connection it is important to note that a relatively large proportion of Oregon students secure positions outside the State. The records of the teacher-placement service at Oregon State College give some indication of the extent of the out-of-State placement. Of the 1,157 names on its mailing list of teachers (not including 61 registered but without positions) less than half (44.4 per cent) are teaching in Oregon.

One reason for the large number of Oregon students who seek positions elsewhere is the higher scale of salaries paid. The average annual salary of high-school teachers in the United States in 1928 was $1,878. In Oregon it was $1,460 as compared with $1,843 in Washington, $1,418 in Montana, and $1,616 in Nevada. Table 4 shows the median salaries paid teachers in cities in Oregon and certain neighboring States.

TABLE 4.—*Median salaries paid teachers in cities in Oregon and other States, 1928–29* [1]

States	2,500–5,000 population			5,000–10,000 population		
	Elementary	Junior high	Senior high	Elementary	Junior high	Senior high
United States	$1,212	$1,399	$1,584	$1,342	$1,528	$1,729
Oregon	1,206	1,279	1,348	1,267	1,382	1,561
Washington	1,267	1,365	1,578	1,295	1,275	1,578
Idaho	1,083	1,033	1,400	1,270	1,310	1,602
Montana	1,446	.....	1,750	1,441	1,483	1,788
Nevada	1,459	1,563	1,933	.....	.....	.....
California	1,652	2,017	2,423	1,655	1,830	2,400

States	10,000–30,000 population			Over 100,000 population			
	Elementary	Junior high	Senior high	Elementary	Junior high	High school	
						Teachers	Department heads
United States	$1,415	$1,634	$1,869	$2,063	$2,348	$2,680	$3,506
Oregon	1,225	1,282	1,458	2,182	.....	2,248	2,664
Washington	1,454	1,611	1,909	1,924	1,818	2,198	2,389
Idaho	1,517	.....	1,775	.....	.....	.....	.....
Montana	1,573	1,700	2,019	.....	.....	.....	.....
Nevada	.....	.....	.....	.....	.....	.....	.....
California	1,699	2,070	2,447	2,131	2,545	2,895	3,217

[1] National Education Association Research Bulletin, May, 1929.

Actual records of placements of high-school teachers made by the Oregon State College in 1928 show the inducement that the better graduates have to seek positions outside the State. Table 5 shows the difference for various fields.

TABLE 5.—*Placement of high-school teachers in different fields by Oregon State College in 1928*

Field and State where placed	Inexperienced	Experienced	Field and State where placed	Inexperienced	Experienced
Industrial arts:			Home economics:		
Oregon	$1,496	$1,600	Oregon	$1,229	$1,397
California	(1)	2,425	California	1,816	2,066
Washington	(1)	1,650	Washington	1,400	1,429
Physical education, women:			Commerce:		
Oregon	1,352	1,475	Oregon	1,294	1,589
California	(1)	1,862	California	1,700	2,138
Physical education, men:			Washington	1,600	1,770
Oregon	1,653	2,125			
California	(1)	2,340			
Washington	1,700	1,699			

[1] None placed.

Two effects are likely to result from these differences in compensation for equal training: (1) Good, experienced teachers are drawn away from Oregon, and the State is compelled to train more teachers

to fill the vacancies created; and (2) the teachers that Oregon secures from a given list of those available each year will probably be the less desirable ones, thus tending to lower the standard of instruction received by the young people in Oregon's high schools and to make more difficult the task of the higher institutions that receive their students from these schools.

Attention has already been called to regulations by other States which make it more difficult for graduates of Oregon institutions to secure positions outside the State. Further, in several States where Oregon teachers have found employment complaint is being made that there is an oversupply of teachers. It appears probable that in the future the opportunities of Oregon graduates to find employment in other States as high-school teachers will be less frequent than they have been in the past. It is apparent that at present the university and the Oregon State College are turning out a greater number of high-school teachers than can be placed within and outside Oregon.

The proposal of the survey commission that the total number of high-school teachers prepared annually by the university and Oregon State College be limited to approximately 425 is supported by the general situation presented and by such figures as are available.

Under and Over Supply of High-School Teachers in Various Fields

In order to determine if possible the state of supply and demand for high-school teachers of the various subjects, the university and Oregon State College were asked to provide estimates of the fields in which, in their opinion, there is an oversupply, an approximate balance of supply and demand, and an undersupply. Both institutions agreed that there is an oversupply of high-school teachers of arts and science subjects, the field in which private colleges are most active in supplying teachers. The Oregon State College, where the major work of the State in home economics is carried on, reported an oversupply of home-economics teachers. This statement is supported by the fact that 15 of the 53 members (28.3 per cent) of the home-economics class of 1929 were not placed by November of that year. The university, where home economics occupies a minor position, reports a balance of supply and demand in this subject. The university reports an oversupply of teachers of art and music. The university also reports an oversupply of high-school administrators and Oregon State College agrees with this judgment to the extent of estimating that supply and demand are balanced. Both agree that the supply of teachers of both boys and girls in the field of health and physical education, including athletic coaching, is approximately equal to the demand. Oregon State College also reports a balance of supply and demand for nonvocational industrial arts teachers. The

university estimates that the supply of teachers of commercial subjects is equal to the supply although the Oregon State College believes that there is an undersupply in this field. However, at the Oregon State College 7 of the 35 seniors in the school of commerce in 1929 who registered with the appointment service for positions as teachers failed to secure them. Although this is a relatively small number upon which to base judgment, it appears reasonable to conclude that the demand for commerce teachers does not justify an effort to increase the number of those trained.

The university reports no field in which there is an undersupply of teachers, while the Oregon State College reports (in addition to commercial teachers) an undersupply in only two fields: Agriculture and vocational trades and industries. The placement service of the college quickly placed all members of the class of 1929 who had combined an agricultural course with teacher-training work.

While these estimates of the situation by the institutions are subject to error, they are based upon personal impressions of institutional officers in intimate contact with teacher-training work, upon the experience of placement services, and upon counts of requests for teachers received from school officers. The most important point to be remarked is the fact that in only two fields, and these fields in which the total number of teachers is small (agriculture and vocational trade and industries) does there appear to be any need to increase the number in training, while in the fields in which most high-school positions exist (history, English, science, etc.), reports indicate positive need for reduction in the number trained.

On oversupply of high-school arts and science teachers is common all over the United States. This is easily accounted for when it is considered that more than half the public and private colleges and universities of the United States have departments of education, and that as many as two-fifths of the graduates of hundreds of the arts and science colleges have been definitely shown to enter teaching. Young college graduates are turned out in large numbers with the minimum of professional training in education. Oregon has its full share of such young people in the market.

Method of Adjusting Supply to Needs of State

If it is admitted that the State should be guided in its high-school teacher-training program by its own needs primarily, it must be obvious that it must determine what these needs are. The problem then arises of how the State can limit the number trained in its institutions to the approximate number required in each field. The survey commission suggests three methods: (1) Assignment of functions to institutions; (2) professional adjustment of certification

requirements; and (3), selective admission to teacher-training courses. Each of these methods requires some further discussion.

Assignment of Institutional Functions

Institutional recruiting.—The number of students that undertake to prepare for teaching is influenced directly by the student recruiting policies of the institutions. Institutional pride in growth and size and the tendency of public authorities to determine financial support upon the basis of the number of students enrolled encourage institutions to compete for students and to extend their offerings to attract every type of prospective enrollment.

Under present conditions of teacher certification and employment in Oregon such recruiting affects the number that enroll for teacher preparation more seriously than it does enrollment in preparation for other occupations and in other fields. This is true for a number of reasons. Students who enroll with the intention of pursuing one of the technical or scholarly fields and find that their industry or abilities are not sufficient to make them successful in the field of their first choice can qualify as teachers by taking a relatively small amount of work in education. They may even be guided to such change of purpose by the institutions in order to save them from the disheartening effects of failure—and to maintain the enrollment of the institutions. Deans of two highly specialized schools, one at the university and one at the Oregon State College, stated to members of the survey commission that "only our poor or failing students go into teaching and we encourage them to make the change."

Further, under present certification requirements for high-school teachers, students who have come to college and have practically completed courses that have no direct vocational purpose may as a last resort decide to qualify as teachers; high pressure recruiting that tends to enroll great numbers who have no definite educational purpose and no special qualifications for college work tends to increase the number of these cases. The fact that teaching is held in relatively high esteem and offers opportunities for immediate employment attracts students who are not familiar with opportunities in other fields; the failure of institutions to provide vocational information as complete in other fields as is that available in the field of education accentuates this tendency. That this is the case is evident from the fact that the placement services of the university and the Oregon State College specialize in the placement of teachers and from the very urgent demand made upon the survey commission by many alumni that contact with employment opportunities in other occupations be developed by the institutions as vigorously as is the placement of teachers.

Recruiting of students tends to have an exaggerated effect in creating an oversupply of teachers in training when two or more institutions offer instruction looking to employment in the same teaching positions. It is necessary, therefore, to examine in some detail how far this situation exists in Oregon.

Problem of Encroachment

The State has provided three normal schools for the purpose of preparing elementary teachers. It is also the apparent intention of the State that the university and the Oregon State College shall prepare the high-school teachers required and confine their efforts to this field. Four questions must be considered, therefore:

1. Are the normal schools entering the high-school field?
2. Are the university and the Oregon State College competing to an undesirable extent in the high-school field?
3. Are the university and the Oregon State College entering the elementary field?
4. Are the three normal schools competing to an undesirable extent in the elementary field?

Since this section of the report is primarily concerned with high-school teachers, the first and second questions only will be considered at this point. Questions 3 and 4 will be discussed in connection with consideration of the elementary teacher training situation.

Normal Schools in High-School Field

Attention has already been called to the fact that of 2,000 high-school teachers in the State in 1929 for whom records were available, only 37, or 1.9 per cent, had received their highest training in Oregon normal schools. This does not show serious encroachment upon the high-school field by the normal schools in the past, although the fact that any high-school teachers are employed who have no more than normal-school training is indicative of undesirable conditions of certification of teachers and of employment. The only phase of the question of encroachment by the normal schools upon the high-school field that need detain us at this point is that of present tendencies in the normal schools.

Are the normal schools tending to undertake any forms of high-school teacher preparation? At the Monmouth institution there is some indication of an undesirable tendency to undertake to prepare certain types of high-school teachers. At all three normal schools the preparation of teachers for junior high school service raises certain questions of duplication of teacher preparation work with that carried on by the university and the Oregon State College.

The normal school at Monmouth states that one of its objectives is the training of high-school principals. Undoubtedly this purpose is

intended to be applicable to small rural or village high schools only, but the survey commission is convinced that the institution at Monmouth does not have the staff, the facilities, or a program suitable to the training of any kind of high-school principals. It is recommended that, until such time as State certification requirements make it impossible for students with only normal school training to qualify as high-school principals or teachers, the State board of higher education forbid the normal schools to advertise or undertake work intended to prepare high-school principals or high-school teachers of any type. The normal schools should themselves refuse to recommend their students for such positions.

Monmouth maintains a commercial department. Sixteen courses are listed in the catalogue in this field. It is difficult to see how Monmouth can function in the preparation of teachers of commercial work, at least until equipment and facilities are provided to put this work on a more satisfactory basis. To meet modern standards, teachers of commercial subjects in high schools should be college graduates. No demand for commercial teachers in elementary grades exists.

The offering of courses in commercial education at Monmouth is illustrative of a general tendency toward expansion evident in several other fields. The institution offers work in physical education for men and for women, health work, athletic coaching, public-school music, art education, and in platoon school work. In none of these fields can a high-school teacher receive at Monmouth adequate training for special work in teaching. Not a few graduates of Monmouth are, however, now actively engaged in teaching them as specialties. Employers under present conditions of certification are permitted to employ such teachers. With one or possibly two exceptions, the special subjects mentioned are needed as part of the regular training of elementary teachers; the normal school should offer them as such only and should not suggest or recommend its students for high-school work of any kind.

Junior High School Teachers

The problem of training junior high school teachers is at present a minor one in Oregon. The survey commission was informed that there are in Oregon only 31 schools called junior high schools and that of these only three are in fact so organized as to meet the accepted requirements and purposes of junior high school units. This statement requires some explanation.

In the United States our public schools have generally been organized into 12 grades of which the first 8 constitute the elementary school and the last 4 the high school. Within the past few years,

however, a tendency has developed very rapidly to secure certain decided advantages of instruction by means of a regrouping of the 12 grades. Under the regrouping plan the first six grades constitute the elementary school; the seventh, eighth, and ninth grades make a new unit known as the junior high school; and the tenth, eleventh, and twelfth grades become the senior high school. This plan of organization exists side by side with the 8–4 plan in many States.

However, merely setting grades 7, 8, and 9 apart as a separate group does not make these grades into what educators recognize as a junior high school. The characteristic feature of a junior high school is an entire reorganization of the subject matter of instruction and of its presentation in a fashion that serves educational purposes quite different from those of the elementary school and of the senior high school. Owing to the fact that instruction is usually departmentalized, that is, divided into subject-matter departments (such as history, English, science), which give the work carried on by each department to all the grades in the junior high school, it is sometimes supposed that departmentalizing grades, 7, 8, and 9 makes a junior high school.

The true junior high school has purposes and uses methods quite different from those of the seventh and eighth grades in the elementary school and from those of the freshman year in the traditional 4-year high school. It becomes apparent at once, then, that the problem of junior high school teaching is not merely one of preparing seventh and eighth grade teachers for the 8-year elementary school and of ninth-grade teachers for the 4-year high school and placing them together in a departmentalized group of grades, 7, 8, and 9. Yet this is practically the only kind of junior high school that exists in Oregon, although the number of reconstructed units of this kind will doubtless increase rapidly as the educational advantages of the reorganization are fully realized.

During the period of transition from the traditional form of organization to the 6–3–3 plan, however, difficult problems are presented in connection with the preparation of teachers. Shall the normal schools that are intended to prepare elementary teachers undertake the task? If they do, they will be compelled to extend their facilities and staffs to provide for the ninth grade, which is not the first year of the 4-year high school, and also to provide for a degree of specialized subject-matter instruction inappropriate to elementary-teacher training. Or shall the university and the Oregon State College, to whom the task of preparing high-school teachers has been assigned, undertake to prepare junior high school teachers? If they do, it means that their facilities and staff must be extended to provide for teachers of children of seventh and eighth grade age.

Upon theoretical grounds it would seem that special schools would be needed for preparation of junior high school teachers, but practically and with specific application to the Oregon situation other solutions are possible and advisable. Let us examine some of the factual considerations that should determine the question in Oregon.

In the first place, there are too few junior high schools and teachers in junior high schools in Oregon at present to justify setting up very extensive special provision for training such teachers. The report of the State superintendent of public instruction for 1929–30 lists but 22 schools as junior high schools, and there were but 297 teachers in these schools. If the liberal interpretation of the right of these units to be known as junior high schools be accepted and if the annual replacement of their staffs be at the rate of 1 new teacher to every 5 positions, these schools would require only 60 new teachers annually. It is rather obvious that the State can not afford to have all five of its teacher-training institutions provide facilities and enter into competition for the right to train students for 60 positions in the State. The reasonable solution would be to designate one of the institutions for the purpose and to provide it with the facilities and staff needed. This the survey commission recommends.

The problem then becomes one of determining at which institution of the five possible claimants this can be done most advantageously and with the least expense. In the opinion of the survey commission the normal schools at La Grande and Ashland should not be considered. They are relatively new institutions and their resources may be most profitably devoted to the specific tasks of preparing for service in the elementary school of eight grades and of offering junior college opportunities to the youth of their regions. This leaves the advantages and disadvantages of the institutions at Eugene, Corvallis, and Monmouth to be considered.

One essential factor in determining the choice should be the existence of a junior high school in the community. The survey commission strongly urges that none of the institutions be authorized to train junior high school teachers until it has immediately available under its own control a school unit judged by competent, disinterested educators to conform in organization and purposes to the requirements of a real junior high school. No junior high school unit exists and the nature of the community is such that it will be difficult to create one at Monmouth. An additional reason that influences the survey commission to recommend that the function of training junior high school teachers should not be assigned to the normal school at Monmouth is that the institution lies in the most

densely populated portion of the State and will require thorough reorganization and considerable expenditure to make it an adequate unit for the training of teachers in the eighth grade elementary schools of its region. It may well devote itself exclusively to this purpose. Units known as junior high schools exist at Eugene and Corvallis. The survey commission has no basis for pronouncing judgment as to whether either has the character of a true junior high school.

The arguments that may be advanced both for and against selection of the university or the Oregon State College as the center for junior high school teacher training seem to have about equal force. Both are in communities where the junior high school movement has made some headway. Both lie in relatively densely populated areas where the movement is already under way and where it will probably in the future make the most rapid gains. Both have competent leaders with modern viewpoints directing their educational work. On the other hand, neither institution has experience in the training of elementary teachers and should not undertake this work in competition with the normal schools.

The survey commission's recommendation that the Oregon State College be selected to develop training of junior high school teachers is determined in large part, therefore, by its proximity to the normal school at Monmouth. The fact that the two institutions are so close together will make it possible for normal-school instructors to serve at both institutions and thus make unnecessary the employment by Oregon State College of a number of instructors who would otherwise be required for a relatively small amount of service. Joint service at the normal school and the Oregon State College should insure a number of high-type teachers required by the normal school for its work with elementary teachers. These instructors may serve both institutions because there are large elements in the training of junior high school teachers that are very similar and closely related to necessary phases in the preparation of elementary teachers. The location of junior high school training at the normal school rather than at the Oregon State College would require division of time between the two institutions by a greater number of subject matter and professional instructors than the plan proposed. Further, living conditions, educational environment, and practice facilities are superior at Corvallis to those at Monmouth.

It is assumed that the number of students admitted to the junior high school training course would be restricted to the needs of the State as determined by careful study. It is recommended that the course provide a minimum of three years' training and that as soon as practicable the State provide special certification for junior high

school teachers embodying the requirement of three years of training beyond high-school graduation.

Functions of the University and Oregon State College

We may now turn to consideration of the question of undesirable competition between the university and the Oregon State College in the training of high-school teachers. It has already been stated that 19.4 per cent of the high-school teachers of the State, in 1929–30, had received their training predominately at the Oregon State College, while 28.2 per cent had been trained at the university. In other words, almost 50 per cent of the high-school teachers of Oregon are trained at these two institutions. These employees of the high schools consist of two groups, the classroom teachers and the administrators and supervisor. The two groups may profitably be considered separately.

Division Upon Basis of General Institutional Functions

It has already been pointed out that undesirable competition arises in part from lack of knowledge concerning the number of teachers to be prepared and in part from duplication of offerings which permit both institutions to train teachers for the same types of position. The coordination of the State's high-school teacher-training program requires that some central State authority continuously study and estimate the needs of the State. But this knowledge will not make a coordinated and economical program possible unless provision is made for a clear division of the functions that the university and the Oregon State College exercise in meeting these needs. The survey commission has recommended in Chapter II a plan whereby the university will become an institution devoted to education in the humanities and social sciences and the Oregon State College an institution devoted to scientific and technical education. This division of general function, with the specific applications proposed, will, it is believed, be of material assistance in determining the fields of high-school teacher training appropriate to the two institutions.

Problem One of Certification

However, this proposal does not constitute a cure-all for the ills of institutional duplication and competition in the field of teacher training. Under the plan proposed it would be possible for a student to prepare in either institution to teach almost any subject or combination of subjects demanded by the high schools of the State. This is true because the plan of division of function recognizes that a college course should provide broad as well as specialized training. In order to secure this breadth of education provision is made for

lower-division (freshman-sophomore) work in fields other than those assigned to the institutions as their distinctive functions. These lower-division subjects, characteristically science at the university and the humanities and social science at the Oregon State College, provide sufficient subject matter to permit students under present conditions of certification to qualify as high-school teachers in these fields. They may, of course, also qualify as teachers in the fields assigned to the institutions as special functions, characteristically the humanities and social sciences at the university and the sciences at the Oregon State College.

The solution of the problem of restricting the field of high-school teacher preparation at the university and Oregon State College to the areas of their special functions is, in the opinion of the survey commission, dependent upon control exercised through certification. In other words, the only method of insuring that the State's expense for training teachers in any given subject or combination of subjects shall not be much greater than that required to meet its actual needs is to set up certification requirements which will limit certification to subjects and combinations of subjects appropriate to the major functions that it is proposed to assign to the different institutions. Thus, for example, to qualify as a teacher of chemistry a student would be required to have an amount of chemistry training that could be secured only at the Oregon State College, the scientific and technical school of the State. To qualify as a teacher of history a student would be required to have an amount of history training that could be secured only at the university, the humanities and social science school of the State.

Further, the certification plan should provide for certification of teachers in combinations of subjects such that all the subjects in any given permissable combination fall within the area of specialized function assigned to one or the other institution. Thus, certification should permit only combinations of two or more subjects selected entirely from one of two distinct groups of subjects, the first group made up of high-school subjects appropriate to the specialized functions assigned to the university (e. g., English, history, economics, art, music, etc.), and the second group made up of high-school subjects appropriate to the specialized functions assigned to the Oregon State College (e. g., chemistry, physics, biology, home economics, agriculture). The exact grouping will, of course, depend upon the nature of the division of the functions adopted by the State, but the survey commission wishes to call attention not only to the fact that any division of high-school teacher training functions between the two institutions is dependent for its success upon some such form of certification but also to the fact that quite independently of any general division of institutional functions it is

possible for certificating authority to secure a considerable degree of institutional specialization in the training of high-school teachers by prescribing permissible groups of subjects for certification. The plan of certification proposed is not an untried experiment. West Virginia and other States strictly enforce certification by subjects.

Further, such a plan would make impossible employment of teachers by local schools without reference to their qualifications to teach certain of the subjects now assigned to them as parts of combinations. The survey commission was told that 40 per cent of the high-school teachers of Oregon are teaching subjects in which they have had no preparation beyond high school. Members of the staffs of both the university and the Oregon State College informed the commission that many of their students were employed to teach subjects in which they were not prepared and for which the institutions would not recommend them. Even though the mathematical statement of the extent to which this practice exists may be inaccurate, there is no doubt that the practice is so extensive as to require correction.

It is fully recognized that the plan of certification proposed would have to be applied gradually and in such fashion as to work the minimum of hardship upon schools in adjusting their demands to the limitations suggested. It is probable that until consolidations of schools are made and other methods of developing high-school units of efficient size are applied, it would in some instances be impossible to enforce rigidly these restrictions upon combinations of subjects. In the opinion of the survey commission these conditions emphasize the necessity that certification be placed in the hands of a professionally trained, nonpartisan State department of education, which should be free to exercise discretion in meeting specific situations, but with authority to enforce standards of the kind proposed with progressive strictness. Pending such strengthening of the State department of education, the commission recommends that a teacher-training council be set up, consisting of representatives of the five State institutions, the State department of education, and of the State Teachers' Association, to consider and recommend to the institution, to the State board of higher education, and to other State authorities, the details of a coordinated program of teacher training and certification. This council should be a continuing agency of coordination and conference among the several interests and institutions involved.

Certification and Graduate Work

In this connection may be discussed another matter that relates to the intimate connection between certification authority and the functions of the university and the Oregon State College in the teacher-training field. Graduate work is increasingly required of

high-school teachers in many States, and for the administrative positions in the school system, superintendents, principals, and supervisors, graduate work is becoming a standard requirement.

The survey commission is not inclined to recommend at the present time that graduate work be required of high-school teachers; but it does recommend that a special type of high-school certification be provided for teachers who improve themselves by taking graduate degrees. It believes that ultimately the State will find it advisable to require graduate work of a large proportion of its high-school teachers. Already in many of the high schools of the State the minimum training of teachers approaches closely to graduation from college. Many teachers have graduate credit. The M.A. degree in many progressive cities and States is rapidly becoming common for high-school teachers and principals.

Moreover, the survey commission believes that it is highly desirable in the immediate future to provide forms of separate certification for elementary and high-school principals and for county and city superintendents which will include in their provisions the requirement of varying amounts of work beyond the first degree. The character of the present administrative officers of the Oregon public-school system and the professional and social functions that they exercise seem to the survey commission to justify immediate steps in this direction.

Since such a step will require provision at the university and the Oregon State College for graduate work in education, it is pertinent to emphasize the need for greater provision than is at present made for extension of the graduate work in this field at both institutions. Attention is here directed to the proposals of the commission presented in Chapter II, by which it is believed that undesirable duplication of work of this kind on the graduate level may be prevented.

Experimental and Research Work in Education

In this connection it is necessary to call attention to one situation already handled by the State board of higher education that indicates the type of incoordination that is likely to arise unless the State exercises careful control of the development of graduate work in education. Graduate work of high type implies the use of schools for research and experimental purposes. Recently the university projected a program which contemplated the creation at Eugene of an elementary experimental school. The normal schools immediately expressed themselves as doubtful concerning the plans of the university to introduce what appears to them and what in fact would have inevitably developed into a curriculum for prospective elementary teachers. The State board of higher education directed that the project be dropped.

The survey commission fully recognizes that the university has no desire to introduce any serious competition with the normal schools in the training of elementary teachers and is in entire sympathy with the need of the institution for demonstration and experimental elementary schools as the basis for development of graduate work in education. Nevertheless, it would have been extremely unfortunate if the university had been permitted to continue its proposed project. The project, even though restricted to strictly experimental purposes, would involve expensive provision of an elementary training-school plant and facilities and a considerable enlargement of the present staff of the university in a field that the institution is not primarily prepared to serve.

The commission believes that a large field of graduate research in education is at present open both to the university and to the Oregon State College that may be conducted by arrangement with the public schools and by cooperation with the normal schools. The development of a special experimental school in the elementary field, even though recognized as a necessary and important step, may well wait upon the perfection of a plan of coordinated effort in the graduate field by the State department of education and the five teacher-training institutions of the State. Such plans should receive the careful attention of the educational council proposed.

Selective Admission as a Means of Adjusting Supply to Demand

We have now discussed the demand for high-school teachers in Oregon and the adjustment of the supply to this demand by means of assignment of institutional function and by means of control through professional administration of certification requirements. Still another means of adjusting supply to demand must be discussed, selective admission to teacher-training courses.

Present Character of Teacher-Training Student Bodies

The teaching profession has not in the past secured, as a rule, its share of the brighter college students. Disproportionate numbers of the more able students have entered law, medicine, engineering, business, or other occupations. Attention has already been called to the fact that students who are not making a pronounced success in courses looking to other specialized vocations are guided into teaching.

The idea of teaching as a genuine profession has too often not been recognized by college faculties, student bodies, or the general public. It is too frequently regarded as a temporary means of making a livelihood or as a last resort for those without special gifts or inclinations. However, these conceptions are now in process of rapid

change. Increased training and specific professional requirements enforced through more rigid application of certification rules tend to raise the esteem in which the profession is held and to make it more difficult for the left overs from other fields to become teachers. Teaching has become relatively better paid. College education is the commonplace possession of great numbers of young people; those who enter teaching must have in addition special professional preparation for the job.

The other learned professions are also becoming harder to enter and quite generally higher standards of preparation and more severe selective measures are being applied in order to secure better professional service and to prevent flooding of the occupations beyond the possibilities of remunerative employment. The teaching profession is, like other professions, raising standards of preparatory training, but it has lagged somewhat behind medicine, engineering, and other learned occupations in applying measures for selecting the students who are best fitted to enter the profession.

As a means of maintaining and improving the standards of instruction given in the public schools, formal certification requirements of attendance at college and of subject-matter emphasis while in college are effective, in part because they serve as means of separating and selecting the more persistent and able from the large number that fail to go through these tests. But other effective means are available for selecting from the entire mass of possible candidates for training those best suited for the profession. Much that will be said in the following paragraphs in regard to the use of these selective devices is applicable to candidates for admission to training as elementary teachers, as well as to the admission of students to training as high-school teachers, but, since the principles operate upon different groups and through different institutions, it is desirable to restrict their application at this point to the selection of trainees for positions as high-school teachers.

Selective Measures Suggested

The measures proposed concern admission to high-school teacher training solely; they are not intended to refer generally to admission to the higher educational institutions. Although the survey commission is persuaded that some further measure of selection of students admitted to the institutions may be used with profit to the State and to the students themselves, it recommends that general admission to the institutions be somewhat liberal and be based upon the common level of preparation provided by the accredited high schools of the State. Admission to courses looking to specific occupational preparation within the higher educational institutions is another matter.

To provide a high level of general education for all its young people who seek it to the full extent of their abilities is a duty of the State and one of its most effective safeguards; to provide expensive specialized training for occupational life for all who apply without reference to their ability to receive it and without reference to the State's need for practioners of these occupations does not seem so obviously a State obligation.

Many professions now insist upon special preparation and abilities as prerequisite to admission to training. In many States it is the practice to enforce the rule that certain minimum preparation, such as graduation from a standard high school, entitles to admission to their institutions, but not to all schools thereof. Thus it is insured that the opportunity is given to all the youth of the State to secure a general higher education and to enjoy the benefits of college instruction during a period when they may explore their own capacities and life purposes, but the institutions are protected from useless expenditure upon the education of those who are not fitted for certain specialized forms of training and upon the training of numbers greatly in excess of the social needs of the State. These practices and considerations should apply with special force to all forms of teacher training.

The survey commission has proposed that the schools of education in the university and the Oregon State College be placed upon the upper division or senior college level. This plan in itself will serve to exclude from teacher-training students who can not carry the broad general training so essential to those who are to guide the thoughts and form the characters of high-school students. Further, it will for two years provide the institutions with knowledge and records concerning the characters and abilities of all who may apply for admission to the teacher-training program from which it will be possible to determine those that give best promise of making the most useful public servants as teachers of high-school youth. In other words, from those who complete the first two years of college work it will be possible to select by means of scholarship records, achievement tests, and ability and personality measures, the students who will make satisfactory scholarship records in the teacher-training course and who possess the personal and social qualities that will make them most profitable objects for the investment of State money in training for public service as high-school teachers.

Organization of the schools of education upon the upper division level and use of selective measures to secure admission of only suitable future candidates for high-school teaching positions should (1) provide a means of adjusting the number admitted to the teacher-training course to the needs of the State; (2) furnish a human product that will raise the level of instruction in the public high schools; and

(3) prevent much waste of student time and energy in preparing for an occupation for which they are not fitted and in which they can never attain happiness.

At the present time the school of education at the university is organized upon the upper division level. The survey commission is informed that the school now sets up certain very definite selective conditions as prerequisite to registering for courses leading directly to teaching. Students must show a fairly high and well-defined minimum scholarship average. In doubtful cases, personality ratings and records of marked improvement during the preceding year are taken into account. These are excellent beginnings, but they are in part rendered ineffective by reason of certification provisions which permit students to teach in high school without ever having registered in the school of education and by reason of the fact that at the Oregon State College the school of vocational education is not upon the upper division level and may prepare students to secure certificates to teach in high school in the same subjects for which the university school of education prepares.

The survey commission proposes that both schools of education be placed upon the upper division level and that their fields be more clearly defined by regulation and enforced by strict certification requirements.

Summary of High-School Teacher-Training Program

Before proceeding to discussion of the State's program of teacher training in the elementary field it may be well to review briefly at this point the more important phases of the preceding discussion of high-school teacher-training. The conclusions reached and the recommendations made may be summarized as follows:

1. If in the immediate future the public higher institutions prepare 425 high-school teachers annually, they will meet the demands of the public schools of the State for such teachers and afford as large opportunity as can be reasonably expected to the youth of Oregon for placement as high-school teachers in out-of-State positions. This estimated number is subject to change as the result of continuous study by disinterested and competent authority, preferably by the State department of education.

2. Except in the fields of agriculture and industry, there is no shortage of high-school teachers in the State, and in the fields of arts and sciences there is an oversupply. Continuous study should determine probable annual demand for teachers of each of the high-school subjects.

3. Limitation of the number of high-school teachers trained to the approximate number demanded by the State should be secured:

(*a*) By definition of institutional training functions in accordance with the general principle that each institution should train

high-school teachers in the fields of upper division specialization recommended for the institutions in Chapter II.

(*b*) By State certification requirements which provide for certification by subjects and by groups of subjects within related areas corresponding to the general division of institutional functions recommended in Chapter II.

(*c*) By more highly selective measures of admission to high-school teacher-training courses conducted solely upon the upper division level.

Demand for Elementary Teachers

We may now turn to consideration of the State's program of training for elementary teachers. In many respects this discussion of necessity parallels the preceding discussion of the relationship between supply and demand, of duplication of offerings, of undesirable competition between the institutions, and of selective methods of admission. But the application of similar general principles to specific situations is so different in the high school and elementary fields of teacher training that repetition of statement found in this discussion may be confined largely to that required to recall the principles stated in connection with discussion of high-school teacher training.

Nature of Problem of Training Elementary Teachers

The largest and in some respects the most important element in a State's program of teacher preparation is that of preparing elementary teachers. There are more of them; nearly three-fourths of the teachers in Oregon are in the elementary schools. They continue as teachers for shorter periods. They come into close contact with and exercise their influence upon children during the most impressionable and formative period of childhood. Their scholarship does not need to be such as to command attention as does that of high-school or college teachers. They in part determine the characters and the future of practically every member of the State's citizenry. Every man and woman in the State has passed through all or part of the elementary-school system; their children will follow in their footsteps. The entire subsequent educational experience of the children of the State will be largely determined by the foundations laid by elementary-school teachers. The quality of the elementary educational service is undoubtedly the most important single factor influencing the future of the State.

It is easy to overlook the importance and magnitude of the task of providing elementary teachers worthy and able to meet this tremendous obligation. In Oregon a large proportion of them do their work in the little 1 or 2 room schools of the State cut off from ade-

quate supervision and helpful contacts. Their individual failures and their successes alike win neither praise nor blame. They are in the lowest scale of a too little honored profession. They and their efforts can be and are ignored to a degree that would not be possible if they were gathered together into large schools that by their very size commanded attention. It is very natural, therefore, that the importance of adequate training for this great army of workers at the roots of civilization should be forgotten or passed over lightly. The survey commission does not believe that the people of Oregon have provided for or received the sort of elementary teaching service that they would desire and be willing to pay for if they could realize vividly what has happened and is happening in the schools of their State as a result of their own failure to understand what neglect of elementary teacher training means.

Retarded Provision for Elementary Teacher Training in Oregon

It is worth while to emphasize the present retarded provision made for elementary teacher training in Oregon by the presentation of certain important facts and comparisons. In proportion to the need of the State for teachers there are more students enrolled in high-school training courses than for elementary teacher preparation. Reasons for this lack of balance are not far to seek. One has but to examine the living conditions and facilities provided the normal schools to understand at least one reason why the best students shun these institutions. Only by upbuilding the staffs, libraries, and general facilities of the normal schools, so as greatly to enhance their services and prestige, can these institutions secure due recognition and convince superior students of the advantages of entering the elementary teaching profession. The State's investment in improving the quality of elementary teaching is far below what in the best judgment of authorities in most of the States is desirable and necessary; it is far below what should be expected of Oregon. This applies not alone to the physical plants of the normal schools, but to the level of instruction provided. These two aspects of the State's investment in elementary teacher training may be viewed together from the standpoint of comparative financial statistics.

Emphasis Upon Different Aspects of Higher Education

In Table 6 data are presented that show the receipts of the public schools and higher institutions of Oregon, its neighboring States, and the United States as a whole. The figures afford an indication of relative emphasis upon the different phases of their general educational programs during the past six years. Special attention is directed to the relatively small proportion of outlay devoted to

teacher training for elementary grades in Oregon, as compared to the United States as a whole, and to neighboring States. Only two of the 42 States in the Union that maintained normal schools or teachers colleges in 1928 gave these institutions less money for their support than Oregon. These States were Montana and South Carolina, and even they are not far below Oregon, although Montana has not much over two-thirds the population of Oregon, and the teachers college in South Carolina is maintained for negroes only. Tiny Rhode Island, smaller than many of the counties of Oregon, and with approximately only two-fifths as many resident students enrolled in her single teacher-training institution, excelled Oregon in the support accorded.

The figures for 1928 are the latest available and do not include maintenance for a small normal school established at La Grande in 1929. However, the income of this institution is relatively so small that its addition still leaves Oregon very near the bottom of the list, even on the assumption that the other States of the Union have not increased their appropriations for elementary teacher training since 1928. As a matter of fact, such appropriations in other States have increased by large amounts.

TABLE 6.—*Receipts of public elementary and secondary schools, teachers colleges, and normal schools, and publicly controlled colleges and universities*[1]

States	1923–24			
	Total receipts	Receipts of public elementary and secondary schools	Receipts of publicly controlled universities and colleges	Receipts of normal and teachers colleges
United States	$2,160,705,885	$1,958,528,872	$153,228,195	$48,948,518
Oregon	21,243,436	18,134,252	2,974,843	134,341
Washington	34,097,607	29,970,690	3,347,616	779,301
Idaho	12,315,790	10,807,362	1,218,522	289,906
Montana	14,419,024	12,327,276	1,582,799	508,949
California	123,018,268	111,951,654	9,799,214	1,267,400

States	1925–26			
	Total receipts	Receipts of public elementary and secondary schools	Receipts of publicly controlled universities and colleges	Receipts of normal schools and teachers colleges
United States	$2,256,251,327	$2,171,844,699	$176,205,030	$64,693,494
Oregon	22,705,664	24,280,400	3,450,717	[2] 295,000
Washington	35,862,322	31,495,730	3,997,097	1,049,898
Idaho	11,122,806	10,364,981	1,708,428	351,194
Montana	13,280,066	12,657,097	1,384,526	281,698
California	151,217,259	142,135,349	12,705,344	1,544,573

[1] Biennial Surveys of Education, 1923–24, 1925–26, and 1927–28.
[2] Includes $125,000 for increase of plant.

TABLE 6.—*Receipts of public elementary and secondary schools, teachers, colleges, and normal schools, etc.*—Continued

States	1927–28			
	Total receipts	Receipts of public elementary and secondary schools	Receipts of publicly controlled universities and colleges	Receipts of normal schools and teachers colleges
United States	$2,603,411,509	$2,324,707,994	$208,686,527	$70,016,988
Oregon	29,358,058	25,040,193	3,963,925	353,940
Washington	36,255,085	29,738,124	4,840,552	1,676,389
Idaho	13,566,500	11,331,175	1,632,576	602,749
Montana	16,111,545	14,211,606	1,606,956	292,983
California	156,630,508	140,898,112	13,619,824	2,102,572

Value of Physical Plants

From the standpoint of the value of elementary teacher-training property, including buildings and grounds, Oregon's capital investment in 1930 does not compare favorably with the amount invested by the other States in 1928. Oregon is, upon the basis of these figures, fifth from the bottom, again with the doubtful distinction of surpassing Montana and South Carolina and, in addition, Arkansas, a State with very low per capita wealth and several auxiliary teacher-training agencies, and also New Mexico, with considerably less than half the population of Oregon and less than one-third its total State revenue receipts.

Standards of Training Compared with Other States

But the financial measure is not the only one by which Oregon fails to equal the standard of practice in the training of elementary teachers that prevails in a large number of States. It has provided but two years of training for elementary teachers and the standard for certification has been even less. Recently State officials have inaugurated a new and improved certification program which will result in 1931 in raising the minimum training of newly employed elementary teachers so that two years of training above high-school graduation will be required. This program of certification for elementary teachers is in advance of the provisions made by the State for the preparation of such teachers. Certification requirements represent minimums; the teacher-training institutions should have facilities beyond these minimums if they are to provide teachers for the better schools as well as for those that maintain only the lowest permissible standards of instruction. Already in Oregon the cities tend to demand three or even four years of training for elementary teachers in harmony with the accepted standard in many city and

some State school systems in other States. Thirty-five States maintain 4-year teachers colleges for the training of elementary teachers. Oregon has none.

The survey commission does not recommend the immediate lengthening of the period of normal-school training to four or even to three years. It believes that the 2-year normal schools should be brought to such a level of excellence that they may secure membership in the American Association of Teachers Colleges before the period of training is extended. Mere extension of the course over more time with present plants and facilities that are inadequate for a 2-year normal course does not seem wise. But extension of the period to three and ultimately four years is a development that will be necessary if Oregon is to keep pace with standards in other States. In the opinion of the survey commission this lengthening of the preparation of elementary teachers should contemplate the development of two years of senior college, professional, elementary teacher training based upon lower division or junior college education of general character. In other words, the plan should look forward to requiring at least two years of general education beyond high school as a condition of admission to the senior college course looking to the bachelor's degree in elementary education. Ultimately the 2-year normal course immediately following high school will disappear. Authorities are agreed that elementary teachers require more general education than is given at present. In the opinion of the survey commission the plan of limiting the work of the teacher-training institutions to the two years of a senior college of elementary education will enable the prospective teacher to acquire both general and professional education more economically and effectively than will the plan of diluting both over a period of four years.

Need for More Vigor and Larger Outlays

It is clear that Oregon has far to go in order to rank on equal terms with even the average of the States of the Union in respect to her support of the teacher-training agencies for elementary teachers. No small and niggardly program, but immediate and substantial outlays alone, will launch the type of program that Oregon must have to compensate for past delays and to advance to its rightful place among the States.

Differences Between High-School and Elementary Teacher Training

In considering the question of adjusting Oregon's high-school teacher-training program to Oregon's needs the most important fea-

tures of the problem could be dealt with from the standpoint of numbers and with reference to administrative devices to prevent expensive duplication of facilities; quality of instruction and the length of the period of training provided by the university and Oregon State College for prospective high-school teachers present few difficulties. The case is quite different with respect to Oregon's program of elementary teacher training; quality of preparation and the period of training are more important elements in adjusting supply to the needs of Oregon's schools than is the mere matter of numbers.

This difference is in part due, as has been pointed out, to the relative neglect of elementary teacher training facilities as compared with provision for the preparation of high-school teachers, but it is also due in part to the difference in the nature of the training that high-school and elementary teachers should receive. Training in subject-matter fields, history, English, chemistry, biology, etc., constitutes a very large element in the preparation of high-school teachers; indeed, until recently, it has been assumed that a student who knew his subject could teach in high school without any or with very little instruction in education. The university and the Oregon State College provide for purposes other than teaching very high-type training in the subject-matter fields; the prospective high-school teacher gives major emphasis to this aspect of preparation and quite frequently regards his work in how to teach the subjects as of secondary importance. The elementary teacher on the other hand has less classroom use for scholarly knowledge of subjects; the elementary teacher's most important equipment is that of familiarity with and ability to apply the laws of learning to children. In other words, the elementary teacher's task is one of molding the minds and characters of human beings during the period when they are least capable of making their own choices and directing their own mental activity. In many respects this task demands greater skill, a wider outlook, and more understanding than is required of teachers at any subsequent period in the school system. Preparation to perform this task is a very special and exacting process that can not be accomplished incidentally in the study of the subjects to be taught.

It is not the intention of the survey commission to imply that the high-school teacher does not need a high degree of knowledge of the laws of learning and of skill in applying them in the processes of instruction. Nor does it wish it to be inferred that the elementary teacher does not need a knowledge of subject matter and a degree of culture beyond the level represented by elementary school sub-

jects; a high degree of both are demanded of the elementary teacher if he is to maintain his own mental health and perform his out-of-school functions in the community in which he teaches. The point is that the preparation of elementary teachers is a difficult process of a highly special type and demands facilities, teachers, and selective processes of at least as high type, although of different character, as those required for the preparation of high-school teachers. These things Oregon has not as yet provided. Subsequent paragraphs will emphasize these matters to a larger degree than has been done in the discussion of high-school teacher training.

It was pointed out at the beginning of this chapter that in the judgment of the survey commission Oregon needs to prepare approximately 1,300 elementary teachers annually. How does this estimated need compare with the number supplied at present by the three normal schools at Monmouth, Ashland, and La Grande?

Under existing conditions of certification which permit elementary teachers to qualify by examination and by training for shorter periods than the two years provided by the normal schools the number of graduates from the normal schools affords very little measure of the actual supply; the number certificated under the various methods is a better index. Nevertheless, it will be helpful to examine the statistics of graduation as well as those concerning certification. Tables 7 and 8 present these facts.

Certification of Teachers Basis for Solution

The nature of the different types of teaching certificates granted all teachers in 1923–24 and in 1927–28 are shown in Table 7. Some significant tendencies during the 4-year period from 1924–1928 may be noted, such as the decrease in the number of certificates granted by examination and in one or two other unsatisfactory types of certificates.

TABLE 7.—*Number of 2-year normal school graduates in 1928–29 and the number teaching in 1930*

	Monmouth	Ashland	La Grande
Total number of graduates or students completing course	[1] 568	188	[2] 20
Number teaching in rural schools (centers of less than 2,500 population)	378	117	11
Number teaching in urban schools (population of 2,500 or more)	183	38	1
Total number teaching	561	155	12

[1] Does not include 103 graduates of 1-year course.
[2] La Grande was opened in 1929.

TABLE 8.—*Certification of teachers*[1]

Type of schools and year	Number of teachers employed	Number														
		By examination				By graduation from standard normal school			By graduation from standard college or university			Graduation from teacher-training course				
		1 year	5 years	Life	Primary	1 year	5 years	Life	1 year	5 years	Life	1 year	Special	Permits	City	Total number of certificate (all types)
Elementary																
1924–25	5,511	1,857	144	465	37	477	591	1,077	26	32	68	538	27	81	86	5,506
1927–28	5,833	1,344	112	256	35	762	929	1,594	30	29	104	375	42	40	81	5,833
High school																
1924–25	1,855	14	11	97	1	5	6	31	373	550	612	5	112	8	24	1,849
1927–28	2,107	6	3	84	1	2	11	23	377	721	758	.....	81	5	35	2,107
Total																
1924–25	7,366	1,871	155	562	38	482	597	1,119	399	582	680	543	139	89	110	7,366
1927–28	7,940	1,350	115	440	36	764	940	1,617	407	750	862	375	123	45	116	7,940

[1] Twenty-seventh and Twenty-eighth Biennial Reports of the Superintendent of Public Instruction of Oregon.

As shown by the foregoing table, there was an increase of 6 per cent in the total number of elementary teachers employed over the 4-year period and a gain of 53 per cent in the number of certificates granted by graduation from standard normal schools. This means a much larger proportion with training equal to the 2-year minimum that it is proposed to be applied in 1931.

The large number of life certificates held by elementary-school teachers in 1927–28, based on examination or two years of work only, should be a matter of serious concern to State authorities, especially since such certificates are now granted without strict provisions for continued improvement of the teachers in service. Two thousand and fifty-four, or more than one-third of the total number of elementary teachers, hold life certificates.

It is inevitable that Oregon will continue to raise the level of training of teachers. The survey commission strongly recommends that life certification be abandoned, or, if retained, that it be accompanied by strict conditions which insure retention of the certificates only through periodic and substantial acquisition of further training. No such certificates should be granted upon the basis of examination. The life certificate operates essentially as a contract between the State and the teachers. When granted for a low level

of training an unduly large number of teachers can and will be content to remain definitely below future standards. The State should not discount future progress. Life certificates should be granted only to those who have a high level of training, and provisions for improvement in service should be incorporated in such certificates, so that those to whom they are granted will be compelled to keep abreast of modern teaching methods and advancements in their profession. Otherwise the State will be seriously handicapped in the upbuilding of an adequately trained teaching body.

In connection with these figures it is instructive to examine the actual preparation received by the school teachers of the State. Table 9 presents these facts. Since this table does not distinguish between high school and elementary teachers it is impossible to determine accurately the training of elementary teachers, but since high-school teachers constitute by far the largest element that has received four years of college training, and since relatively few high-school teachers have less than this amount of preparation, the table affords a very good basis for general judgment.

TABLE 9.—*Preparation of teachers in 1924–25, 1925–26, 1926–27, and 1927–28*[1]

Number of years training	Number and per cent of teachers							
	1924–25		1925–26		1926–27		1927–28	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 4 years of high school	241	4.3	318	5.1	232	3.8	167	2.6
4 years of high school only	1,288	23.0	1,090	17.8	845	13.8	577	9.1
1 year of normal school or college	928	16.5	1,104	18.0	1,191	19.6	1,356	21.4
2 years of normal school or college	1,511	27.2	1,666	27.2	2,096	34.3	2,127	33.5
3 years of college or more than 2 years of normal school	444	8.0	722	11.8	445	7.2	595	9.4
4 years of college	1,176	21.0	1,217	20.1	1,297	21.3	1,506	24.0
Total	5,588	100.0	6,117	100.0	6,106	100.0	6,328	100.0
1 year graduate teacher training course (no certificate)	543	.....	495	.....	358	.....	375	.....

[1] Data adapted from Twenty-eighth Biennial Report of the Superintendent of Public Instruction of Oregon (1929).

Certification should apply to teachers, supervisors, principals, and superintendents. Adequate recognition should be given the certification of teachers for the different kinds of teaching positions in the public schools. "Blanket" certificates for any and all teaching positions should be discontinued. Certification for the teaching of the different levels of elementary-school teaching and for the different subjects of the high schools should follow a careful study of needs in this respect, but in any case should be set up primarily on the basis of professional training and specialization.

Certificates should be renewed chiefly on the basis of a definite period of successful teaching experience and the completion of a definite required amount of approved professional training. The lowest-grade certificates should be made nonrenewable when conditions of supply make this possible. Standards of certification should be advanced with the utmost rapidity permissible, as determined by the available conditions of supply of trained teachers.

Raising Levels of Training of Teachers in Service

The preparation of teachers to care for replacements and to fill newly created positions is not the only task of the teacher-training institutions. The raising of existing levels of preparation of teachers now in the service to an accepted minimum of training is a major responsibility. With the exception of teachers who may enter into service by the unfortunate expedient of examinations, most of the future new teachers of Oregon will enter upon service with at least two years of training above high school. The extent of the job to be done by the teacher-training institutions to raise the level of training of the existing teaching body of Oregon to the 2-year level may be gathered by an inspection of Table 9. From this table it may be seen that in 1928, approximately one-third of 6,328 teachers of Oregon for whom reports were received had less than two years' training above high school, one-third had about two years' training, and one-third had three or four years' training. The survivors in the future among the 2,100 underprepared teachers must be brought up one or two years in training to reach the minimum 2-year level. Of these, 744 teachers must be brought up two or more years, and 1,356 teachers must be brought up one year. Since by far the most of these teachers hold positions in the elementary schools, the task is a heavy one for the normal schools. Many underprepared teachers, of course, will drop out of teaching as standards advance; but there is at present a constant influx into teaching positions of teachers with less than two years of training who pass examinations for certificates.

Teacher preparation has not been finished when the relatively short period of institutional or preservice training is completed by the student. Inservice training is needed thereafter to supplement the invaluable lessons of experience. The desirability of extending the present public-school supervisory service to the young rural elementary teachers of the State is apparent. Only three counties have rural supervisors to aid the county superintendents. While some county superintendents have their offices so well organized and staffed that they can spend considerable time among their teachers, the task of detailed supervision is frequently too great for them. The average

county superintendent in Oregon has approximately 60 teachers under his jurisdiction. It is a matter of simple mathematics to show that he can usually give only the barest inspectorial service to his teachers, especially in some counties that are comparable in size to the smaller States of the Union.

The office of a State high-school supervisor or inspector now exists in more than four-fifths of the States of the Union. Oregon has none. The many small high schools of the State are especially in need of professional advice, assistance, and direction in respect to practices and standards. Per capita costs run very high in such schools, and assistance in the organization of the work will sometimes result in substantial economies. Greater effectiveness and better professional direction of secondary education should follow the establishment of such an office in the State department.

Proportion of Total Number Needed to be Trained by Each Normal School

Assuming that the commission is correct in its estimate that 1,300 new elementary teachers will be required annually, the question immediately arises as to the proportion of the total that each of the three normal schools should train.

Local Character of Student Body and Positions

The problem is not solved by dividing the number equally among the three schools. The State has very properly established normal schools at Ashland and La Grande in the sparsely settled southern and eastern portions of the State. The purpose was to afford convenient educational opportunities to the young people of these sections and to insure that the schools of the east and south should have an adequate supply of teachers. It is a well-established fact that all higher educational institutions draw the larger part of their student bodies from within a relatively narrow radius. This condition is accentuated in the attendance upon normal schools everywhere and is of special importance because it has been found that a very high percentage of normal-school graduates find employment within the immediate region of their training institution. Hence, localities remote from a teacher-training center either have to pay larger salaries than the communities near at hand or have to accept the less able and poorer teachers who can not find employment near home.

This has a direct bearing on the distribution of the proposed teacher quota among the normal schools in Oregon. The quota of each school should be in proportion to the number of teachers needed annually by the schools of their regions. This complicates the process of determining the distribution for we have no accurate statis-

ties concerning teacher needs by regions. However, we do have several bases for forming an estimate.

First, it is known that for the United States as a whole one elementary teacher is employed for each 184 population. If we determine the population of the three regions served primarily by the normal schools at Monmouth, La Grande, and Ashland, we shall have a rough means of estimating the number of teachers that would be employed, assuming schools of similar size and standard in the three regions. It is not necessary in making this estimate to divide the entire State into geographical sections with rigid assignment of territory to each normal school. A much more satisfactory method is to assign to each normal school the counties from which it draws the greatest number of students. This distribution is presented by Table 10, and by Figure 4 (page 14).

TABLE 10.—*Distribution of student enrollments in normal schools of Oregon by counties*

Name of county	Number of students attending			Name of county	Number of students attending		
	Monmouth	Ashland	La Grande		Monmouth	Ashland	La Grande
Baker		4	16	Lane	67	18	1
Benton	23	2		Lincoln	9	1	1
Clackamas	49	3	2	Linn		7	1
Clatsop	20			Malheur	2	2	10
Columbia	15	1		Marion	48	3	1
Coos	16	32		Morrow	6		6
Crook	1	4		Multnomah	157	8	4
Curry	1	4		Polk	127		
Deschutes	6	7		Sherman	4	1	2
Douglas	10	25		Tillamook	11	3	2
Gilliam	5		1	Umatilla	2	1	22
Grant	3			Union			74
Harney	1	3	3	Wallowa	1		14
Hood River	13	1	2	Wasco	10		5
Jackson	1	128		Washington	34		3
Jefferson	4			Wheeler	4		2
Josephine		14	1	Yamhill	22	3	1
Klamath		18					
Lake		6		Total	672	299	174

It will be seen that Monmouth draws 72 per cent of its student body from Clackamas, Lane, Marion, Multomah, Polk, and Washington Counties; Ashland 79 per cent from Coos, Douglas, Josephine, Jackson, Klamath, and Lane Counties; and La Grande 81 per cent from Baker, Malheur, Umatilla, Union, Wallowa, and Morrow Counties. The Monmouth region has a population of 546,406; the Ashland region 181,531; the La Grande region 82,703.

It is safe to assume that the students drawn from other counties and the teachers needed by them will not seriously disturb the proportions that may be derived from these figures. Simple reasoning suggests, therefore, that if each normal school supplies the teacher needs of its region, its proportion of the total teacher needs of the

State will correspond to the proportion that the population of its region bears to the total poulation of the three regions.

Upon this basis Monmouth will be called upon to supply 67 per cent of the 1,300 new teachers required annually, or 871 teachers; Ashland should supply 22 per cent, or 286 teachers; and La Grande 11 per cent, or 143 teachers.

Certain well-known conditions, which need not be described at this point, tend to make these results of doubtful application in the specific situation found in Oregon. It is necessary, therefore, to check these figures by other calculations.

Since the population is of different character and since conditions of living prevail in the eastern and southern counties served by La Grande and Ashland that are not found in the Monmouth area, it may be suspected that the number of children of school age (5–17) in these different regions will give us a different picture of the relative need for teachers. Unfortunately the figures are not available upon this age basis, but sufficiently accurate results may be obtained by using the school census age (5–20) for which figures are at hand. These figures show that in the Monmouth area there are 140,561 children enumerated, in the Ashland area 51,479, and in the La Grande area 24,835.

Again assuming elementary schools of similar size and standard in the three regions, these figures would give us, by using the same processes of reason and arithmetic applied in the case of estimate upon the basis of population, the following results: Monmouth might be expected to supply 65 per cent of the 1,300 teachers required annually, or 845 each year; Ashland 24 per cent, or 312; La Grande 11 per cent, or 143.

It will be noted that these percentages and figures do not vary much from the results obtained in the estimate upon the basis of population. Monmouth, according to the second method of figuring, would be responsible for providing 26 teachers less than it would provide if the first method of figuring is used; Ashland would supply 13 more; La Grande 13 more.

One other method of estimate may be used, that based upon the actual number of elementary teachers now employed in each of the three areas served by the normal schools. These figures show in the Monmouth area 2,618 teachers, in the Ashland area 1,297, and in the La Grande area 575. Distribution of annual supply upon this basis would make Monmouth responsible for 58 per cent of 1,300, or 754; Ashland responsible for 29 per cent, or 377; and La Grande for 13 per cent, or 169.

Attention is called to the wide difference between the figures obtained by this method and those obtained by the preceding methods of estimate. This method indicates that Monmouth would be called

upon to supply 91 less teachers annually than are indicated upon the basis of school census; Ashland 65 more; La Grande 26 more.

Since the third method of estimate is based upon the facts as they actually exist at present, it may be supposed that they nearly approximate the correct result. The question very naturally and properly arises as to the value of presenting the estimates upon the basis of population and school census. These estimates were made for the purpose of emphasizing the difference in teacher-training needs when it is assumed that elementary schools of similar size and standards exist throughout the State in contrast with the situation when actual conditions are used as a base. From Table 11 may be obtained a conception of the number of 1 and 2 teacher elementary schools distributed by counties as well as the number of teachers in other elementary schools.

TABLE 11.—*Number of 1 and 2 teacher elementary schools and larger schools, by counties, in Oregon*

Name of county	Number of 1-teacher elementary schools	Number of 2-teacher elementary schools	Number of teachers in larger-sized elementary schools	Total number of elementary teachers
Baker	45	7	48	107
Benton	36	7	60	110
Clackamas	64	30	159	283
Clatsop	16	11	89	127
Columbia	24	12	99	147
Coos	37	14	162	227
Crook				31
Curry	10	3	18	34
Deschutes	14	3	81	101
Douglas	81	14	55	164
Gilliam	28	5	12	50
Grant	42	2	20	66
Harney	36	0	16	52
Hood River	2	3	50	58
Jackson	38	13	132	196
Jefferson	22	2	4	30
Josephine	33	10	25	78
Klamath				179
Lake	9	4	28	45
Lane	102	37	277	453
Lincoln				84
Linn	99	12	71	194
Malheur	31	14	42	101
Marion	68	31	175	305
Morrow	23	4	24	55
Multnomah	12	8	1,232	1,260
Polk	46	12	60	130
Sherman	14	0	19	33
Tillamook	26	6	44	82
Umatilla	51	11	81	154
Union	41	3	88	135
Wallowa	49	3	38	93
Wasco	37	8	47	100
Washington	67	20	80	167
Wheeler	21	2	13	36
Yamhill	67	19	74	179
Total	1,291	330	3,717	5,668

As is evident from an analysis of this table, the greater number of one and two teacher schools and the smallest number of larger sized elementary schools are found in the sparsely populated counties of the State. In the counties with a high density of population, less

one and two teacher schools are operated while a greater proportion of larger sized school units have been established. The counties served by the Monmouth Normal School have 357 one and two teacher schools as compared with 1,706 other types of larger size. In the counties comprising the Ashland Normal School area, there are 425 one and two teacher schools while the larger sized schools total 699, a greatly reduced proportion. Counties making up the La Grande Normal School section have an almost equal number of both types of school units, there being 326 one and two teacher schools and 326 larger schools.

Increased Teacher-Training Expense From Small-School Units

In the southern and eastern parts of Oregon are likewise more teachers per 1,000 of population and more teachers per 100 children of school census age than are found in the region where larger schools and higher standards are more generally the rule. This means an increased teacher-training expense to the State. This expense can be equalized in part by consolidation of schools in the south and the east wherever savings would result or by providing the south and east with teachers upon whose preparation less money is spent than is the case in the Willamette Valley.

It is not the function of this survey commission to present plans for public-school consolidation. The quality of teachers that the normal schools should provide does, however, come within its purview. The program recommended by the commission is based upon the conviction that the State does not wish to discriminate against the people and children of the south and east by providing them with more cheaply and less well-trained elementary teachers than are furnished to the remainder of the State. Therefore, although for the immediate future it may be expected that Ashland and La Grande may be called upon to supply a larger proportion of teachers per 1,000 of population and per 100 children of school census age than will be supplied by Monmouth, the survey commission believes that in these areas considerable reduction of the demands upon the normal schools may be brought about by consolidation of existing schools, which will raise the standards of elementary schools without material increase in total school costs. The survey commission accepts for the moment, therefore, the estimate of distribution of the State's total elementary teacher needs derived from present elementary teaching positions in the areas served by the several schools. It expects that these estimates for La Grande and Ashland will be reduced in the future as economical consolidations of schools are effected, provided unforeseen increases in population in these regions do not counteract the effects of consolidation.

Short Tenure Increases Expense of Training in Southern and Eastern Oregon

However, one other factor must be considered before accepting these figures as a tentative basis for assignment of responsibility for annual supply of teachers to the three schools. Of the one thousand six hundred and twenty-one 1 and 2 teacher elementary schools in the areas of the three normal schools 809 are located in the areas served by the Ashland and La Grande normal schools. It is well known that teacher tenure is shorter and turnover more rapid in sparsely settled areas where small schools are the rule than in the more densely populated regions. Tenure is likely to be longer even in the smaller schools of thickly settled sections than it is in schools of the same size in the remoter parts of a State; access to the outside is easier, promotion to larger schools more probable, salaries tend to be higher, and the schools themselves are frequently more attractive.

The better teachers who serve an apprenticeship in the larger schools of the sparsely settled portions of the south and east tend to move to the still larger schools of the northwest. Their positions are to a considerable extent filled by teachers who have been successful in the smaller local schools, hence the number of vacancies in small school positions in the south and east tends to be increased by the movement of experienced teachers to the northwest.

These conditions make it evident that some adjustment should be made in our estimate of the demand upon the three normal schools to provide a somewhat larger quota for the southern and eastern schools and a correspondingly smaller quota for the school at Monmouth.

We have very slight statistical basis for such an adjustment pending continuous collection and interpretation of accurate data by a central State agency. However, of somewhat more value than pure guesswork is an estimate that may be made upon the basis of the unsatisfactory data at our disposal. It will be recalled that the estimate that 1,300 new elementary teachers will be needed annually by Oregon is derived from averaging the maximum and minimum results proposed by the two extreme ratios for new positions to total number of positions which scholarly studies in other States have suggested. These ratios are 1 : 4 and 1 : 5; the figures for Oregon derived from their use are 1,150 and 1,450. If it be assumed that the larger ratio 1 : 4 applies to the south and east and the smaller ratio 1 : 5 to the territory served by Monmouth, a tentative adjustment of our figures is possible within the proposed total of 1,300.

It is, therefore, proposed tentatively that to Monmouth be assigned the task of preparing 741 teachers annually, to Ashland 384, and to La Grande 175.

Selective Admission to Teacher-Training Institutions

The selective admission of young people to the normal schools is a matter for serious consideration. Some definite action has already been taken, but no uniform practice applicable to all the institutions of the State has yet been adopted.

At the Eastern State Normal School, which has been in operation only since 1929, the results of achievement tests in basic subjects are being secured, and the specific personal qualifications of students are being studied with a view to utilizing the results in excluding unqualified students from work in student teaching. At Ashland and Monmouth students must make a minimum average scholarship mark in all subjects the first year in order to enter student teaching.

A much more vigorous policy of selective admission not only to student teaching but also to the normal schools themselves is entirely feasible and should be enforced, gradually at first but with increasing pressure. The first step that should be taken is the strengthening of admission requirements. While a list of "standard" high schools is used by the institutions, nearly half of these high schools have enrollments of less than 50. Since there is no State high-school inspector or supervisor, inevitably many of these extremely small schools with limited plants, faculties, and equipment must turn out some graduates who are below reasonable standards of attainment for college entrance.

The admission requirements of some of the institutions are still rather flexible; for instance, Monmouth and Ashland occasionally allow entrance credit for experience in teaching. This practice is unnecessary and is not in keeping with the standards of the American Association of Teachers Colleges. It is entirely possible that some old, experienced teachers with little high-school training may be found who are better teachers than some of the young high-school graduates, but the older teachers should be admitted as special students and required to make up entrance credits before graduation. It does not follow that they should receive high-school credit for work they have never done. At the very least, achievement, intelligence, and other tests should be employed and the results utilized in an impartial and effective way to bar unpromising material from training.

There is every reason to believe that the normal schools have not in the past received their due share of the best material in the Oregon high-school graduating classes. They have taken little or no part in the vigorous and extensive contacts made with high-school pupils that have characterized the activities of the other higher institutions of the State. Such contacts have not always been made with a view to recruiting for State requirements, but

rather for the purpose of forwarding the programs of individual institutions. If the true needs of the State were considered, the normal schools and consequently the State would profit by securing better teachers for the future citizens of Oregon. It is as important for the State to receive good teachers from its institutions as successful workers in other fields.

Ambitious and able young people quite naturally are prone to consider the large colleges and universities as affording the best educational opportunities. This is especially true when it is commonly known that in plant, equipment, and other respects the normal schools do not compare favorably with the other State institutions. More attention to the needs of the normal schools should result in a better quality of human material entering them.

Undue leniency was reported by some members of the faculty in one of the normal schools in respect to the retention of students obviously below satisfactory standards of scholarship. Regardless of the accuracy of these reports, it is undoubtedly true that a high standard of scholarship affords an excellent means of eliminating considerable undesirable material for training. Often satisfactory teachers have only ordinary scholastic ability, but there is little doubt that normal schools receive a larger proportion than do other institutions of students who somehow got through high school but who are unfitted for the ordinary types of normal school or college work and for teaching. When there is ample qualified material available for training for teaching positions, there is not an excuse for admitting or retaining decidedly inferior material. No credit is due the teacher-training institutions for holding a high percentage of inferior students through the entire course. Special schools with special offerings might do this, but in the normal schools "success" in passing students too often indicates slack standards of scholarship.

In summary, then, the present conditions of teacher supply justify immediately more effort on the part of the teacher-training institutions, the State department, the State board of higher education, and public-school authorities to secure a larger proportion of the abler high-school graduates for entrance to teacher training; more careful inspection and supervision of the high schools in which graduates receive their training; strengthened formal admission requirements; the increased adoption and enforcement of selective measures; and more exacting scholarship and personality requirements for graduation. Such requirements are needed in some institutions more than in others, but with minor exceptions they should be much the same in all institutions where teachers are trained for positions in the schools of the State. Only in this way can Oregon safeguard the supply of its teachers and forestall the almost in-

evitable lowering of standards. These matters should be dealt with vigorously and practically by the educational council suggested by a preceding paragraph of this report.

Observation and Practice Work in the Teacher-Training Institutions

Importance of this element of training.—The most characteristic and fundamental element of the work of professional teacher-training institutions is observation and practice teaching. This work provides the laboratory and practical application of theoretical and abstract principles obtained in the academic classroom. It provides the most important means of testing and improving the ability of students to perform their teaching duties under the conditions that will have to be met when they actually enter the public-school system. Observation and practice work under the competent direction of members of the teacher-training staff serves economically to correct and prevent errors and faults of teaching that, after the students are scattered throughout the State in teaching positions, could be rectified only by a system of supervision more extensive and costly than could be undertaken by any but the most wealthy communities.

Limitation upon number trained.—The observation and practice facilities available to a teacher-training institution constitute the most important limiting factor in the number of teachers that can be prepared by the institution. Under modern conditions of training and certification to teach, practice work must conform to certain standards and amounts. The maximum number of teachers that can be trained by a single institution is limited, therefore, by the number of children and schools in the local community that can be made available for student teaching under conditions of supervision and direction that the accepted standards for such courses require.

Character and control of practice schools.—The observation and practice work of teacher-training institutions requires that they have available schools for the purpose that are of the same general character as those in which the prospective teachers will be employed when their training is completed. In general, two methods are used by teacher-training institutions to secure practice facilities—they own and conduct their own practice schools upon or near the campuses, and they utilize the public schools of the local community in accordance with agreements made with the local school authorities.

Use of both types of training schools is most advantageous. Experience has shown that practice work for student teachers can not be properly and effectively organized and managed unless the teacher-training institution has a practice school near it and completely under its control. Student teachers and the faculty members

of the teacher-training institution must be able to reach the practice schools without undue waste of time. It is essential that the character of regular room teachers be determined and that the schedules and nature of the work carried on by room teachers, by student teachers, and by the faculty members of the teacher-training institutions be coordinated under single control. This means that the teacher-training institution should own at least one training school and exercise control over it without division of authority with local school agencies.

Local schools may be used to supplement the observation and practice work carried on in the institution's own training school and thus make available more economical facilities for certain aspects of student-teacher practice that do not of necessity need to be done under the conditions that should prevail in the institution's own training school.

These considerations make it essential that the observation and practice facilities and work of the Oregon teacher-training institutions be examined in some detail. This examination will afford opportunity to present and discuss certain principles and practices that are related to but not immediately referred to in the preceding paragraphs.

The university does not have complete control over any of the schools used for practice except the university high school. An arrangement made with the city of Eugene provides for the use of Roosevelt Junior High School for trainees interested in teaching the academic subjects in a reorganized junior high school. Terms of the agreement give the university the power to appoint, with the approval of city authorities, the school's supervisors. These supervisors are under university control and are responsible to it for the student-teaching programs. Relationships, however, in this and other matters are not clearly defined and are not wholly satisfactory. The principal is subsidized by the university and acts as general supervisor subordinate to the university's director of supervision.

Organization of student teaching.—The dean of the university school of education is responsible for the coordination, in so far as possible, of the observation and student-teaching program with the college work of the institution as a whole. Course offerings in all education subjects, but not in the academic subjects, are under his general oversight. The organization lacks concentrated authority. In the future steps should be taken to secure greater centralization of control of all student-teaching activities. Closer coordination of methods courses for academic subjects with the work of the heads of departments of the university high school should be secured, although a fairly satisfactory spirit of cooperation exists at present. The institution is working out an administrative plan of organization

that will definitely coordinate all educational-training activities under the director of supervision and the dean of the school of education. The ideal has not yet been reached, but with full cooperation satisfactory results should be attained.

A general enrichment of offerings in the university high school is also needed. At present the curriculum is too strongly imbued with the spirit of the traditional high-school offerings of 20 years ago. The modern high school trains young people for all walks of life and not for college entrance only. For example, the university high school should, in simple justice to the girls from the city who attend the school and quite without reference to student-teaching practice, offer work in home economics comparable to that in almost any good high school for girls. The high-school curriculum should be liberalized by the addition of other subjects and by less emphasis upon college preparatory purposes. Prospective teachers engaged in practice would then be able through practical demonstration to realize more fully the objective and purposes of progressive secondary schools, such as they will be called upon to build up in Oregon.

Oregon State Agricultural College.—Corvallis High School is Oregon State Agricultural College's chief unit for observation or practice in vocational education, physical education for women, commercial education, and industrial arts. No facilities are provided for practice in health and physical education for men, public-school music, and other subjects.

Corvallis High School is a public urban senior and junior high school. Smith-Hughes vocational high-school classes are utilized for observation and practice. There is joint control by the institution and public-school authorities. No opportunity exists for practice in teaching combinations of subjects for small high schools, and only recently was practice in physical education of girls inaugurated.

Numerous difficulties often arise when a teacher-training institution must depend wholly upon local public-school authorities for student-teaching facilities. In the practice school and practice classes at Corvallis, conditions in student teaching are not wholly satisfactory on this account. Some of the difficulties encountered include poorly arranged classrooms and lack of special quarters that may be utilized when needed, such as offices for the training-school staff, library, study rooms, conference rooms, assembly room and gymnasium, and demonstration facilities. Supplies and equipment for practice are also sometimes inadequate.

It is clear that any institution otherwise as well provided as Corvallis for a first-class educational program should be better supplied with the facilities necessary to carry through a satisfactory program

of student teaching for the benefit of the large number of students annually trained by the institution for service in the schools of Oregon.

At Corvallis a campus training school is probably the outstanding need which will become more pressing with the expansion of teacher-training offerings contemplated by the general assignment of functions to the institution recommended in Chapter II. Further, no large program of graduate work in the field of education can be undertaken without school facilities for demonstration, experimental and research purposes.

Present control by the institution over the Corvallis Public High School is decidedly inadequate. Local changes of policy in the public schools should not handicap a great institution in its essential work. A program of apprentice teaching in outlying Smith-Hughes high schools for vocational practice work is possible but in the long run a good local campus school will be most practicable and will prove most satisfactory.

In addition, there is too little coordination of the student teaching activities of the institution. Each department to a large extent conducts its own practice work independently of the other departments. All such work should be concentrated under the immediate authority of a director of training or equivalent officer responsible to the dean of education. Such an organization would result in higher standards of training, in economy of effort, and in the upbuilding and maintenance of happier relationships with local public-school authorities, and more effective results from the actual work of student teaching.

Oregon Normal School.—At Monmouth observation and student teaching were conducted at the time of the survey in six public schools—Monmouth, Independence, Valsetz, Rickreall, Greenwood, and Oak Point. Typically these schools are organized as elementary schools. Monmouth and Valsetz are utilized also for training teachers of upper or junior high school grades. As already pointed out, while beginnings have been made at Monmouth toward the establishment of junior high school teacher training, no genuine, standardized program has been worked out.

The schools at Oak Point and Greenwood are used for strictly rural school teacher training. All of the six schools, however, are in the centers of less than 2,500 population, and in this respect at least may be classed as rural schools. While all these public schools are under the joint jurisdiction of the institution and the public-school boards, a high degree of control is actually centered in the director of training, who has two assistants with administrative functions, in addition to a well-qualified supervisory staff.

In general, the facilities utilized for observation and student teaching at Monmouth are satisfactory except in the case of a training-school library and special study and conference rooms.

The director of training and his assistants are responsible for the conduct of the work of observation and supervised teaching. His responsibilities comprise the execution of the program as a whole, including the supervision of student teaching, maintenance of contact with various communities, coordination of training activities with the academic side of instruction, and similar functions. The assistant director of training has charge of test programs, diagnostic, and remedial work. In addition he exercises immediate general supervision over the elementary group of student teachers. A second assistant director of training is vested with control over personnel work, faculty, pupils, interpretation of the latest research for teachers, and the promotion of higher scholastic standards of the staff in service. He is the acting principal of the training center located at Independence.

Organization of student-teaching facilities and staff.—The officials responsible for the coordination of the observation and student-teaching program with the college work of the institution are the director of training and the methods teachers. The director of training, however, does not have oversight over all the course offerings in either education or academic subject matter. His chief work is the direction of the student-teaching program.

The professional rural-school courses for student teachers are conducted independently of the control of the director of practice for the institution as a whole. This is poor administrative procedure. To divorce one element of student teaching from the remainder of the program is unjustifiable, and a consolidation should be effected at once. The present director of training is well qualified in this field of work and thoroughly sympathetic with a program of rural education. He should be put definitely and unmistakably in charge of the practice work in rural education. All necessary authority should be conferred upon him commensurate with such responsibility.

Too great a degree of separation exists between the department of education and the practice unit. Student teaching is a professional course. The work should be conducted in close cooperation with the other professional courses of the institution. In order to rectify existing conditions, plans for a closer administrative and professional functioning of these two separated units should be put into effect.

Southern Oregon Normal School.—At Ashland, training facilities are provided chiefly through the Lincoln School, a public elementary school of six grades. The building was constructed by the city of

Ashland, but was planned for practice purposes under the direction of the president of the normal school and the State contributed funds necessary for the addition of two or three practice rooms to each regular classroom and other facilities of a minor nature.

This school has reasonably satisfactory playground space, but has no auditorium, assembly room, or gymnasium. An outdoor play shed only is provided. The halls of the building are utilized by student teachers for conferences and study, for assemblages of any large gatherings of children and for other activities of the training program. Room teachers or critics have no office space for conferences and other purposes. A very small and totally inadequate room is provided for a central collection of books. Although a nucleus of perhaps 1,500 books for children is maintained at the main library of the normal school some distance away, their use by training school children is naturally very slight. Room supervisors have fair collections of books in their regular classrooms, but a collection for the use of the school as a whole is desirable.

There should be constructed at once a large special room that could be utilized by the entire school for assembly purposes and for physical training. In addition to this large special room, a library or reading room should be provided of sufficient size to accommodate the pupils of the school. Additional quarters for the use of student teachers for conference purposes and for the preparation of their work should be furnished. Office space for room supervisors could well be provided and utilized in part for holding necessary conferences.

Additional construction and consequent changes in existing room utilization should afford space for the housing of the juvenile library now located at the main building of the normal school, the existing collection of books at the training school, and future additions. The shelf room now occupied by the juvenile library at the main building is badly needed by the main library.

In some teacher-training institutions of other States, the local communities provide the necessary plants and plant facilities for student teaching. In other instances, such provisions are made by the normal schools. In still others, public-school authorities and the teacher-training institutions cooperate in providing for such needs. The responsibility may equitably be shared alike by the State and the local community. Probably the expansion of the special plant facilities at Lincoln now so badly needed could best be provided by State and city cooperation. Both the normal school and the public-school programs would be decidedly advanced by the adoption of such a plan.

The control exercised by the normal school over the elementary training school is satisfactory. The city of Ashland has been very cooperative. An attitude of encouragement and support is manifested toward the work of the student teachers and supervisors. Normal-school authorities select the teachers and control the course of study in the elementary school. A written agreement between the normal-school authorities and the public-school board extending over a period of 10 years has been consummated which has resulted in satisfactory arrangements for student teaching.

Conditions in and relations with the city junior high school at Ashland, which is also used for practice purposes, are not so satisfactory. This school is not under the immediate control of normal-school officers nor is any satisfactory control exercised over them by the institution.

Ashland, like the other normal schools, trains teachers for upper grades. Such teachers are usually employed in rural schools. Quite frequently a given teacher in a rural school will teach not only the upper grades, in which there are usually small enrollments, but also the intermediate grades, and, in the case of 1-teacher schools, even primary grades. In order to meet this situation the program of observation and student teaching at Ashland is unique in respect to the large number of grades and subjects in which each prospective teacher is given practice. Most trainees secure experience in the teaching of primary, intermediate, and upper or junior high school grades. Almost all of them receive experience in at least two of these groups. In order to accomplish this objective a certain amount of rotation of student teaching is essential through the different grades. While opportunity is given trainees to do considerable teaching in one group, a very substantial amount of work must be done with the idea of extensive rather than intensive practice. The chief reason for this arrangement is that most of the graduates must teach in rural schools and that they should have practice in as many grades and subjects as is practicable. Most of the graduates secure positions in rural schools, where they are compelled to teach a variety of subjects. This situation is more pronounced in southern Oregon than in the typical normal-school district in other States.

Opposed to the plan used at Ashland is that which provides differentiated curricula, hence specialization in practice work for the primary grades and for each of the grades beyond. While it is true that a considerable number of teachers, especially for the first year or two, teach grades extending through more than one of such groups, there are many schools in Oregon that use teachers whose whole time is given to only one or two of the elementary grades. For this plan it is argued that a limited normal-school course of two years requires

much intensive work in specific grades, that placement of teachers may be done more intelligently when they are trained for specific positions, and that the program of training is more to the point and less likely to be vague and confused as to objectives. On the other hand, it is contended by adherents of the plan used at Ashland that there is a decided advantage even for the teacher of a single grade in being familiar with the problems, methods, and content of the grades that precede and follow.

No two normal schools in the State have adopted the same methods of training teachers for 1-teacher schools. The Ashland plan is one not followed elsewhere in the State in the same way. If there is merit in the Ashland system, its desirable features should be incorporated in the programs of Monmouth and La Grande. The present uncoordinated methods of procedure with reference to this most important element of teacher training emphasize the need for the State educational council already proposed, that could bring together the instructors and authorities of all the teacher-training institutions of the State for the purpose of reconciling the various elements in the training program. Great divergency and actual contradiction of theory and principle exist at present.

Eastern Oregon Normal School.—For student teaching La Grande utilizes the Ackerman Training School, housed in classrooms located in the normal school's single building. In addition, three city public schools are available for this purpose. Of these, one, Central School, is utilized for observation only. This school, as well as the other two, are organized upon the usual 8-grade basis. There is some departmentalization by subjects in the upper grades, but reorganized junior high school work is not carried on. The Ackerman training unit in the normal-school building consists of only the first, third, fourth, and sixth grades, and has an enrollment of 30 to each grade except the fourth, which has 22. The public schools have enrollments of approximately 400 children each, most of whom may be utilized for a certain amount of practice by observers and student teachers. Thus, an adequate potential supply of practice pupils appears at hand.

The three public schools are controlled directly by the city school superintendent, who participates to a limited extent in the administrative control of the Ackerman Training School in the main building. This latter arrangement is unusual and unnecessary. The institution conducts student teaching under a written agreement with public-school authorities, which, however, is so worded that these authorities, if so disposed, could seriously handicap the development of normal-school training activities in the public schools. It is essential in La Grande that public-school authorities be generous in

their cooperation if the institution which they were recently so happy to welcome is to grow in efficiency and scope of service. The divided authority in the administration of the schools used for practice may easily become, under the present agreement, a source of discord and a serious handicap to the institution. It is unfortunate that a more carefully worded agreement could not have been made at the time of the establishment of the normal school. This is unimportant, however, if the city authorities see their way clear to observe the spirit as well as the letter of the agreement. During the first year of the existence of the normal school, cooperation on the part of city school authorities has been satisfactory. The general attitude on the part of cooperating public-school teachers as well as the parents and children of the city has also been favorable. Nevertheless, it is highly important that the normal school be furnished immediately with a separate training school of eight grades under its own control. The mixture of grade children and college classes in the same building is a handicap to both.

Two officials are responsible for the supervision of the work of observation or student teaching at La Grande. One is the director of the training school, who has general control of the work of supervising teachers and who has immediate direction of student teaching in intermediate grades. The other is the supervisor of primary education, who has control of the work for the primary grades. Supervising teachers are regular members of the faculty of the normal school. The methodology and procedure employed in the practice work, as observed by the survey staff, are up to date and in keeping with modern practice. Many difficult problems of necessity arise in the establishment of a training program during a normal school's first year of existence. At La Grande adjustments have been made with dispatch and good judgment.

State authorities must keep in mind the fact that this institution was started without many of the essentials of plant and equipment necessary for the successful inauguration of a complete teacher-training program. There exist many such deficiencies that might well have been met before the institution was opened. A normal school with only one building is handicapped immensely in providing housing space necessary for its varied services. With no specially designed campus training school, no dormitory for girls, no health unit, no well-planned playground and health equipment, the observation and practice work must necessarily be conditioned by the urgent needs of the institution as a whole.

Training-school staff.—A separate section of this report deals with problems of staff personnel. Mention here may be made, however, of the wide discrepancy between the salaries of critics and supervisors,

and the regular members of the institutional faculties. Except in the institutions where regular subject matter or education classroom teachers are also in charge of the work of the student teachers, salaries are in most cases considerably higher for the regular classroom teachers than for the supervisors and teachers in the training schools.

The tendency in progressive teacher-training institutions is toward equalizing the salaries of training school staff personnel, and regular institutional classroom teachers. It should be said that this ideal has not yet been reached in many normal schools, but the Oregon institutions can well set as a goal this standard, which is one that is definitely recommended by the American Association of Teachers Colleges.

Relations of Teacher Training to Office of State Superintendent of Public Instruction

Since the teacher-training functions of the higher educational institutions are so directly connected with the public schools, it is appropriate that the survey commission indicate at this point certain developments in the State's chief public-school office that have direct and indirect bearing on the coordination of Oregon's teacher-training program.

Specific suggestions have already been made with reference to certification as a means of maintaining desirable standards in the preparation of teachers and as a means of controlling the supply of teachers to be trained. The relations between the State department of education, the public schools, and the teacher-training institutions, are so inextricably interwoven in the better States that their consideration as isolated units is artificial. What affects one affects the other two; progress or retardation of any of these three aspects of a single system is helpful or harmful to the others.

It has already been pointed out that the apparent oversupply of applicants for teaching positions in Oregon is not due in any subject matter field or upon any level of the State's school system to a surplus of teachers trained to a standard that the schools need and which Oregon may well demand. It is an oversupply of teachers who are able to meet certification requirements, the standards for which are at present too low and too flexible. The so-called surplus of teachers will rapidly disappear as certification requirements are strengthened and made more rigid.

The State is under obligation to continue a progressively advancing program that will relieve the better teachers of hurtful competition with undertrained and inadequately qualified young people who apply for jobs after finishing a minimum of preparation. Who shall be responsible for assembling and interpreting the facts upon which

the rate of this progress should be based by which the programs of the teacher-training institutions should be directed, and under which the conditions of public-school operation should be determined? Who shall control teacher certification in the interests of the schools and the institutions and hence in the interests of the State as a whole? In the opinion of the survey commission, these responsibilities can be exercised and these desirable ends attained only through the development of a State department of education with enlarged facilities and powers under the direction of a professional, nonpolitical State superintendent of public instruction.

If the State department of public instruction is to function as it should, in order to insure well-trained teachers for the public schools and well-trained students for the higher institutions, its powers and facilities will have to be considerably extended. At present no official other than a certification clerk is provided in the State department of education for the oversight and coordination of teacher training. The State superintendent and other officers, when they are able to take time from their other major duties, offer such assistance as is possible. Officials in certain teacher-training institutions, public-school officers, and others render aid to some extent in research on certain certification and other problems of primary interest to the State department. This assistance is desultory and uncoordinated.

The present service and personnel of the State department of education could well be expanded to include professionally trained staff members whose duties should, among others, include the supervision and inspection of high and elementary schools, the continuous collection, compilation, and dissemination of detailed information concerning the status and needs of the public schools and the further development of the present system of certification. Qualified staff members should make thorough and continuous study of the present status and present and future needs of teacher training in the State. The exercise of such functions will necessitate the appointment of a trained high-school supervisor, an officer with similar functions for elementary and rural schools, a director of educational research, and a professionally trained director of teacher training and certification.

The State superintendent of public instruction should have authority within broadly defined limits to adjust certification requirements to the needs of the State.

The survey commission is convinced that the general supervision of professional activities of the kind proposed and the exercise of the extensive powers implied require that the State superintendent of public instruction be an officer qualified by professional experience and education and who is not dependent for his appointment upon political favor either as exercised through the appointive power of

State officials or as secured through the art of winning public votes. Many other progressive States have removed their chief school officer from the jousting ground of party politics and placed his employment upon a professional basis in the hands of nonpartisan boards of education.

The survey commission recommends that Oregon adopt the same standard and procedure in order to insure disinterested and progressive leadership in finding scientific solutions for many of its problems of education.

The intimate connections of the normal schools, of the university and of the State college with the public schools of the State have already been sufficiently emphasized. Under desirable and more vigorous educational leadership by the State department of education these relationships will become more apparent; it depends upon the State whether they shall result in bickerings, jealousies, contests, and incoordination or shall provide the basis for harmonious and well-balanced development. The State has witnessed the results of incoordination between two of its higher institutions. It now has three normal schools which present possibilities of developing undesirable rivalries with each other and with the university and the State college. The public schools suffer from the effects of institutional aggrandizement and therefore, in turn, serve as a poorer source for the students that the higher institutions receive. To place the normal schools under one control, the university and the Oregon State College under another, and the public schools under still a third leadership accentuates and increases the inharmonies that tend to develop even under the best forms of organization. The State has attempted to bring about coordination among its five higher institutions by placing them under the control of a single board of higher education. The survey commission believes that this was a wise and effective step in the right direction. It believes also, however, that the full benefits of this method of coordination will not be secured to the public schools and to the State until the State chief public educational office is coordinated with the higher educational agencies of the State by bringing all educational activities under common control.

The State superintendent of public instruction should then be appointed by and report to the State board of education. His functions would be those of executive officer of the board in the administration of the State department of public instruction.

Miscellaneous Technical Points

Several matters that could not be discussed without unduly interrupting the thread of the presentation so far need brief attention.

These will be treated in succession with no attempt to relate them to each other or to the subjects that have already been discussed.

The need is evident for further cooperative study on the part of the institutions of Oregon of minimum requirements in education in both 4 and 2 year curricula. Both minimum and maximum requirements, as well as possibilities of election in all fields, should be defined more accurately. While norms should be so established as to leave abundant opportunity for flexibility of requirements among the different curricula, they should at the same time reflect the influence of much more professional thought in respect to the curricula than at present is evident.

Relation of Academic and Technical Subjects to Educational Subjects

Another problem of teacher preparation is the unification of the work in academic or technical subjects and professional education so that in the end prospective teachers may secure the proper balance and selection of subject matter that will equip them to the fullest possible extent for their duties as elementary or high-school teachers or administrators.

In none of the five institutions is the observation and practice work, which is the most characteristic and fundamental element of the professional-education offerings, utilized to the fullest advantage by all the teachers of academic subjects. Instructors of courses in professional education may also be found who rarely visit the training school. More clearly defined administrative organization of all practice work would tend to remedy this situation somewhat. There should be less neglect of the translation of the facts, principles, and theories advanced in the subject matter and professional classrooms into actual practice. Efforts to overcome these weaknesses should be continued with vigor by administrative authorities in every institution in the State.

A state-wide curricular revision program for the teacher-training institutions of Oregon would be an excellent project for the State department of education to initiate and foster when properly staffed and given adequate powers. Excellent examples of possibilities in cooperative teacher-training curricular revision have been afforded in West Virginia, Pennsylvania, and other States. Such a state-wide program would involve the active cooperation of staff members of all of the institutions that train teachers, through central committee and subcommittee work in the several subject-matter fields, conferences, and by other means. Outside qualified experts could help. Each institution should then adhere to the findings made. The curricular revision program should be repeated from time to time according to needs.

This state-wide program could well undertake such studies as the actual job of the teachers in the public schools in respect to local needs, combination of subjects taught, and so on. The subjects that will best prepare the teacher could be stated, uniform terminology adopted, and the minimum requirements in each subject or course specifically stated.

Training of Atlethic Coaches

The training of athletic coaches is reported as an objective by all five of the institutions that train teachers. Just how much athletic coaching is needed in elementary or even junior high schools as compared with instruction in health and hygiene is a very pertinent question. Institutions training teachers for elementary grades should put their emphasis on preparing teachers to give effective instruction in physical education and health. Preparation of teachers to do even part-time coaching in small schools with limited work in high-school grades should be the function of institutions with better facilities and more extensive offerings than are or should be possessed by the normal schools. It is perfectly clear that Oregon does not need five institutions engaged in work of this kind.

As long as the university and the Oregon State College are regarded as separate institutions and maintain two sets of athletic teams, it is difficult to discover a basis for dividing between them the function of preparing coaches or for assigning the function to one and denying it to the other. In spite of pious protestations and even earnest institutional effort to put preparation to coach high-school games upon a sound basis of health education, the fact remains that institutional success in intercollegiate athletics constitutes the most important basis of judgment when school officials seek coaches for their public-school games. Perhaps strict State certification requirements for all those who are employed as high-school coaches, with emphasis upon very high standards of health education, would help to correct this situation; it would not provide a basis for division of function in this field between the university and Oregon State College. Both institutions for the sake of the health education of their general student bodies should maintain the physical-education equipment, staffs, and offerings that are an essential and large element in the preparation of high-school instructors in physical education. Under the allocation of functions between the two institutions neither can offer all the elements of physical and social science that such teachers should have.

The survey commission recommends that the proposed State educational council consider placing preparation of teachers of high-school physical education upon the basis of a joint curriculum pursued at the two institutions.

Chapter IV

Coordination of Non Campus and Extension Instruction

It has been recognized for many years that higher educational institutions are able to render an extensive educational service to the people of their communities who can not take up residence upon the campus. This recognition has been expressed in many ways. Extension classes have been organized at different points away from the campus. Correspondence courses have been prepared and offered to all who wish to take them. Debating leagues, film-distribution services, radiobroadcasting stations, advice to clubs or similar groups, book and clipping loan services, lectures both of entertainment and instructional character, and many other types of informational and educational aid have been rendered. In some cases rather extensive and complicated organizations using special methods have been developed for services of these kinds.

In much of this work the primary purpose has been to make available to the people of the State the educational and informational resources that are assembled at the institutions of higher education. Some of the work and some of the activities are intended to enable noncampus residents to earn college credit. In other instances no questions of credit are involved, but the work is intended to increase the vocational efficiency of those who take it, or to enrich their lives by widening their intellectual and recreational horizons.

Frequently the educational work of an institution may be carried on in part at some location other than the main campus of the institution because the facilities or the clientele afforded by the noncampus location are more suitable than those which can be provided upon the campus. These have been the factors that have determined the location of medical schools upon noncampus sites in many instances. Clinical and hospital facilities are available more economically in a city than in the rural location in which the higher institution may be placed. The same types of consideration have led to the formation of branch junior colleges at points in the State where the economic and social conditions made it especially difficult for the citizens to come to the main campus. This is the case of the branch junior college of the University of Idaho at Pocatello and of the junior institution maintained by the Utah Agricultural College at Cedar City.

When extension activities at noncampus centers become very extensive it may be economical to maintain a resident director at the center and even employ an instructing staff that devotes its full time to educational work in the community in which the extension center is located. Usually the work of this staff is supplemented by the services of institutional staff members who come to the center from the main campus for short periods. When this development proceeds very far, especially in offering courses for college credit, it is sometimes difficult to distinguish the extension center from a branch institution. The distinction has usually been largely an administrative one.

In the case of branch institutions with their supervising dean, directly responsible to the president of the institution, but compelled to carry on locally a somewhat independent departmental organization, problems of administration tend to develop that are difficult of solution. The relationship of the members of the departmental staff in the branch institution to the corresponding departments upon the main campus, the difficulty in maintaining unity of purpose and similar scope of courses and standards of work, tend to trouble the relationship of branches with parent institutions.

When extension is organized under the immediate control of a director located upon the main campus, the tendency is to create within the institution a second university with its campus scattered over the State and which exercises a considerable degree of autonomous activity. When extension centers away from the campus are developed, as a part of the second extension university, their relationships to the director of extension and to the activities of the campus institution become even more complicated and difficult of solution than those that exist between branch colleges or units and the central institutional administration.

Satisfactory organization principles and administrative procedures have not been developed in the United States for handling branch units or extension activities. This is the case when the branches and extension work of only one institution are considered. We are still further from arriving at satisfactory methods of dealing with these activities when the problem becomes one of coordinating such activities that are carried on under the auspices of a number of institutions. It is especially important that steps be taken to solve these relationships and to unify the noncampus programs of State institutions.

State institutions may properly be expected to concern themselves so that their resources are made available to as large a proportion of their constituency as is possible; the obligation to coordinate these

activities is emphasized. A duplication of effort and work upon the home campuses of different State institutions presents many serious problems of expense and public relations, but when by reason of branches or extension activities several State institutions extend their campuses to cover the entire State, competition, waste of effort and resources are likely to result. The survey commission had called to its attention while in Oregon, the fact that in one city, in one school building, upon the same day, and in two different rooms representatives of two State institutions were holding entirely independent extension meetings, each for a relatively small group, upon the same subject or upon subjects so closely related in content and purpose that one representative could have probably carried on the work more effectively than two. The travel expense might have been cut in half; the time and salary of one instructor might have been saved for other activities. It is not intended to imply that the survey commission found this condition typical in Oregon; it is convinced that such duplication will tend to grow and to become very expensive to the State unless measures are taken to prevent it.

The State board of higher education is compelled by the mission assigned to it under the law to consider these matters and seek a solution whereby these activities may be conducted with the greatest possible economy to the State. It is, therefore, necessary for the survey commission to examine the actual scope and nature of extramural and extension activities in Oregon and to describe their operation and relationships for the purpose of suggesting a solution that will be of value to the board in determining its policy with reference to these matters. Since this is the purpose, the discussion that follows fails to emphasize the great usefulness of the services of this type that are rendered by the higher institutions. The commission fully realizes that the description given is not an adequate one; it wishes to emphasize that the condition that will be presented should not be interpreted in any sense that will minimize the monetary and cultural values of noncampus units and activities. The commission is thoroughly convinced that Oregon has received from work of this kind a return in material resources and in the enrichment of the lives of its citizens that is worth many times the value of the money expended. The point is that the expenditure of the same amount of money might have resulted under different conditions in even wider value to the State.

The complexity of the organization and relationships that exist or are developing with reference to the extramural and extension situation in Oregon makes it difficult to present the facts simply and in proper perspective. In order that all of the elements of the situation may be considered the discussion that follows will deal, first,

with extension activity as such; second, with branch units; and, third, with a summary of some of the actual relationships that emphasize the need for reorganization from the standpoint of State requirements rather than from the standpoint of institutional prerogatives.

The university has a very well-developed general extension service. This extension service maintains an office at Portland and another one at Eugene. In addition, in 1930, extension classes were conducted at Albany, Astoria, Baker, Coquille, Eugene, Grant's Pass, Junction City, Klamath Falls, Marshville, Medford, Pendleton, Salem, Silverton, and The Dalles. Approximately one-third of the university extension classes are in communities of less than 2,500. These classes are conducted by regular members of the staff of the University of Oregon, by extension division employees who do not do work upon the campus at Eugene, and by local officials or staff members in city school systems or in private institutions.

At the Portland extension center "resident credit in the University of Oregon may be earned in all classes, unless exception is made." The offerings of the extension center are listed under the following schools and colleges that are maintained at Eugene: The graduate school; the college of literature, arts and science; the school of architecture and applied arts; the school of business administration; the school of education; the school of journalism; the school of music; and the school of physical education. It is thus possible for a student to earn the bachelor's degree at Portland, although he may spend very little time upon the campus at Eugene. By taking correspondence courses offered for credit by the university, in addition to his class work at Portland, the student at this center may be able, in certain instances, to secure a bachelor's degree without having spent any time at Eugene. One-third may be earned by correspondence. Students may do correspondence work in long vacations. A student who transfers from another institution with advanced undergraduate standing may secure a degree from the University of Oregon without ever having been upon the campus at Eugene. Indeed "it is possible, in a number of departments in the Portland center, to accomplish the whole work for the degree of master of arts." These facts are reported with no implication that such a development should be condemned; if the staff and the facilities provided at Portland are the equivalent of those provided upon the campus at Eugene the geographical location has no bearing upon the standard of work and hence upon the value of the degree thus earned at the Portland center. A large proportion of the work at Portland is conducted by the same staff members who carry on work at Eugene, although a considerable part of the offerings are conducted by members of the staff of the extension service who do not do work at Eugene.

In addition to the work thus organized, the extension center conducts courses for the Portland chapter of the American Institute of Banking and through the medical school a certification course in nursing for students in accredited hospital schools.

It is difficult to distinguish the extension work of the university at Portland from the functions performed by a branch institution. No limitation is placed upon the amount of work that may be earned by class extension. It is treated just the same as resident work. A whole series of extension activities in addition to class work described above is carried on by the university extension division. It is difficult to determine whether these activities are directed from the Eugene or the Portland center since the director of the service divides his time between the two offices.

Most important among these other activities is the correspondence study work. Correspondence-study courses are offered both for credit and for other purposes. (See Table 1.) College-correspondence courses are offered in bird study, botany, business administration, cartooning, drawing, economics, education, English, geology, health education, history, journalism, literature, mathematics, modern languages, physics, physiology, psychology, and sociology. Students who do not satisfy the entrance requirements of the University of Oregon may supplement the entrance credits earned in high school through correspondence courses offered in civics, American history, world history, English, English composition, English grammar, mathematics, and physics. Elaborate series of courses for credit have been developed in the schools of architecture and applied arts, of business administration, of education, of journalism, of law, and in the school of medicine. In this connection it is interesting to note that 45 term hours of courses are offered by the university extension service that "may be substituted for required courses at the Oregon Normal School" at Monmouth. The Oregon Normal School at Ashland allows credit toward graduation to the extent of 32 hours but requires that all courses in education be taken in residence at Ashland. Thirteen of the 22 term hours in education required by the State for a teacher's certificate may be taken by correspondence. The extent of the extension work carried on by the university is indicated by the fact that in 1928–29, exclusive of the summer session, it had 6,573 enrollments, of which 2,948 were in correspondence study. Of the class enrollments almost 3,000 were in Portland, not including those in the summer session. The summer session at Portland had 793 enrollments and at Eugene 572. The Portland center announces 135 class-extension courses in 35 fields, all of which are of college grade.

TABLE 1.—*University of Oregon correspondence students 1925–1930 who completed resident work also*

Credit by correspondence, in term-hours	Number of students
10	85
10 to 19	157
20 to 29	41
30 to 39	10
40	14
Total	307
Range	9–60
Median	About 14.3

Among other activities carried on by the extension service are study courses for clubs, teachers' reading circles, the reading courses of the United States Office of Education, visual instruction service, and a social welfare department that includes within its scope extension lectures, participation in surveys and investigations, institutes, and publications. Under these activities is included the Oregon High School Debating League administered by the university since 1907.

The school of applied social science at Portland and the medical school are clearly branch institutions. The summer session conducted at Portland may also be regarded as a branch rather than an extension activity. The summer sessions both at Portland and Eugene are administered by the director of extension.

The Oregon State College is responsible for the maintenance of cooperative agricultural and home economic extension, which is supported by joint contributions of the Federal Government, the State, and local communities. This support is in the proportion of 32 per cent from the Federal Government, 41 per cent from the State, and 23 per cent from county sources.

The cooperative agricultural and home economics system is nationwide. It is, in part, controlled by the provisions of Federal law and the regulations of the United States Department of Agriculture. It is difficult to describe in simple terms the organization and the functioning of this system in a specific State. (See fig. 5.) In Oregon, as in other States, there is a central office located at the land-grant college, which in this instance is the Oregon State College. The director of extension has his headquarters in this central office and is provided with various administrative assistants. Among those who aid him in directing and supervising the work of the local extenson units is a State county-agent leader, a State home-demonstration leader, and a State boys' and girls' club leader. It is the function of these assistants to supervise immediately and to render aid in the development of the agricultural, home economics, and boys' and girls' club work.

In addition to the central extension office and directly connected with it, as well as to the resident teaching departments, is a series of technical assistants known as extension specialists. It is the function of the specialists to render aid upon technical questions to the local county-extension organization.

In 28 counties of Oregon in March, 1930, there were county agricultural agents; in 6 of these counties the agents had assistants; in 5 counties there were county home demonstration agents; and in 6 counties there were county club agents. In addition there was one urban club agent located at Portland. Thus, throughout the State are scattered representatives of the agricultural and home economics extension service, who look directly to the central office for guidance

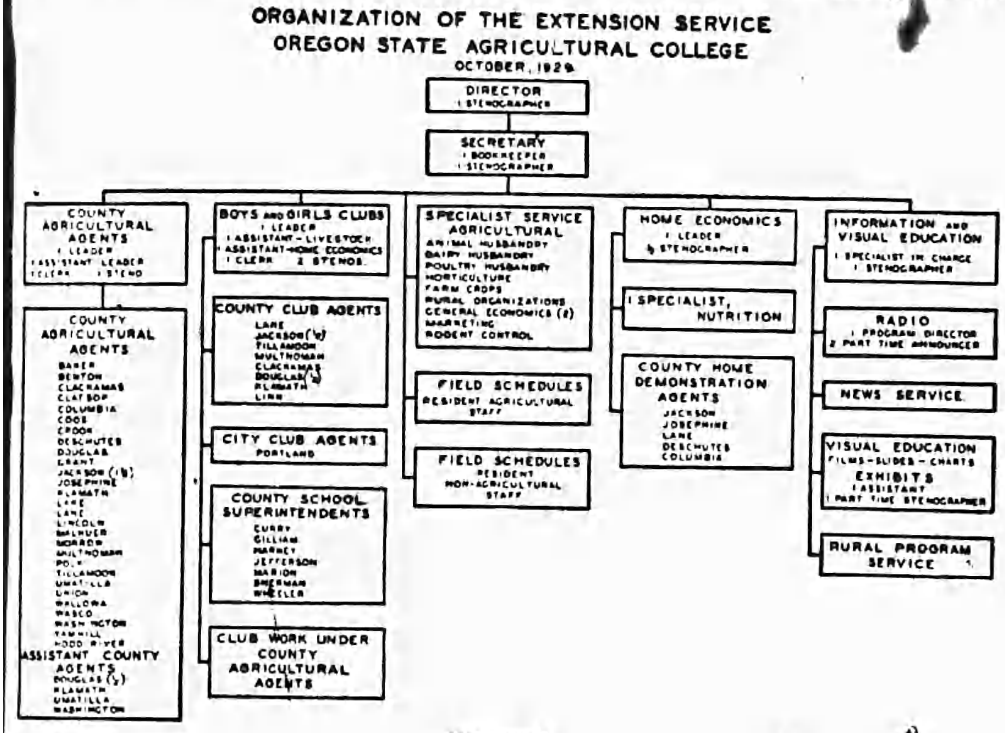

FIGURE 5

and assistance. One of the functions of the central office, in addition to aiding in the construction of county programs, is that of training the county extension agents in their work by means of group conferences, and what may be known as short-time extension schools.

The most essential feature of this system of extension is the intimate contact between the county workers and the communities in which they are located. There is hardly an activity of the county and there will be few individuals even remotely interested in agriculture and rural life, who do not have some more or less direct association with these agents. They render aid by means of group conferences, meetings, individual consultations, and in almost any fashion that will serve the needs of the community. The backbone of the local program, however, is determined by the development of

projects around which the efforts of those participating in the extension activities will be centered. These projects in Oregon may be classified as those having to do with soils, horticulture, animal husbandry, poultry husbandry, farm crops, farm management, agricultural economics, agricultural engineering, and road control. The purpose is to secure more effective practical results in the county in the activity with which the project deals.

Upon the technical side the specialists from the central office at Corvallis are at all times prepared to render aid by correspondence, by visits for inspections, or addresses to groups. The time spent annually by specialists in this field work and the number of addresses made run into impressive figures.

In addition to the contacts made by the county agents with local organizations, the central office, through the director, his administrative assistants and through the extension specialists establishes contact and cooperation with many types of organizations that are directly or indirectly interested in rural welfare both from the productive and social standpoints. The report of the director of agricultural extension at Corvallis in one year indicates direct relationships with the State department of education, the grange, the bakers of the State, the farmers' union, the State federation of labor, Retail Merchants' Association, the Oregon Cooperative Council, the railroad advisory board, chamber of commerce secretaries and the Federation of Women's Clubs.

In Oregon, as elsewhere, the extension service prepares bulletins of information, setting forth in a simple, easily understood manner the results and uses of the latest scientific discoveries that relate to agriculture, suggestions with reference to farm management and community life and, in fact, dealing with any topic that comes within the scope of the activities of the service. Agricultural, home economics and boys' and girls' club exhibits are promoted and developed by the service. Home-study courses are sometimes offered, although in Oregon this has not been highly developed. The service over the radio is carried on regularly and utilized by many farm people.

It is one of the fundamental limitations of this service that it is not concerned with work for high school or college credit, but devotes itself to the interpretation and the application of scientific, economic, and social knowledge to the problems that immediately concern rural people. Its functions are those of assisting to enrich the lives of people in the open country by means of economic improvement and leadership in social development. Nevertheless the assumption that the county, agricultural, home demonstration, and boys' and girls' club agent work is the sole function of this service is subject to some modification. Of the budget, 55 per cent is expended in the counties and 45 per cent upon general extension, which is interpreted by

statements of the State college to mean "all projects except county agent, home demonstration agent, and club agent projects."

Certain implications of the fact that the agricultural and home economics extension service is directly a part of the State college should be clearly understood. The State college exists in part for the purpose of research in the field of agriculture and in part for carrying on resident instruction in the field of agriculture and the related sciences. In performing these functions there are assembled competent persons thoroughly familiar with all phases of the problems that concern production and distribution of agricultural products, the management of land, and the problems that are related to the social and economic welfare of rural workers, both as producers and home makers. The agricultural colleges were at first established with the idea that they would give direct service through resident instruction to the rural people in the States in which they were located. It was early discovered that this service could at best reach a relatively small portion of the people, and in many respects it was not adapted to the great needs of the majority. It was not until 1917, however, that Federal provision for cooperation with the States in carrying on extension work resulted in the rapid development of a direct service with its own local organization and carrying on projects of the type indicated. Probably in no other area of educational endeavor is so fully recognized the obligation and the opportunity to make available to the people of a State from its higher institutions the assistance that the assembly of teachers and investigators makes possible. The survey commission is entirely in sympathy with these purposes. It recognizes, however, two facts that require some comment: (1) The opportunity afforded by this closely knit organization to exercise a degree of political influence in support of institutional policies only indirectly related to the extension service that may distort the educational program of a State, and (2) the limitation upon the character and scope of the activities of agricultural extension service.

It is not the purpose of the survey commission to imply that the agricultural extension service in Oregon has been used for political purposes to a much greater extent than has been the case in other States. This fact, however, does not make less important the recognition of such use. Anyone who is familiar with methods of our American political procedure would be naive indeed if he failed to recognize that extension workers through their personal and official connections in local communities "tip off" local leaders with reference to legislative action that the State college desires and aid in securing the assistance before legislative bodies in the promotion of projects and activities that affect the welfare of the institution at

Corvallis. The facts may be thus stated without implying that the extension service is a political organization. The community of interest that exists between the agricultural producers of the State, the extension service, and the college, is entirely commendable and it is perfectly natural that it should express itself with results that are too well known to require detailed description. No one would deny the obligation of the institution to keep its constituency informed concerning its activities and its plans for development; the existence of an extension organization of the kind described, with its efficient facilities for unifying support about the institutional purposes of one element in the State's higher educational program, may obviously distort the development of that program as a whole. In seeking a means for coordinating the extramural and extension service of the State it is apparent that these conditions must be seriously considered. It is equally apparent that no solution should be accepted which will hinder the accomplishment of the educational purposes that inspire the cooperative agricultural and home demonstration extension work.

A second point in connection with this service that needs consideration, as has been indicated, is the limitation placed upon the character and scope of its offerings. Rural people as well as others are interested and entitled to opportunities for enriching their personal lives by studying art, history, mathematics, and indeed any subject in the whole range of human knowledge, as well as those subjects which directly affect their economic condition as agriculture producers. With these things the extension service is not immediately concerned, and indeed can not be concerned, in so far as use of the Federal moneys and the State moneys appropriated to match Federal moneys are concerned. Yet here is an organization that reaches out to every section of the State and affords the only contact with the State's higher institutions provided to many isolated farm homes and families which, in many cases, crave the intellectual and recreational stimulus that might be derived from correspondence and class instruction in subjects most remote from their immediate means of obtaining a livelihood. It seems that this organization should be utilized at least to acquaint these people with the opportunities and offerings afforded by their State educational agencies.

The commission is not satisfied with the reply frequently made to such proposals by the agricultural and home economics extension service, that this is all true, but that the specific job undertaken by this extension service is an ambitious one and demands all its energies and resources. If the contention of some of the extension-service leaders is admitted, the only alternative, if the rural people are to be afforded the opportunities of the kind proposed above, is to develop a parallel, equally effective organization to reach these

people. In some institutions this has been attempted through the organization in the land-grant institutions of a general extension service entirely separate from the agricultural and home economics service.

At Corvallis general extension work has not been highly developed. The school of commerce carries on some extension lectures and has conducted American Institute of Banking classes at various points about the State. It has also cooperated with the State Merchants' Association and conducted business institutes at a number of points. The school of engineering has given courses in auto mechanics at Portland, as well as courses for manual-training teachers. Its direct service by means of counsel and aid in demonstration work, as well as in participation in important engineering aspects of State surveys dealing with sanitation, have been extremely important and useful. The school of vocational education has developed a program of vocational guidance in the schools of the State and at one time at least in cooperation with the Rotary Club of Portland opened an office there for a period of months to afford this type of service. All these schools, together with the school of forestry, have, in their reports, recommended the expansion of extension activity in the fields in which they deal. To the survey commission it seems desirable that extension service be provided to the manufacturing and school interests of the State as well as to those directly in agriculture. Even though this were done, however, the field would not yet be covered, nor would the organization of the service under a single institution be adequate. All of the areas, which have been in the past peculiar problems of the university, would not be made effectively available to the constituency of the State college.

The suggestion was made to the survey commission that one extension service of state-wide proportions be developed under the auspices of the college to include activities covering all its functions and that a second state-wide service be developed by the university to cover the functions that are peculiarly appropriate to that institution. This plan, however, would be extremely expensive and would fail to utilize the contacts of the State college with its clientele to familiarize them with the opportunities offered by the university service, and on the other hand the university service would not very naturally provide to its constituency the information and incentive to participate in the extension opportunities offered by the State college service, although they might be more appropriate to the needs of many individuals than the offerings of the university service. A constant temptation on the part of both would be to expand their extension offerings to cover the entire field. This would be only reasonable, since desire for educational aid is not limited to desire

for instruction in areas with which the recipients are vocationally and socially affiliated.

At the present time none of the normal schools carries on extension activities of any importance, although, as has been indicated, this is an area of extension service the need for which has been recognized both by the university and the State college. As has been mentioned previously, correspondence courses and extension classes are conducted by the university and are accepted for credit upon the resident normal school courses at Monmouth and Ashland. Forty per cent of university extension classes are teachers and 41 per cent in correspondence study are teachers. Under these conditions the normal schools have practically no connection with their human product or with other teachers after they have entered the school system of the State. Such contacts of value alike to teachers in service and to the teacher-training institutions themselves are usually established and maintained in other progressive States by means of extension activities including itinerant teacher training, conducted by the teacher-training institutions and planned by them in cooperation with the State department of education.

The statement was made early in this chapter that conflict, duplication of effort, and waste of resources were likely to develop in Oregon to a degree much greater than is the case at present, by reason of extension service and the development of branch units under the auspices of the two entirely separate institutions. This confusion of activity is likely to be accentuated further as the normal schools grow and have opportunity to exercise functions that they are capable of exercising in cooperation with the program of a more highly developed State department of education. This statement may now be supported in the light of the preceding description of the situation as it actually exists by considering evidence of the ambitions and plans for expansion of the scope and nature of noncampus and extension activity on the part of the university and the Oregon State College.

The major part of this discussion may be centered about the situation at Portland. Present conditions and probable future developments in Portland present the evils of the situation most vividly although similar undesirable incoordinations exist and will tend to increase in other portions of the State. It is perfectly evident that, unless the university extension center at Portland encroaches upon fields of extension work that have been accepted as functions of the Oregon State College, especially work in home economics, engineering, applied and vocational education, it can not offer work in many areas that Portland needs. Very naturally, therefore, the Oregon State College has for some time considered and planned opening an extension center at Portland with a resident director to

provide to this community extension opportunities that are needed and desired and that are especially appropriate to this institution by reason of the high development of resident instruction and research work in certain areas. Administrative officers of the institution have stated that this development in Portland has been delayed pending the results of the survey directed by the law which created the State board of higher education.

The university has formulated plans for a junior college under its control at Portland, in addition to its present extension center and branch units in that city. It has been suggested that this junior college offer two distinct sets of courses: The first, of lower-division, pretechnical character, designed to prepare students for advanced technical and professional courses at both Corvallis and Eugene in the upper divisions of these institutions; the second, of lower-division terminal character not suited for use to secure advanced standing as junior class students at the university or State college, but intended to provide for definite vocational and life purposes within the 2-year period. It is difficult to understand how the university could, though the proposed Portland junior college under its control, offer lower-division technical work preparatory to upper-division resident work at Corvallis under present definition of functions and curricular organization at the State college. If the organization of work proposed in Chapter II of this report were in force, the difficulty of encroachment would, of course, not develop. However, the junior-college plan proposed also contemplates the offering of terminal courses in the fields of the trades related to engineering and home economics. Under present definitions of functions of the institutions, work of this character is not related to the functions of the university, but is directly a function of the State college, and even under the reorganization of work suggested by Chapter II of this report, such courses could not be carried on under the auspices of the university at junior-college level without encroachment upon the field that no one proposes should be taken from the State college. With reference to extension and noncampus work in the field of teacher training, present practices and proposals for the development of such activities in Portland do not contemplate participation with the normal school at Monmouth, although this institution is conveniently located and should be prepared to render real service to the elementary teachers of the city. This is an area which does not now fall within the scope of either the university or the State college and which it is not contemplated by Chapter III of this report should be assigned to these institutions.

The commission believes that Portland needs the educational service that can be afforded by use of the facilities and staffs of the three

higher institutions in its immediate neighborhood. It believes that immediate contact in Portland, with industrial and social facilities that the city alone affords, would be of decided advantage to certain phases of the residence work of these institutions. It does not believe that another university should be built up at Portland under the guise of infiltration of branch units. It does not believe that the university and the Oregon State College should develop independent extension centers at Portland or elsewhere in the State.

The problem, therefore, becomes one of suggesting an organization that will utilize all the resources of all the State institutions at points and in ways which will be noncompetitive, economical, and effective. The answer to this question is suggested by the implications of the query "What would be done with reference to these activities if all the institutions were under single administrative control?" The problem is one of service and not that of recruiting students to increase institutional prestige or to secure political support for institutional measures. It is, therefore, proposed that an extramural council be set up consisting of representatives of the five State institutions, the State board of higher education and the State department of education to determine the administrative policies for the extramural and extension activities of the five State institutions. This council should be headed by a director chosen by the council and approved by the institutional presidents and the State board of higher education. It should be the function of the director of the extramural council to develop a unified program of extramural and extension activities which will utilize the facilities developed in all the institutions to the fullest extent consistent with the expense involved. The administration of the radio broadcasting station, located at Corvallis, should be assigned to the director of the extramural council. It should be operated by him through his local representative at Corvallis, in such a fashion as to make it serve the best and widest interest of the State as a whole. The programs presented should be identified as the programs of the extramural council of the State's system of higher education. They should make use of the talent and knowledge available in all the institutions, the State department of education, and other State offices.

All correspondence work, whether for credit or without credit, should be administered from the office of the director of the extramural council. The entire program of offerings should be listed as the correspondence course offerings of the extramural council. The courses should be prepared by individuals or groups selected from the most capable persons to be found in the State. The instructors should be designated by the extramural council from the staff members of the institutions whose time is available for such work. Instructors who teach courses for credit should be approved by the

institutional department in which the subject of the course falls; they should have the status of staff members of the institution.

All class-extension work should be administered by the extramural council. The offerings and the appointment of instructors should be determined in much the same way as in the case of correspondence courses. The extramural council should have charge of all the informal services of extension, including visual instruction, information, and lecture services. In these instances, as in others, the resources of the institutions for such aid should be surveyed, listed, and utilized as one service.

The participation of the institutions in this state-wide program should be determined primarily upon the basis of the budget for such service, which should be the budget presented by the extramural council for approval by the State board of higher education. The budget should be made up in cooperation with the institutions and should include (1) the administrative officers of the extramural council; (2) an item to meet the portion of the salaries of institutional staffs which may fairly be assigned to the time that they devote to extension work; (3) provision for the employment of instructors for certain types of activity, who are not members of the resident instructing staff in the institution; (4) provision for clerical personnel; (5) for supplies; (6) for travel; and (7) postage, telegraph, and telephone.

Local communities in which these activities are conducted should provide housing and equipment. At present classes for university extension groups pay 85 per cent or more of the cost. In the case of the extension work at Portland, the advantages to the city would be such that it may reasonably be expected that the city should provide a site, the building or buildings required, and an annual sum for operation and maintenance of the plant.

Since a large proportion of those who take advantage of the opportunities offered by extramural service are earners or enabled thereby to secure such opportunities at much lower living cost than would be the case if they attended one of the State institutions as resident students, it is entirely appropriate that the fees charged for practically all forms of the service offered by the extramural council should be such as to meet a much larger proportion of the costs than is the case of resident students upon the campuses. Many of these activities may be made entirely self-supporting, aside from the cost of administration.

Two special questions present themselves with reference to the solution here proposed: (1) The relationship of the cooperative (Federal, State, county) agricultural and home economics extension service, and (2) the relationship of branch units conducted in part

to afford instructing and research opportunities to students who spend a portion of their period of education at the campus of one or more of the five institutions.

Because of the Federal connections and the restrictions that arise therefrom the articulation of the agricultural and home economics extension service, with a state-wide system such as that proposed, becomes extremely difficult. That such articulation is desirable has been recognized by the administration of the State college. In 1928 the president of the State college took steps to consider the whole matter of the further development of general extension activities as distinguished from those of the cooperative agricultural and home economics service and the commission was informed that the purpose was to develop a coordinated use of all the extension resources of the institution including both general and agricultural extension. Although this development was not carried far because of the decision to delay aggressive development of the general extension service until the results of this survey might be known, the discussions of institutional committees did not reveal any essential and unavoidable weaknesses in the plan and purpose. The commission does not believe that it is impossible even under Federal restrictions to develop a high degree of correlation and mutual aid between the services of general extension character and those of the Smith-Lever extension service, if the personnel involved approaches the problem sympathetically and with a real desire to find solution to the detailed problems that will arise. Under the plan proposed, the agricultural extension service would continue to be budgeted as an activity of the State's higher-educational system conducted from Corvallis. This service would be a unit in the state-wide extramural council also. Inasmuch as the State board of higher education is responsible for the budgeting of all the activities of the institutions, the allocation of funds to the agricultural extension division and the determination of the purposes for which they shall be used is as much a part of its function as the allocation of any other funds. It is assumed that the activities carried on by the cooperative agricultural service are of such outstanding obligation that they will be continued in accordance with the provisions of the United States Department of Agriculture with reference to expenditures of Federal moneys and of State and local contributions provided to match such moneys. Funds in excess of this amount provided by the State could, of course, be used for such purposes as the State desired, including funds for types of activity not covered by the limited field of the Smith-Lever extension service. The commission is entirely convinced that neither Federal policy nor legal status are insurmountable obstacles to the development of a state-wide program; it fully recognizes that such development in so far as the Smith-Lever extension service is concerned will depend

upon the cooperation of the State's Smith-Lever extension workers. After all the board has a right to expect the administrative and operating officers of the State's higher institutions to devote themselves to determining how the policies of the board which are of benefit to the State shall be carried rather than to the discovery of reasons why desirable action should not be taken.

With reference to the branch units of instruction maintained by the university at Portland, which are the only units of the kind concerned, the situation is somewhat different. In so far as these branch units are intended to provide local services they do not differ from extension activities. In so far as they represent devices to complete or carry on under more advantageous conditions the education of students in schools and departments upon the campus at Eugene, difficulties of relationship and interpretation arise. It would be obviously as short-sighted to deny to the departments at Eugene and Corvallis and the normal schools, use of opportunities and facilities at Portland or at other points in the State for the carrying out of their resident educational programs as it would to restrict research of the instiutions to the materials and equipment that can be assembled upon one of the campuses. However, it should be perfectly apparent that under the guise of better facilities afforded by Portland it might be possible for the university to transfer the greater part or all of its upper-division work in commerce and law and in education to Portland. The commission recommends, therefore, that the establishment of departmental branches at points away from the campus be restricted to the very minimum and that when such branches are established they be housed in the quarters of the extramural center, which should retain under such usage complete control of the physical facilities afforded. Institutional offerings at Portland and at other points in the State other than at the campuses at Eugene, Corvallis, Monmouth, Ashland, and La Grande should be through and in cooperation with the extramural council of the State's higher educational system.

The summer schools of the institutions constitute an important type of activity that is closely related both to regular campus work and to special offerings for persons not usually resident upon the campuses. At present six summer schools are conducted, one upon the campuses of all of the five State institutions and an additional school conducted by the university at Portland. The commission was requested to consider whether the State requires six such schools and also to determine whether undesirable duplication of offerings and institutional competition result.

Careful examination of the offerings of the summer schools now conducted and of the nature and sources of summer school student bodies convinces the survey commission that some modification of

present practice is desirable. It is recommended upon the basis of the facts and conditions discovered that each of the institutions continue to hold a summer school upon its campus, but that the offerings, including those intended for the education of teachers, be confined to those appropriate to the institutional functions recommended by Chapters II and III of this report. Plans for each such campus school should be submitted to the State board of higher education and be subject to its approval upon the basis of the principles stated prior to the completion of fiscal and faculty personnel arrangements. To insure the minimum of undesirable duplication and to make the State aware of the entire range of opportunities afforded by the summer schools conducted under the auspices of its higher institutions the announcement or catalogue of the offerings of all the work upon the different campuses should be printed in one publication and separate institutional announcements should be discontinued. In addition to the campus summer schools it is believed by the survey commission that a summer school should be conducted at Portland, but under quite different auspices than those that control the school at present. Examination of the offerings in the Portland summer school under university control shows that they parallel pretty closely the characteristic functions of resident work upon the university campus; no provision is made for offerings that are the special provinces of the State college or of the normal schools. These omissions are serious. Summer schools are largely composed of teachers. One reason for the location of a summer school at Portland is the opportunity that it offers for rural and small-town teachers to enjoy and profit from the facilities offered by the city while they are securing also more formal types of education. Elementary teachers, trained by the normal schools, and teachers of agriculture, trades, and home economics, trained by the State college, profit especially from such contacts as are afforded by a large city. It is desirable that the summer school at Portland be conducted with these teachers in mind, and that it also afford opportunities to others who desire and would profit from offerings peculiar to the institution at Corvallis. It is, therefore, recommended that the summer school at Portland be a joint enterprise of all the five higher institutions of the State under the administration of the extramural division of the State's higher educational system.

Chapter V.

Supplementary Coordination

Preceding chapters have presented the basic conception that it was the purpose of the law creating the State board of higher education to secure a unified higher-educational system for the State. They have described the economic and social background in Oregon as factors conditioning and limiting the general development of education in the State. The conditions that make desirable the coordination of educational offerings provided through resident instruction, research, and extension teaching have been indicated. The survey commission has recommended a distribution and allocation of the functions of resident and extension instruction and of research, which, in the opinion of the commission, is fundamental to the creation of a unified higher-educational system in Oregon.

It next becomes necessary to consider procedures and devices that will contribute to the establishment, operation, and maintenance of coordination. This chapter will discuss, therefore: (1) Recruiting, publicity, and the whole matter of public relations; (2) the admission of students to the higher institutions; (3) methods of evaluating and recording the work of students while in college; and (4) graduation requirements and the degrees granted as a result of college study. Subsequent chapters will deal with other uniform procedures such as those related to staff selection and management, to financial support and business management, and to student welfare and personnel in relations other than those that are commonly regarded as academic.

All the matters discussed in this chapter are related directly to the desire of institutions to secure large enrollments. Part of this desire for growth is perfectly natural and is in harmony with the general tendency to measure the value and service of an institution in terms of size. Part of it arises from idealistic enthusiasm for, and belief in, the value of education which leads the institutions to desire to extend their services as widely as possible. It is not intended that the discussion that follows should minimize in the slightest the very real desire that exists in the higher institutions of Oregon to render service to the State quite apart from institutional ambitions and the expediency inspired by relationships with the sources of financial support.

Unfortunately these commendable attitudes have been excessively stimulated and supplemented in the past by the ever-present possibility of a redistribution of the millage taxes in support of higher education. Such redistribution by the legislature subject to direct review by the citizens of Oregon has been constantly in the minds of the institutions. Both legislative bodies and the public are familiar with the yardstick which measures educational development and service by the counting of noses. Other means of measuring the extent of educational programs and their success are complicated and difficult of comprehension without detailed and sometimes highly technical knowledge. It is perfectly natural therefore that efforts to maintain the distribution of the millage tax between institutions or the desire to secure readjustment of the millage tax to provide for the continued expansion of a single institution should lead to great emphasis upon numbers and upon devices which tend to increase the number of students in the institutions. The president of the university, in one of his annual reports, fully recognized the undesirable character of this yardstick as a means of readjusting millage distribution.

> The proposal is being put forth that some automatic method for the adjustment of the millage from year to year between the Oregon State Agricultural College and the University of Oregon should be adopted. This proposal has generally been on the basis that it should be based upon the attendance at the two schools * * *. However, if the distribution of the millage were made to depend automatically upon the student attendance each year, it would have, I think, two very unfortunate effects. The first one would be that it would stimulate competition between the two schools for student attendance * * *. In the second place, such a basis for distribution of the millage would place a premium upon lowering of standards at the two schools * * *. It is always possible for either institution to take in a number of additional students if they were willing to waive either their standards of admission or their requirements for continuance as students after admission. If their income depended upon this attendance, there would at least be a strong incentive to be careless of educational standards. (Report of President Hall to board of regents, June 9, 1928.)

The foregoing clear statement testifies to the wisdom of the authors of the bill creating the State board of higher education, when institutional claims on specific proportions of the millage were abolished, the millage, along with other income, was placed as a single fund under the board's control for such allocation as the interests of an unified system of higher education might require.

From the desire for numbers have arisen vigorous and expensive publicity and recruiting programs supported by both direct and indirect use of the resources of the institution. Hence has arisen also pressure, and sometimes a tendency, to admit students who are poorly prepared. The State has been concerned about the students who come to the Oregon higher institutions from other States and

considerable conviction exists that relates this influx to the belief that Oregon institutions attract out-of-State students of mediocre ability and poor preparation. Even more important, however, is the admission of Oregon students who are not prepared to do work of college grade. From the same cause tendencies are likely to develop which, by lowering the standards of college instruction, will retain in residence large numbers of students who are admitted with poor preparation. Further, in order that every inducement may be offered to real or vague occupational objectives and interests of prospective students a variety of degrees may be developed without much reference to accepted practice. All of these matters justify an examination of the actual situation in Oregon with reference to these elements of educational procedure and require that the commission make suggestions for control of excesses and for a certain degree of uniformity of standard and procedure.

Public Relations

One of the most conspicuous sources of unhealthy rivalry among the institutions of higher education in the State of Oregon is found in their public relations programs. This has resulted from the fact that these programs have, by the nature of circumstances. been competitive rather than cooperative.

Normal schools, colleges, or universities are expensive elements of State government. Their services to the State and their needs for the support or extension of these services are remote and mysterious as compared to the services and needs of the local elementary or high schools with which every citizen lives in immediate contact. Yet the adequacy of their support and the efficiency of their management affect the quality of trained service in every type of public and private enterprise.

This commonplace is stated here for the purpose of emphasizing that the remedy for the existing unhealthy rivalry among the institutions of higher education of Oregon in their public relations programs consists not in abandoning or curtailing these programs but in coordinating and reshaping them in such a way as to make them serve as a continuous, understandable report to the people of the State. Only through such a continuous, understandable report can these citizens determine intelligently the nature of the support they should give to these important institutions.

The agencies through which the State board of higher education may best bring about the necessary modifications in the public relations programs of the several State-supported institutions of higher learning are: (1) An adequate system of reports to the board, and (2) the board's control of the budget.

Catalogues

Institutional catalogues serve several purposes. They are a year-by-year historical record of institutional development. They are indexes of institutional facilities and offerings. They are devices for recruiting students. The records of the former State board of higher curricula contain voluminous reports of controversies growing out of conflicting statements contained in the catalogues of the university and of the State college. In every case these controversies resulted from the use of the catalogue as a device to recruit students for the particular institution. The remedy for this situation lies in making the several catalogues serve, as far as possible, as non-competitive statements of the total facilities provided by the Oregon program of higher education for the postsecondary school training of the youth of the State.

It is accordingly recommended that all catalogues of the five institutions be prepared in the future under policies defined by the State board of higher education.

It will perhaps be desirable ultimately to publish no complete catalogue of the university or of the State college for general distribution to high-school seniors or other prospective students, but, instead, a series of bulletins, one for each major division or school, bearing some such headings as the following: Oregon Program of Higher Education—Bulletin of the Normal School at Monmouth; or, Oregon Program of Higher Education—Bulletin of the College of Engineering at Corvallis. Each of these bulletins might contain a uniform introductory chapter describing the Oregon program of higher education. Following would appear such announcement of the requirements and facilities of the particular major division or school as would be needed for the information and guidance of students interested in the particular field. A limited edition of the complete set of bulletins for each institution should be bound together in the form of complete catalogues for distribution to officials and institutions within and without the State.

It is further recommended that each institution segregate in its budget its request for funds with which to print and distribute these bulletins and accompany these requests by a statement of the size of editions proposed and the plan for their distribution, together with a report covering the same items for the previous year, once this plan has been established.

Other Student-Recruiting Pamphlets

The intensity of rivalry between the university and the State college is nowhere so strikingly illustrated as in the "student recruiting" and other public information material in bulletin and leaflet

form printed and distributed by them. As a rough indication of the nature of the problem the following data, summarized from reports prepared by the editors of both institutions, are interesting.

At the university there were on hand in May, 1930, 26,500 copies of 18 "student-recruiting" bulletins and leaflets, the original editions of which totaled 93,500 copies. At the State college there were on hand in May, 1930, 16,000 copies of 11 "student-recruiting" bulletins and leaflets, the original editions of which totaled 91,000 copies.

It is recommended that further publication of institutional bulletins and leaflets for student recruiting be discontinued at once and that on and after a date to be fixed by the board no further distribution of such pamphlets be permitted even in the case of available surplus stock on hand.

In place of this material it is recommended that there be prepared under the direction of the board a single book or booklet, attractively printed and illustrated, setting forth the educational opportunities provided by the Oregon program of higher education.[1] A similar booklet dealing with the summer schools would probably be needed as well.

News Bureaus

Because control of the newspapers of the State is in the hands of men who include representatives both of the university and of the State college, the news bureaus of both institutions have been kept continuously aware of the fact that too partisan a tone would result in rejection of their material by some editors. This has resulted in fewer expressions of extreme rivalry in this branch of the public relations program than elsewhere.

The outstanding defects of the present situation in their order of importance seem to be (1) the separate control of athletic publicity vested at both institutions in an employee paid by and responsible to the associated students; (2) the disproportionately small attention given to news of the fundamental educational missions of the two institutions—teaching, research, and public service.

These criticisms are based on the theory that the news bureaus should serve as part of a balanced and accurate record of the aims, methods, resources, and needs of the Oregon program of higher education. The success of the bureau is not to be measured by the frequency with which, as a result of its activities, the name of the institution appears in the public press or by the total amount of

[1] The University of Chicago—A Descriptive Pamphlet for High-School Students suggests some of the standards of attractiveness and readability which should characterize such a publication.

space secured. The measure of success should, on the contrary, be the extent to which the bureau contributes to a balanced understanding by the people of the State of one of their important agencies for social, economic, and political progress.

A good bureau will be frank and honest in the performance of its functions. It will not waste time nor energy in seeking out trivialities that are of no educational significance, but which merely serve to get the institution's name in print. The same ingenuity that is now applied in giving news value to incidents of no real importance might be seasoned with good taste and applied with constructive results to reporting the fundamental educational activities of the institutions.

It is recommended that as soon as practicable the athletic publicity men employed by the associated students at Eugene and at Corvallis be transferred to the news bureaus of the respective institutions and paid from State funds.

It is further recommended that the budget requests for the news bureaus of the two institutions be segregated, include all costs, and be supported by statements of policies as to the types of news and illustrative material to be gathered and the manner of their distribution. In addition the board should require such reports as it may deem wise, including periodical filing with the board of classified and indexed copies of all materials issued by the news bureaus and of their utilization by the press.

High-School Contacts

Something of the nature of the rivalry between the university and the State college in seeking contacts with the high schools of the State is indicated by data taken from reports prepared at each institution. These data are not in such form as to offer bases for comparisons and must be regarded as approximate. With these reservations in mind it is interesting that the university reports "that some 144 high schools were visited" during 1929. The State college reports over 100 visits to high schools in 1929–30 other than visits in connection with commencement programs. In addition, each institution invites high-school students to its campus for several conferences, meets, etc., annually. Rivalry between the two institutions in the lavishness of entertainment provided for these high-school delegations has resulted in constantly increasing expenditures of time and money. Occasional complaints have come from the high schools that these meets at times have interfered with the orderly carrying on of the educational programs of the secondary schools.

It is recommended that all funds for travel of faculty members be segregated in the budgets of the several institutions. The nature

and purpose of the travel, together with the dates and duration of resulting absence from the institution, should be stated in detail in reporting travel and in making claim for reimbursement.

It is further recommended that the practice of holding invitation conferences, meets, etc., of high-school students at the several institutions be discontinued.

Radio Broadcasting

Of the five State-supported institutions of higher education only one—the State college—has its own facilities for radio broadcasting.

It is recommended that this service be placed in charge of the extramural division of the State's higher educational system and that a plan be prepared under the direction of the board for allocating the time of the station at Corvallis between the three institutions at Eugene, Corvallis, and Monmouth—the latter as a representative of the three normal schools. If not too expensive to be practicable, it is suggested that the campuses at Eugene and at Monmouth be connected by direct wire with the station at Corvallis. It is further recommended that the budget requests for the operation of this station be segregated, include all costs, and be supported by plans for the allocation of time and a statement defining proposed policies as to types and aims of programs be presented. The board should require such periodic reports as it deems advisable concerning programs actually given.

Admissions

Just as high-pressure recruiting tends to increase numbers by diluting educational standards, a variety of bases for admission as between the different institutions tends to create rivalry and to lower the character of the student body in the institutions themselves. The commission is entirely in sympathy with the principle that admissions to public higher institutions should be based upon articulation with the work of the high schools; in a large sense the standards of the institutions go back to, and depend upon, the character of public-school education. Nevertheless, a wide range of option remains with the institutions in choosing the students to be admitted to their work. If rulings with reference to satisfaction of formal admssion requirements are constantly interpreted in the most liberal sense possible, the character of the student body is likely to become mueh lower than would be the case were the opposite true.

"Are the Oregon higher institutions attracting from other States students who can not get into the institutions of their own States, because of poor preparation or poor ability?" is a question to be determined by tests.

The psychological tests of the American Council on Education, administered by the University of Oregon, show no very large difference in central tendencies among the students who enter the university from the different States, although the median rating of students from California and from other States (other States exclusive of Idaho, Washington, and Montana) are lower than the median of students from Oregon. The students from the Philippine Islands also show a very much lower median. At the Oregon Agricultural College two-thirds of the students from Oregon are in the two upper quartiles in the English examinations; three-fourths of those from California are in the two lower quartiles. The majority of the out-of-State students who enter the Oregon State College are in the lower two quartiles. On the psychological examinations the results for students from Oregon, California, and Washington are quite similar, Washington being highest and California lowest. Those from Idaho and Montana are low during the first quarter, but decidedly better in the second. Students from other States fall predominantly in the lower half.

It would seem that a considerable proportion of out-of-State students are attracted to the Oregon higher institutions by reasons other than those that would lead students of exceptional ability to come. The State is interested in this matter apparently largely from the standpoint of expense of training out-of-State students. In 1921 the regents of the University of Oregon and of the Oregon State College agreed upon the establishment of a nonresident tuition fee of $50 per term, as compared with $15 per term for residents. The amount expended upon the education of out-of-State students is still considerably more than is paid in tuition and other fees. Further the State is interested in knowing whether the higher nonresident fees are collected by the institutions or whether these fees are escaped by reason of laxness on the part of the institutions in applying the nonresident rule.

Nonresident Students

The admission of nonresident students is not so serious a problem at the present time as it was in former years. Prior to 1915 Oregon State College did not require high-school graduation, or even the completion of a high-school course for admission. This condition as contrasted with the situation in certain other States adjoining Oregon resulted in a great influx of students into Oregon's institutions of higher learning. In view of these low requirements for admission, the students who poured into Oregon from other States were naturally not of the type, in many cases, which Oregon institutions desired to attract.

With the setting up of a special nonresident tuition, the Oregon State College has also made an effort to exercise more care in the selection of nonresident students for admission. In line with this purpose, the committee on admission of nonresident students has been appointed, of which the registrar is chairman. It is the duty of this committee to accept or reject applicants for admission to Oregon State College who do not reside in the State of Oregon. The basis for this selection is threefold: First, the applicant should be in the upper half of his high-school graduating class; second, the trend of his academic work in high school should be consistently good or consistently upward; third, the high-school principal's recommendation of the student should be entirely satisfactory. The latter consideration is in most cases the deciding feature. The university requires that the out-of-State students shall be eligible for admission to the State universities of their own States.

It is important to the State of Oregon that its young people who seek special educational opportunities in higher institutions outside the State should not be penalized financially by the States to which the students go. Oregon should be prepared to render a similar service to the children of adjoining States. Unless this is done a type of tariff war is likely to develop. Further, it is entirely probable that a large number of the students who come to Oregon for their higher education remain to increase its population and to contribute to its resources by their efforts. Local communities quite frequently offer inducements to higher-educational institutions to locate in their midst because of the financial advantages secured by the services students contribute both while in college and after the college period is ended. It is by no means clear that the State should not, from the social and economic standpoint, adopt a similar policy with reference to attracting out-of-State students to attend its higher institutions.

In so far as data available indicate, an honest and serious attempt is being made by both institutions to collect all nonresident fees that should be paid. Under conditions whereby residence may be established in Oregon and because of the rather large dependence that must be placed on student affidavit, it is certain that a few nonresidence students are enabled to avoid payment of the fees in spite of the efforts of institutional authorities to collect them. The one point, with reference to which the commission believes that coordination may be improved, is that which relates to similarity of ruling concerning the admission of nonresident students.

Attention has been called in the preceding paragraphs to differences of ruling with reference to this matter between the university and the Oregon State College. In the opinion of the survey com-

mission the rule that only students shall be admitted who are eligible for admission to the universities of their own States presents serious difficulties in administration. These dfficulties are likely to increase as types of admission requirements are developed with specific reference to individual areas of institutional programs. As the institutions develop services that are peculiarly excellent in the functional fields assigned to them, certain areas of education may very well attain such reputation as to attract out-of-State students in even larger numbers. Admission to these schools and colleges, both for Oregon students and for out-of-State students, may well be conditional upon satisfaction of certain specific requirements that can not and should not be covered by the general rules of other institutions. It is recommended, therefore, that the rules now in force at the Oregon State College be applied to both institutions.

This is a convenient point at which to examine the character of students attracted to Oregon institutions of higher education. The character of student bodies is obviously determined in part by the administration of admission requirements, in part by the tone of the institutions as expressed in their treatment of students as individuals and as groups, and in part by the scholarly reputation of institutions in the secondary and higher educational worlds.

A study made by the University of Oregon Personnel Research Service, which appeared in mimeographed form in May, 1930, states:

> In general, it was shown that entering students at the University of Oregon rank somewhat below the national average in the abilities measured by the American Council on Education psychological examination. Although several private schools with very selective entrance requirements were included in the norms, thus tending to raise them considerably, it was also found that the intellectual level of entering students at the University of Oregon was somewhat below that of the better State universities which had used the same test. However, it appeared that Oregon had as large a percentage of very able students (in the highest 1, 2, 3, to 5 per cent) as in the national norms or even in very select private schools. Apparently Oregon suffers more from the mediocrity of the great mass of entering students than from any tendency of the ablest students to enroll elsewhere.

The study indicates that at the—

> present rate of improvement it will be some seven and a half years before the average intellectual ability of entering students at the University of Oregon is equal to the average ability of the students who come to the University of Michigan for training even if Michigan stands still, i. e., becomes no more selective intellectually in terms of these tests than it now is.

Studies made by the Oregon State College of its students show very striking variations in the distribution among ability groups according to the schools in which they enroll. These variations are shown upon the basis of psychological examinations, by English placement tests and by college performance.

Table 1 shows the percentage distribution of freshmen in each of the eight schools of the Oregon State College according to ratings made in the psychological tests.

TABLE 1.—*Distribution of freshmen in each school according to rating made in psychological examination*

School	Quartiles							
	1		2		3		4	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Agriculture	15	22.7	14	21.2	16	24.3	21	31.8
Chemical engineering	17	47.2	11	30.6	5	13.9	3	8.3
Commerce	63	19.2	81	24.6	82	24.9	103	31.3
Engineering	60	33.7	58	29.6	49	25.0	23	11.7
Forestry	17	22.7	19	25.3	18	24.0	21	28.0
Home economics	26	19.7	35	26.5	33	25.0	38	28.8
Pharmacy	10	17.5	16	28.1	13	22.8	18	31.6
Vocational education	31	22.1	32	22.9	37	26.4	40	28.6

Study of the above table reveals that more than 50 per cent of the freshmen in the schools of agriculture, commerce, vocational education, pharmacy, home economics, and forestry fall in the two lower quartiles when the ranking of all freshmen in the psychological examination is obtained. Commerce, agriculture, and vocational education freshmen show the poorest record upon the basis of this measure. The table also shows that agriculture, commerce, and pharmacy have more than 30 per cent of their freshmen in the fourth quartile. Forestry, pharmacy, and vocational education all have 28 per cent or more in the fourth quartile. This seems to indicate that these schools have a relatively large number of students low in the abilities that the psychological examination tests measure. It is perhaps significant that the schools which have the poorest student bodies measured in this manner are also those in which it is quite commonly charged that recruiting is most active.

At the Oregon State College ranking in the placement examination in English shown by Table 2 gives somewhat similar results. A larger percentage of the freshmen in agriculture are found in the lower half and also in the lower quartile than is the case of any other school. Forestry is next in both groups, pharmacy sixth in the percentage in the lower half and fourth in the lowest quartile. It is interesting to note that the freshmen in the school of engineering, which ranks high among the schools upon the basis of the psychological tests, in the English test bring their school down to fifth among the schools when they are ranked according to their standing in the lower half, and sixth among them when they are ranked according to the percentage in the fourth quartile. Commerce is

fifth among the schools on the basis of quartiles. With the exception of the engineers (notoriously deficient in interest in English), agriculture, pharmacy, and commerce again show relatively large proportions of their students in the lower ranks. It is difficult to determine why forestry should rank low, except as its students are recruited from much the same groups as those from which students in agriculture are derived.

TABLE 2.—*Distribution of freshmen in each school according to rating made in placement examination in English*

School	Quartiles							
	1		2		3		4	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Agriculture	8	11.8	12	17.7	16	23.5	32	47.0
Chemical engineering	12	33.3	13	36.1	6	16.7	5	13.9
Commerce	100	29.1	74	22.2	76	22.8	84	25.1
Engineering	43	21.7	47	23.7	52	26.3	56	28.3
Forestry	8	10.3	15	19.2	19	24.4	36	46.1
Home economics	52	39.7	35	26.7	32	24.4	12	9.2
Pharmacy	11	19.3	10	17.5	22	38.6	14	24.6
Vocational education	48	34.5	32	24.0	28	20.2	31	22.3

A numerical average for each student was determined, representing his rating for the year in all subjects. These ratings were then arranged and divided into quartiles arbitrarily assigning to the first quartile students who had made 87 per cent and above; to the second, those who made from 83 to 86 per cent, inclusive; to the third, 79 to 82 per cent, inclusive; and to the fourth, those who made 78 per cent and below. On the basis of this ranking each school contributed to the first, second, third, and fourth quartiles the percentage of students indicated by Table 3.

TABLE 3.—*Rating of students for the year in all subjects*

School	First quartile	Second quartile	Third quartile	Fourth quartile
Agriculture	18.2	9.1	31.8	40.9
Chemical engineering	52.8	22.2	5.6	19.4
Commerce	20.7	29.0	25.9	24.4
Engineering	18.4	20.9	21.9	38.8
Forestry	17.3	28.3	22.7	30.7
Home economics	22.7	36.4	25.8	15.1
Pharmacy	16.7	11.1	14.8	57.4
Vocational education	21.7	29.0	25.4	23.9

It is interesting to note that upon this basis agriculture and pharmacy again contribute most heavily to the lowest quartile and the least to the upper two quartiles. Engineering and forestry also contribute very heavily to the lowest quartile and, with the exception

of agriculture and pharmacy, the least to the number of students who rank in the upper half. It is impossible to determine upon the basis of this ranking whether the preponderance of the students in these schools is to be interpreted as meaning poor quality of students or greater zeal and severity in eliminating in some schools than in others. Other studies indicate for the country as a whole that engineering schools are very strong in maintaining high standards and in their elimination of students for this reason, while agriculture is quite frequently charged, both upon the basis of impression and fact, with retaining students of relatively low ability. These general attitudes are, of course, not necessarily applicable to a specific institution such as the Oregon State College. However, other evidence contained in the study made by the registrar of the State college inclines the survey commission to the belief that this explanation may hold in the case of the Oregon State College.

In this connection it may be noted that upon all three methods of ranking agriculture students contribute very largely to the lowest quartile and that upon the basis of the psychological and English tests, whose results are not modified by variations between schools as the result of different standards of marking, agriculture, pharmacy, and commerce are uniformly low.

Admittedly recruiting of students for the school of agriculture is most vigorous and it is freely charged in Oregon that recruiting for the school of commerce is also conducted widely and indiscriminately. The commission found no evidence and did not meet with the charge that recruiting for the school of pharmacy was emphasized. In its opinion the type of student attracted to pharmacy has in mind quick employment of the drug-store type at relatively low compensation. It would appear probable, therefore, that the selective grouping of students with this occupational objective may account for the low ranking that pharmacy attains.

Intimately related to the problem of admissions is that of student losses after students are admitted to the institutions. If poor students are admitted to college and the college maintains high standards of instruction and scholarship, losses are likely to be large. The temptation is to lower standards of college instruction in order to retain students. This temptation arises, first, because of interest in the individual student; second, because of the implication that large losses mean poor teaching; and, third, in Oregon, because the number of students has been the obvious argument to use in maintaining the distribution of millage or in securing a new distribution of greater advantage to one or the other of the institutions. A study of student losses will not provide answers to all the questions raised by these relationships between standards and losses. It will provide,

however, factual data whose interpretation is made possible by other conditions described by this report.

Of the students entering the University of Oregon in 1924 and in 1925, 17.4 per cent and 19.1 per cent, respectively, were graduated at the end of four years. Of those entering, over 50 per cent of each group were eliminated by the end of the second year. The number graduating at the end of the normal 4-year period is somewhat less than the total number ultimately graduated, since in the two classes named 13.6 per cent and 11.3 per cent, respectively, stayed on into the fifth year. If from the total number who enter be deducted those who were graduated and those who remained more than four years, the mortality of the class is approximately 69 per cent in the university.

A study of the class of 1929, entering Oregon State College in 1925, indicates that 22 per cent were graduated at the end of four years, 16 per cent were still in school beyond the four years, 5 per cent were suspended, 17 per cent transferred to other institutions, and 40 per cent had withdrawn for various reasons. Again estimating mortality by deducting from the original entrants both those who graduated and those who remained beyond the 4-year period, the class shows a mortality of 62 per cent. The percentages of those graduated at the end of four years and of those staying on beyond the 4-year period are both slightly higher in the Oregon State College than at the University of Oregon.

The fact that the university graduates only from 17 per cent to 19 per cent of an entering class in the normal period of four years and that the Oregon State College graduates only 22 per cent is ameliorated in part by the rather large retention beyond the fourth year on the part of both institutions. This retention is explained largely by the facts that many students from rural centers attend school during the fall and winter but drop out during the spring term and that many students of relatively small means may drop out for considerable periods in order to earn money to continue their education. Nevertheless, when students retained in the fifth year are not included in losses the class mortality still remains exceedingly high in both institutions.

For 35 land-grant colleges and universities the percentage of the class of 1924 graduated in 1928 or before was 41.7 per cent. Comparing this figure with the 22 per cent for Oregon State College and 17.4 per cent and 19 per cent for the University of Oregon indicates that only half of the expected number graduate within the 4-year period. Even assuming that all who stay on beyond the fourth year graduate eventually, the total percentage of graduates for the two institutions would be 38 per cent at Oregon State College and 30 per cent at the University of Oregon.

Several points are pertinent in this connection. As has been indicated, studies seem to show that as a whole the students entering Oregon higher institutions fall considerably below the national norms in the American Council on Education test of college ability. This situation is accentuated somewhat also by the number of students of inferior ability or training who come from outside the State. At the university 17.6 per cent of the students in the class of 1929 came from outside the State, a number sufficiently large to affect the general situation if these students were quite commonly poorly equipped to do university work.

A distribution by States shows that the percentage of graduates at Oregon State College is highest among students from Oregon. The largest percentage that stays on beyond the fourth year comes from Montana, although the numbers are too small to be of special significance to the general situation. The highest proportions of suspended students are from States other than Oregon, California, and Washington. The greatest proportion of transfers; that is, students leaving the Oregon State College to attend other institutions, is from the group of States other than California, Idaho, Montana, and Washington. Almost as large a proportion, however, of California and Washington students transfer. The largest percentage withdrawing without attendance at another institution are the students who come from Washington.

The most important point in this connection is probably that of transfer students. There is reason to believe that out-of-State students come to Oregon State College from other States, especially from California and Washington, to do their junior college work and then transfer to institutions in their own States. A study of the scholarship of these transfer students shows them to be as a group somewhat above average. Those who withdraw for reasons other than transfer are, however, as a group, below average in scholarship.

A study of the students entering the university as members of the class of 1929 who transferred to other institutions shows that these students are slightly below the general university average in scholarship and approximately average in ability as shown by the American Council on Education test. This study shows also that the greatest numbers transfer during the first four terms or at the end of six or of nine terms of work at the university. The grade point average of such transfers is somewhat higher for those who remain for the longer period of time at the university. This probably means that those who drop out early are lower in ability than those who remain longer.

The basic reason for the low percentages of graduation at both institutions arises, in the opinion of the survey committee, from the

fact that efforts to recruit students have brought into the institutions an undue proportion of students of poor ability, many of whom should never go to college and are totally unfitted for work of college standard. The relaxation of recruiting methods would doubtless effect an improvement, although, in the opinion of the commission, it is highly desirable that for specific areas of specialization and vocational purpose a more rigid policy of selection be adopted. This selective process should begin in the high schools of the State as early as possible. Until such a policy is put into effect Oregon's institutions of higher learning will continue to secure an inferior type of student who goes to college for a year or two and then cuts loose or is cut loose, even under conditions that make it advantageous to the institution to retain as many students as possible. The fact that the law creating the State board of higher education makes the board responsible for allocation of funds to the institutions should result in lessening the incentive of the institutions to seek large numbers in order to determine the distribution of millage taxes. The way is, therefore, made easier for the inauguration of selective processess appropriate to the specific functions of the institutions and uniform with reference to the common requirements that underlie a variety of types of specialization.

Selective processes are not, of course, simply procedures in methods of admission. They may and should serve the additional purposes of guidance during the period of college attendance. Thus the adoption of the newer forms of psychological and achievement tests may serve to supplement other bases for admission and at the same time aid in placing students properly in their college work and in providing suitable types of instruction. The psychological tests, especially, have come to serve these purposes in many institutions.

Testing Program

All of Oregon's institutions of higher learning administer psychological tests more or less systematically to incoming students. At present this practice is carried out independently at each institution without reference to what the others do. Since all of them do give such tests, it is not necessary to point out the desirability of the practice. We may assume that each institution is convinced of its usefulness.

The chief point of criticism is lack of uniformity. Some of the institutions administer tests to all incoming students, others to their freshmen only, and still others only to freshmen in certain schools. Some institutions give these tests during freshman week in the fall, other at various times during the year. Some of the institutions study and use these test results to a much greater extent than others.

Above all, different institutions do not use the same test or tests. It is highly desirable that much more uniformity of practice be introduced if any use is to be made of the results of the testing program either within the institution or for comparative purposes. It is recommended, therefore, that—

1. A test (or battery of tests) be selected which shall be administered to all students entering any of the five Oregon institutions of higher learnings, this test to be selected on the basis of the usual criteria of reliability, validity, adequate norms, ease of administration, and scoring and cost in addition to the important consideration of its suitableness. There are a number of tests which would serve as adequate measures of the ability of practically all students who may enter Oregon's institutions of higher learning.

2. It is further recommended that after the test has been selected, a uniform procedure with respect to the time of administering it be adopted. It is usually most convenient and efficient to administer the test as early in the school year as possible, preferably during the first week of school in the fall term or during freshman week. It will probably be found necessary to administer the test at the opening of each term to students who enter at that time and to those who entered late the preceding term or who for some reason failed to take the test.

3. It is also recommended that after the test has been given and scored, some method of expressing the score of each individual in terms of its relations to the scores of the entire group be adopted by all the institutions. Such, for example, would be the method of percentile ranks or of standard deviation scores. This is essential to the proper interpretation of individual scores of adults on psychological tests in any particular institution or group, aside from reference to the norms on the test, and is even more desirable for research purposes.

4. It is strongly urged that the results of the testing program be made a part of the individual personnel record and that these results be made use of to as great an extent as possible. Some of the institutions are at present making little or no use of the results of the tests which have been given. This is an extremely costly and wasteful procedure. The uses of psychological test scores in personnel work, in vocational and educational guidance, in matters of adjustment, in interpretation of scholastic difficulties, and in research are great. To give tests and not to make use of the results is worse than giving none because of the time and expense involved.

5. In addition to psychological tests, it would probably be desirable to make use of some aptitude tests, which ones, or how many of these are used, can be left to the discretion of a committee to

formulate the uniform testing program. What has been said above with regard to psychological tests applies quite as well to the use and interpretation of results of aptitude tests.

Marking Systems

Just as psychological tests serve the useful purposes of placement and guidance, systems of evaluating the progress and the development of students constitute an important phase of educational procedure. These systems are usually embodied in some method of marking or rating students. This system of evaluation should be such as to enable comparisons to be made in regard to the attainments of students no matter in what institution the student may be located. This is especially important in the case of transfers and becomes essential to the coordination of the work of the Oregon higher institutions proposed by the survey commission. In accordance with the plan suggested for coordinating the work of the university and the State college, students will quite frequently pursue part of their courses at one institution and part at the other. Their achievements, therefore, should be measurable in comparable terms.

Oregon's higher institutions of learning have no uniform system of marking. It is desirable that marks given by the faculty in one institution be comparable in form and meaning to those of any other institution in the State. The advantages of such uniformity in marks in the matters of transfer of credits, in giving credit for quality, in awarding honors, and prizes, in determining eligibility for promotion and graduation, and in research are obvious.

It is recommended, therefore, that a uniform system of marking be adopted by the five institutions of higher learning and in so far as possible that this system also be adopted by the public schools of Oregon. There would seem to be no good reason for confining this marking system to the higher institutions alone.

It is not the purpose of the survey commission to recommend specifically what system of marks should be used or what the theoretical distribution of marks should be. It is probably true, however, that the system of marks which uses letters instead of figures or per cents is in widest usage at the present time. Since marks are in a sense a medium of educational exchange, it is advantageous to have the same units in all localities or at least to conform with common usage wherever possible.

It is suggested, therefore, that some such system as the following be considered for adoption in the schools and higher institutions of learning:

A—highest or best; B—above average; C—average; D—below average, but passing; F—failure; I—incomplete where the student

has been prevented from completing the course because of unavoidable reasons or circumstances.

It will be noted that no "conditional" mark (usually designated by E) has been included. This is sometimes used in cases where a student does not receive a passing mark, but for certain reasons seems to deserve another chance. There would seem to be no valid justification at the present time for such a mark. It is usually employed where the instructor is influenced by factors entirely extraneous to the actual achievement of the student. Marks should be a measure of achievement and nothing more if they are to be objective and they should not be influenced by personality or other factors. If marks are an objective measure of achievement, there seems to be no justification for doubt as to whether a student deserves to pass or fail any more than there is as to whether he should receive an A or a B. It has been shown many times that instructors are incapable in most cases of judging a student's ability in finer units than a 5-point scale.

It is further recommended that a theoretical distribution of marks be adopted in order that marks given by different instructors in different or in the same institution be to some extent comparable in meaning. If one instructor gives 75 per cent of A's while another teaching the same course in the same institution to groups comparable in ability assigns only 15 per cent of A's, it could certainly not be said that A means the same in both classes. It is a step toward making marks comparable in meaning, therefore, to hold to the same distribution within practical limits. A number of theoretical distributions have been proposed. That of Rugg, based on units of the standard deviation, seems as logical and practical as any. It is as follows: A, 7 per cent; B, 24 per cent; C, 38 per cent; D, 24 per cent; F, 7 per cent. In view of the known facts regarding the manner in which human abilities distribute themselves and in view of the sound statistical basis for the above distribution, it can be strongly recommended.

It is necessary to add here a word of caution regarding adherence to any fixed distribution of marks. Strict adherence to any such distribution is justified only where a normal distribution of the abilities exists. It is obvious that in a group highly selected in either direction on the scale it is ridiculous to attempt to force the distribution of marks into such a form. On the whole, however, and especially in large classes, such a theoretical distribution can often be very closely approximated.

Finally, it is recommended that where honor points or credit for quality are given, three points be given for A, two for B, one for C, none for D, and minus one for F, for each credit hour of

work on which the mark is based. This weighting is merely an arbitrary one and as long as all institutions use the same one, any other weighting will serve the same purpose. Wood recommends A, 11; B, 8; C, 6; D, 4; F, 1. This has the disadvantage of larger numbers, but the advantage of doing away with negative quantities. It would probably be well to form a committee of representatives from each of the institutions for the purpose of studying the problem of a uniform marking system. By studying the actual situation, this committee could determine the needs of the institutions with respect to marks and a marking system; and on the basis of the above recommendations, develop the most suitable and adequate system for the State.

At the Oregon State College there is a scholarship committee which is very active in the cases of students who do unsatisfactory work. During 1928–29, 492 students were interviewed by this committee. The University of Oregon has no such committee apparently but is planning a personnel organization which is to handle all student deficiencies and maladjustments.

It is necessary to consider the circumstances under which students are permitted to withdraw from courses for which they have enrolled. The university regulations permit withdrawal from a course at any time previous to the time of the final examination without penalty, regardless of the grade of the student at the time of withdrawal. At the Oregon State College administrative regulations prescribe that withdrawals must be made not later than two weeks after the date of official registration, that if a subject is dropped in the period following three weeks after official registration and if the student's grade in the subject at the time of withdrawal is below passing, the instructor must report failure for the student. If it appears that an injustice has thus been done to the student, the registrar has "authority to make such adjustment as may seem advisable." The registrar stated that in practice this authority is very rarely exercised.

In order to withdraw from a course at the university a student must present a petition to withdraw with the signatures of his advisor, his instructor, and the dean of men or women. As a rule the instructor and the advisor sign the petition but make no statement; the dean of men or women seem rarely to sign the petitions themselves, but their secretaries usually do so. The instructor in the course is asked to give the grade of the student in the course that he dropped but does not do so in the majority of cases. Such withdrawal must not reduce his load to less than 12 hours, although this requirement may be waived by action of the academic requirements committee of which the registrar is chairman. In most cases this rule regarding the student load is adhered to.

The total number of withdrawals from courses from the university in 1928–29 was 1,783. In this year 309 students asked to withdraw from courses without adding others. A study of a random sampling of all the requests to withdraw for the fall term of 1928–29 shows that of 92 petitions, 40 were to drop courses only, 40 were to drop and add, 1 was in connection with the change of major, and 7 were to add courses only. It seems, therefore, that at the university in about one-half of the cases, students withdraw from courses without addition of other courses and without penalty. The reason most frequently given is "too heavy a load and part-time work" but 34.6 per cent who withdraw say that the reason for requesting withdrawal was course troubles and lack of interest. Those who withdraw do not seem to have lower grades on courses completed than do those who do not withdraw. Further, among those who withdraw are about the same number of students with high as of students with low ability. The effect of this procedure would seem to be somewhat as follows. A student registers for from 15 to 18 hours, tries out the courses and then drops the one in which he is most likely to fail or in which he has the least interest.

Under the conditions of withdrawal prescribed by the Oregon State College the standards are somewhat better protected. Practice as shown by a tabulation of changes in registration at the Oregon State College for the year 1929–30 indicates (1) that by far the greatest number of such changes are made during the first two weeks after registration, (2) that in almost all cases other courses are added at the time of withdrawal from the course in which the student was first registered, and (3) that such changes in registration seldom reduced the student load below the normal one and not infrequently served to increase it.

Anyone familiar with the tendency of students to seek grades and credits will have no difficulty in recognizing that it is highly desirable that withdrawals of students from courses be carefully controlled. The commission does not wish to insist upon the adoption of a specific type of withdrawal rule but recommends that through conference between the two institutions such regulation be developed as will best control the conditions that must be met in the different local situations.

Of quite similar relationship in its bearing upon the evaluation of work done by students is the whole series of regulations affecting or resulting in probationary action. Reference is, of course, to probationary action upon the basis of academic delinquencies rather than upon the basis of violation of moral or social regulations. For the five terms following the fall of 1928, 399 students were placed

upon probation at the University of Oregon. The number for the three terms of 1928–29 was 220. Of the total number of students placed upon probation 69.2 per cent clear it, 20.5 per cent are disqualified, and 10.3 per cent withdraw. Of those disqualified 14.6 per cent were reinstated and made good, while 3.9 per cent were reinstated and failed. In the year 1928–29 there were 115 who were dropped for scholastic reasons. In the same year a total of 1,783 grades of withdraw and 2,406 grades of incomplete are found. The grade of incomplete must be removed within one year, except in physical education where two years are allowed.

At the Oregon State College four types of probation are practiced.

First, students below grade in one subject at mid-term receive notification from the registrar's office, and the names of these students are sent to the office of the dean of men or the dean of women for follow-up. Instructors are requested to submit to the dean of their school or head of the department in which they are teaching, a record of the students who are below grade in one subject or more. The dean or head of the department then transmits this record to the registrar's office.

Second, students reported below grade in two or more subjects at mid-term are placed on conditional probation, unless in the judgment of the committee such action is deemed inadvisable. An interview is always arranged. The first step following this action is an interview with the scholarship committee, at which at least three members of the committee must be present. The purpose of this interview is to warn the student and to make him aware of the seriousness of his situation, and to adjust the situation in any way possible. There is no fixed or arbitrary point determining whether or not a student is placed on conditional probation, but the most recent basis used by the registrar's office for placing the student on conditional probation was being below grade in seven or more term credits. It is likely that as time goes on the standard for conditional probation will become more definite. If, at the end of the term, the student's work has been brought to a satisfactory status, the conditional probation is removed and no record is made for this probation. On the other hand, if the work of the student at the end of the term is still unsatisfactory (and here again no arbitrary standard is used, but the judgment as to whether the student's work at the end of the term is satisfactory or not rests with the scholarship committee) the record of probation dates from the mid-term, and the probation becomes one of three things:

1. Suspension for a period from one term to a year, but conditional probation rarely, if ever, terminates directly in suspension. More often it becomes—

2. Regular probation, which is probation of an indefinite nature and length, or—

3. Term probation, which is the most drastic type of probation, and which requires that the student bring his work to a satisfactory status by the end of the term or be dropped from school for a period or from one to three terms.

For the period of September, 1928, to May, 1930, a total of 993 students were subject to the action of the scholarship committee. The largest numbers of these, both relatively and absolutely, came from Oregon and California. About one-fourth of the group from each State (excepting Washington and Oregon) were suspended. Less than 10 per cent of those from Washington and about 20 per cent of those from Oregon were suspended.

Of those placed on probation the highest proportion of those released from probation due to improvement in work were from Montana (50 per cent), but for the groups having numbers sufficiently large for reliability, Oregon, California, and States other than Washington, California, Montana, and Idaho are about equal, with 40 per cent each.

The summary shows that of the 993 students originally placed on probation, 197, or roughly 20 per cent, were suspended; 387, or 40 per cent, were removed from probation eventually; 192, or 20 per cent, were still on probation as of May 5, 1930; and 217, or 20 per cent, left college during the period under consideration and while on probation.

It is extremely difficult to formulate and apply uniform probationary regulations as between two institutions. The regulations may be, and probably should be, developed through conference but effective application of such rules is, from the educational standpoint, so dependent upon personal judgment of what is best for the individual that uniformity of application is probably undesirable as well as difficult.

Tests, grades, probationary action, and an infinite number of other matters that deal with the management of students as individuals and as groups, may be regarded as closely related to, or as even the major functions, of a personnel system. In some institutions a special organization is developed for the purpose of handling student personnel work, although this is not essential to the existence of a very well-defined personnel system in an institution. Broadly speaking, it is the purpose of a personnel system to gather information concerning the student and upon the basis of this information to provide assistance to him and to the faculty, which will bring about the best possible adjustment between the student and his environment. Whatever personnel organization accomplishes this most effectively in a specific institution is the proper one.

At the present time each of the five institutions is developing its own personnel system. The Oregon Normal School is the only one of the three normal schools which seems to be aiming at a definite organization and program. At the Oregon State College the personnel work is directly under the school of vocational education, at the University of Oregon it is under the department of psychology in the college of literature, arts, and sciences. It seems unwise to attempt to lay down any definite organization for all five institutions. The function of a personnel system will depend to a great extent on the type of institution in which it exists and the type of student material with which it deals. A personnel system for engineering students would probably differ materially from one for students in agriculture in the same institution or from one for architectural students in another institution.

It is even doubtful whether the gathering of information about the individual student can be done uniformly in all five institutions without considerable waste. There are certain essential facts as to high-school record, parentage, age, experience, intelligence, likes and dislikes, etc., which should undoubtedly be obtained about every student. There are probably others, however, in which only agricultural colleges would be interested or others which only the normal schools would want.

It seems desirable to recommend, therefore, that a committee be appointed with representation from all five institutions to study the problem of a uniform personnel record. It may be desirable to make this record blank uniform only in certain respects and then to permit additional data to be collected in the same or in another record by each institution as it sees fit to do so. At the same time this commitee might well consider the possibilities of laying down certain principles in the administration of the personnel system which would be followed in all institutions without attempting to force each of them to follow exactly the same procedure unless it proved desirable to do so. For example, the work of mental hygiene and the functions of the psychiatrist are closely related to personnel work. At the University of Oregon plans are now under way to develop this phase of the work in the university health service while at the Oregon State College what work is being done along this line is carried out by the college of education in connection with a course in mental hygiene. In this case it would seem desirable to allocate this work to the same department or school in both (or in all) institutions, preferably in the health service in the larger institutions.

In general, therefore, it may be recommended that uniformity in personnel record and administration should not be required beyond the point at which it begins to hamper the particular purpose of the

system in any institution. A certain degree of uniformity is desirable and even essential for any inclusive research program as well as for efficiency and economy but too much uniformity may decrease the usefulness of the system.

Graduation

Differences in types and purposes of work taken at the higher institutions justify variation in the requirements for admission to training in each of these fields; these differences also justify variation in requirements for graduation not only with respect to subjects studied but also with respect to quantitive measures of work such as those of time and credit. These statements should be rather obvious but the tradition of the 4-year college course and the later standard of 120 semester or 180 term hours required for the first degree have sometimes obscured the varying amounts and types of ability and achievement demanded to master different undergraduate forms of instruction. Precise uniformity as between the requirements for graduation in different fields or as between institutions of different purpose may be regarded as evidence of adherence to mechanical and formal standards rather than as evidence that high standards are maintained. From this standpoint it is desirable to examine the various graduation requirements in force at the university and the State college.

At the university there are certain lower division requirements for all students. In addition all lower division students must clear either Group I or II and Group III or IV of the four subjects matter groupings, except in the colleges of law and of literature, science and arts where Groups I, II, III, and IV must all be fulfilled. In addition, the last two mentioned colleges require a sophomore option which is a continuation of a freshman survey course.

After the junior certificate has been obtained, certain upper division requirements must be met. These are in all schools (1) 186 term hours of work altogether; (2) not more than 46 term hours of the lowest passing grade; (3) 62 hours of upper division work except that in all schools except literature, science and arts this may be reduced to 45 hours upon recommendation of the dean of the school in which the student is majoring; (4) 36 hours in a major of which 24 must be in upper division (in business administration the student must clear 45 hours in a major); (5) 33 term hours of foreign language unless the student has not less than two years foreign-language credit from high school in which case he takes either 24 or 21 hours. In all schools except literature, science, and arts the bachelor of science degree may be obtained by substituting 36 term hours of social science or of science and mathematics for

the foreign-language requirements. In literature, science, and arts both requirements must be met; (6) one year in residence earning at least 45 term hours, although class-extension work may be regarded as residence; (7) the last 45 term hours must be earned through instruction offered by the University of Oregon; (8) not more than 60 hours may be earned by correspondence study. In addition the law school has certain special requirements for the bachelor of laws and doctor of jurisprudence degrees. In the school of music a student may receive considerable credit toward the bachelor of music degree from practical music such as voice, piano, orchestra, glee club, etc. This tends to make work for the bachelor of music degree depend in large part upon physical persistence rather than upon mental achievement.

In general, it seems that although the requirements as set down appear quite formidable, they are not difficult to meet and that the scholarship requirements are not strict. The school of law is the only one which requires a certain grade point average for graduation and this is only in the special degrees of bachelor of laws and doctor of jurisprudence. The only thing resembling a requirement as to scholarship average for graduation is the limitation that not more than 46 hours may be graded as low as the lowest passing grade. In other words, a student may have an average grade decidedly below the average or middle grade and still graduate.

It should also be noted that it is only within the last two years that the requirement of 62 (and in some cases 45) term hours of upper-division work has been made. Previous to this, a student was able to graduate from the University of Oregon without meeting any requirements as to upper division or advanced course work. There is evidence, therefore, that the institution is attempting to secure a higher standard of work toward graduation.

The basic requirements in all curricula at Oregon State College are English composition, 9 credits; economics, 3 credits; political science, 3 credits; finance and administration or sociology, 3 credits; natural sciences, 9 credits. Men in addition must have 6 credits in military science and 3 credits in physical education. Women must have 9 credits in physical education. The total number of credits required of men is 207; of women, 192. These are the minimum requirements. Some curricula demand 12 credits in English and most demand more than the minimum in the natural sciences and in the social sciences.

There is no upper or lower division as such but no student is admitted to junior standing until he has received the junior certificate. The requirements for this are 100 credits for men and 90 for women toward graduation, with an equal number of grade points.

This certificate is not awarded until at least two terms have been spent in residence at the college.

For a major, the student is required to have at least 36 credits in one department or in closely related departments. Most of the curricula require more than this in the major. Students may take a minor consisting of not less than 18 credits in some other department or school than the one of major work.

In addition to the requirements stated above, a student must have grade points equal to the number of credits earned in order to graduate. This corresponds to an average of C.

The number of titles applied to the degrees granted by the Oregon institutions, in order that they may indicate with more or less accuracy the nature of the undergraduate specializations of different students, is somewhat bewildering. This practice, which is most evident at the university, is justified by the emphasis upon differentiation of specialization embodied in the graduation requirements of the university. These sound reasons for granting different undergraduate degrees, or for granting the degree with a designation indicating the field of specialization, have less force at the State college, although the distinctions of curricula and graduation requirements as between agriculture and engineering, for instance, are so notable as to warrant the practice. In the opinion of the survey commission multiplication of titles is much less desirable than use of the two standard terms, bachelor of science and bachelor of arts, accompanied by a descriptive phase such as in journalism, in engineering, etc.

In view of the problems of curricular adjustment that must be solved by joint conference between the two institutions if the recommendations of the commission concerning fundamental coordination are adopted, it is desirable that a committee similar to those appointed for these purposes be designated to coordinate practices and requirements of the two institutions with respect to graduation requirements and the terms to be applied to undergraduate degrees that are granted. It should not be the purpose of such a committee to seek or to impose uniformity; the different characters and functions assigned to the institutions make uniformity of graduation requirements and of degrees as between the institutions undesirable. It should rather be the purpose to determine jointly the differences that are appropriate to these different functions. Such mutual agreement should serve to define differentiation in conventional terms of time, credit, grades, and grade points in order to contribute to better institutional and public understanding of distinctions between educational functions that are more fundamental than these mechanical and formal measures. The commission believes that the Oregon institutions may make a real contribution to higher education

in America if they will thus give concrete expression to the very real differences among the various curricula with respect to the abilities and attainments required of students in order to acquit themselves creditably. Such expression might well serve to give effective recognition to the fact that four years of effort in college devoted by different students to different curricula, does not result, as it were, in the attainment of four gallons of education dipped from a common spring.

Chapter VI

Articulation of Accounts and Business Management

The law creating the State board of higher education requires that the board set up a uniform system of accounting for the higher institutions under its charge. The authors of the law probably had in mind two aspects of the need for uniform accounting: (1) The interpretation, in terms of dollars and cents, of the activities carried on by the State's higher educational institutions, in other words costs; and (2) the use of uniform accounting in controlling the educational programs of the different institutions in such fashion as to secure a unified system. It is the purpose of this chapter to consider some of the implications of this requirement of the law and to suggest the principles and procedures essential to the attainment of the purposes which such a system should serve.

To devise a system of uniform accounting for five institutions of diverse character, in which expenditures are as large as those of the Oregon institutions, is by no means a simple task. In 1929–30 the estimated income of the institutions of higher learning in Oregon was $9,263,995. Savings in the expenditure of this large sum that may result from unity of business management and from uniform accounting may constitute a relatively small percentage of the total, but in terms of dollars be sufficiently large to enable the State's program to be expanded or improved in ways that would be impossible otherwise.

The complexity of the problem is increased by the fact that this income is derived from a variety of sources. It is possible to group the sources of funds for support of higher education in the State under five major heads: Income from the State, from the Federal Government, from the counties, from the students and from gifts and other sources. However, this simplification serves to conceal the problems involved in setting up a uniform system of accounts.

Money from the State is derived under 17 different State laws which provide for continuing appropriations from year to year and also from special appropriations made at every legislative session. Each of the continuing appropriations is limited by the terms of the law, and in a number of instances the purposes for which the money may be expended are very specifically prescribed. In order to deter-

mine whether the legal requirements are being observed it is necessary to account for each of these funds.

In the same way Federal funds are provided in accordance with 14 different Federal acts and agreements. In several instances the Federal Government requires one type of accounting for one fund and another type of accounting for another fund. For example, the money received as a result of the Morrill Acts of 1862 and 1890 is accounted for to the United States Office of Education in accordance with definite classification prescribed by that office. This classification has no relationship, or very little relationship, to the classification and regulations imposed by the director of experiment stations in the Department of Agriculture with reference to the Hatch, Adams, and Purnell funds. Neither uses the same system as is used in accounting to the Department of Agriculture in the case of the Smith-Lever extension service funds. All are different from the accounting required in the case of funds received from Smith-Hughes sources for the purpose of training vocational teachers. Yet all these requirements must be met by the State's system of institutional accounting.

Funds are received from 30 counties in Oregon and the local contributors are entitled to as scrupulous accounting for money derived from the communities as is the Federal Government.

Income from students is secured from tuition, laboratory, and other fees. In some instances these fees or charges against students are for specific purposes and contributed by the students with the definite understanding that they shall be expended for these purposes and not for others. Thus money contributed for the health service may reasonably be expected by parents and students to be expended for that purpose. All this involves strict fund accounting.

Further, the general classification of "gifts and other sources" conceals a very complex situation with reference to responsibility for donations. There was a time in the history of American education when many persons were fearful that when they gave money to an institution, especially to a public institution, for a specific purpose, it would be lost in the general accounting and possibly diverted to other uses than for those which it was intended. This fear has been overcome only by a type of fund accounting which regards every gift for a specific purpose as an inviolable trust. The person who provides $10,000 under the condition that its income shall be devoted to the purchase of new books for the library in a specific field wishes to be reasonably assured that the institution will observe the conditions of the gift. He or his heirs should be able to determine from the accounts of the institution at any time whether the trust is maintained intact and its income devoted to the purpose intended.

There is also concealed under the head of gifts and other sources a variety of sources of income which must be accounted for specifically with reference to activities and services carried on as a part of the educational or research program of the institution in order to determine actual costs of such operations. Thus sales of products from experiment stations which are not in any sense profit, but are rather the salvaging of some of the costs of research work, should in fact be deducted from the expenditures for that purpose in determining the cost of the research. In the same way services of inspection or testing for which fees are charged must be accounted for with reference to the specific service if any real conception of the cost of such service is to be obtained.

Accounting in the case of higher educational activity is further complicated by the variety of activities and necessary operations for which money is expended. There is no single standardized product or small group of products into whose creation set quantities and qualities of material and service enter without variation. While we are accustomed to speak of the students as the product of our educational institutions the elements that go into the making of this student product are not the same for any two students. Even within the broad classification of making a student into an engineer or an agriculturist or a physician or a social worker or a scientific research worker, the combinations vary widely and each element requires expenditure.

In carrying out educational purposes the institutions purchase and use everything from rats to university professors, everything from thumb tacks to buildings, from bird seed to tractors. In accounting for the use of all these services and materials there is no single common measure of their value in the educational process. Rats may be used to carry on an investigation into problems of nutrition conducted by the home economics department or they may be used by the medical school to determine the effects of drugs. Tractors may be used for preparing land for an epic-making investigation or they may be used to acquaint students with the mechanism of their construction. Of two books of exactly the same cost one may be used by 20 undergraduate students, the other may be used by a single specialized worker in the field that it covers. Obviously the significance of the cost lies wholly in the type of use that is made of any item for which expenditure is incurred. To account for educational expenditures and to measure their costs requires that the accounts be set up to serve educational usage and purposes. The task of a uniform system of accounting, therefore, becomes especially difficult since it must be of such character as to satisfy the demands of good business practice and at the same time serve rather than hamper

the fundamental purposes for which the institution exists, that is, instruction and investigation.

The problem is rendered still more difficult by reason of the number of persons that must be responsible in the ultimate analysis for the determination of the expenditures needed to carry on specific, different educational processes. No business officer ever lived who could determine of his own knowledge the amount and quality of a specific chemical needed for the beginning course in chemistry, for a research project in medicine, and for an agricultural experiment. No business officer can have the knowledge of materials and of their uses in all of the many fields of knowledge that are included in an educational program. Only the persons actually engaged in the instructing process are able to tell for their own work what is needed in many areas of expenditure. The same is true with reference to services within specific areas of educational endeavor. It is true that the institutions expend money for items and very large items, that are common to the entire group of institutions. Fuel, for instance, is purchased and used by all. Typewriters and thumb tacks are standardized products. But even in these cases special coals may be required for experimental purposes, typewriters may need to be adapted to specific recording needs, and it may be necessary that even thumb tacks be purchased to meet the specifications of specific situations. In determining the expense of an institution, therefore, a wide variety of judgments is required. The accounting system or method of business management which prevents, in the interests of uniformity, the use of these judgments will defeat the educational purposes of the institutions, however excellent it may be from the standpoints of preventing the expenditure of money and for purposes of business accounting.

It is rather apparent from this description of the difficulties involved in setting up a uniform system of accounting to serve both educational requirements and business methods that the primary emphasis must be upon educational administration. The accounting system should contribute to determining actual costs of institutional operations. It can give very little aid in determining the relative importance of these activities from an educational standpoint.

Common practice among educational institutions has not provided a standard of educational accounting or of fiscal reporting among higher institutions. It has been maintained with considerable show of validity that no system can be devised which is applicable to more than one institution. This contention is supported by the argument that the activities and standards of educational attainment of any two institutions that may be selected differ so widely that comparisons are of no value. The survey commission believes, however, that it is possible within a single State system to devise a

method of accounting and a uniform system of business management that will furnish valuable educational and financial information. This belief is shared by a great number of business officers and administrators. A national committee has been set up to study this matter and funds have been provided by one of the foundations for the purpose of developing a standardized system of financial reporting which will be applicable to institutions of all types and sizes. This report is as yet not available as a guide in determining State procedure that should be followed in setting up uniform business operations in Oregon. However, certain essential functions characteristic of an educational accounting system may be defined.

1. Such a system must provide for fund accounting. The board of higher education is responsible to individuals for the use of gifts; to the State, for the various funds supplied by it; to the Federal Government for the funds furnished from that source; and to the counties for the specific funds that they supply. It is responsible to the students for fees collected from them for specific purposes. Only a system of fund accounting can enable the board to be sure that its various obligations for funds are observed.

2. It must set up certain general classifications that are of administrative and educational value into which all institutional activities may be fitted as units. From the educational standpoint the unit activity is the essential factor.

3. It must be so simple that the cost of its operation is not excessive.

4. It must permit of reporting to the public and should reflect the nature of the educational program of the institutions.

5. It must be suitable for statistical correlation with student and faculty activities.

6. It must not discourage initiative nor involve so many restrictions and processes that it is easier to fail in educational enterprise than to overcome the intricacies of the financial system.

Present diversity of institutional practice and business management makes it impossible to determine relative costs with reference to operations that are common to two or more of the Oregon institutions. This at any rate should be accomplished by the accounting system.

The survey commission suggests upon the basis of an examination of many hundreds of reports and close contact with the national committee now considering the whole matter that the accounting system set up be such as to permit reporting in harmony with the system that is outlined by the paragraphs immediately following.

The report should consist of four major divisions: First, a balance sheet; second, an income statement; third, an expenditures statement; and fourth, a series of schedules presenting and explain-

ing by detailed listings significant items that have appeared in preceding divisions of the report. To these major divisions may well be added a fifth section containing supplementary information such as summaries of facts concerning enrollments, degrees granted, results of pledge campaigns, condition of subsidiary corporations, and other statistical studies that are not properly a part of the financial report itself but which may be used as the basis for interpretation of the financial data given. Each of these major divisions of the report may be described in somewhat greater detail.

Governing Board

The Oregon State Board of Higher Education is the governing board for all the higher institutions of the State. Its expenses should be shown separately and it should have its own budget, accounts, and financial report quite independent of those of the institutions, yet these expenditures are an element in the cost of conducting each of the institutions in the State's system of higher education and should be allocated to institutional expense. While no method of such allocation is entirely without weaknesses it is suggested that apportionment of this expense in proportion to the public funds (Federal, State, and local) received for the support of the institutions is as nearly equitable as any method easily applicable. A method of paying the expenses of the State board of higher education by allocation to the institutions should tend to increase the desire of the institutions that the board arrange to take over common business activities which may thus be managed at less cost to the entire system than is possible under scattered institutional direction.

It is frequently desirable to prepare schedules showing total expenditures of specific types distributed by operating units and shown by total, such as expenditures for salaries, fuel, telephone and telegraph, water, freight and cartage, printing, scholarship aid, travel, publicity, and so on through a list whose length is determined solely by space and the opinion of the governing board with reference to the value of knowing the coast of such items. Frequently, detached in this fashion from the educational functions which they serve, expenditures serve merely to satisfy more or less idle curiosity, but on the other hand such items as telegraph and telephone, fuel, travel, publicity, and rent, when compiled over a period of years, may call attention to changing conditions or to the possibility of effecting economies.

It will be noted that the preceding suggestions are concerned with a system of reporting the financial operations of educational institutions; they do not deal directly with accounting methods and proce-

dures. The commission is not concerned with the specific system of accounting that is adopted further than to point out that unless it is designed to permit financial reporting of the kind indicated the most important educational reasons for setting up such a system will be defeated. There are many accounting processes and methods all based upon sound principles; it is the function of experts in that field to adapt these procedures to specifically educational requirements as well as to the business requirements of money counting.

The system of reporting suggested, or a similar one, supported by detailed schedules, should provide definitions of items and directions for classification of activities that will permit institutions of different types and size to distribute all items of capital investment, income, and expenditure under appropriate headings and thus afford comparable financial pictures of their operations in so far as these operations are of similar type and should also at the same time indicate clearly educational functions that are peculiar to each. For example, it makes no difference whether an institution is a normal school, a university, or a State college, administrative expenditure in each case should be defined in the same terms, and include the same items in so far as they are elements in the administrative expense of any institution. The primary value of such a system lies in the fact that in making comparisons between institutions it is possible to be reasonably sure that all items of similar character are classified in the same way rather than distributed to different major classifications by different institutions. Provision is made for variation of organization and procedure in actual operation as between institutions but operations of similar purpose are brought together. Thus it is possible to determine whether institutions operating under different methods of administrative organization are spending similar or differing proportions of their total resources for this phase of institutional activity. Determination of the fact of variation does not, however, indicate conclusively that from the educational standpoint the form of administration that costs proportionately the least is better than the one that costs more. The reporting merely insures that variations in administrative costs between the two institutions are not due to different methods of financial reporting of such costs. In the same way it is possible to classify instruction expenses in very different subjects and for very different purposes under the general heading of "instruction," with assurance that the same types of expenditure are considered in both cases in determining these expenses. It is therefore possible to determine the proportionate amount of total resources spent by the two institutions for instruction, but it is impossible to determine whether the institution that is teaching a subject not included in

the work of the other is spending too large an amount for that specific field. Judgment in regard to the latter point must be based upon the relative importance of different activities in the life of the State and Nation and to a degree upon the nature of the State's educational policy or even upon the nature of its social philosophy. The form of reporting should, by reason of the opportunity it gives to distinguish specific subject matter and types of instruction, clearly expose the fallacy of the procedure which attempts to compare the financial efficiency of different educational institutions by dividing total instruction expense by the total number of students. Inevitably it must cost more to accomplish some types of educational purpose than others; financial reports of the kind proposed should make it perfectly evident that in the educational world as in the agricultural, it costs less to produce a pea than to produce a cantaloupe.

At the present time five different systems of management handle the business of Oregon's higher institutions of learning. Each of these systems has its own policies, its own procedures, its own records and business forms, its own methods of report making. In no two instances is it possible to determine the amounts spent for a general class of expenditures such as administrative expenditures, with reasonable assurance that the statements embody all the same type of costs. Terminology and groupings are so different that comparable items are concealed and dissimilar activities appear to be comparable. It is very important, therefore, that under the direction of the State board of higher education adequate measures be taken to insure accounting and business procedures of such uniform character that a standard method of reporting financial condition and operation may be prescribed and adhered to.

One means of accomplishing these purposes was frequently suggested to the survey commission, that of concentrating business operations of all institutions in the office of the State department of higher education. This proposal is seriously opposed by the institutional administrations upon grounds that deserve careful consideration. Fundamentally the objection to removing responsibility for the business operations of an institution from the direct control of the administrative officers of that institution may be traced to the belief that this would result in removing from the officers responsible for educational administration the means of exercising that responsibility. The president is held responsible for the effective and economical conduct of the instructing and research programs of the institution. Effectiveness and economy are dependent upon use of the funds available as and when they are demanded by the educational program. It is necessary that the president have at all times immediately under his control the financial instruments and

agencies through which the educational program may be carried on. A central business office for all the institutions would, it is feared, introduce intermediate and time-consuming processes which would make it awkward and difficult for the president to use the financial resources effectively in carrying out the educational policies and processes for which he is responsible. Educational management would be as difficult under such dual control as would the coordination of the right hand of one person with the left hand of another.

Experience in other States with central State purchasing agents and other centralized forms of business control over different institutions tends to support this viewpoint. Further, it is difficult to believe that such centralized business management could be kept within the limits of mere accounting and business service for and to the educational officers of the institutions. The tendency always is for control of operations and program to concentrate where the financial power rests. Therefore, it is contended that the presidents of the institutions and their educational officers would gradually become the servants of the business office and that there would be substituted for the educational direction of the capable and outstanding human personalities who are institutional presidents a kind of impersonal direction by a business machine and by accountants more concerned with the sacredness of rules and the conservation of forms than with the use of money to create educated young men and women or to discover truth through the processes of investigation.

The survey commission is in entire accord with the views that underlie these contentions; it believes that any form of centralized business management that is independent of the control and use of the administrative officers responsible for the educational programs of the institutions will result in inefficiency and waste. At the same time the commission recognizes that there are elements of waste in the present unassociated and independent conduct of business operations by five separate offices. It recognizes that the State board of higher education can not secure comparable records essential to coordination of the higher educational program of the State as a whole under existing differences of procedure and record keeping. This is true even though the institutions are perfectly honest in their attempts to respond to requests for information. Definitions and selections have to be made and different persons place different interpretations upon the significance of certain elements. Further, the commission recognizes that it is probable that a larger proportion of the funds devoted to higher education in Oregon is being spent upon the mere operation of the business machinery of the university and the State college than would be required if these two institutions

were under one administration and one business management. This judgment is supported by certain comparisons that it is possible to make with the proportion of available funds spent for overhead and business management in certain States where the university and land-grant college are one institution. Although comparisons of this kind are difficult because of different methods of financial reporting used by different institutions computations were possible in the case of Missouri, Nebraska, New Jersey, and Ohio, which seem to indicate that Oregon with its separate institutions is spending a larger proportion of the total institutional funds for overhead and business management than are these other States where the land-grant institution is also the State university. Missouri and New Jersey each spend 6.5 per cent for these purposes; Nebraska spends 5.6 per cent; and Ohio 4 per cent. As compared with these States Oregon spends 8.9 per cent. If it be assumed upon the basis of these figures that by combining the business management of the University of Oregon and the Oregon State College even 1 per cent of the total budget might be saved for educational uses instead of being spent to keep the business machinery going, the total upon the basis of the estimated income for 1929–30 would amount to approximately $90,000 per year.

In view of the apparently conflicting requirements of educational administration and of business economy, both of which the commission fully recognizes, the problem becomes one of suggesting methods whereby educational effectiveness may be preserved and more economical business operation secured. In the opinion of the survey commission these purposes may be accomplished by creating in the State department of higher education the means to perform certain services for the institutions that can be carried on more economically at a central point and that are not inherently local and involved in preservation of administrative control. This area may be defined with sufficient definiteness to indicate certain specific types of service that may be thus performed.

It should be evident that business activities which involve contact with students, immediate supervision of buildings and grounds and of clerical help, the issuing of supplies, care of equipment, and the operation of local enterprises such as dining halls, laundries, and dormitories must be performed locally. It is not apparent, however, that those functions which concern custody, preservation and investment of funds, and the keeping of records thereof is essentially a local function or related to the preservation of administrative control. These functions involve careful extended bookkeeping operations; in the opinion of the survey commission these operations could be carried on effectively and more economically at a central point. Statistical study of the financial records and their correlations with

records of attendance, grades, graduation, and so on involves the carrying on at each institution of much manual labor. It should be possible to assemble in a central office serving all institutions modern mechanical equipment for much work of this kind that would be too expensive for duplication in each institution but that would enable such work to be carried on by mechanical means more quickly and economically. Assuming that a uniform system of accounting and reporting should be established in all institutions, each institution must put in much time and effort in compiling and assembling information required for the guidance of the State board of higher education in determining the condition and relationships of the entire higher educational system of the State. When these institutional reports are received it is necessary for the office of the executive secretary of the board to assemble and rearrange the institutional reports in accordance with the requirements of the board. A system whereby the institutions might furnish the board with the original records or raw data with reference to certain standard requirements would save institutional labor in compiling and with modern equipment available in a central office would permit of the most economical assembly there of pertinent data from all the institutions. In the opinion of the survey commission it is desirable that the State board of higher education establish such a centralized statistical and recording service; it is believed that its uses and the economies that would result would develop rapidly as its advantages became evident from experience with it not only for financial purposes but for purposes of educational research and control by the departments and administrations of the institutions.

Chapter VII

Coordination of Capital Investment

Duplication of work as between institutions does not necessarily mean wasteful doubling of plant and equipment for the conduct of such work. If both institutions are using their facilities for the conduct of a specific type and grade of work to full capacity, transferring all of this activity to one campus would mean a doubling of the facilities upon that campus for that type of work. It is true that this doubling of capacity upon one campus may frequently be accomplished somewhat more economically than provision for the same amount of work by two institutions, since it is usually possible to create a single unit of a given capacity more cheaply than to construct two units, each of which has half that capacity. Thus concentration of work at one place is likely to result in economy of capital investment even in the cases when such concentration would be accompanied by no corresponding saving in the direct cost of instruction.

The survey staff made a very careful and elaborate study of building use by the five higher educational institutions of Oregon. It is impossible within the compass of this survey to present all the information derived from the data assembled but certain phases of this study are pertinent to the questions raised by the preceding paragraph in regard to economies in the use of capital that the State may effect both in the use of existing plant and in future construction.

No entirely satisfactory measure of plant use has been devised. However, a very useful calculation may be developed. It is assumed that each class and laboratory room may be used 36 hours a week. The student capacity in each room in each building of the entire educational plant is then determined. By multiplying the number of students that each room would accommodate by 36 a theoretical measure of 100 per cent usage of each room is obtained in terms of student-hours. Actual schedules of room use in the Oregon institutions were studied and actual room use determined by multiplying the number of students in each class that occupied the room by the number of periods each class used the room. By adding these numbers together a figure was obtained that represented the student hours used. This figure was then divided by the number representing theoretically complete use of the room and a percentage obtained.

By arranging these percentages for the rooms in each building in descending order the theoretical median percentage student use of that building was determined. Similar treatment provides a theoretical percentage student use of the entire educational plant of each institution.

Table 1 which shows this median per cent for each building should be interpreted as follows:

At Monmouth the administration building contains 13 rooms. The theoretical percentage student use as given is 23.7 per cent. This means that 6 rooms were used less than 23.7 per cent of theoretical full capacity and 6 were used more than 23.7 per cent.

The figures contained in the table should not be interpreted as meaning that the institutional plant, at La Grande for instance, is used only 23.7 per cent as efficiently as may reasonably be expected, nor that in any case the difference between 100 per cent and the percentage given will represent the greater service that may be demanded of institutional officers in their use of the plant.

TABLE 1.—*Median student percentage use of buildings*

[Thirty-six hours per week at full room capacity basis of computation]

Institution	Number of rooms	Median percentage	Institution	Number of rooms	Median percentage
Eastern Oregon Normal School	14	23.7	Oregon State College	218	28.1
Southern Oregon Normal School	15	13.3	Armory	2	100.5
Monmouth Normal School:			Mechanic arts	8	45.0
Administration Building	13	23.7	Commerce	23	43.1
Monmouth High School	1	12.7	Administration	5	42.5
Evangelical Church	1	20.1	Apperson Hall	16	37.5
Music Hall	2	18.0	Physics	18	37.5
University of Oregon	83	23.7	Dairy	13	36.2
Architecture Building	9	22.5	Engineering labor	8	35.0
Villard Hall	6	23.5	Science	13	33.7
Commerce Building	9	20.8	Home economics	21	32.3
Johnson Hall	6	27.5	Woman's Building	9	30.0
Music Building	1	24.2	Forestry	10	28.4
Friendly Hall	2	25.6	Agriculture	28	25.0
Deady Hall	15	23.7	Pharmacy	10	25.0
Condon Hall	7	22.5	Library (classrooms)	2	21.3
Journalism Building	4	22.5	Stock judging	1	20.5
McClure Hall	7	22.5	Shephard Hall	1	19.0
Oregon Hall	12	22.5	Farm mechanics	4	17.5
Education Hall	3	16.2	Men's gymnasium	5	17.5
Gerlinger Hall	2	13.1	Mines	12	17.5
			Poultry	5	7.5
			Horticultural poultry	5	5.0

It is impossible to attain the theoretical 100 per cent use of the educational plant and equipment. This is true for a number of reasons. Certain types of work are absolutely essential to a balanced educational curriculum. They can not be omitted even though relatively few students spend comparatively few hours upon them; the facilities must be provided although they can be used but a small portion of the time. This may be illustrated by the poultry and horticulture buildings at Corvallis. Such buildings especially designed

to meet the needs of instruction in poultry and for an essential phase of horticulture are not suitable for many other instructional purposes. It is obvious that the curricula in agriculture demand this instruction. It is equally obvious that to require students to take such a large proportion of these subjects that the facilities would be in use to full capacity would result in an unreasonable distortion of emphasis. The same type of consideration is applicable with reference to facilities that must be provided for advanced or specialized work and for research; the very nature of the work is such that the plant and equipment provided can not be used to full capacity. Further, institutional officers can not determine exactly the number of students that will enroll in specific classes during any one year. Nor is it possible, or in the long run economical, when new buildings are constructed to provide facilities that will be immediately utilized to the limit of their capacity. Student bodies in the past have constantly tended to grow larger and room size and building size must be planned with reference to such future growth. Many of the buildings in Oregon were planned with rooms of size very much greater than is needed under specialization of subject matter and the diversification of offerings required by a modern curricula. Student interests shift from one subject to another and one curriculum to another many times during the life of an educational plant. Hence it is difficult to determine when buildings are constructed the exact size and number of rooms that will be demanded during the life of the building. For these and other reasons that need not be presented here, educators are inclined to agree that an educational building that shows from 40 to 50 per cent theoretical median percentage student use is very efficiently employed and that an entire education plant that shows 40 per cent median student use is being used almost as completely as may be expected.

Upon the basis of these judgments the three normal schools appear to be using their plants much less efficiently than might be demanded. In the case of the normal schools at Ashland and La Grande, where the buildings are new and the schools just developing, it is probable that this low efficiency may be ascribed in large part to provision for the future. Under these conditions a low percentage median student use is not special cause for concern except as the practices that are made possible by such liberal room space may become fixed as a standard for the future when the institutions become larger and hence may lead to demands for further accommodation which would not be necessary with efficient scheduling.

The normal school at Monmouth, however, shows a very low median percentage student use which can not be explained upon these grounds. The administration building, which contains the offices,

auditorium, and library, in addition to 13 classrooms, shows a theoretical 23.7 per cent median percentage student use. This building is old, the rooms are large, poorly arranged, and in spite of excellent janitorial care, the building presents a shabby and somewhat depressing appearance. The fact that the rooms are so large makes it impossible to maintain the variety in offerings required by a modern teacher-training curriculum and at the same time develop classes which will fill rooms to their rated seating capacity. This becomes evident when we examine the median period percentage that represents the median of the possible number of hours that each room may be used upon the basis of maximum use of 36 hours per week. Upon this basis the classrooms in the administration building show a 62.5 per cent median[1] period use of room. This is high. That size of room, rather than failure to use room, gives the low median percentage student use is evident also from the fact that a room in the Evangelical Church is used to supplement the classrooms in the administration building. Upon the basis of period use the room in the Evangelical Church shows a 61.1 per cent maximum use. It is apparent that for the space inclosed by its four walls the administration building is much more poorly adapted to the purposes of a modern curriculum than would be afforded by the same space if it were broken up into rooms of proper size. The conclusion of the survey commission that the administration building is overcrowded in the sense of having to accommodate a large number of classes and that it is poorly adapted therefore, to the enrichment and specialization of curriculum recommended by another portion of this report is confirmed by the observations and personal investigations of the survey staff.

No relief can be found by partitioning large rooms so as to provide a greater number of class and laboratory meeting places. Quite apart from the matter of sound interference the height of rooms and the arrangement of light are such as to make this solution impossible. Nor can relief be found by adapting space now devoted to offices and to the library to class purposes. Offices are small and almost continuously occupied. The library is extremely limited in book storage space and most undesirably overcrowded by readers at all hours. In the opinion of the survey commission enrichment of the curriculum and provision for a student body of the size that the institution should accommodate in order to serve its territory can be accomplished only by thorough remodeling of existing facilities and by provision for new construction. It is urgently recommended, therefore, that the State provide approximately $500,000 for new construction and for remodeling the plant at Monmouth. The new plan

[1] This is not median percentage student use.

should provide for a modern library building with a seating capacity for 30 per cent of the student body and for ample stack space. It should provide for a safe auditorium seating the entire student body and for class and laboratory rooms to permit the simultaneous meeting of one-half again as many classes as exist at present.

Upon the basis of the standards proposed, the university does not show a very efficient use of the plant as a whole, or of any single building therof. This is in part due to unwise planning in the past which has resulted in the multiplication of small units and the building of extravagantly cheap buildings. In part it is due to the wide variety of subjects that are offered on the upper division level for the purposes of specialization over almost the entire range of knowledge. In part it is due to the type of class scheduling that seeks to concentrate work in the morning hours.

At Corvallis the median percentage student use of the plant as a whole is somewhat higher than at Eugene, but falls considerably short of the proposed standard. Nevertheless, three buildings, mechanic arts, commerce, and the administration buildings, reach the standard proposed and the two rooms in the armory are used in excess of theoretical completeness. Nine of the 22 buildings considered at Corvallis show a median percentage use in excess of the highest median percentage building use at Eugene. On the other hand, two buildings at Corvallis show a smaller percentage than the building at Eugene that ranks the smallest percentage of use. Part of the apparent failure to use buildings to the fullest efficiency is due, as is also the case at Eugene, to highly specialized offerings and to concentration of scheduling during the early part of the day and failure to utilize Saturday hours extensively. Probably the somewhat higher use of the plant as a whole is due to consistent plant development over a long period of years with future demands in mind. This better plant development has resulted from control by a single administration over a long period of years and also from a relatively consistent rate of growth.

The commission is of the opinion that the efficiency of use of class and laboratory rooms may be increased in both institutions considerably by the adoption of three policies: (1) Class scheduling for the purpose of assuring use of rooms for a greater number of hours per day; (2) distinct separation of funds available for educational purposes from those available for capital investment; (3) Allotment of institutional function in accordance with the recommendation made by the commission in Chapters II, III, and IV of this report.

Each of these proposed methods of securing economical use of capital investment requires more extended discussion.

Class Scheduling

Students and professors alike prefer to get their classes over with in the morning in order that their time may be free for other pursuits during the afternoon and evening. Traditions of academic leisure are such that only gradually is it regarded as reasonable, either by the faculty or students, that Saturday hours should be taken up by the work that it is their main business to perform. Thus it is quite common for educational institutions to regard only a portion of the day as open for the scheduling of classes or laboratory. These traditions and prejudices have in some cases apparently reasonable bases. However, the matter of expense involved in accommodating our present student bodies is one that must be considered seriously. The State and other public agencies are contributing to public higher education in such fashion as to make it possible for students to receive a college education for a personal expenditure far smaller than the cost of such education. It appears reasonable that the State should insist that this money be spent efficiently even at the expense of academic traditions of leisure and convenience. It is sometimes asserted in defense of limitations of scheduling class hours that students must earn their way and must be left free, therefore, to devote themselves to remunerative occupations during the afternoon. There is force to this contention but in view of the proportion of the expense of education that the State is paying the question may be raised whether the State is also obligated to conduct its educational work inefficiently from the financial standpoint in order to permit students to earn money while in college. Inefficient room use is also promoted by the idea developed during the period when space was ample that a professor has a mortgage upon a room even when he is not using it, just as he has a claim upon his residence even though he may be absent from it. This idea tends to prevent scheduling rooms for purposes other than those to which they are primarily devoted. Provision of office space for the staff tends to make it less necessary that classrooms be occupied by the professor when no classes are held. It is true that certain rooms provided with special equipment can not be used for other purposes. Nevertheless, in the opinion of the survey commission, it is highly desirable and indeed essential that the institutions attain a reasonably high percentage of use of all space provided before calling upon the State for additional construction. The standard of plant efficiency in practically all institutions is exceedingly low. The institutions of Oregon probably as compared with similar institutions elsewhere show a relatively high-plant use. This fact does not justify the conditions that exist.

Separation of Funds for Educational and Capital Use

Under present conditions of institutional financing in Oregon as well as in many other States large sums are provided from various sources which may be turned to any purpose desired by the administration or by the governing board. Thus millage tax income may be used either for educational purposes or for plant development. Student fees likewise are in many instances available for direct administrative and instruction charges or for capital investment. Under these conditions one of two tendencies is likely to develop: (1) The educational program may be starved in order to provide for plant needs and (2) the plant development may be starved to care for direct instructional costs. The problem thus confronting administrators and governing boards is that of adjusting these three types of income in such fashion that neither education program nor plant requirements suffer. Probably these officers are best qualified to determine both educational and capital requirements. Nevertheless, the fact that a single fund may be used for either or both types of expenditure tends to conceal from the people and from legislators especially their own responsibilities in the matter. In the opinion of the survey commission it is highly desirable that certain specified millage taxes be limited to expenditures other than those for capital investment and that capital investment be provided for (1) by special millage provision, (2) by special appropriation, and (3) by donation. Of these three methods, special millage provision for capital investment has the advantage of permitting a long-time building program with reasonable assurance that the program can be developed. The second subjects the higher educational program to frequent appeal to the legislature where the decision will sometimes be made upon grounds other than those of the ability of the State and its responsibilities to its higher educational program, but it also requires and gives opportunity for appeal to the legislature and the people of the State upon the basis of facts. The third method, that of provision of plant by gift, will be used in any case to supplement the other methods used.

The president of the Oregon State College has described as follows the problem that confronts the administrator when millage income and student fees are available either for instruction or capital investment:

> Although as much as possible of millage tax income has been saved for the construction of necessary buildings from year to year, the margin between total income and needs for maintenance gradually became less and less following 1921 until in the fall of 1927 the regents of the college found it advisable to establish a resident tuition fee, the income from which, along with that from nonresident tuition fees, was devoted to meeting the most pressing needs of the college for buildings. Increasing demands upon the institution in the

meantime have become so great, however, that next year practically all the income of the college, from tuition fees as well as millage taxes, will be required for maintenance. Under these conditions all but the most immediate and imperative needs for buildings have necessarily been deferred from year to year, and many old and inefficient buildings (some of them dangerous fire hazards) have been kept in service long after they should have been razed. In the selective process of determining what buildings must be built and what deferred, all needs of the institution have been carefully considered year by year.

In a State like Oregon, where a large portion of the students in the public institutions are from families of moderate means, the question may be raised very properly whether the State should expect students to contribute through fees to the development of permanent plant. It is true that tuition rates in the public institutions are low for citizens of Oregon. In spite of some sentiment which favors entirely free public higher education it is doubtful whether in Oregon there is any serious objection on the part of citizens or students to paying a part of direct educational costs. The commission is of the opinion that the people of Oregon believe that the student fees go directly and exclusively into administrative and instructional expense; it does not believe that the people of the State realize that part of the money paid by students is being used to build up the plant for the use of students of succeeding generations. Although it may be argued that it makes no difference to what purpose these moneys are devoted so long as they do not in any case pay the entire cost, yet it is doubtful whether the people of the State would regard this contention as having much force. It is also the opinion of the commission that the task of administrators in presenting the needs of the institutions will be considerably clarified if the present millage taxes are devoted to administrative purposes, to direct instructional cost, and to operation and maintenance of plant and if student fees are devoted exclusively to direct instructional purposes. This would require special provision by means of special millage or by special appropriation for capital investment.

Adoption of a Policy of Allocation of Functions

Examination of class schedules, already presented in part by Chapter II, shows that upper division classes in the fields now covered by both institutions are, upon both campuses, relatively small. If all such classes were confined to one or the other institution, it would be possible to use both buildings and instructors more efficiently. Classes and laboratory groups in these special fields on the upper division level would by such union approach more nearly efficient size. It would be possible, therefore, to raise the median percentage student use of the present plants considerably and at the same time develop needed expansions of offerings in both institu-

tions. Further, provision of facilities that must be made in the future could be done more economically in one plant than in two.

This does not mean in the Oregon situation that it would be better at this late date to unite the two institutions upon one campus. Quite apart from historical background and sentiment the State now has a large investment upon both campuses. There is no practical means of getting this investment back from either campus if one were abandoned. Both must be utilized now, and the problem therefore is to propose a plan which will insure the most economical use of the present plant and the most economical future development. This, in the opinion of the survey commission, necessitates a compromise between present conditions and those that might obtain if the institutions had been developed upon a single campus. In other words, the problem is to obtain, in so far as possible, the advantages that would be derived if the institution at Eugene and the institution at Corvallis had been, or could in the future become, a single institution upon two campuses. The commission believes that these advantages can most nearly be attained by the division of functions already recommended.

The division of functions recommended has direct bearing upon economy of investment of capital in class and laboratory facilities but in addition it is important in determining investment in facilities that are of general service such as investment in the library. Both of these aspects of capital investment may be considered together. During the course of the survey work detailed estimates of building and plant needs in order of priority were obtained from administrative officers of all institutions. These statements were reviewed by the survey staff upon the basis of building inspections, special studies of attendance and course data, and in the light of recommendations contemplated by the commission with reference to allocation of the offerings of the various institutions.

That the coordination of institutional function has a direct bearing on possible economy of capital investment in the plants at Eugene and Corvallis is made evident by the discussion that follows. The estimates of administrative officers concerning their plant needs for the next 10 years were carefully examined and the list considered by the survey staff from the standpoint of what would be required by the institutions if they continued to develop independently and without further coordination of function than that which exists at present. These lists were then arranged without reference to the priorities suggested by administrative officers in parallel columns. No new construction not included in the administrative estimates was added by the commission. This arrangement presented in striking form the duplication contemplated in a considerable portion of the future capital development.

The university at Eugene contemplates during the next 10 years the construction of a library building at a total cost of $750,000, of which the first unit is estimated at $500,000 and the second at $250,000. The State college at Corvallis contemplates an addition to its present library, to cost approximately $350,000, thus bringing the total investment in the library building to $1,100,000. Both these buildings are planned upon the assumption that both institutions will continue to develop upper division and graduate work in the sciences. If the allocation of function proposed by the commission is adopted, it would be possible to modify the plans for the library building at Eugene to omit stack, seminar, and reading room provision for upper division and graduate work in the sciences. In the opinion of the survey commission it should be possible to construct the first unit at a cost of not much in excess of $350,000 by reason of economies effected by this and other means. But the greatest saving will come in the investment in books and equipment for upper-division science that should result from confining provision of these expensive facilities to one campus. In the same way, although not so strikingly, perhaps, since the institution at Corvallis does not offer a major in the arts and humanities at present, savings in library space and in investment for books should be effected by more exactly defining lower-division work in the arts, humanities, and social sciences and limiting the work at Corvallis to this level. The present tendency is to duplicate at Corvallis to a considerable extent the facilities for upper-division work in these areas, although no degree is granted in this field. The condition of the library at Eugene is such and its overcrowded use is so evident that the survey commission can not recommend too strongly that the institution be provided immediately with a new and modern library building designed to accommodate the fields of work recommended as the peculiar function of the university.

Among the buildings included in the 10-year program at Eugene are the following: Chemistry building, $150,000; chemistry-research building, $75,000; and a biology building, $150,000; a total proposed investment of $375,000 in the fields of chemistry and biology. The plan for the development of the plant at Corvallis proposes a chemistry building to cost $355,000; a chemical-engineering building to cost $180,000; a biological-science building to cost $525,000; and an animal-science building to cost $310,000, a total proposed investment of $1,370,000, for the purposes of instruction and research in the chemical and the biological sciences and their applications. The commission is in entire accord with the desire of the State college to provide a biological-science building in the immediate future to accommodate the research of the Agricultural Experiment Station in this field and to house laboratories and rooms for instruc-

tion. It also recommends the construction of a chemistry building to provide for this important aspect of the work of the State college. Further, the commission is convinced that the university is in urgent need of modern provision for laboratories and class space for lower-division work in the sciences. The point that it is desired to make here, however, is that plant investment at Eugene and at Corvallis must be planned with reference to the libraries, the science buildings, and other recitation and instructing facilities that will be needed under the proposed reallocation and coordination of function. The plant development at neither institution can be planned independently of development at the other if the coordination of function recommended by the commission is adopted by the State board of higher education. It becomes essential that the entire combined plant be developed with reference to the combined program. This planning will have to be done with reference to the nature of the coordination program that is adopted, but the commission may emphasize certain very definite situations with reference to the plant needs of the five campuses as indicative of the nature of the development that Oregon must contemplate in the immediate future if its higher institutions are to continue to function and enjoy the high reputation that they have in the past.

The plant at the university has been neglected. Many of the buildings are old and poorly adapted to the modern requirements of instruction and research. Fifteen of the 30 buildings that may be regarded as constituting the educational plant upon the Eugene campus were built prior to 1920 and only 1 of the 15 was erected at an original cost in excess of $100,000. Johnson Hall, erected in 1915, cost $108,000. Hendricks Hall, erected in 1918, was next in cost at $56,000. Only one other building, Oregon Hall, erected in 1916, cost as much as $50,000, although additions in 1915 to the library, originally erected in 1905 at a cost of $25,000, and in 1910 to the men's gymnasium, originally erected in 1909 at a cost of $32,000, also brought the cost of these buildings to slightly over $50,000. Two of the buildings were erected at a cost of approximately $35,000 each and two at a cost of approximately $25,000 each. Of 5 buildings included in the 15 the most expensive cost $8,000 and the least expensive, the infirmary, $3,000 including the annex. One, Deady Hall, still used as a classroom in spite of its almost complete obsolesence, was erected in 1876 as a gift and is very properly no longer assigned any value. Cheaply constructed, small buildings characterized the campus at Eugene prior to 1920, when it was a relatively small school. Since that period 15 buildings have been erected, two, Gerlinger Hall in 1921 and the men's dormitory in 1927, at a cost of something over $300,000 each, together constituting an investment greater than for the entire group

of 15 buildings erected before 1920. Only four other buildings erected since 1920 cost more than $100,000 each, the music building $123,000, the education junior high group $143,000, the commerce building $102,000, and McArthur Court, $198,000. Only 5 additional buildings represent investments of any size, the heating plant with conveyor and tramway slightly over $100,000; Susan Campbell Hall $86,000; architecture and allied arts group $73,000; Condon Hall $93,000; and the journalism building $43,000. The commission is not informed concerning the cost of the fine arts building.

The survey staff inspected the entire plant of the university and was deeply impressed by the waste that has resulted from investing capital in small, cheaply constructed buildings that have a high rate of depreciation, involve great fire risks, and display practically no elements of the dignity and beauty that should characterize a great center of learning and culture. In the opinion of the survey commission, practically the entire plant of the university should be rebuilt by replacing obsolete and flimsy structures by fireproof, well-designed buildings. The great number of small, make-shift sheds, transformed dwellings, and wooden barracks scattered over the campus should be razed and replaced by substantial buildings in relatively large units that will constitute a part of a harmonious campus plan. The cheap construction that characterizes even the newer buildings, such as the commerce building, the journalism building, and Condon Hall, should be abandoned. The per student investment in the plant upon the Eugene campus is low, but it is higher than that of some other institutions which have expended their funds upon substantial and permanent structures.

The plant at Corvallis has been developed more substantially and consistently than that at Eugene. In part this is due to the long period during which the institution has been developed under the direction of a single administration. In part this may be due to the fact that the professional schools of engineering, agriculture, and home economics, all carrying definite occupational appeal, are located upon the single campus. The university has at Eugene no similar schools that enlist the wide interest and support of large and homogeneous occupational groups. Journalism and commerce, for instance, are very recent developments in the field of higher professional education. Law education is seldom regarded with enthusiasm by the people of a State that has but just passed out of the pioneer period and is likely to command the attention and interest of the legal profession only when their indifference results in overcrowding the bar with practioneers of low ethical and social standards. Only in the field of education might it be expected that the university would have the strong support of a distinct professional class, but this has not been the case in Oregon to the extent

that is found frequently in other States, largely because of the failure of the State to develop a vigorous agency of educational leadership in its State department of education.

Still a third reason for the better development of the plant at Corvallis is to be found in the extraordinarily detailed and exact methods adopted to maintain complete knowledge of the condition and uses made of the physical plant. The system of maps, charts, diagrams, and records of use of plant is much more complete and precise than will be found in most higher educational institutions in the United States. It is a model of control of physical facilities by means of up-to-date records. The commission recommends it for adoption by the State board of higher education in all the institutions under its control.

In spite of the excellent development of the plant at Corvallis, the rigid economy that has made it necessary to resort to student fees, to accumulations of small savings over a period of years from funds that were available for operation, and to extraordinary measures to preserve old buildings leaves the campus encumbered with several buildings that are serious fire risks and unsuitable for the uses to which they must be put. This is notably true of Kidder Hall (a women's dormitory that presents grave fire risks in spite of the efficient measures taken to guard against fire); the old administration building erected in 1887; the small wooden structure used for the health service; and the old gymnasium. As has already been indicated the campus at Corvallis should be provided with ample and substantial biological and chemistry buildings to house the research and instruction work in these fields. In view of the major economic importance to the State of the investigations conducted by the agricultural and engineering experiment stations these units should be provided with quarters that are not makeshifts. This becomes especially important if, as is proposed by the survey commission, all upper division and graduate work in the sciences be concentrated upon the Corvallis campus. Of no less importance is the need that provision be made for facilities in the field of education, especially a modern and commodious experimental and practice school for the training of teachers and for research in the problems of vocational education.

Considerable comment has already been made upon the physical plant at Monmouth; it is not necessary to add to the recommendations already made with respect to this institution. Emphasis has already been given to the need for a training school entirely under the control of the institution at La Grande. At both La Grande and Ashland there is real need that dormitory facilities be provided. Quite apart from the larger degree of control afforded by

dormitory life, the educational values to be derived by group living under conditions of physical and social association designed to create standards of taste, refinement, and intellectual intercourse are especially needed by those who in the classroom and in community contacts will set the future social standards of the State. Both these institutions also need special facilities for health and physical education in order that the physical recreation of students may be conducted under attractive conditions. Adequate library, dormitory, physical education, and recreational facilities are as necessary at the three normal schools as are provisions for class and laboratory rooms and for training-school work. The commission can not urge too strongly that the State plan to make the physical plants of the normal schools as complete for their size and purposes as is regarded as desirable for the university and the State college. The causes that make necessary provision for high standards of student living and instruction are as fully operative in the normal schools as in institutions intended for other types of training.

Chapter VIII

The Libraries

The library is a factor of fundamental importance in the work of institutions of higher learning. The general recognition of this fact has come during the last generation. In fact, so recent is its acceptance that in many colleges, normal schools, and universities the library facilities have not been brought to the stage of development essential to the proper functioning of these institutions of higher learning.

Functions of the Library

The generally accepted functions of the library in institutions of higher learning are:

I. Provide the printed resources needed by the students in connection with the study activities growing out of their classroom and laboratory activities. The growth in freedom from the single textbook that has characterized the educational developments of recent years has made this function of the library much more difficult to carry out than was true under the old order. The movement from a curriculum based primarily on languages and mathematics to one with large elements of the natural and social sciences brought out vividly the inadequacy of instruction based exclusively on texts. The need for a wealth of printed resources has been further accentuated by the recognition of the desirability of giving the learner a greater breadth of view than is likely to result from instruction confined to a single text and classroom discussions.

These two movements have brought to the library of the institution of higher learning two problems:

1. That of providing a wealth of printed material.
2. That of providing copies of certain commonly used books in such numbers as to make them readily available to students when they are needed for collateral reading.

The solution of these two problems has not only greatly increased the number of volumes that must be bought and put through the processes preparatory to use, but the handling of these printed resources has placed a large load on the library. Meeting the needs for reserve books is a conspicuous activity in most college, normal school, and university libraries.

II. Good teachers must be constantly growing in breadth and depth of knowledge in their fields of endeavor. The number of journals and books that appear annually in any department of knowledge is so great that it is not reasonable to expect instructors to bear all the financial burden involved in obtaining those necessary for their study. It is reasonable to expect that the institution should provide a large proportion of the printed resources that will be needed by members of the teaching staff in order to keep up their professional growth.

III. The most effective college library provides the resources for general reading and stimulates students to avail themselves of these resources. At present we are dominated too largely by the view that education is a matter of a few years spent by the youth in school and college instead of a lifelong process. The adult education movement is doing much to correct this erroneous conception. It is important that schools and colleges should contribute to the development of habits of good reading by providing a high quality of reading material in abundance for the young people who attend them. It is especially incumbent upon the colleges, normal schools, and universities to provide these resources when such a large proportion of the student body comes from small high schools and small towns that have very limited libraries as is the case in Oregon. This argument can not be too strongly put for those who are in training for teaching.

In addition to these three functions which should characterize the libraries of all higher institutions of learning, individual libraries have special functions that are determined by special features of the work conducted by the institutions of which they are a part. The university and the State college are illustrative of two of these special functions:

1. The needs of graduate work and the research activities both of faculty and students make heavy demands on a library that are of a somewhat different type than those previously discussed. They call for a much greater range of books and journals than are necessary for the instruction and general reading of the undergraduate. Materials of this character place additional burdens on the library due to the efforts necessary to locate them and the difficulties involved in cataloging and preserving them as contrasted with the ordinary run of books.

2. The development of extension courses that are offered for credit makes it important that printed resources be made available at extension centers. It is of interest that in general those responsible for the formulation of plans for extension have not given this question large consideration. Extension courses are conducted

with printed resources so limited that a high quality of work can not be done.

Important Factors in Library Service

In the carrying out of the functions outlined above the important elements are:

1. A well-trained library staff. The college administrator and the faculty members are too prone to think that the work of a library staff is essentially of a clerical nature. It is true that there is much of the clerical in the work of a library. It is also true that due to lack of training and vision libraries sometimes never raise their work above a relatively simple routine. Libraries in which this is a condition are not making their largest contribution to the academic community. Scholarship and technical training are both important in the development of the library. The reports on training and the interviews with the staffs convince the survey commission that the personnel of the libraries in the State-supported institutions of Oregon is well prepared for its duties. The reports from faculty members were in the main commendatory of the work being done by the staffs of the libraries. These views are substantiated by the data of Table 1. From these data it is seen that those holding the more responsible positions in the libraries are in the main well trained and experienced persons. It is also evident in the older institutions that the members of the staff are being retained for considerable periods of time.

TABLE 1.—*Preparation and experience of those holding the positions of major responsibility in the libraries of Oregon's public higher institutions*

Institutions	Years of experience (average)	Years in present library (average)	Percentage having a college degree	Years of experience after earning first degree (average)
University	21.6	13.4	100	0.65
State college	17.1	9.5	84	1.5
Monmouth	15.8	7.3	50	.5
Ashland [1]	9.0	2.0	100	2.0
La Grande [1]	1.0	1.0	100	2.0

[1] Librarian only person included.

A report made by the Office of Education on the libraries of land-grant colleges states that 22.5 per cent of the librarians and heads of library departments held no college degree. George A. Works, in a study of the training of 57 heads of library departments in 31 colleges and universities, found that 12.3 per cent had no degree. It is evident that the library staffs of the Oregon institutions make a favorable showing in comparison with these two groups. For

positions as responsible as the headship of a department in a library, college graduation with at least a year of training in library science is the commonly accepted standard.

Favorable comment should be made especially on the training of the librarians in the Ashland and La Grande Normal Schools. Each has had two years of study after taking the bachelor's degree. In each instance training in library science has been included. The librarian at Monmouth, although not trained formally to the same extent, is thoroughly competent. Question should be raised at this point regarding the size of the staff in these schools. G. W. Rosenlof, in a report on the Library Facilities of Teacher-Training Institutions, in discussing the size of the library staff, states:

> There should be employed not less than two full-time persons, in addition to the training-school librarian, for the library staff in all schools of less than 500 students.

Ashland and La Grande each has only one full-time person who has also general responsibility for the library of the training school.

2. An adequate supply of books and periodicals properly cataloged and housed.

The number of volumes that are needed naturally varies with the functions that the institution is discharging. Where researches are being conducted as at the University of Oregon and the State College the needs will be much greater than in the normal schools. Both the college and the university are building up their libraries to meet the research as well as the instructional needs.

The data of Table 2 show that, in spite of the fact that the institutions are approximately the same size, the university is spending about 80 per cent more on the annual maintenance of its library than is being expended by the college. That at least this amount of difference has existed over a period of several years is also shown by this table. That this difference is not due primarily to the inadequacy of the library building at the university is to be seen from the expenditures devoted to books, periodicals, and bindings as shown in Table 3. It is evident that for years the university has been devoting more to the building up of its printed resources than has the college. This is accounted for in part by the fact that the State college work emphasizes laboratory procedures and, upon the undergraduate level at least, makes fewer demands upon printed resources.

It should not be inferred from these data that the university has been spending too much on its library. In comparison with other universities of its class its showing is good but not exceptional.

TABLE 2.—*Total expenditures for library purposes*

Year	University	State college	Year	University	State college
24	$68,720	$33,486	1927	$81,619	$48,010
25	70,964	44,375	1928	86,302	46,657
26	78,926	47,507	1929	95,511	53,604

TABLE 3.—*Expenditures for books, periodicals, and bindings*

Year	University	State college	Year	University	State college
24	$26,810	$9,106	1927	$31,904	$16,543
25	26,196	15,300	1928	35,872	16,312
26	32,817	16,204	1929	38,580	21,784

The showing made by the State college library is not on the whole so favorable as that of the university. As has already been indicated its expenditures are distinctly below those of the university. The survey of the land-grant colleges that has been made by the Office of Education shows that in its expenditures per student for library purposes it is below the average for this group of institutions. This same source is authority for the statement that it possesses complete sets of 21 journals that were considered especially important in scientific research to a less degree than they are held by the majority of the land-grant colleges. If the suggestions that are made elsewhere in this report regarding the development of a school of science at State college are accepted it will become a matter of increased importance that the library be strengthened. Especially will this be true of its holdings of scientific journals.

The conditions with reference to the printed resources in the normal schools except at Monmouth is relatively not so good as at the college and university. Monmouth has 15,039 volumes; Ashland 7,032, exclusive of its juvenile collection; and La Grande 2,500 exclusive of the juvenile collection. G. W. Rosenlof, in a study of the libraries of teacher-training institutions, found that for normal schools having an enrollment of less than 500 students, the average number of volumes was 6,955 exclusive of the training-school libraries. From these figures it is evident that La Grande and Ashland are below the standards that generally obtain for schools of their class. It is true that they are young schools but State authorities would not consider it wise to establish a normal school without a fairly adequate building. The same policy should be followed in the matter of printed resources for the library. While the libraries at Ashland and La Grande are being added to each year provision

should be made immediately to raise the size of their collections to at least 5,000 volumes each.

Journals should be a conspicuous feature of the library of a normal school. In order that the maximum use may be made of them it is necessary that the important ones be bound. Thus far little or no funds have been spent at Ashland for this purpose. The budget of the library should be increased so that the binding may be brought up to date and kept there.

Buildings

The library building at the university was outgrown several years ago. As a consequence the books have to be housed in several buildings and the staff is so crowded that it can not work most effectively. Furthermore, students and faculty can not work to good advantage. Steps should be taken at once to provide the university with an adequate library building. This should be erected on the unit plan and a minimum of $350,000 should be provided for the first unit.

The building at the college should be sufficient to meet the needs of the institution for a number of years to come if the extraneous activities now housed in the building are removed from it. This should be done as soon as practicable. It will make possible a better arrangement of work and reading rooms than now obtains. Likewise, it will make for better conditions for study.

The reading room at Ashland is not large enough to meet the demands made upon it. Fortunately, it will be possible to annex an adjacent classroom by the removal of a partition. This should be done in the near future as there are times when it is not possible to meet the demands on the part of students who wish to use the reading room.

In all of the institutions the members of the staffs are well prepared and apparently much devoted to their work. While book resources, especially at Ashland and La Grande, should be increased and in the not distant future additional help should be provided at both of these places, the conditions in the libraries on the whole are good with one exception. That exception is the university library building. It has been completely outgrown, and steps toward the erection of a new building should be taken at the earliest practicable moment.

Coordination of the library facilities at Eugene and Corvallis to correspond to the allocation of functions recommended by the commission should result in transfer of considerable portions of the collections now possessed by these libraries. The book resources of the two should be regarded as a common stock. This stock

should be rearranged to place on the shelves at Eugene and at Corvallis the books best adapted and most needed for the functions of each institution. Transfer of title which might in certain instances raise legal questions is not involved in this recommendation; interlibrary loans and deposits make possible such shifting of collections as will prove useful. Future purchases should also be coordinated to insure the minimum duplication of resources between the institutions. Free use of both library collections by the staffs and student bodies should be secured by effort upon the part of the librarians to make such interchanges easy, rapid, and without excessive red tape.

Chapter IX

Faculty Standards

The execution of the entire higher educational program of Oregon s directly dependent upon the faculties of its different institutions of higher learning. No institution of higher education can achieve ts objectives and attain high standards without a staff of energetic, nthusiastic, and proficient members deeply interested in the work for which they are chosen and well organized to perform the tasks onfronting them.

Many factors enter into the evaluation of the effectiveness of an cademic staff. The size of the staff in relation to the number of tudents and the purposes to be achieved determine whether a suffi- ient number of teachers are being employed to meet the needs of he institution. The distribution of the staff as to subject-matter ields, departments, schools, or colleges, particularly with relation o student enrollment, determines whether there has been an equitable llotment of duties among the different members. The scholarly reparation and experience of the staff determine to a large degree whether the members possess ability to meet their responsibilities. The enthusiasm and interest of the members are disclosed to some xtent in the offices and memberships held in learned societies. Their nergy and industry may be ascertained in a measure by their pro- uctiveness as shown by publications and other creative work. The haracter of the staff is dependent to a degree upon the amount of nbreeding revealed by the places where its members received their raining. Although not applicable in individual cases, the age of taff members is significant.

The compensation of the staff is a vital element in determining the ind of faculty that an institution is able to assemble. An institu- ion with a low salary scale will have difficulty in competing with ther institutions in obtaining the services of the highest grade of eachers. A healthy morale among the members of the staff is pro- oted to a great extent by the policy of the institution in granting ave of absence for study and in provision for adequate housing nd social facilities.

Before proceeding to a discussion of the personal qualifications of taff members in the Oregon institutions it is advisable to consider he distribution of the various academic ranks in the different insti-

tutions. Such an analysis is helpful in obtaining a general idea o an institution's faculty personnel. Since the normal school staffs are not organized by rank they may be omitted from consideration. Table 1 shows the number and percentage of the staff members holding different ranks in the university and State college.

TABLE 1.—*Number and percentage of staff members holding different ranks at university and State college*

Rank	University of Oregon		Oregon State College	
	Number	Percentage	Number	Percentage
Deans	10	4	11	
Professors	61	25	71	
Associate professors	22	9	38	
Assistant professors	36	15	44	
Instructors	41	17	109	
Assistants, teaching fellows, etc	74	30	25	

For the purpose of securing a basis of comparison, the survey commission has compiled data showing the percentage distribution of ranks among the staffs of the 52 land-grant colleges and universities in the United States. Approximately one-half of the institutions are State universities and the other half separate State colleges, so that the situation found in them may be compared to those in the Oregon institutions. The staff distribution, according to rank for these institutions, is as follows:

Different ranks	Percentage of total
Deans	
Professors	2
Associate professors	1
Assistant professors	2
Instructors	2
Assistants, teaching fellows, etc	
Total	10

The distribution of ranks of the University of Oregon's staff is very similar to the distribution in this group of institutions, although the percentages of instructors and assistants seem to depart rather widely. In the University of Oregon 17 per cent of the staff are ranked as instructors, as compared with 29 per cent in the group of institutions and 30 per cent are classed as assistants and teaching fellows, as compared with 9 per cent in the 52 land-grant colleges and universities. It will be noted that approximately 53 per cent of the staff of the university are assistant professors or of higher rank, while in the group of institutions 62 per cent hold these ranks. This situation raises, but does not answer, the question

as to whether an unusual proportion of the teaching at the University of Oregon is being done by instructors and teaching fellows. The answer to this question may be obtained only by a detailed study of actual distribution of the teaching burden upon different levels. Such a study should be made by the university.

The arrangement of the staff by rank at the Oregon State College conforms very closely to the apportionment found in the group of institutions, although the percentage of assistant professors is somewhat smaller and of instructors somewhat larger at the State college than in the entire group of land-grant institutions. Thus only 54 per cent of the staff of the State college, approximately the same percentage as at the university, holds the rank of assistant professor or higher. The same question may be raised with reference to the State college, therefore, as has been raised in regard to the university and the answer should be sought by the same means.

As between the two institutions these facts in regard to ranking of staff reveal no very significant differences; study of the basis for appointment and of the duties assigned to the ranks of instructor and assistant in the two institutions would appear to be desirable in view of the apparent difference of percentage distribution between these ranks in the two institutions.

Scholastic Qualifications

The scholastic qualifications of the staff are revealed in a large degree by the training of its members. Training may be measured upon the basis of the years of study above high school, the highest degree held by the staff members, and their actual teaching experience. Statistical information on all three of these phases of training was collected for the Oregon institutions. In Table 2 are given the number of staff members according to rank at the University of Oregon and the Oregon State College with the years of study above high school.

TABLE 2.—*Number of staff members of university and college with years of study above high school*

Staff rank	University of Oregon					Oregon State College				
	Did not answer	1-4 years	5-6 years	7 years or more	Total	Did not answer	1-4 years	5-6 years	7 years or more	Total
Deans	.....	1	1	8	10	1	.....	4	6	11
Professors	.....	3	15	43	61	5	10	34	22	71
Associate professors	8	.....	5	14	22	2	6	11	19	38
Assistant professors	.....	4	13	19	36	1	6	23	14	44
Instructors	2	11	20	8	41	8	35	57	9	109
Assistants, teaching fellows, etc.	.....	19	43	12	74	.....	11	13	1	25

The number of years of study above high school of the staff of the University of Oregon is fairly high. Although 1 of the deans, 3 of the professors, and 4 assistant professors have had but four years of study above high school, the staff as a whole is above the average. In the Survey of Land-Grant Colleges and Universities, conducted by the United States Office of Education,[1] it was found that of the staffs of 51 institutions 28 per cent had from 1 to 4 years of study above high school, 34 per cent from 5 to 6 years, and 34 per cent 7 years or more. Two per cent of the staff did not furnish information on the point. The University of Oregon's staff has a far better record. There are but 16 per cent of its staff members with only 1 to 4 years of study as compared with 28 per cent for the entire group of institutions, while the university has 39 per cent of its staff with 5 to 6 years of study above high school in contrast to 34 per cent for the 51 colleges and universities. Furthermore, the university has 43 per cent of its staff with seven years or more of study above high school as against 34 per cent for the group.

The situation in the staff of the Oregon State College is not so favorable, although the proportion of its staff having only from one to four years of study above high school is 23 per cent while for the 51 colleges and universities the percentage is 28 per cent. For the group as a whole 34 per cent had from 5 to 6 years of study above high school as compared with 47 per cent for the college. The proportion of the college staff having seven years or more of study above high school, however, is much smaller than is the case in the group of institutions. For the college the percentage is 24 per cent and for the 51 colleges and universities 34 per cent. In other words, the Oregon State College falls below the average for the land-grant institutions of the United States in the proportion of its staff having seven or more years of study above high school.

The number and percentage of the staff members of the Oregon normal schools, according to years of study above high school, are shown in Table 3.

TABLE 3.—*Number and percentages of staff members of normal schools with years of study above high school*

Normal school at—		No years	1-4 years	5-6 years	7 years or more	Total
Monmouth	number	1	23	12	4	40
	Proportion per cent	2	58	30	10	100
Ashland	number		5	14	2	21
	Proportion per cent		23	67	10	100
La Grande	number		5	9		14
	Proportion per cent		35	65		100

[1] Bulletin, 1930, No. 9, U. S. Office of Education: Survey of Land-Grant Colleges and Universities.

The minimum scholastic requirements for teachers in normal schools should be one or two years of graduate work in addition to four years of study above high school.

The normal school at Monmouth has a very large proportion of staff members who fall below this standard. The school at La Grande has a considerably smaller percentage than Monmouth and the school at Ashland has a smaller percentage of staff members than at La Grande that fail to meet the standard proposed. Arrangements should be made for these members of the normal school staffs to pursue additional work; and new teachers should not be selected who have less training than five or six years above high school.

The highest academic degrees earned by the staffs of the institutions provide another index to their training and scholarship. In Table 4 are presented the number and highest degrees held by the members of the staffs of the University of Oregon and the Oregon State College.

TABLE 4.—*Highest degrees earned by members of staff of university and State college*

Staff rank	Number at University of Oregon holding—					Number at Oregon State College holding—				
	Did not answer	Bachelor's degree	Master's degree	Doctor's degree	Total	Did not answer	Bachelor's degree	Master's degree	Doctor's degree	Total
Deans	----	1	3	6	10	----	3	2	6	11
Professors	8	11	16	26	61	5	18	32	16	71
Associate professors	2	1	7	12	22	2	8	17	11	38
Assistant professors	1	7	14	14	36	----	14	25	5	44
Instructors	7	17	16	1	41	9	61	39	----	109
Assistants, teaching fellows, etc	1	61	12	----	74	----	25	----	----	25

The earned degrees held by the staff members of these Oregon institutions may be compared with reports for 51 land-grant colleges and universities. These reports show the following distributions:

	Per cent
Did not answer	6
No degrees	4
Bachelor's degrees	38
Master's degrees	34
Doctor's degrees	18

The staff of the University of Oregon compares favorably with the average for the entire list of institutions in the number of earned degrees. All members of the university staff have earned at least one degree; the university has a slightly larger percentage holding the bachelor's degree, a slightly smaller percentage with earned

master's degrees, and a considerably larger percentage with doctor's degrees than was found in the land-grant colleges and universities.

The staff of the Oregon State College contains a considerably larger percentage of members who have no degree higher than the bachelor's than is the case for the land-grant institutions as a whole. However, a larger percentage hold earned master's degrees. Particularly marked is the small percentage of earned doctor's degrees on the staff of the State college. The college's proportion of doctor's degrees is but 13 per cent, while for the group of institutions it is 18 per cent. This difference may be explained by the fact that the figures for the land-grant group include institutions which combine all the public higher education of the State. These include large faculties of arts and sciences, while the separate land-grant colleges, such as the Oregon State College, specialize in technical schools in which the doctor's degree has been regarded as less essential.

The record of the number and of the highest degrees earned by the staff members of the normal schools is given in Table 5.

TABLE 5.—*Number and percentages of staff members of normal schools with highest degrees*

Normal school at—		Number earning—				
		No degree	Bachelor's degree	Master's degree	Doctor's degree	Total
Monmouth	number	10	23	6	1	40
Proportion	per cent	25	57	16	2	100
Ashland	number	2	6	13		21
Proportion	per cent	10	29	61		100
La Grande	number	1	5	8		14
Proportion	per cent	7	35	58		100

As was to be expected from the facts already given concerning the years of training above high school the normal-school staff at Monmouth has very large percentages with no degrees and with only the bachelor's degree. Prompt steps should be taken to raise the qualifications of the staff and to meet the recognized norms provided for normal-school teachers. The normal schools at Ashland and La Grande have staffs containing rather large percentages of members with the master's degree, but in order to meet the standards of the American Association of Teachers Colleges both institutions should reduce the proportion of faculty members whose highest degree is the bachelor's and add to the number with doctors' degrees.

As another index of the preparation of their staffs Table 6 presents the years of teaching experience of the faculties of the university and State college.

TABLE 6.—*Number of staff members of university and State college, showing years of teaching experience*

Staff rank	Number at University of Oregon having—							Number at Oregon State College having—						
	None	1–2 years	3–4 years	5–9 years	10–14 years	15 years or over	Total	None	1–2 years	3–4 years	5–9 years	10–14 years	15 years or over	Total
Deans	----	----	1	----	----	8	9	----	----	1	1	2	7	11
Professors	----	1	2	9	15	29	56	----	----	3	11	12	41	67
Associate professors	----	3	2	9	5	3	22	----	2	1	7	19	9	38
Assistant professors	1	7	8	12	4	1	33	1	4	6	17	10	5	43
Instructors	3	8	12	8	5	1	37	7	40	22	21	11	5	106
Assistants	33	27	12	6	----	----	78	14	10	1	1	1	----	27

The most interesting thing revealed by examination of the foregoing table is that at the university, neglecting the 33 assistants who have had no teaching experience, the largest number in each rank is with one exception found one column to the right of the largest number of the next lower rank; that is, experience and advanced academic ranking are very closely related. A somewhat similar pattern is evident in the distribution of rank and experience in the portion of the table covering the Oregon State College staff. Comparison with Table 4, showing distribution of ranks by highest degree held, reveals no such regular relationship. From this it is evident that advancement in rank has been won by years of teaching experience rather than by years of advanced study.

In connection with this table it is perhaps significant to note that 58 per cent of the university staff and 53 per cent of the college staff have gained all their teaching experience in their present institutions. This may be of special importance if it is found that very large percentages of all ranks of the two staffs obtained a considerable portion of their undergraduate and graduate training at the institutions in which they now teach.

Table 7 shows the number of staff members of the university and State college who secured all, part, or none of their undergraduate training at these institutions.

TABLE 7.—*Where staff members of University of Oregon and Oregon State College have received their undergraduate and graduate training*

Staff rank	Number at University of Oregon receiving—						Number at Oregon State College receiving—					
	Undergraduate training at institution by which employed			Graduate training at institution by which employed			Undergraduate training at institution by which employed			Graduate training at institution by which employed		
	All	Part	None	All	Part	None	All	Part	None	All	Part	None
Dean	1	----	9	----	----	9	----	----	11	----	----	9
Professor	10	1	53	3	2	37	9	----	60	2	----	44
Associate professor	2	----	20	1	----	18	10	----	26	2	2	24
Assistant professor	15	----	23	3	4	23	13	2	31	2	1	27
Instructor	13	1	23	7	----	8	44	----	62	4	----	37
Assistant, teaching fellow, etc	30	----	36	6	----	6	18	----	9	----	----	----

TABLE 8.—*Degrees earned by staff members at institutions by which they are employed on basis of work with percentages of total number of entire staff in each rank*

Staff rank	Bachelor's degree				Graduate degree			
	University of Oregon		Oregon State College		University of Oregon		Oregon State College	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Dean	1	10						
Professor	10	16	9	13	3	7	2	4
Associate professor	2	9	10	26	1	5	2	7
Assistant professor	15	39	12	27	3	10	2	7
Instructors	13	35	44	42	7	47	4	10
Assistants, etc	39	52	18	67	6	50		

Table 8 shows for each rank the percentage of the staff in that rank that obtained undergraduate or graduate degrees in the institutions in which they now teach. When it is remembered that Oregon has been, in a sense, an isolated community it is rather remarkable that such small percentages of the upper ranks of the staffs of its institutions have secured their undergraduate and graduate degrees from the institutions in which they are now teaching. The two lower ranks in the university show rather high percentages of both graduate and undergraduate degrees earned at the university, but when the actual number in these two ranks holding graduate degrees from the university is considered it is evident that the situation is not serious. Among assistants and instructors are found the largest number of staff members who are serving their apprenticeship and will ultimately find permanent positions elsewhere. Their employment upon the staff provides an excellent method for selecting the most capable and useful for retention or recall after they have had the further training of graduate work or experience elsewhere. The survey commission is of the opinion that inbreeding is not a serious problem at either the university or the State college.

Since very few members of the staffs of the normal schools have had college teaching experience in institutions other than those by which they are now employed, their teaching experience in the public-school systems for which they are preparing teachers may be supposed to raise somewhat their qualifications for normal-school work. Table 9 presents, therefore, the teaching experience of the normal-school staffs in elementary and secondary schools.

TABLE 9.—*Number of staff members of normal schools showing years of teaching experience in elementary and high schools with percentages*

Normal school at—		Number having—						
		None	1–2 years	3–4 years	5–9 years	10–14 years	15 years or more	Total
Monmouth	number	8	6	10	10	4	2	40
Proportion	per cent	20	15	25	25	10	5	100
Ashland	number	5	2	5	7	1	1	21
Proportion	per cent	24	9	24	33	5	5	100
La Grande	number	11	2	.....	.....	.....	1	14
Proportion	per cent	79	14	.....	.....	.....	7	100

The table shows that at Monmouth and Ashland 20 per cent and 24 per cent of the staffs have had no elementary or high-school teaching experience. No reliable standards are available upon which to form a judgment as to whether these percentages are so large as to constitute a weakness in the preparation of teaching staffs. However, when the fact that one-fifth of the Monmouth staff has no such experience is considered in combination with the facts that 25 per cent have no degrees and 57 per cent have no degrees higher than the bachelor's, some concern may be felt in regard to the qualifications of a rather large group of the faculty in the Monmouth school. The administration should give this matter careful attention and determine whether vigorous steps are not required to raise the level of training and experience of the Monmouth faculty.

The faculty at the La Grande school shows 79 per cent with no elementary or high school experience. This would seem to be a rather large proportion to have had no teaching contact with the public schools. The number of masters' degrees held by this staff shows that a fairly large proportion has obtained desirable academic training; the combination of such training with public-school experience would be better.

There is a tendency in some quarters to emphasize the importance of youthfulness both in the administrative and in the teaching staffs of higher educational institutions. The survey commission believes that this emphasis may easily be carried to the extreme. It readily admits that the presence of younger men and women on the faculty is desirable for many reasons. It acknowledges that the retention of faculty members beyond the age of usefulness—whatever that may be—sometimes proves a handicap to administrative and educational programs. At the same time it is convinced that the scholarly community may be enriched immeasurably by the presence upon the campus of even ripe age and must depend for stability and constructive policies upon men and women who have reached full maturity. Because the opinion was freely expressed to the survey staff that there is considerable "deadwood" in some of the Oregon institutions,

it attempted to determine whether this opinion was due to the age of staff members, or to quite other causes, by assembling information in regard to the age distributions of the faculties of Oregon institutions. This information is presented by Tables 10 and 11.

TABLE 10.—*Number of staff members according to age in the University of Oregon and Oregon State College*

Staff rank	Number at University of Oregon										Number at Oregon State College									
	Less than 25 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55–59 years	Over 60 years	Total	Less than 25 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55–59 years	Over 60 years	Total
Deans			1			1	6	1	1	10			1	1		5	1		2	11
Professors			2	2	2	13	10	6	10	50			2	11	17	17	8	5	7	67
Associate professors		4	2	8	1	6		1		22		1	4	10	11	4	5	1	2	38
Assistant professors		12	2	7	2	2	2			35		6	11	13	7		4	2		43
Instructors	4	16	2	1	2		1	1	1	38	10	50	16	9	12	2	2	1	2	104
Assistants, teaching fellows, etc.	33	27	2	2	3		1			76	12	10	1	1	1	1				26

TABLE 11.—*Distribution by age of staff members of normal schools with percentage for different age levels*

Normal school at—		Number									Total
		Less than 25 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55–59 years	Over 60 years	
Monmouth [1]	number		11	5	4	4	4	5	1	1	35
	Percentage		32	15	11	11	11	14	3	3	100
Ashland	number	2	3	6	4	2	2		1	1	21
	Percentage	10	14	28	19	10	10		5	5	100
La Grande	number		5	5	1	2			1		14
	Percentage		35	35	7	16			7		100

[1] 5 teachers did not furnish information.

At the university slightly more than one-sixth of the professors are 60 years old or over and at the State college slightly less than one-sixth fall in this age group. Of the entire staff at the university only 5 per cent are 60 years of age or more and at the State college just under 5 per cent. Upon the basis of age alone this does not seem to be a situation that should cause undue concern; the proportion is not so large as to justify the opinion that "elderliness" characterizes the staff of either institution. Distribution of other age groups among the different ranks shows a fairly regular increase of age with increase of rank and no extraordinary concentration of an undue number of any rank in a single age group.

The distribution of ages in the normal schools shows a considerable proportion in the years from 25 to 35, but except at Monmouth the number above 50 constitutes less than 10 per cent of the staff.

Publications by Staff Members

No better criterion of the industry and creative ability of a staff can probably be found than the number and quality of publications for which its members are credited with authorship. Through the individual questionnaire sent to the faculty members of the Oregon institutions the survey commission conducted a special inquiry into this question. The results in the case of the university and the State college staffs are shown by Table 12.

TABLE 12.—*Number of publications of which staff members of University of Oregon and Oregon State College staff were responsible during the last three years*

Staff rank	University of Oregon								Oregon State College							
	None reported	1–2 publications	3–4 publications	5–6 publications	7–8 publications	9–10 publications	More than 10 publications	Total	None reported	1–2 publications	3–4 publications	5–6 publications	7–8 publications	9–10 publications	More than 10 publications	Total
Dean	4	2	3	....	1	....	....	10	6	2	1	....	1	....	1	11
Professor	27	10	12	8	1	1	2	61	36	12	13	5	2	1	2	71
Associate professor	9	6	4	1	2	....	....	22	20	9	3	4	....	1	1	38
Assistant professor	19	7	3	5	2	....	....	36	29	7	5	2	1	....	....	44
Instructor	34	4	1	....	1	1	....	41	97	8	3	1	....	....	....	109
Assistant, teaching fellow	67	5	2	....	....	....	....	74	25	....	....	....	....	....	....	25

Sabbatical Leave

Responsibility for growth in the scholastic and academic training of the staff frequently rests in part upon the institutions. The failure to provide for sabbatical leave prevents faculty members without adequate graduate work from attending other institutions to secure their higher degrees and to improve their qualifications.

The Oregon State College has a plan of sabbatical leave which has undoubtedly resulted in advancing the standards of its staff. Faculty members above the rank of assistant professor are granted leave for a period of a year on half pay to devote themselves to research, advanced study, writing or travel. Three years of service at the college are required before such leaves are permitted and the staff member must agree to remain at the institution for at least one year after returning from leave. As a general rule, only one absence from a single department is granted in any one year. The staff member while away on sabbatical leave must render a written report to the president at the end of each quarter reporting on the work performed during the preceding three months.

At the university leave is occasionally granted but in the past the plan has not been used systematically to improve faculty qualifications. No plan has been adopted at the three normal schools

for granting sabbatical leave to staff members. As already shown, the faculties of at least two of the normal schools are deficient in scholastic qualifications. Without sabbatical leave, it is practically impossible for the staff members lacking higher training to advance themselves. This situation is accentuated by the fact that the staffs of the normal schools are employed on a 12-month basis. Since they are unable to pursue graduate work at summer sessions without sacrificing one-fourth of their annual salaries it is extremely difficult for them to secure much-needed additional training. It is urgently recommended that a system of sabbatical leave be established at all the higher institutions. The recommendation is also made that salary schedules and conditions of employment be so arranged that staff members normally on the 12-month basis may be permitted summer or other leave, at least every third year, for purposes of travel, study, or other form of recuperation and self-improvement.

The university has worked out a system whereby staff members participate in the pensioning plan of the Carnegie retirement system. Since the law of Oregon or the rulings of the attorney general do not permit the institution to contribute for this purpose from State funds, staff members have authorized the institution to deduct a percentage of their annual salaries to meet the payments required. The State college has not as yet developed a pension system. It is highly desirable that the State law be modified to provide opportunity for a pensioning system to which both State and the faculties of all the higher institutions will contribute. The survey commission is inclined to the opinion that participation in the system should then be made compulsory.

Faculty Welfare

Morale and efficiency of the staff are affected in a measure by the provisions made for welfare and well-being. Every modern institution of higher learning should furnish sources of social and intellectual diversion for its faculty members. This is especially important in the case of institutions located in small communites as the Oregon institutions are.

The Oregon institutions have only made a beginning in promoting the welfare of their staffs. At the University of Oregon a small building, originally constructed as a private dwelling, has been converted into a faculty club. The facilities include dining, reading, and general rooms. The Oregon State College has set aside special rooms for the faculty in its new Memorial Union.

At both of the institutions special arrangements have been made so that the members of the staff may utilize the student facilities for physical exercise. In the case of the university locker rooms

are reserved exclusively for faculty members and certain tennis courts are set aside for their use. While the normal schools have programs to improve social life among their faculties, no attempt has been made to establish faculty clubhouses or similar quarters.

Considering the advancement made by other universities and colleges throughout the country with respect to faculty welfare, study of the individual problems of the several Oregon institutions should be undertaken with the object of securing substantial facilities for these purposes.

Salaries

The entire problem of staff efficiency is intimately related to salary schedules. No institution of higher learning can maintain a highly competent staff unless adequate salaries are paid—salaries commensurate with the duties performed and the scholastic ability of the members. The services of high-grade university and college teachers can neither be secured nor retained by an institution except by the payment of compensation equivalent to that prevailing in other institutions of similar type. Moreover, the industry, enthusiasm, and earnestness of faculty members are seriously affected by their remuneration.

On this account the salaries paid the staffs of the Oregon institutions were made the subject of particular study by the survey commission. The presidents of the University of Oregon and the Oregon State College receive annual salaries of $12,000. In addition, the university's chief executive officer receives perquisites, including house rent, with a cash value of $1,000. The State college president has perquisites valued at $1,500. In the opinion of the survey commission these amounts are not greater than the responsibilities the positions demand. Table 13 (A and B) presents the salary schedules of the staffs of the university and the State college segregated by ranks.

TABLE 13A.—*Salary scales of staff members according to rank at the University of Oregon* [1]

Staff rank	Number receiving—																		
	$5,500–$5,749	$5,250–$5,499	$5,000–$5,249	$4,750–$4,999	$4,500–$4,749	$4,250–$4,499	$4,000–$4,249	$3,750–$3,999	$3,500–$3,749	$3,250–$3,499	$3,000–$3,249	$2,750–$2,999	$2,500–$2,749	$2,250–$2,499	$2,000–$2,249	$1,750–$1,999	$1,500–$1,749	Up to $1,499	Total
Deans	1				5	1	4		1										12
Professors			1		10		19	7	14	2	2	1	4	1			2	2	65
Associate professors									1	7	11	1							20
Assistant professors									2	2	4	8	17	8	5				46
Instructors															8	10	8	8	34
Total	1		1		15	1	23	7	18	11	17	10	21	9	13	10	10	10	177

[1] Assistants and teaching fellows not included.

TABLE 13B.—*Salary scales of staff members according to rank at Oregon State College*[1]

Staff rank	Number receiving—																	
	$5,500–$5,749	$5,250–$5,499	$5,000–$5,249	$4,750–$4,999	$4,500–$4,749	$4,250–$4,499	$4,000–$4,249	$3,750–$3,999	$3,500–$3,749	$3,250–$3,499	$3,000–$3,249	$2,750–$2,999	$2,500–$2,749	$2,250–$2,499	$2,000–$2,249	$1,750–$1,999	$1,500–$1,749	Up to $1,499	Total
Deans			5		2	1													12
Professors					16	1	8	10	17	4	7								63
Associate professors					1				3	4	10	6	3						27
Assistant professors									1	1	5	4	26	8	4				49
Instructors												1	6	10	38	30	15	4	104
Total			5		19	2	8	10	21	9	22	11	35	18	42	30	15	4	255

[1] Assistants and teaching fellows not included.
[2] 63 members on a 12-months basis.

For purposes of comparison Table 14 shows median salaries of the different ranks of staff members in the 52 land-grant universities and colleges.

TABLE 14.—*Median salaries for different ranks of staff for all land-grant colleges and universities of the United States as compared with median for University of Oregon and Oregon State College*

Staff rank	All land-grant universities and colleges[1]	University of Oregon	Oregon State College
Deans	$5,193	$4,500	$5,083
Professors	4,278	3,925	3,837
Associate professors	3,342	3,205	3,110
Assistant professors	2,738	2,647	2,620
Instructors	2,005	1,775	2,019

[1] Bulletin, 1930, No. 9, Survey of Land-Grant Colleges and Universities, United States Office of Education.

The median salary in every rank of the staff of the university is below the median prevailing for all the land-grant colleges and universities of the United States. Deans in the land-grant group receive a median salary of $5,193, as compared with $4,500 in the university, a difference of $693. The median for professors is likewise higher in the land-grant universities and colleges as a whole, being $4,278, while the median for professors in the university is less by $353. In the case of associate professors the median for the group is $3,342, as compared with $3,205 for the university. For assistant professors the university's median salary is $2,647, in contrast with $2,738 for all the land-grant colleges and universities. The low-salary scale at the university for the rank of instructor is shown by the fact that instructors are paid a median salary of $2,005 for all the institutions, while at the university this median is only $1,775.

With two exceptions, the median salaries paid the several ranks of the State college teaching staff fall even further below the median for the land-grant group than those of the university. In the State college deans are paid a median salary of $5,083, which is $110 less than the median salary of deans in the colleges and universities as a whole. Professors receive a median salary of only $3,837 at the college. This figure is $441 less than the median salary for professors for the entire land-grant group. Similarly the median salary of associate professors for the State college is $232 below that of all the land-grant colleges and universities. Assistant professors at the State college are also paid a median salary less than the group, the difference being $118. In the case of instructors a slightly higher median salary is found than in the group, the excess, however, being but $14. The median salary in this instance is higher than the university by $244.

These figures indicate that if Oregon is to meet the general trend in salaries among the public universities and colleges of the United States, as its economic and social resources would seem to warrant, considerable increases in the levels of salaries paid to practically every rank of the faculties of the university and State college will be necessary. This conclusion is justified further by the fact that when median salaries in each rank are obtained for the land-grant universities and colleges in the group of Western States and the Territories of Alaska and Hawaii (Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, California, Alaska, and Hawaii), the medians in all ranks except that of dean, are much closer to the medians for the United States as a whole than is the case in the Oregon institutions. In other words, except for deans, the Oregon institutions fall almost as far short of meeting the median salaries paid the different ranks in the group of Western States as they do in meeting the medians for the United States as a whole.

Table 15 shows the distribution of salary ranges paid to staff members of the Oregon normal schools and the medians for each institution.

TABLE 15.—*Salary scale of staff members of normal schools with medians*

Normal school at—	$5,000–$5,249	$4,750–$4,999	$4,500–$4,749	$4,250–$4,499	$4,000–$4,249	$3,750–$3,999	$3,500–$3,749	$3,250–$3,499	$3,000–$3,249	$2,750–$2,999	$2,500–$2,749	$2,250–$2,499	$2,000–$2,249	$1,750–$1,999	$1,500–$1,749	Up to $1,499	Total	Median
Monmouth						1			8	12	10	1	5	1	1	1	40	$2,771
Ashland	1							1	6	2	4		6				20	2,750
La Grande									1	1	1	10	1				14	2,400

It will be noted that the median salary paid by the normal school at Monmouth is $2,771. For the normal schools and teachers colleges throughout the United States the median salary is $2,780, so that the compensation at Monmouth is only $9 below the median for the country at large.

In the normal school at Ashland the salary scale is lower than at the Monmouth school. The median is $30 below the median for the country's entire group of teachers colleges and normal schools.

The salary schedules in the normal school at La Grande are usually low and unless advanced will gravely retard the institution's development. As compared with all the normal schools and teachers colleges of the United States with a median salary of $2,780, the median salary at the La Grande school is $2,400.

The survey commission recommends that for the entire group of Oregon institutions salary scales be devised which will compare more favorably with those in the United States as a whole and which will provide more nearly comparable salaries for staff members of similar training, experience, and responsibility. In the opinion of the survey commission, mechanical and automatic devices for assigning rank and salary increases should be avoided; administrative judgment that is guided by minimum requirements defined in general terms affords a better basis for determining compensation in terms of the value of the individual to the institution than any automatic system so far devised.

Turnover

A heavy turnover in the staff of a higher educational institution is almost a certain indication of fundamental defects in its management if in management be included salary scales, work assignments, and general provisions for faculty welfare. It is difficult to attain objectives with a faculty in which the tenure of office is brief. Although it may be necessary under some circumstances to select younger untried men and to train them with the expectation that as they secure experience and reputation they will be called to other institutions, this policy places a heavy burden of experimentation and trial upon the Oregon institutions.

Figures were obtained by the survey staff concerning the turnover in the faculties of the Oregon higher institutions. Table 16 shows the number of resignations by rank annually for the past six years in both the university and the State college.

TABLE 16.—*Staff turnover of University of Oregon and Oregon State College as shown by resignation during past six years in different ranks*

Staff rank and department	Number at University of Oregon resigning in—							Number at Oregon State College resigning in—						
	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30[1]	Total	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	Total
Administrative officers	----	----	----	----	1	----	1	1	----	----	----	----	----	1
Deans	----	----	1	----	1	----	2	2	----	----	1	[2]3	----	[2]4
Professors	1	2	1	2	2	----	8	2	1	1	3	2	4	13
Associate professors	1	3	2	3	1	----	10	4	2	4	1	3	3	17
Assistant professors	8	3	2	7	3	----	23	2	6	6	4	1	3	22
Instructors	9	11	3	11	4	----	38	27	26	16	24	31	21	145
Library personnel	3	3	4	3	2	5	20	4	4	3	7	4	4	26
Experiment station	----	----	----	----	----	----	----	----	----	2	----	1	3	6
Extension service	----	1	1	----	----	1	3	2	1	8	4	3	3	21
Total	22	23	14	26	14	6	105	42	40	40	44	48	41	255

[1] Data not complete for fiscal year, 1929–30.
[2] Includes commandant, R. O. T. C.

Considering that the normal turnover in the well organized and managed staff of the average university and college does not exceed 5 per cent, the situation existing in the higher institutions of Oregon is in need of remedy. In the opinion of the survey commission this remedy may be provided by adjustment of salary scales, by liberal provision for leaves and by creation of a generous system of retiring allowances.

Chapter X

The Students

It is the purpose of this chapter (1) to describe the character of the student bodies in Oregon's higher institutions (2) to consider various aspects of institutional dealings with students in relations other than those of the classroom, and (3) to examine the nature of the organized activities carried on by students largely upon their own initiative but which are associated with institutional life.

Character of Student Bodies

Attention has already been called to the residence and migration of Oregon students and to their abilities as measured by tests and grades. Students themselves were asked to fill out a simple questionnaire concerning such items as age, residence, earnings, major courses, plans for work after graduation, the occupations and economic status of their families, and their reasons for attending the institution in which they were enrolled. This questionnaire was filled out by students in the winter of 1930. Table 1 shows the number of students who cooperated in this way and the proportion that the number replying was to the total enrollment as reported by the institutions.

TABLE 1.—*Number and percentages of students cooperating*

Location of institution	Number making returns	Per cent of total enrollment	Location of institution	Number making returns	Per cent of total enrollment
Ashland	300	85	Eugene	2,921	86
La Grande	218	88			
Monmouth	596	86	Total	7,195	
Corvallis	3,160	86			

It is apparent from the foregoing table that the questionnaire provided a very large sampling of information concerning the students in attendance in the winter of 1930. (The tables that are derived from these returns show figures that are in some cases less than those given here because students sometimes failed to answer one or more questions.)

Table 2 shows the age of the students in the various State institutions of higher education.

TABLE 2.—*Age of students in Oregon public institutions*

Age	Location of institution					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
14	1		3		0	4
15	1		12		2	15
16	1		83		2	86
17	5	4	126	29	41	205
18	44	31	110	210	252	647
19	62	53	78	496	457	1,146
20	55	37	52	640	536	1,320
21	31	28		554	542	1,155
22	33	17		436	384	870
23	16	14	37	324	228	619
24 or over	51	28	90	467	524	1,160
Total	300	212	591	3,156	2,968	7,227

One of the most interesting things about the above table is the number of students who are 24 years of age or more. These constitute slightly over 16 per cent of the total, and it will be noted that the proportion is large in all institutions. This might be accounted for by the number of medical students in the case of the university, but none of the other institutions has a postgraduate school enrolling very large numbers. Probably the better explanation is to be found in the economic condition of the students and their families, which tends to compel them to interrupt their schooling in order to earn money to continue. Facts to support this opinion are afforded by the questionnaire returns.

In the first place a large proportion of the students earn a considerable part of their way through college. The extent of such self-help is made evident by Table 3.

TABLE 3.—*Self-help by Oregon students*

Proportion earned	Number of students earning by location of institution					Total number students
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
All	103	41	208	903	751	2,006
Three-fourths	16	20	42	369	288	735
One-half	24	19	47	521	339	950
One-fourth	29	14	54	483	394	974
Very little	59	28	98	352	456	993
None	68	95	143	516	728	1,550
Total	299	217	592	3,144	2,956	7,208

Almost 28 per cent of the student body of the Oregon higher institutions of the State are, according to their own reports, earning all their way through college by work while in attendance and during intervals between attendance. A smaller proportion of the students, less than 20 per cent, at La Grande earn their way than in any of the other institutions, and the largest percentage, 35 per cent, earn their way at Monmouth. Almost 57 per cent of the

students at La Grande earn little or none of their college expenses, while the university is next in the percentage of students (40 per cent) who do not help themselves to any very great extent by their own earnings.

The economic condition of students is doubtless largely determined by that of the families from which they come. Since, however, standards of wealth differ very largely among different groups of people, and since whether a son or daughter shall be sent to college is so largely determined by whether the family thinks of itself as able to do so in terms of these differing standards, students were asked to state the approximate family income at the time they started to college and also whether the family was of less than average means, of average means, or well-to-do. Table 4 shows the number of students in each institution who classified the family income within certain ranges.

TABLE 4.—*Family income*

Income ranges	Number of students from families of incomes indicated					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
Less than $600	7	7	39	54	54	161
$601 to $1,200	42	38	131	265	205	681
$1,201 to $2,400	118	80	214	830	635	1,877
$2,401 to $3,600	85	53	168	804	654	1,699
$3,601 to $4,800	17	19	45	497	411	989
$4,801 to $6,000	10	12	19	277	329	647
$6,001 to $7,500	9	1	7	136	175	328
More than $7,500	5	5	10	194	376	590
Total	293	215	563	3,057	2,839	6,972

As is to be expected, perhaps, Table 5 shows by far the larger number of students classifying themselves as coming from families of average means.

TABLE 5.—*Classification of family wealth*

Means	Number of students from families classified					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
Less than average means	32	16	39	212	212	511
Average means	255	194	533	2,766	2,577	6,325
Well to do	11	6	9	130	132	288
Total	298	216	581	3,108	2,921	7,124

It is interesting to note that almost twice as many class their families as of less than average means than as well to do. These figures are given greater significance when the income ranges reported as average and less than average are grouped to show frequencies of such reports. Table 6 shows some of the more striking results of this analysis.

TABLE 6.—*Classification of income ranges*

Location of institution	Total number students represented	Number report incomes average	Number interpret average as $1,201 to $2,400	Number interpret average as $1,201 to $2,400	Number report less than average	Number interpret less than average as $601 to $1,200
Ashland	330	255	198	114	31	[illegible]
La Grande	218	194	131	79	16	[illegible]
Monmouth	506	533	301	204	30	[illegible]
Corvallis	3,160	2,766	1,533	748	212	[illegible]
Eugene	2,921	2,577	1,178	547	212	[illegible]
Total	7,195	6,325	3,141	1,692	510	[illegible]

Considerably more than half the students at Ashland, La Grande, and Monmouth who say that their families are of average means interpret incomes of from $1,201 to $2,400 to be in this class, while almost as large proportions give the same interpretation at the university.

If $3,600 be accepted as the very highest level that can in Oregon be regarded as classifying a family as of average means, it is interesting to note from Table 4 the number and proportion of students in each institution whose families have larger incomes than this. Only 14 per cent of the students in Ashland and Monmouth belong to such families, 17 per cent in La Grande, but 36 per cent of those in Corvallis do, while slightly more than 45 per cent of the students at Eugene belong to families with incomes reported as larger than $3,600.

It is quite commonly assumed that there is a close relationship between modest income and residence in the open country and the smaller towns. If this assumption is correct it would be expected that the size of community from which students come would be distributed in somewhat the same fashion as family incomes. Table 7 gives the facts concerning the size of communities from which students in Oregon's public higher institutions come.

TABLE 7.—*Size of communities from which students come*

Size	Number of students reporting from—					
	Ashland	La Grande	Monmouth	Corvallis	Eugene	Total
Open country	97	105	258	701	262	[illegible]
Less than 500	4	12	31	87	61	[illegible]
500 to 1,000	13	10	30	89	61	[illegible]
1,001 to 1,500	7	13	26	51	51	[illegible]
1,501 to 2,500	8	6	28	88	114	[illegible]
2,501 to 5,000	31	2	20	156	154	[illegible]
5,001 to 10,000	70	28	22	574	214	[illegible]
10,001 to 30,000	40	23	34	205	716	[illegible]
More than 30,000	7	3	97	[illegible]	887	[illegible]
Total in towns	180	95	206	[illegible]	2,258	[illegible]
Total	277	305	804	2,637	2,620	[illegible]

It will be noted that approximately 25 per cent of the students reporting come from homes in the open country and that a slightly larger proportion come from cities of more than 50,000 population. As is to be expected the institution at Corvallis draws a larger proportion from the open country (a little over 26 per cent), than does the institution at Eugene (about 14 per cent); while Eugene draws almost 34 per cent from cities of over 50,000 as compared with 26 per cent from this source by Corvallis. Each of the normal schools draws a larger proportion of its students from the open country than either Eugene or Corvallis: Ashland 35 per cent, La Grande 50 per cent, and Monmouth 44 per cent. From the foregoing figures it is apparent that Portland is not sending students to the higher institutions of the State in quite as large proportions as the size of its population in relation to the population of the State would seem to justify. With one-third of the population of the State, Portland according to these figures would be furnishing only a little over 26 per cent of the students in the State's higher institutions even if it were assumed that the entire number coming from cities of more than 50,000 population came from Portland. In fact, a number of these students come from cities of this size outside of Oregon.

The data derived from student questionnaires show several other matters of interest in regard to the students who attend Oregon's higher institutions. Table 8 shows the number of students living certain distances from the institutions that they attend.

TABLE 8.—*Number of students living certain distances from the institutions they attend*

Distance from home (miles)	Ashland	La Grande	Monmouth	Corvallis	Eugene	Total
Less than 10	71	55	61	534	707	1,418
10 to 25	44	19	52	83	41	239
26 to 50	22	14	88	196	51	371
51 to 100	23	40	247	1,002	149	1,461
101 to 200	54	44	70	355	1,149	1,672
201 to 300	45	30	46	269	324	714
More than 300	39	10	26	713	522	1,310
Total	298	212	590	3,142	2,943	7,185

It is perhaps due to the separation of even relatively small concentrations of population by distance that would be large in an older, more fully developed country, that accounts for the fact that only 23 per cent of the students travel less than 25 miles to attend college in Oregon. The proportion is larger within this radius in most of the institutions of the United States. Almost as many students in Oregon travel more than 300 miles as travel less than 25.

In view of the fact that 23 per cent live within 25 miles, a total of 1,657, it is interesting to examine Table 9, which indicates where students live while attending college. The number living at home is a relatively large proportion of those who live within 25 miles, almost the maximum distance that students can ordinarily go back and forth between home and college classes.

TABLE 9.—*Where students room*

Place room	Ashland students	La Grande students	Monmouth students	Corvallis students	Eugene students	Total
At home	99	78	87	416	676	1,356
Dormitories		3	213	683	530	1,429
Fraternities and clubs	71	3	7	1,460	1,303	2,844
Private families	130	133	289	544	411	1,507
Total	300	217	596	3,103	2,920	7,136

Distance from home and rooming place while in college are closely related to one of the main reasons given by students for attending the college they do in preference to others. Many state that they chose their college because of its convenience to home. Table 10 indicates the frequency with which students assigned one or another reason for their choice of college.

TABLE 10.—*Reasons for choice of college*

Reasons	Frequency of reasons assigned by students at—					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
Convenience to home	81	122	56	379	824	1,462
Less expensive	42	12	79	230	141	504
Social reasons		2	2	15	47	66
Quality of work	15	15	47	1,167	595	1,839
Vocational purposes	132	49	380	773	767	2,101
Influence of friends	20	14	24	449	356	863
Scholarship granted				26	46	72
Didn't know why	8	2	7	111	172	300
Total	298	216	595	3,150	2,948	7,207

Slightly over 20 per cent of the students in Oregon's higher institutions said that they chose the institutions they did because of their convenience to home. Closely associated with this reason is that of economy since so much saving of expense comes from nearness to home that it is hard to distinguish the one reason from the other. If those who stated that they chose their college for reasons of economy be added to those who did so because of convenient location, more than 27 per cent are included. There is some difference among the institutions in the extent of these combined reasons for choice Approximately 41 per cent of Ashland students assigned these reasons; 62 per cent of the students at La Grande; 23 per cent

of those at Monmouth; 19 per cent at Corvallis; and 32 per cent at Eugene.

Another cause assigned is worthy of attention. Thirty-seven per cent of the students at Corvallis stated that quality of work was the reason that attracted them, while 20 per cent of the students at Eugene gave this reason. While it may be questioned somewhat whether such large proportions of students are very capable of determining quality of work with any degree of accuracy upon scientific evidence, the fact that such large numbers assigned this as their reason at least argues that the institutions have excellent reputations in the State. It is rather interesting in this connection to note that almost the same number and proportion at Corvallis and Eugene gave vocational objectives as their reason for choice (24 per cent at Corvallis and 26 per cent at Eugene), although it might be expected that the proportion who enter the technical school of the State at Corvallis with definite occupational objectives might be larger than at the university where the arts and humanities receive so much emphasis. It may be that the recruiting and publicity program of the institution at Corvallis has had some influence in increasing the numbers who have no definite occupational purposes at the time of entrance.

Among the normal schools the students at Monmouth indicated vocational purposes as of most influence in their choice of institution, almost 64 per cent assigning this reason. Forty-four per cent at Ashland gave this reason but only slightly over 22 per cent at La Grande.

Still another fact is significant; only 72 out of 7,200, 1 per cent, stated that they came because of scholarships. This is indicative of the notable lack of scholarship aid provided by Oregon's higher institutions.

If the 300, or 4 per cent, who could not tell why they chose the college they did is the entire representation of that class of drifters who float aimlessly into higher educational institutions everywhere, the State is to be congratulated; the general opinion is that a much larger proportion of students go to college merely because it is the thing to do. Probably Oregon has a smaller proportion of students who are inspired by no real and specific ambition because of the generally modest economic condition of the families of the State and because of the fact that there is no very large leisure population. Practically all students must look forward to earning their own livings.

The occupational objectives of the students in Oregon's public higher institutions are listed in Table 11.

TABLE 11.—*Occupational objectives of students*

Occupation	Number of students with objectives named in—					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
Teaching	227	193	575	828	753	2,576
Agriculture	1	1	1	191	11	205
Trade				38	16	54
Home making	10	1	1	60	36	108
Business	13	2	7	737	593	1,352
Profession	20	3	2	884	1,017	1,926
Other	8	5	5	127	144	289
Undecided	21	13	5	287	398	724
Total	300	218	596	3,152	2,968	7,234

Teaching is the occupational objective for more than 35 per cent of the students in Oregon higher institutions; even at Corvallis and Eugene, which have programs much wider than teacher preparation, very large numbers look forward to employment in this field, 26 per cent and 25 per cent, respectively. Although a few of these students are looking forward to college teaching the great majority are planning to enter the high-school field, at least temporarily. Reference to the chapter of this report dealing with teacher preparation will confirm the impression created by these expressions of choice that the State does not need so many teachers in preparation.

It may also be doubted whether there is need for such emphasis upon preparation for business and the professions within the State of Oregon itself, as is shown by the occupational choices indicated by the table. However, these figures include out-of-State students as well as Oregon students. It is interesting, therefore, to examine Table 12, which indicates the occupational objectives named by Oregon students only. Inasmuch as the normal schools are now primarily teacher-training institutions the table is confined to the choices of students in the institutions at Corvallis and Eugene.

TABLE 12.—*Occupational objectives of Oregon students*

Objectives	Objectives of Oregon students at—		Objectives	Objectives of Oregon students at—	
	Corvallis	Eugene		Corvallis	Eugene
Teaching	714	677	Profession	763	904
Agriculture	155	7	Other	104	128
Trade	30	13	Undecided	242	339
Home making	48	34			
Business	600	527	Total	2,656	2,629

Comparison of the figures for the entire student body and for the students whose homes are in Oregon indicates that a slightly larger proportion of the students at Corvallis who are preparing to teach come from out of State than is the case at Eugene. The

same is true of students who look forward to business and the professions.

If the courses of study pursued by students are appropriate to their occupational objectives their choice of majors should show considerable parallelism with their plans for work after leaving college. Students who indicated their plans for work after graduation were asked, therefore, to name also their major course of study or field of specialization in college. The reports of 2,633 students at the university whose homes are in Oregon show that 85 were majoring in architecture; 97 in art; 436 in business; 55 in chemistry; 101 in economics; 183 in education; 346 in English; 61 in history; 166 in journalism; 187 in law; 40 in mathematics; 348 in medicine; 81 in modern language; 121 in music; 17 in psychology; 93 in sociology; 13 in zoology; with a scattering in other fields. It will be noted that the larger groups are found in the fields which the survey commission's recommendation, contained in Chapter II, would assign as the major functions of the institution at Eugene. It will also be noted that at the university there are very few majors reported among Oregon students in fields that the survey commission proposes be concentrated in the upper division levels at Corvallis, only 10 in botany, 55 in chemistry, 19 in geology, 8 in physics, and 13 in zoology.

At the Oregon State College 2,663 students who live in Oregon state that they are majoring as follows: 255 in agriculture; 749 in business; 429 in education; 637 in engineering; 119 in forestry; 318 in home economics; 121 in pharmacy with the remainder scattering. Owing to conditions of organization and to the liberal requirements for majoring at the State college it is impossible upon the basis of these data to point out so clearly as in the case of the university, that the recommendation of the commission with reference to transfer of certain work from Corvallis to Eugene would affect relatively few Oregon students at the State college. Indeed the figures with reference to majors in business indicate quite the contrary. However, it is in the major division of business at Corvallis that the greatest opportunity exists for students to cencentrate in fields other than those that are ordinarily regarded as preparation for business careers. It may be doubted whether transfer of commerce and business to Eugene upon the upper division level with retention at Corvallis of lower division courses, that in the main parallel similar courses at Eugene, would seriously affect a very large proportion of Oregon students now at the State college.

It is sometimes assumed that the occupations of the fathers of students affect student choice of educational purposes, determine the aid that families can give in educating their children, and, in part,

influence choice of institutions which children attend. Table 13 shows the occupations of the parents of students in Oregon's higher institutions by institutions.

TABLE 13.—*Occupations of parents of students*

Occupation	Number of students whose parents are engaged in different occupations					Total
	Ashland	La Grande	Monmouth	Corvallis	Eugene	
Agriculture	86	101	212	694	361	1,454
Manufacturing	8	6	23	119	127	283
Trade	38	22	73	293	220	646
Business	58	23	89	834	982	1,986
Transportation	13	5	16	98	123	255
Professions	12	12	15	264	413	716
Teaching	7	4	5	54	67	137
Clerical	4	----------	11	49	53	117
City, State, and Federal employees	18	8	26	168	115	335
Retired	10	7	32	169	136	354
Deceased	42	25	85	386	289	827
Total	296	213	587	3,128	2,886	7,110

The large number of students whose fathers are retired or deceased, 1,181, is in accord with the fact that the Oregon institutions have such large numbers of mature students. If the distribution of parental occupations may be assumed to represent the approximate distribution of occupations in the State as a whole it is interesting to note that while 11.4 per cent of the living fathers are in the professions, 26.6 per cent of the students plan to enter the professions. Similarly 23.1 per cent of the living fathers are in agriculture but only 2.8 per cent of the students plan to enter this field. Thirty-one and six-tenths per cent of the fathers are in business but only 18.7 per cent of the students plan to enter business. Perhaps these relationships are of no real significance but they raise interesting questions concerning the shifting of occupational emphasis, the redistribution of Oregon's economic population, and the changing size of agricultural and business units.

Housing and Feeding

The conditions under which the college student lives, the character of his lodging place, the place in which he eats, and the company with whom he eats are as vital in the educational process as is the academic program. An institution with a staff possessing the highest scholastic qualifications and giving the finest type of instruction will be handicapped in teaching students unless the institution provides also the conditions for developing the art of refined and cultured living in a social group. The average college student spends only a minor part of his day in the classroom or laboratory. A majority of his hours are spent in other activities that satisfy the demands of physical living or the needs of gregarious human nature.

In providing advantageous living conditions for their students the private universities and colleges generally throughout the United States have progressed much further than the publicly supported higher educational institutions. The number and quality of dormitories and residence halls, where students spend so much of their time, found in the larger private institutions, usually far exceed those in public institutions. However, Oregon public institutions, particularly the State university and the State college, are far ahead of most State institutions in their provision for student living. In the normal schools, on the other hand, only the scantiest provisions have been made for either the housing or feeding of students. The failure of the State to make appropriations for the construction of dormitories and residence halls is the commonly assigned reason for their absence on the campus but this explanation is not altogether valid. It is possible under modern methods of financing, as has been already proved in Oregon, to erect the necessary buildings through bond issues and to operate them on a self-sustaining basis.

Housing

The first step in the study of the physical conditions under which the college students of Oregon live is their segregation on the basis of the various places of residence. In Table 14 are shown the percentage of women and men students of the university and the State college according to different methods by which they are housed.

TABLE 14.—*Where students of university and State college live shown in terms of percentages of the entire student body*[1]

Housing methods	University of Oregon		Oregon State College	
	Percentage of women students	Percentage of men students	Percentage of women students	Percentage of men students
Dormitories	22	14	47	13
Private rooming houses	20	23	3	29
Living at home	10	15	24	13
Chapter houses	48	48	26	45
Total	100	100	100	100

[1] Derived from institutional reports. These figures are substantially the same as those derived from student reports. See Table 9.

The residence-hall facilities of the university are such that 86 per cent of the men students and 78 per cent of the women students are compelled to seek living quarters other than in institutionally operated buildings. A very large proportion reside in chapter houses so that student fraternities and sororities are performing a service which is of material assistance to the institution. Private rooming houses afford quarters for approximately one-fourth of

both the men and women students while a smaller percentage are local students living at their homes. For the land-grant State universities and colleges of the United States as a whole, the proportion of men students housed in dormitories and residence halls is 9 per cent and for women students 6 per cent. The University of Oregon is, therefore, providing living quarters for a greater percentage of its students than the average for the State-controlled institutions as a whole. It is patent, however, that a serious shortage of residence halls still exists, particularly for women students.

While no better facilities for housing men students have been provided at the State college than at the university the situation is different in the case of women students. The institution furnishes living quarters for 47 per cent of its women students as compared with 6 per cent for State universities and colleges in the country at large. Only 53 per cent of its women student body are forced to go off the campus to secure places to reside and of this proportion 26 per cent live in sorority chapter houses. The percentage of women students living in private rooming houses is so low as to be almost negligible, which speaks well for the initiative and interest of the administration of the college in the living conditions of its women students. More dormitories for men students, it is obvious, are needed. At present only 13 per cent of the men students are housed in residence halls under institutional management. A considerably greater percentage of men students dwell in private rooming houses than at the university while the proportion living in fraternity chapter houses is also less.

Unusually meager provision has been made for the housing of the students in the Oregon normal schools. Except for a single dormitory for women at the Monmouth school, nothing whatever has been done in the way of furnishing residence halls at these institutions. The lack of fraternity and sorority houses likewise has had the effect of compelling all the students, excepting those residing in their own homes, to seek dwelling quarters in private rooming houses. As a majority of the students enrolled in the normal schools are women, a greater responsibility rests upon the schools to provide dormitories than would exist were the student populations composed only of men students. Beyond a doubt the growth and development of the programs of the normal schools, particularly in the case of the institutions at Ashland and La Grande, are being seriously retarded by the lack of housing facilities. The conditions under which many students room at all the normal schools are not conducive to development of leaders and examples in the refinements of living.

From the foregoing sketch of the conditions existing in the Oregon institutions, it is evident that the dormitory systems are entirely inadequate to meet the requirements of the student bodies. A gen-

eral law on the State's statute books authorizes the construction of new residence halls or similar revenue-producing structures by bond issue. Already the State college has erected several dormitories by this method of financing, the net earnings from their operation being used for the amortization of the capital outlay. There is no doubt, therefore, of the feasibility of the plan. The present policy of compelling large proportions of the student bodies to find lodging off the campus in quarters not under direct institutional supervision should be abandoned. The survey commission can not emphasize too strongly the necessity for immediate action in the adoption and prosecution of a dormitory building program at all the institutions. In the normal schools especially steps should be taken to construct safe, fireproof, and attractive residence halls for women students without delay.

The number of students accommodated is not the sole question to be considered however. The nature of the housing provided is of even greater educational importance. The residence halls at the University of Oregon are well conducted and are in charge of a dormitory director. In most instances the students take care of their own rooms, although additional service is furnished in the women's dormitories. The janitor work is performed both by student labor and by hired janitors, the buildings being generally clean and in good repair. Student proctors are responsible for the supervision of the men's residence halls and receive $155 annually. In the women's halls students also serve as proctors but receive no pay. It is difficult to account for this distinction, especially as it is rather more difficult for deserving women students to secure outside work to earn their way.

Feeding

Food service enterprises for the benefit of the student bodies are operated by the university and the State college. This service is providing in dining halls. The blight of the cafeteria, with its lack of socialization, rapid consumption of food, and rushing meal hour has not yet descended upon the institutions.

The university conducts institutionally managed dining halls for both men and women students. Three meals are served daily. The food is wholesome the ration well-balanced, and the service satisfactory.

Separate dining rooms for men and women students are operated by the State college. The service afforded includes three meals daily. The average total number of meals served per day to men students amount to 717 and to women students 1,365. It is evident, therefore, that the feeding enterprises of the institution are conducted on a rather large scale. The service seems to be entirely satis-

factory, the survey commission meeting with no complaints of any character. A sanitary commission has supervision over the maintenance of sanitary conditions in the dining halls and kitchens and also is responsible for the testing of the milk and water. The institution makes an effort to socialize the dinner hour for the students. Special guests are invited and singing and dancing are encouraged after dinner in the parlors.

Little provision is made for feeding the students in the normal schools except in the case of the institution located at Monmouth. At this school a dining hall is conducted for women but none for men students. A small cafeteria is likewise operated, serving noon lunches under the supervision of the home economics department. The menus in the women's dining hall are prepared under the direction of the dean of women with the advice of the department of home economics. In the normal school at Ashland a cafeteria is situated in the training school, but at the La Grande school no dining facilities of any sort are provided by the institution. The average annual cost of board and room is $279 at the Ashland school as compared with $432 at the La Grande school. The survey commission is of the opinion that the establishment of dining halls, such as exist at the university and the State college, would be highly valuable to the normal schools in the advancement of the social and physical welfare of the students. A further advantage would be the unification of the student bodies.

Employment and Placement Service

An important problem confronting the institutions of higher learning in Oregon, as well as elsewhere throughout the country, is the placement of their students, both graduate and nongraduate, in positions after they leave college.

Higher education is a costly process both to the State and to the student. To allow the human product after the expenditure of time in study and after the outlay of a large sum of money to defray the cost of education to leave the campus and drift for himself is the height of inconsistency. Because of their prestige as publicly supported institutions responsible for the preparation of youth to enter industrial and professional fields, the university, State college, and normal schools have access to sources of employment and are able to make contacts not readily available to any private agencies. That the institutions should not allow this opportunity for service to escape them is self-evident.

It is a moot question whether the placement of college students should be concentrated in one central organization. Some degree of centralization of records and of methods is undoubtedly desirable. But inquiries received by members of the faculty from prospective

employers can frequently be handled best by direct action. As in other personnel matters some method of centralized service with decentralized functioning is most desirable. The methods now in use at the university and the college with reference to teacher placement seem to function with considerable efficiency, although the effort involved is great and is increased by the competitive situation that has already been pointed out.

The most important defect in the present placement work is the fact that it is too largely confined to the placement of teachers. Considerable progress has been made in this phase of the work but other fields and occupations are generally neglected or handled in a haphazard manner by heads of major divisions whose innumerable other duties and responsibilities prevent them from providing a systematic service. Under the present arrangement coordination between the personnel of the different educational units is not feasible. Alumni emphasized to the survey commission their desire that placement in other areas be developed as vigorously as in the field of teacher training. The vital importance of placement is emphasized in the comments made by the graduates and ex-students on the shortcomings of the Oregon institutions in this respect.

At the university an organization bearing the name of the appointment committee carries on the placement work. The chairman of the committee is a member of the staff of the school of education and nearly the entire program is concentrated in securing teaching positions for graduates of the school of education. Administrative funds and students' fees are utilized to pay the cost of the maintenance of the office. The institution, therefore, has the nucleus of a central placement bureau that might function effectively, but apparently little is being done toward finding employment for graduates other than prospective teachers. The schools of law and journalism at the university maintain their own services, also known as appointment bureaus, while in the case of most of the other divisions whatever placements are made of students are generally the result of the initiative of the deans or department heads.

A fairly satisfactory record, however, has been made by the appointment committee in securing positions for teachers. The effectiveness of the work of placing teachers is diminishing from year to year rather than increasing, the committee securing positions for 14 per cent less registrants in 1929 than in 1927. This is due to other causes than the lack of activity on the part of the committee. An attempt is made to cooperate with employers and to follow up placements, but the committee has no field representatives. There is likewise no organized cooperation with the rank and file of the teaching staff in the different departments.

The placement service at the Oregon State College is an effective functioning agency and the work has been closely centralized in a single office. Combined with the personnel division, the organization handles both the personnel and placement activities of the institution. A professor of education is in charge with a full-time assistant and a clerk. Operating costs are defrayed through institutional funds and student fees. The bureau makes all types of contacts through business concerns, industrial firms, and municipal chambers of commerce by letter. Apparently no limitation has been placed on the work of the placement service. Attempts are made to secure positions for graduates and nongraduates, older alumni, and self-help students, while attention is given to providing outside contacts for students already in college. The bureau, however, is handicapped by a lack of coordination within the college and a general absence of interest on the part of staff members. As in the case of the university, the placement office at the college has been devoted in a great measure to securing positions for teachers. It is claimed that engineering, research, public utilities, business, hotel, pharmaceutical, and lumber organizations place orders for prospective employees with the placement office regularly.

Although the normal schools have only one type of graduate for whom to find employment and are not confronted with the task of securing positions in widely different professions and vocations, the placement service at these institutions is not very highly organized. Possibly services of direct placement may be safely left to the presidents in the small schools at Ashland and La Grande, but the larger institution at Monmouth needs a very carefully organized service. Probably all should have careful and completely organized follow-up services for graduates after they are once in the public-school system.

In the institution at Monmouth, the president has jurisdiction over the work of placing graduates. A small bureau has been organized with a full-time secretary and a fairly satisfactory arrangement for the conduct of the undertaking has been installed. The service aims to secure teaching employment for the immediate as well as the older graduates, but as the office also has been charged with answering requests for credentials from ex-students, a considerable amount of time is consumed in this detail of work. In order to maintain field contacts, there is a part-time special agent who visits authorities responsible for the employment of teachers. The bureau likewise endeavors to keep in touch with superintendents and principals of public schools throughout the State by correspondence and educational publications.

It is recommended that the central placement offices at the university and State college act in the capacity of information-gathering and record-keeping agencies and make a special effort to educate the faculties to the use of these aids. Such education may be successfully prosecuted through staff bulletins, special faculty conferences, and discussions at general faculty meetings. One of the important tasks that should be undertaken by the placement bureaus is research into occupations of the alumni and the possible fields of occupations for students who have not yet completed their courses of study. This research should be conducted upon a comprehensive basis, cooperatively by the five State institutions and the State department of education.

Guidance

The success or failure of the career of a student in college depends to a large extent upon whether he has been guided properly in the selection of his courses and the pursuit of his studies.

Educational guidance is related to vocational guidance, a fact that has not been sufficiently recognized except in the professional fields. In a considerable percentage of cases the student's program of work should be so correlated with his choice of life work that the college serves in part as a preparation for the occupation which is to be followed after graduation.

An important phase of guidance is that it deals with the individual student. The task is not a question of centralized control for the purpose of unifying and conducting an activity for the entire student population even though centralization of records and data may be advantageous. On the contrary, the problem is one of personal interview, conference and relationship between student and staff member often consuming many hours of time.

The survey commission devoted no small amount of attention to an inquiry into the methods in use at the Oregon institutions in the guidance of their students. As in the case of universities and colleges throughout the United States, the service is still in an embryonic stage. At the University of Oregon vocational and educational guidance have been combined theoretically. The students are assisted in the selection of their courses on a basis of ability, interest, objectives, cultural, and other intangible values by faculty advisers. The institution estimates that 25 per cent of the faculty are proficient in such counseling while another 50 per cent are assigned as assistant advisers. Students are informed of graduate work offered and of the opportunities to continue advanced study through scholarships. On the other hand, the vocational guidance seems to be confined principally to lectures given occasionally in the schools of

education, business, and science departments, to the collection of information on different occupations, and to the maintenance of a list of books on various vocations in the library to which the students are referred. Thirty-four per cent of both the juniors and seniors attending the university are undecided as to their future occupation. The institution expended $100 for vocational guidance in 1929.

At the Oregon State College an endeavor has been made to centralize guidance and counseling in the personnel and placement office which is under the control of a professor of education, but this system is being abandoned in favor of the decentralized plan. The institution appoints special interviewers for each class. Vocational guidance, as in the case of the university, is reported as being combined with educational guidance. Students are advised to choose their studies on bases of interest, objectives, cultural values, for the purpose of specializing, to secure distribution of work, and to obtain a degree. Tests and measurements are sometimes utilized to aid the student in reaching a decision. In vocational guidance the college now has in the process of construction a complete list of vocational occupations to supplement the books in the library. Since the institution is a land-grant college with defined objectives of industrial and technical education it is to be expected that a large proportion of the students will have selected their life work. This is the case. Of the juniors registered in the college in 1929, 70 per cent had selected their future vocation and of the seniors 80 per cent.

Guidance of students in the normal schools of Oregon is limited since their function is so largely that of teacher preparation. The assumption seems to be that all students who have matriculated in the institutions are there for the purpose of entering the teaching profession and that little guidance, either educational or vocational, is necessary. Modern education, however, is divided into many different fields and the selection of a congenial specialization by each student is highly important in determining ultimate success or failure. Educational guidance in the Monmouth Normal School is handled chiefly by the president and the dean. Each student has a faculty adviser to aid him in the pursuit of his work during his two years' attendance. An attempt is made to have all matriculants select their major field, such as primary, intermediate, and secondary education, as early as possible after entrance. A special point impressed upon the students is that they should attend either the university or college after completion of the normal school curriculum. No classes are conducted in occupational guidance and the library contains only about a dozen books dealing with vocational subjects.

The normal school at Ashland has not attempted to establish any systematic plan of guidance. The library is without books on occupations. Student counselling by members of the faculty appears to be neglected. A plan of guidance is just being developed in the case of the normal school at La Grande, but very little genuine progress has been made. The president and faculty members are responsible for assisting students in their choice of specialization and major field of interest. The program of educational and vocational guidance has been combined. There are four books on occupations in the library. One of the important angles of guidance that seems to have been overlooked altogether at the La Grande institution is a real system of student counselling.

Findings and Recommendations

Guidance is one of the major problems confronting public higher education in Oregon as is the case in higher institutions elsewhere. Many students devote four years to study and preparation and are still undecided at the end of that period as to their life work. This condition will probably always exist, but increasingly institutions are convinced that they have the means, and are attempting to use them to aid students to make their own choices.

One of the principal recommendations of this survey is the segregation of the educational program and academic organization of the university and State college into lower and upper divisions. Through the lower division the student is to pursue basic and fundamental courses and in the upper division he is to concentrate upon his major field of specialization in future life. The success of the plan is largely dependent upon the choice of an occupation or profession by the student by the completion of his sophomore year in college.

The survey commission does not propose to outline a specific system of educational and vocational guidance to be adopted by the Oregon institutions. No such system has been devised that is appropriate to all conditions. It is nevertheless possible to outline certain general principles that should be followed. A guidance policy to be effective must involve the participation of a large number of the members of the staff in the observation of the qualities and aptitudes of students with whom they come into contact. Personal acquaintance between student and teacher is one of the important keys to guidance. Through sympathetic relationships with faculty members, the students should be roused, inspired, and stimulated to study their own capacities and tastes and to solve the problem of their future occupations. Upon the basis of these principles, it is recommended:

1. That the several institutions promptly proceed to the study of a definite program of educational and vocational guidance.
2. That the program be comprehensive in scope and so effective in purpose that it will be applicable to the student immediately upon his entrance in college.
3. That through the operation of the program every student shall be aided to make a decision as to his life career by the time that he has completed the lower division and begins his upper division work.

Physical Welfare and Athletics

A great deal of stress and emphasis has been placed on the promotion of the physical welfare of the students in the higher educational institutions of Oregon.

Physical education programs have been adopted, but as is the case in many universities and colleges throughout the country they are subordinated to intercollegiate athletics. The domination of intercollegiate athletics is reflected in the selection of the staff, in the budget allotments, and in the financing of the athletic physical plant. Although only a minor proportion of the student body actually participates, priority in the utilization of football fields, running and field tracks, and baseball fields is given to intercollegiate athletics. For the utilization of athletic facilities, the most inconvenient and inaccessible hours are assigned to students not members of the intercollegiate teams.

Moreover, the situation has been aggravated at the University of Oregon and the Oregon State College by the segregation of the control of intercollegiate athletics from the regular physical education organization. The students at both institutions have been permitted to exercise administrative jurisdiction. The alumni are likewise represented, another cause for the complete overshadowing of intramural by intercollegiate athletics. In order to appraise the status of physical welfare and athletics in the several institutions with a view to making recommendations for the betterment of present conditions, the survey commission made a special study of the situation in Oregon. Each of the institutions will be considered separately. The programs at present in force, including organization and system of control, will receive attention.

University of Oregon.—The organization responsible for the physical welfare of the students at the university is the school of physical education. It is divided into four departments, physical education for men, physical education for women, health service, and athletics, each under the supervision of a director. The administrative head of the school holds the title of dean, the staff under him consisting of 10 regular members and 10 paid student assistants.

In the departments of physical education for men and women, students are required to pursue one hour per week of hygiene for one year and three hours per week of exercise for two years. Sports may be elected to satisfy the requirement for exercise. A textbook is used in the hygiene course, but the equipment available is only moderately satisfactory. The school attempts to use the dining halls, gymnasiums, dormitories, and classrooms as laboratories for the hygiene course. A major and minor are offered in physical education, the major being 52 semester hours and the minor 16 semester hours. Graduate work is also offered on a limited scale.

The health service at the university seems to be generally superior although the equipment is inadequate and no facilities are available to combat an epidemic. Three full-time physicians are employed and a physical examination is given all students upon admission. No hospital is connected with the institution, but an infirmary is located on the campus containing 13 beds and with a staff of 4 nurses and other attendants. The number of beds is entirely insufficient, at least three times as many being needed to meet the requirements of the student body. Free service is given students in the infirmary for a period of two weeks, after which a charge of $3 per day is made. Parents are informed of serious physical defects of students and such cases are referred to specialists for attention.

The fourth unit of the school of physical education is the department of athletics. Nominally this department is responsible for all athletics, both intramural and intercollegiate, but as authority over intercollegiate athletics has been vested in an executive council of the associated students, the duties of the department have dwindled down to the handling of intramural athletics only.

The executive council of the associated students is composed of 7 students, 4 faculty members, and 2 alumni. It has control over the finances of intercollegiate athletics, making of the budget, scheduling of games, selection of the football coach and fixing his salary, except that the actual funds are handled through the business office of the institution. A graduate manager, an employee of the council, serves as its executive officer. From the personnel of the executive committee, it is evident that intercollegiate athletics are dominated by influences outside the actual administration of the university, the students and the alumni having a majority of the committee.

Football is the major intercollegiate sport and is overemphasized to a high degree. The salary of the football coach is $10,000 plus an additional $1,500 for services rendered as assistant physician. In the previous chapter the salary schedules of the university staff were presented and it was shown that the salary of deans, the highest

ranking members of the academic staff, was $5,000. Thus the football coach receives double the salary paid the deans with their large responsibilities. The football coach has four assistants.

As a result of these situations, intramural athletics, in which practically the entire student body has opportunity for participation, are being seriously retarded in favor of intercollegiate athletics. Both intramural athletic facilities and funds are deficient. No money collected from intercollegiate athletics is used for intramural sports, although minor contributions of equipment are occasionally made.

Because the figures reported contain duplications, it was impossible to ascertain exactly how many of the students, either men or women, are actually engaged in intramural athletics. The program, however, includes all the different sports. In intramural athletics for men no awards of any type to winners are made. Notwithstanding that letters and sweaters on a basis of the point system are awarded to the women students in intramural athletics, this branch of physical education is at a lower ebb than that of men students.

Intercollegiate athletics, with football overshadowing all other sports, occupy first place. The total gate receipts in 1929–30 amounted to $58,454, all of which was expended on intercollegiate athletics except $5,720 representing a net profit. The financial statement of the university shows that $9,250 of State appropriations are utilized to pay salaries for intercollegiate athletics, an extremely unusual situation in view of the fact that no State funds are available to defray the operating costs of intramural athletics.

The institution is in a position to convert its entire physical education work into a well-organized and effective program for the benefit of the entire student body. It has an excellent athletic physical plant, both outdoor and indoor. The outdoor facilities include 2 football and 4 baseball fields, 1 cinder track, and 13 tennis courts. For indoor sports, provision has been made for both men and women students on an extensive scale. The university has a men's gymnasium and has four gymnasium floors in another building devoted to women. In addition there is a basketball pavilion erected at a cost of $200,000 for games, indoor tennis, and indoor track. Two large swimming pools, one for men and one for women students, are included in the physical plant while two athletic fields exclusively for women students are provided. In order to develop a physical education program in which all the students of the university will participate, it is necessary to reorganize completely the present methods of control and administration of athletics.

Oregon State College.—Physical welfare at the State college is organized into a school of health and physical education, composed of five departments—physical education for women, physical education for men, health service, hygiene, and intramural athletics. The

head of the school is a dean assisted by two directors and eight other staff members. A separate and independent organization exists for the control of intercollegiate athletics.

The college requires that men students take the course in hygiene 1 hour a week for a year and pursue 2 hours per week of exercise while the same regulation is enforced for women students except that 3 hours per week of exercise are required. The claim is made that special efforts are put forth to exemplify hygiene teaching in the dining halls and gymnasiums. The school of health and physical education is entirely a service division, no degrees being granted. A minor of 12 semester hours is offered in physical education for men students and of approximately 20 semester hours for women students.

At the State college the health service falls to some extent below the standards maintained at the university. There are 3 full-time physicians on the staff and 5 trained nurses. The institution has an infirmary with 11 beds and students are allowed free service for 10 days. Notwithstanding the greater enrollment of students at the State college than at the university, the infirmary is smaller and more deficient in facilities. At least four times as many beds are needed. No isolation room is available, the X-ray equipment is out of date, the method of transportation of food to patients is insanitary, and the bathroom facilities are entirely inadequate. In this connection it must be stated that the rooms in the infirmary are clean, airy, and fairly light. An entire absence of work in psychiatry was discovered in the health service department. A course in mental hygiene, however, is offered in the school of vocational education. Parents are not regularly informed of physical defects discovered by the department although a system of correcting defects by follow-up examinations, consultations, and medical advice is in operation.

The State college has an athletic physical plant superior to any other in the State and equal to the best found in the larger western universities and colleges. No reason exists, therefore, why intramural sports should not be the principal objective of the physical education program and why they should not be developed upon an extensive scale. For outdoor athletics, the institution has 5 football and 2 baseball diamonds, 1 cinder track, 10 playground diamonds, 4 tennis courts, and 1 water course. Capital investments of approximately $315,000 have been made on indoor sports. A fine men's gymnasium composed of four units with a large swimming pool has been erected on the campus. The women's building contains complete gymnasium facilities for women students situated on five floors and also a swimming pool. The college likewise has an $85,000 stadium built by subscription, bond issue, and gifts.

Notwithstanding the excellent facilities available for the general advancement of the physical welfare of all the student body, intercollegiate athletics have been permitted to dominate the athletic program of the college. So intense has become the interest and so acute the desire for prestige that the advantages to be obtained from intramural competition among the great mass of students have been to a large degree overlooked and have received only minor consideration. Neither funds for the support of intramural athletics are provided through the profits accruing from intercollegiate football nor through State funds. It must be conceded, however, that more is done at the State college than at the universiy for the furtherance of intramural athletics. The program for men students encourages contests by the awards of cups, plaques, and medals. A women's athletic association has been organized with a board of control that has served to arouse interest to some degree in intramural sports among the women students. Letters and sweaters are awarded by the organization, which raises a limited amount of money by dues. The number of men and women students actually participating in intramural athletics was not available due to the duplication in the figures presented.

Intercollegiate athletics, with football as the primary interest, are under the administration and management of an agency outside of the regular college organization. This agency is interrelated with the associated students. It is known as the athletic board of control and consists of 3 faculty members, 5 students and 1 alumni member. A graduate manager employed by the board serves as its executive member. Thus intercollegiate athletics are administered in practically the same manner at the State college as at the university except that no attempt has been made to interlock the board of control with the official physical education organization of the institution. Although the funds are handled by the business office, the athletic board of control directs all expenditures. The arrangement of games, the selection of coaches, the fixing of salaries, and other questions of policy are under its jurisdiction.

Football has been emphasized and the competitive spirit developed to a high degree. The head football coach receives a salary of $8,000 annually and has four assistants. He is appointed by the board of control and holds the rank of professor. Other members of the faculty with this rank are paid an average salary of $4,000 so that the football coach's compensation is far in excess of the remuneration of the regular academic staff. The assistant coaches receive $2,750 to $3,800. Comparing these salaries with the compensation of instructors in physical education for women, practically all of which are $1,900 or less, the discrimination against in-

tramural athletics is evident. Responsibility for this condition is directly traceable to the creation of a separate and independent board for the control of intercollegiate athletics.

Summary.—Upon a basis of the facts presented in the foregoing review, the survey commission is convinced that the only method for the development and execution of a comprehensive program of physical welfare for the benefit of the student bodies of the university and State college is a complete reorganization of the present plan of management of intercollegiate athletics. The commercialism at present existing in football, the payment of high salaries to coaches, and the favoritism shown intercollegiate athletics with the consequent neglect of intramural athletics are due in a large measure to the influence of student and alumni control. Establishment of separate boards to manage these activities distinct from the regularly constituted organizations of the institutions is contrary to well-recognized principles of administrative procedure. In order to correct the prevailing conditions and to place physical education upon a simple but sound foundation, the following recommendations are made:

1. Abolition of the present boards of control comprised of students, alumni, and faculty members.

2. Incorporation of control of intercollegiate athletics in the schools of physical education to be administered on the same basis as the functions of any academic major division.

3. All coaches to be employed in the same manner as other staff members and to receive no larger compensation than is provided for in the regular salary schedules of the faculty.

4. Receipts from intercollegiate games to be handled through the same channels as other departmental earnings and to be budgeted with other institutional funds.

5. Adoption of the policy of supporting intramural athletics by means of institutional and State funds and rejection of the proposal that intramural sports be financed from intercollegiate receipts.

6. Widespread promotion and advancement of intramural sports with the definite objective of having every student on the campus participate.

Normal schools.—The physical welfare programs of the normal schools have been organized on a very limited scale, with the exception of the school located at Monmouth. The responsibility rests on an insufficiency of funds rather than a lack of initiative on the part of administrative and educational officers.

In the Monmouth normal school a genuine effort has been made to promote the physical welfare of the student body as a whole. Two physical education departments have been established, one for

men and one for women. The men's department is under the supervision of an athletic director who has two assistants while the department for women is in charge of a health director with four assistants. Students are required to pursue courses in hygiene and exercise. Both departments offer a minor in physical education and there is a large enrollment in the courses indicating that the program is such as to inspire the students' interest. The health service is on only a fairly satisfactory basis. The nearest hospital is 8 miles away. A makeshift student infirmary with 9 beds is operated on the campus where free service is given patients for 3 days after which a charge is levied. The medical staff consists of 2 part-time doctors, 1 graduate nurse, and 1 practical nurse. A shortage of equipment exists in the physician's office. While a medical examination is obligatory at entrance for all students, the follow-up examinations are rather desultory being conducted chiefly by medical students from the University of Oregon.

The facilities for sports consist of 1 football and 1 baseball field, 4 tennis courts, and a gymnasium for men. Only $2,700 has been invested in gymnasium equipment. Football is the dominant sport and intercollegiate contests are held. No profit, however, is realized from the games as the students are admitted without charge with the result that commercialism has not gained a foothold. The football coach is appointed directly by the board and is under the direct supervision of the president. Under present arrangements he coaches both intercollegiate and intramural teams so that intramural athletics instead of being neglected have been encouraged.

The development of an organization for conducting physical welfare work in the normal school at Ashland has been handicapped by inadequacy of funds. Capital investments in gymnasiums for both men and women students are essential if a superior program is to be adopted. An auditorium entirely unsuitable for the purpose is being utilized for gymnasium classes at the present time. Physical education and athletics have been combined into one department under the control of a single head. No compulsory exercise is in effect for men students, but 2 hours per week are required in the case of women students.

The physical plant consists of 1 football and 1 baseball field, 1 playground, and 2 tennis courts. Intercollegiate athletics are limited chiefly to football. There is a lack of interest and the probabilities are that paid admissions will be entirely abolished. A deficit of $2,500 occurred in 1929–30 in football finances. The institution is confronted with an absence of intramural athletics. No health service of any type has been established at the school, illnesses being reported by fellow students.

The normal school at La Grande is suffering under the disadvantage of an inadequate plant in its physical education program. The staff is small. The work for men students is under the charge of a director receiving a salary of $2,400 while the woman director is paid the same compensation. No other teachers are employed for physical education. A football and baseball field are the only outdoor athletic facilities while in the case of indoor sports the institution has been compelled to rent buildings for use as gymnasiums. The gymnasium for men students has 25 lockers and 2 showers but the one for women students has no showers or similar accommodations.

Health service is extremely limited at the school, being in charge of the director of physical education for men whose equipment consists of a physician's scales. Local hospital facilities are utilized in case of illness among the students and reduced rates are charged for medical attention by the local physicians. Under the regulations, all students are required to pursue a hygiene course and exercise to the extent of 2 credits for each.

Intercollegiate football is under the control of the president, the director of physical education serving as the coach. The practice is to charge admission to the games, but on account of the small revenues no profits were realized for the 1929-30 season. Intramural sports on the point system for women students are being promoted and considerable progress is being made notwithstanding the lack of physical plant facilities and equipment.

Student Activities

Fraternities and sororities.—Student fraternal organizations are well developed in the University of Oregon and the Oregon State College. None exists at the normal schools.

The great strength and impetus given to the growth of fraternities and sororities everywhere throughout the United States seems to lie in the failure of the institutions to provide housing facilities for the students. The Greek letter organizations met this issue by the construction of chapter houses with large monetary investments.

At the university 50 per cent of the men students are members of fraternities and 51 per cent of the women students belong to sororities. Although not all the students having membership in these organizations live in chapter houses, by far the greater proportion reside in them, the percentage for both men and women students being 48. A somewhat similar situation is found at the Oregon State College. Of the men students, 50 per cent hold membership in fraternities, and of the women students, 46 per cent have joined sororities. The chapter houses furnish housing facilities

for 45 per cent of the men students and only 26 per cent of the women students, the latter proportion being low because the institution has erected and operates a greater number of women's dormitories.

An interfraternal council for fraternities and a Pan Hellenic council for sororities have been established on the campuses. These organizations have jurisdiction over rushing, pledging, initiation, and similar fraternal problems. A liaison exists between faculty officials and the councils, but the latter appear to exercise final authority in most instances so that the institutional representatives serve in an advisory capacity. The Greek-letter organizations, therefore, manage their own affairs to a large extent.

The important problem of the fraternities and sororities is their relationship to the health and welfare of the students through living conditions existing in the chapter buildings. Another vital question is whether membership entails a neglect of academic work and educational accomplishment.

The administration of the University of Oregon inspects the chapter houses. The number living in a single room is limited. Fire risks and sanitary conditions are the subject of periodical checking. In 1930 an attempt was made to supervise the meals served the students in both the fraternity and sorority buildings, but this was unsuccessful. The institution also tries to regulate the living costs in the chapter houses, which is high as compared with other places. Little real improvement has been effected, however, by such efforts. Very few of the fraternities have house mothers. In accordance with a law of the National Pan Hellenic Congress applicable throughout the country each sorority has a house mother. The university permits combined fraternity-sorority parties and no per-student maximum cost has been fixed for them. The number of fraternal dances are limited to one each year. In the erection of new chapter houses, the administration seems to have adopted definite policies. The organization must have at least one-third of the cost of the new building either in cash or the equivalent before beginning construction and must conform to the sanitary, fire, and building regulations. To assist inexperienced fraternity and sorority members in managing chapter houses, the institution offers a special course in budgeting for house managers.

At the Oregon State College the status of the control exercised over fraternal organizations does not differ widely from that found in the university. A joint faculty and student committee, known as the student interests committee, is vested with authority to approve the constitution, organization, and program of new fraternities or sororities being established on the campus. The faculty committee on buildings has jurisdiction over building plans and leases of

chapter houses. The college limits the number of students to four in a room, conducts inspections of lodging facilities, and otherwise enforces fire and sanitary regulations in fraternity buildings. Double beds, however, are still in use in some of them, while in others the double-deck bed is found. There is no special supervision of the chapter house diet. A rule of the institution prohibits interfraternity parties, but no limit is placed on the number that a single organization may give during the year. All the sororities employ house mothers. The professor of home economics supervises the budgets of the sororities and conducts a monthly audit, but this is a mutual arrangement instead of an institutional regulation. A cost of living, somewhat higher than elsewhere, prevails in the chapter houses.

In analyzing the fraternities and sororities attention must be called to the fact that the members of such organizations are students in institutions of higher education. It is essential, therefore, that they perform their duties with the same effort and industry as the nonfraternal group of the student population. Considering the large proportion of the students belonging to Greek-letter organizations at the university and State college, the administrations are under some obligation to maintain a comprehensive check of scholastic records of the different fraternity and sorority chapters and to insist that each maintain a scholarship at least equal to the average for the student body as a whole. The failure of a chapter to reach the average would seem to indicate that distracting influences are operating within the organization to prevent the members from attending to their studies and performing their college work. In such instances the necessary remedial steps should be taken by the institution.

Scholastic ratings of the fraternal organizations are regularly made at the University of Oregon. Some rather significant facts are disclosed. Of the men's chapters the grades of all except three fall below the all-university average and over half are below the nonfraternity average for men students. In the case of the sororities, a scholastic standard exceedingly creditable to the organizations is revealed. With the exception of six chapters, the grade of each sorority is above the average for the entire group of women students. Moreover, all the chapters save two exceed the nonsorority as well as the all-university average. The high academic standing of the sororities is due in a large measure to the adoption of a plan of scholastic probation in pledging candidates for membership in their organization. No such rule has been invoked by the fraternities. Although the university has an excellent system of ratings of the fraternities and sororities, penalties for low

scholarship are not inflicted upon the chapters as a unit, but upon the individual members who are suspended when their grades reach a certain minimum.

The State college states that a system of scholastic rating is maintained for fraternity and sorority chapters. The uniform scale approved by the American Association of College Registrars is not utilized by the institution. While minimum scholastic requirements for pledging are not imposed, the candidates must average 80 per cent in their grades before initiation is sanctioned. A faculty committee passes upon eligibility, and the fraternities and sororities violating the rule must forfeit a bond. Initiation of pledges making low grades is disapproved. The college enforces a policy of infliction of penalties in case the Greek-letter organizations are deficient in academic work and scholastic accomplishment. Grades below the average are sent to national chapters, members are suspended from college, and social privileges are withdrawn.

Summary.—The foregoing review indicates no very serious laxity on the part of the administrative authorities of the Oregon institutions in the control of the fraternities and sororities. As the members of these private organizations are an integral part of the student bodies, it is essential that their health and welfare be safeguarded and that their scholastic attainments be maintained on the same level as other students. In order to accomplish these objectives, the following recommendations, all of which may be put into effect by the cooperative method, are presented:

1. That the institutions extend their supervision over the chapter houses with a view of improving the lodging conditions and the diet served the student members.
2. That a careful check be made of the scholastic records of each chapter and that it be placed on probation with curtailment of social privileges for failure to attain a minimum standard.
3. That in the event of continued neglect of a chapter to maintain the requisite scholastic standard, suspension be enforced on the grounds that its continuance is detrimental to the academic progress of the institution.

The associated students.—Control and direction of extracurricular activities of the university and the State college are vested in the students. The responsible organization is known as the associated students. Considerable power has been conferred upon them not only in the expenditure of funds but also in the management of student affairs.

In the case of the university, an executive council is the final authority of the associated students. Its membership consists of 7 students, 4 faculty members, and 2 alumni. A complicated arrangement exists for the designation of the personnel. The student mem-

bers include the president of the associated students, who serves as chairman ex officio, the vice-president, the senior finance officer, the junior finance officer, the secretary, the executive man and the executive woman. Faculty members serving on the council are the president of the university or a representative and three others from the staff, one of whom is an alumnus. The two alumni members are appointed by a committee consisting of the president of the university, the president of the alumni association, and both the incoming and outgoing presidents of the associated students. The body is divided into 6 subcommittees who make recommendations to the full council.

Extracurricular activities under the control of the associated students at the university include chiefly athletics, publications, glee clubs, forensics, and building operations for student purposes. A fee of $5.25 per quarter is collected by the institution at the time of registration as dues for membership, which entitles the student to tickets of admission to athletic contests, concerts, debates, and other events held on the campus. The executive council has direction over the disbursement of a large sum of money annually. In 1929, the receipts totaled $182,267. Of this amount, $35,665 was derived from student fees, $62,595 from varsity football, and $84,007 from other sources and activities. Over 50 per cent of the revenues were devoted to men's intercollegiate athletics by the council.

A body called the board of control exercises direction of the affairs of the associated students organization at the State college. It is composed of 9 members, of whom 5 are students, 3 faculty members and 1 an alumnus. The student members are the student president, first vice-president, and secretary, all serving ex officio, and two other students elected to the board. Of the faculty members, all are appointed by the president of the college and one is especialy designated as the chairman. The alumni member is chosen by the board of directors of the alumni association. For the conduct of its business the board is organized into subcommittees of finance, athletics, and publications. The recommendations of the subcommittees are submitted to the board of control for final action.

The fee levied against students for membership in the associated students at the college is $5 per quarter collected at the time of registration. Payment of the charge entitles the student to admission to activities under the supervision of the organization. The board of control handles a slightly smaller sum of money annually than the executive council at the university, the total for 1929 being $177,963. Of this amount, $47,625 is secured from student fees, $96,834 from gate receipts of football games, and $33,504 from other sources. In the expenditures of the revenues, the board utilized

$110,271, or approximately 68 per cent, for intercollegiate athletics in which men students participate almost exclusively.

From this brief discussion of the methods of control of extracurricular activities in the Oregon institutions, it is evident that the associated students have been vested with authority over the disbursement of large sums of money of which the greater proportions are being expended for intercollegiate athletics. In the section of this report dealing with physical welfare and athletics, the survey commission proposed that the administration of intercollegiate athletics be transferred to the physical educational departments and that the revenues derived be handled through regular institutional channels in the same manner as other departmental earnings. This recommendation is repeated here. Its effect will be to reduce substantially the large amounts of money at present under the control of the associated students, eliminate the handling of intercollegiate funds altogether, and confine the functions of the student organizations to the management of extracurricular activities of a noncommercial and nonprofit character.

Chapter XI

Findings and Recommendations

The State board of higher education was created with jurisdiction over the five publicly supported higher institutions of Oregon in order to unify their activities and to utilize the institutions to create a single system of publicly supported higher education in the State. This method of securing unification of the State's higher educational institutions has abundant precedence in the practice of other States. The Oregon law, however, is an improvement upon many similar attempts by reason of the fact that it invests the board with sufficient power, guards against political influence, and furnishes the means to the board for securing technical education information and advice. The law fails, however, to provide for coordination and integration of the public higher educational system of the State with the public-school system with which the higher educational institutions are so intimately associated and upon which they are so dependent. Some further provision for the coordination of the entire State system of education is desirable.

That the State of Oregon is abundantly able to support a very effective system of public education is evident from its growth in population, from the homogeneous character of its people, from the esteem in which education is held, from the large proportion of wage earners as compared with the population of school age, and with other nonproductive groups, from the density of its population and the distribution of its inhabitants in rural and urban areas. Upon almost every one of these counts Oregon is typical of the general situation in the United States and in many respects enjoys advantages greater than those found in the Nation as a whole. Oregon should look forward with confidence to the development of a system of higher education the equal of that found in any State in the Union. This conclusion, reached upon the basis of statistical study of population, is confirmed by a study of the economic opportunities afforded by the State.

While Oregon thinks of itself largely in terms of agriculture, forestry, and mining, almost as large a proportion of its people are engaged in manufacturing as in these industries. The future educational program of the State should be predicated upon the expectation that manufacturing and business will become increasingly

important in the State. The variety of economic opportunities afforded by the State indicates that Oregon's ability to support social agencies, including education, is not dependent upon a single type of occupation or upon a single form of productivity. This fact implies a varied program of public higher education.

The ability of the State to support education without neglect of its other fundamental obligations is measured by its present social and economic income. On this basis Oregon compares very favorably indeed with States of comparable size with reference to its manufactures, its farm products, its fisheries and its lumber. Such barometers of economic ability as savings bank deposits, postal receipts, expenditures for luxuries, and income tax paid, confirm the opinion that Oregon is especially fortunate in the thrift and industry of its people and in the abundance of its natural economic advantages. In per capita wealth and per capita income Oregon ranks high. Oregon possesses the ability and resources that, without crippling other State activities, may be used to support an effective system of public education from kindergarten to professional school.

In order to release these resources for effective use an effective and fair distribution of the tax burden is required. At present the per capita tax income of the State indicates that the State is contributing liberally for the support of the State government. Further, the State's per capita expenditure for public higher education is greater than that of he United States as a whole. Oregon is expending a slightly larger percentage of its tax income for higher education than most of the States that are comparable in size and resources. It expends more per student than the average for the United States as a whole. It is evident that Oregon is not only spending generously for higher education but that its annual expenditures represent a substantial proportion of the State's income.

A larger percentage of the combined receipts for private and public higher education in the State of Oregon is spent for public higher education than is usual in the United States as a whole; 80.6 per cent of the total in Oregon is received for public higher education as compared with 48.7 per cent for the entire United States. In other words, the State is bearing a larger proportion of the total higher educational cost and the private institutions are performing a smaller portion of the task than is the case in most other States. Further, for every $1,000,000 of its wealth, Oregon has invested $3,935 in capital assets for its public higher educational institutions as compared with $2,500 for the United States as a whole. However, of the 17 States chosen for comparison with Oregon, six have larger capital assets per million dollars of

wealth. Oregon's investment in its public higher educational property per 1,000 population is almost twice that of the United States as a whole.

In view of these facts it is evident that Oregon is making expenditures for higher education on a scale proportionate to its wealth and income. The problem, therefore, is whether Oregon is securing the fullest returns for the money it is expending and whether the opportunities and services afforded its people are of the character and type to be expected from such expenditures.

This question can be answered in part in terms of the number of students enrolled in public higher institutions. In Oregon 75.3 per cent of the total college population of the State are in public higher institutions; in the United States as a whole only 50.6 per cent are in public higher institutions. Further, there is one college student attending a public higher educational institution for every 93 people; in the United States there is one such student for every 208 people. In other words, Oregon is securing large student attendance for its expenditures.

Of far more importance than quantitative measures in terms of student attendance is the answer to the question as to whether the higher educational program of the State is meeting the cultural, industrial, and economic needs of the State. Oregon's economic organization is much the same as that of the Nation at large. If it is assumed that for the entire Nation the educational program is an effective one with reference to social and economic requirements it should be expected that the number of students enrolled in various major fields of study in Oregon will correspond closely with such enrollment in the United States as a whole. The data indicate that Oregon falls below the United States as a whole in the percentages of students in graduate work, in liberal arts and in law and that the percentages enrolled in agriculture, commerce, and business, engineering, and pharmacy exceed those of the United States as a whole.

These conclusions are confirmed by comparison of the number of students enrolled in each field of study in Oregon with the number the State would have if it educated the same proportion in each field as are being educated in all the higher educational institutions of the United States. It seems, upon the basis of these data, that Oregon's higher educational program is considerably distorted. The question is raised as to whether the funds provided by the State are being apportioned properly between its different educational enterprises. The policy which permits the emphasizing of some fields of study without reference to their relative importance in the economic and social structure of the State may be due obviously to an absence of fundamental coordination in the State's public education program.

The future must contemplate one great system of higher education in the State with its several units not competing but combining to make the single enterprise most effective.

The State board of higher education was created to solve these problems. Tendencies and decisions determined by historical development afford considerable help in such solution. It is the purpose of the State that the normal schools shall train the elementary teachers and that the university and the State college shall prepare the high-school teachers. A large part of the work of the university and the Oregon State College is devoted to areas of educational endeavor that are peculiarly their own and within which there is no competition. The university's major attention is given to the humanities and the social sciences and to their application, while the major activities of the Oregon State College are directed to the sciences and their technical application in a wide range of occupations. Historical developments that disregard these distinctive characteristics will have to be ruthlessly amputated in order to secure economy and unity in the educational system of the State. The fundamental recommendations with reference to better distinction of functioning may be summarized as follows:

1. The training of teachers for the elementary schools should be done at the three normal schools.

2. Unspecialized freshmen and sophomore work, referred to as lower division work, in all the arts and sciences should be available upon essentially identical terms at Eugene and Corvallis. It is the purpose of lower-division work to provide the broad general education needed by men and women without respect to the careers that they will follow and to provide service courses needed in the many professional curricula.

3. A great school of science should be developed at Corvallis based upon lower division work that may be pursued at either the university or the State college. This school of science should provide curricula leading to undergraduate and graduate degrees in the various sciences including botany, sociology, geology, chemistry, physics, astronomy, mathematics, and statistics.

4. A great school of arts, literatures, and social sciences should be developed at Eugene, based upon lower division courses that may be pursued at either the State college or the university. This school or arts, literatures, and social sciences should provide curricula leading to graduate and undergraduate degrees in the arts, English language and literature, foreign languages and literatures, speech, history, economics, political science, sociology, and psychology.

5. The professional schools based essentially upon the natural sciences should be located at Corvallis. These include engineering,

agriculture, forestry, mines, women's careers in the realm of foods and teacher training in the sciences, and their applications.

6. The professional schools resting essentially upon the arts, literatures, and social sciences should be located at Eugene or at Portland. These include architecture, music, law, medicine, public health, nursing, social service, journalism, business administration (including commerce), and teacher training in the arts, literatures and social sciences, and their applications.

In order to provide comparable lower-division programs at Eugene and Corvallis considerable modification of present practice and course content at both institutions and a serious adjustment of the requirements of some of the professional schools are required. The offerings in the lower divisions of the two institutions should be practically identical and so designed as to permit a student to transfer from either institution to the other for continuation in the upper-division specialization of his choice without loss of time or credit. These modifications and adjustments should be secured by the agreement of joint committees of the two institutions upon which the State board of higher education should be represented.

Lower-division work at Ashland and La Grande should follow in general that provided at Eugene and Corvallis, with such modifications as are made necessary by absence of upper-division offerings and equipment. The survey commission recommends the offering of lower-division college work at Ashland and La Grande in order to insure educational units of efficient size and in order to serve the people of these sections of the State most economically. The educational offerings at Monmouth should be similarly enriched but owing to the proximity to the university and the State college it is not necessary that Monmouth develop a distinctive junior college program.

The principles enunciated are not universally applicable. The medical school is both a scientific and a social agency. Agricultural economics and agricultural journalism require upper-division preparation in both the physical and social sciences. Architecture has its major emphasis in the realm of art but is essentially dependent upon structural engineering. The commission recommends that these problems be solved (1) by exchange of professors between institutional units, or in other words, joint service of two or more units by a single faculty member when the number of students makes this economical, (2) division of the residence of students between two institutional units when curricular adjustments permit this arrangement, (3) transportation of students between the two institutions when this is the only method by which the student may obtain courses that he needs in his special field, and (4) extending the period

of training required for certain professions such as agricultural economics, to the graduate level as is done in the case of medicine.

The greatest duplications between offerings at the university and at the State college and the solutions proposed by the commission may be listed under four points:

(*a*) Extensive duplication of courses arises from the fact that students preparing to teach two or more high-school subjects do not confine these combinations to related subjects. The commission recommends, therefore, that by means of State department of education regulation of certification requirements permissible combinations be confined to related areas. The teacher-training work of the university should then be limited to subjects in its major field of the arts, literatures, and social sciences and their applications, and that of the State college to the field of the sciences and their applications. It is recommended that a continuing State educational council, containing representatives of the five State institutions, the State department of education and the State Teachers Association, be created to work out the details of methods and procedures to be followed in coordinating the teacher-training work of the State in accordance with the fundamental recommendations of the commission.

(*b*) Duplication is found in the lower-division courses intended to provide general education and training preparatory to specialization during the upper-division period. The commission recommends that this duplication be approved and regulated by opening all lower-division fields to both institutions and by requiring that such courses be practically identical at both institutions. This may be effected economically by reason of the size of the groups that require such training. Details of putting this program into effect should be worked out by joint committees of the institutions affected.

(*c*) Duplication of upper-division courses in the sciences, the humanities, and the social sciences is extensive and expensive. The commission recommends, therefore, that all upper-division science work be confined to the institution at Corvallis and that all upper-division work in the arts, literatures, and social sciences be confined to the institution at Eugene. Coordination of function by this means can be accomplished with less disturbance and inconvenience of students than is offered by any other method. Details of putting this program into effect should be worked out by joint committees of the institutions affected.

(*d*) The primary problem in connection with duplications in miscellaneous fields is that of building up one strong department rather than that of securing greater economy although reduced cost should also result from elimination of these duplications. The

commission recommends, therefore: (1) That beyond the facilities which will permit institutional music to pervade both campuses, the function of musical education be confined to the university; (2) that divisions of health and physical education be developed at both institutions for the purpose of maintaining the physical health of student bodies, for the purpose of training students in care of themselves throughout life and for the purpose of inculcating interest in the problems of community health and sanitation; but that preparation of students to become health supervisors and teachers of physical education be accomplished by means of a joint curriculum which will require the student to pursue work at both institutions. The details of this curriculum should be worked out by the State educational council suggested above; (3) that work in agricultural journalism and agricultural economics be conducted as 5-year curricula which require a student to spend a period of training upon each campus; (4) that 4-year curricula in rural sociology, rural art and architecture, industrial management, architectural engineering, and similar fields which require elements of upper division training both in the sciences and in the arts or social sciences, be secured by arrangement of curricula so that students will spend from two to three years upon one campus and the remainder of the 4-year period upon the other.

Study of the facts convinces the commission that the inconvenience caused to a few students by these arrangements will be slight; that residence requirements for participation in intercollegiate athletics will not be seriously affected; that the desire of instructors to conduct upper division and research work in areas which are confined to the lower-division level in their institutions may be met by exchange of services between the institutions and by development of cooperative research and graduate programs; and that the State may well insist that continued failure to maintain such coordination that may arise by reason of the present dual administration of the two institutions should result in the establishment of a single administration for the two campuses.

Duplication of work upon the graduate and research level is more expensive than duplication upon the undergraduate level. Oregon's program of graduate and research work needs further development. This development may be accomplished most economically and costly duplication upon this level may best be avoided by the inauguration of a series of interinstitutional cooperative projects financed by funds specially budgeted for the purpose. Graduate work for the master's degree should be allocated in accordance with the upper-division functions assigned to the institutions but should contemplate use of the resources for guidance and the facilities of both insti-

tutions. Graduate work for the doctor's degree and other research projects should to a much greater extent be authorized and financed upon condition that such interinstitutional cooperation be utilized. No doctor's degree should be granted in any field except upon joint recommendation of appropriate representatives from the campuses at Eugene and Corvallis. Support for institutional research should be determined in part by evidence of efforts to utilize the personnel and facilities of both institutions in the prosecution of specific research projects in areas to which both may make contributions.

In order to provide administrative contact and a competent agency for the promotion and supervision of such interinstitutional research it is recommended that a State research council be set up to consist of representatives of the five State institutions, the State board of higher education, and the State department of education. This council should develop a program of cooperative research for approval by the presidents of the institutions and by the State board of higher education and should supervise the work of project groups made up of representatives from two or more institutions.

The teacher-training functions of the five State-supported higher institutions must be coordinated with each other and determined by the needs of the State's public-school system. Such coordination is not secured at present; the number of students preparing for teaching has increased in five years by 60 per cent while the number of teaching positions in the State increased by only 10 per cent. Past rate of growth in the number of new teaching positions will probably not be continued during the next 10 years. It is estimated that the annual demand caused by new positions and by replacement of teachers who leave the service will be approximately 425 high-school teachers and 1,300 elementary teachers.

It may be expected that the private institutions will supply 20 per cent of the demand for high-school teachers, leaving 80 per cent to be supplied by public institutions. Owing to the large number of small high schools in the State a large proportion of high-school teachers have to be prepared to teach three or more subjects. In order to reduce indiscriminate recruiting on the part of the institutions it is recommended that the State department of education be provided with funds to make a continuous study of the demand for teachers with different combinations of subjects. It is also recommended that high-school teacher certification be limited to certain authorized combinations of subjects. The institutions should then enroll only such students for high-school teacher training as give promise of success and in such numbers in the various fields as are sufficient to satisfy the needs of the State and provide training for students who may reasonably be expected to secure out-of-State posi

tions. There is no reason why the State should provide expensive professional training much beyond its own needs provided selection of trainees that give promise of success is made before rather than after training is given. In other words, the commission recommends that the extent and nature of preparation of high-school teaching be controlled by assignment of specific functions to the institutions, by professional adjustment of certification requirements, and by selective admission to the teacher-training courses.

Specific assignment of institutional functions should confine the normal schools to the training of elementary teachers, the university to training of high-school teachers in the arts, literatures and social sciences, and the State college to training of high-school teachers in the sciences and their applications.

Present tendencies of the Monmouth normal school to prepare for certain high-school positions should be corrected. Junior high school teachers should not be prepared at more than one institution in view of the slight demand for such teachers; the commission recommends that this work be carried on under the administration of the institution at Corvallis in cooperation with the normal school at Monmouth.

Graduate work in education should be developed both at Eugene and Corvallis within the areas assigned to them, but training of public-school administrators should be emphasized at Eugene and should be conducted in cooperation with the public schools, the State department of education, the institution at Corvallis, and the normal schools.

The training of elementary teachers is the most important single factor influencing the future of the State. The people of Oregon have in the past not provided for or received the kind of elementary teaching service that the State needs. This statement is supported by comparison of expenditures with those of other States and the United States as a whole, by similar comparisons of investments in physical plants, and by the standards of training in force in Oregon and elsewhere.

Preparation of elementary teachers is a difficult process of a highly special type and demands facilities, teachers, and selective processes of at least as high type, although of different character, as those required for the preparation of high-school teachers. These Oregon has not as yet provided.

The survey commission recommends that certification provisions be strengthened by abolishing or restricting life certification, by providing more exact requirements for renewal of certificates, and by raising the qualifications for initial certification. In order to make such changes effective, to provide for their efficient administra-

tion, and to insure coordination with the work of the teacher-training institutions it is further recommended:

(1) That the State department of education be provided with an official to exercise oversight and coordination of the work of teacher training and certification.

(2) That the State department of education be provided with a staff adequate to exercise supervision over both high and elementary schools and to collect, compile, and disseminate information concerning the status and needs of the public schools.

(3) That the State superintendent of public instruction be freed from the necessity of political affiliation and partisanship by the creation of a State board of education with authority to select and employ a professionally trained superintendent of public instruction.

(4) That the State board of education and the office of the State superintendent be in some fashion closely related to and coordinated with the State board of higher education in order that the teacher-training functions of the higher institutions and the needs of the public schools may be approached and administered as one problem.

(5) That pending such strengthening of the State department of education a State educational council be set up, under the authority of the State board of higher education, to contain representatives of the five public higher institutions, the State department of education and the State Teachers' Association. It should be the function of this educational council to recommend to the institutions, the State board of higher education, and to other State authorities, the details of a coordinated program of teacher training and certification. This council should be a continuing agency of coordination and conference among the several interests and institutions involved.

It is estimated that 1,300 new elementary teachers will be required annually by the schools of Oregon. The distribution of the training of these teachers among the three normal schools is determined by the fact that schools draw most largely from their immediate vicinities and by the fact that elementary teachers are for the most part employed in the region in which they receive their training. Various bases of estimate indicate that it is probable that it will be reasonable to expect the school at Monmouth to prepare 741 teachers annually, the one at Ashland to prepare 384, and the one at La Grande 175.

Present conditions of elementary teacher supply justify immediate effort to secure a larger proportion of the more able high-school graduates for entrance to teacher training; strengthened formal admission requirement; adoption of selective measures; and more exacting scholarship and personality requirements for graduation.

Observation and practice teaching provide the laboratory and practical application of theoretical and abstract principles obtained in the academic classroom. The facilities for this work constitute the most important limiting factor upon the number of teachers that can be prepared by a single institution. These facilities are themselves limited by the number of children and schools in the local community that can be made available for student teaching, under conditions of institutional control that insure proper standards of supervision and direction. All the Oregon institutions are in communities that can furnish the number of children needed for practice schools by institutions of the size recommended; not all have practice schools sufficiently under their own control to guarantee the high standards required for this work. The institution at La Grande should be provided with its own training school at once. The facilities at Ashland should be improved by important plant additions. The institution at Monmouth should abandon some of its smaller outlying schools and increase the accommodations at its local training centers. The institution at Corvallis should emphasize its practice work to a greater extent by means of a better organization of its direction and by arrangements for a larger degree of control of the conditions under which observation and student teaching are conducted. A campus school is highly desirable. The university high school should be modernized in its curriculum and should be increased in size, and the organization of practice work at all centers should be brought under centralized direction.

The institutions of Oregon are able to render an extensive educational service to the people of the State who can not take up residence upon the campus. When such services are organized and promoted independently by each institution the campus of each tends to be extended to cover the entire State. Duplication of effort, of expenditures, and undesirable rivalry more immediate than that of resident teaching are likely to result. The tendency is to use these activities primarily for the promotion of institutional advertising and to win political support instead of making them primarily means of educational service. These tendencies have developed to a considerable degree in Oregon; the present plans for expansion of such service will tend to accentuate waste of money and time and use of extension work as a means of winning local political support for individual institutions.

The extension services offered by the university and the State college are extremely valuable to the State and have more than justified the expenditures made for their support. The problem in the immediate future is one of preventing undesirable and expensive rivalry in this field by these two institutions and of utilizing the

extension resources of the normal schools which are at present failing to exercise extension functions. In other words, the commission does not recommend curtailment of extension service but its expansion and control in such fashion as to develop a unified state-wide system in which the resources of all the institutions will be utilized harmoniously and economically to give the greatest possible service. The problem of such coordination is complicated by the existence of branch units of the university in Portland and by the conduct of two summer schools by the university, one at Eugene and one at Portland. The situation is still further complicated by the fact that the state-wide organization of the agricultural and home economics extension service directed from the State college is used for extension service of a very restricted character and by the fact that this service is a part of a national system subject to the conditions and limitations of cooperation with the Federal Government.

Careful consideration of the extension situation in Oregon as it actually exists, as it is likely to develop, and as it may be utilized for better and more economical state-wide educational service leads the commission to recommend the creation by the State board of higher education of a State extramural council to consist of representatives of the five State institutions, the State department of education, and the State board of higher education. This extramural council should determine the administrative policies for the extramural and extension activities of the five State institutions. It should be headed by a director chosen by the council and approved by the institutional presidents and the State board of higher education. It should be the function of the director to develop a unified program of extramural and extension activities which will utilize the facilities in all the institutions to the fullest extent consistent with the expense involved. It is the purpose of this recommendation to secure for Oregon the advantages of extramural service by all the institutions of the State that might reasonably be expected if they were all under the administration of one president instead of under five independent administrative offices. Included in the coordinating functions of the director should be the summer schools of all institutions; radio broadcasting; extension and instructing centers at Portland and other points (except the medical school); correspondence study and class extension; visual instruction, lectures and information services; and all high-school debating leagues, athletic and educational conferences designed to bring the youth of the public schools into contact with the State's higher educational agencies. All short courses of less than two weeks' duration should be arranged and advertised through the extramural council although conducted upon the campus and by the staff of a single institution. All insti-

tutional extension organizations that by law or by reason of Federal or other cooperations must continue as distinct units should be subject to the supervision and use of the extramural council. Uniform conditions should be formulated whereby credits earned by correspondence and class extension may be applied to satisfy the degree or diploma requirements of the State institutions. The activities under the coordinating supervision of the extramural council should be budgeted separately from the budgets of the individual institutions although for convenience of administration such budgets may in certain instances be reallocated to institutions.

Recruiting and Publicity

Enthusiasm for, and belief in, the value of education which leads institutions to attempt to extend their services as widely as possible is to be commended. These efforts are subject to condemnation only when they represent the promotion of institutional ambitions at the expense of a State's entire program or when they are the result of expediency inspired by desire to influence the sources of financial support. In Oregon the wish to retain or to change the allocation of millage taxes between the institutions has in the past been a potent factor in attempts to increase the number of students by means of recruiting devices and by multiplication of institutional offerings. This incentive should be weakened by reason of the power lodged in the State board of higher education to allocate all funds in such fashion as best to serve the educational interests of the State as a whole.

One of the means used to recruit students is the publication of institutional catalogues. In the past statements made in these catalogues have been the source of bitter interinstitutional controversies. Many of these difficulties would not have arisen if the catalogues had been noncompetitive statements of the total facilities provided by the Oregon program of higher education. It is, therefore, recommended that in the future all catalogues of the five institutions be prepared under policies defined by the State board of higher education. It will perhaps be desirable ultimately to publish no complete catalogue of the university or of the State college for general distribution, but instead a series of bulletins each setting forth the opportunities afforded to pursue a specific curriculum or a related group of curricula at the State higher institutions.

Both the university and the State college have issued great quantities of most attractively printed student recruiting pamphlets. It is recommended that all such institutional publications be discontinued and that in their place the board cause to be prepared, published, and distributed a single booklet, attractively printed and

illustrated, setting forth the educational opportunities provided by the Oregon program of higher education.

It is further recommended that the athletic publicity men employed by the associated students at Eugene and at Corvallis be transferred to the news bureaus of the respective institutions and paid from State funds. It is further recommended that the budgets for the news bureaus of the two institutions be segregated, include all costs, and be reduced to the minimum by action of the State board. In addition the board should insist upon a conservative policy of publicity seeking on the part of the institutions and should restrain ingenuity in exploitation of trivialities.

All faculty travel should be segregated in the budgets of the several institutions and all faculty absences from classes or other university duties to address high schools or make high-school inspections should be reported to the board. The practice of holding invitation conferences and meets of high-school students at the several institutions should be discontinued.

Admissions

Just as high-pressure recruiting tends to increase numbers and lower standards, a variety of bases for admission of students tends to create institutional rivalry and to lower the character of the student body. Evidence is abundantly available to indicate that the Oregon institutions are receiving large numbers of students of poor preparation and low college ability. It is recommended, therefore, that the rules for admission of out-of-State students be uniform in content and be administered uniformly in the State higher institutions and that the institutions cooperate upon the use of standard tests and personality measures in the assignment of students to work in the institutions. The mortality or losses of students admitted to both the university and the State college are extraordinarily high as compared with those of similar institutions throughout the United States. Of those who entered the university in 1925 only 19.1 per cent were graduated by the end of the fourth year. Of those who entered the State college in the same year only 22 per cent were graduated in four years. Although there are various explanations for these low percentages, it is significant that 35 universities and land-grant colleges graduated within the 4-year period over 40 per cent of the students who entered. Part of the low percentage in Oregon is due to the poor preparation and low abilities of Oregon students enrolled under conditions of high-pressure recruiting and in part to the poor preparation and abilities of out-of-State students admitted.

In the text of this report will be found detailed recommendations for uniform procedures in the selection and use of tests, marking

systems, use of honor points, probationary actions including conditioning and suspension of students, withdrawals from courses, and the collection of personnel information for purposes of educational advice, all designed to secure and to protect comparable standards of scholarship within the several institutions.

No recommendation is made looking to specific uniform quantitative and qualitative standards for graduation; it is evident, however, that at the university these standards need to be raised with reference to the quality of work demanded and that at the State college greater concentration of student effort, particularly upon the upper division level, should be required. It is recommended that an interinstitutional committee be designated to coordinate practices and requirements of the two institutions with respect to graduation requirements and the terms to be applied to undergraduate degrees that are granted. It should be the purpose of this committee to determine the differences in these matters that are appropriate to the different functions of the two institutions. The commission believes that Oregon institutions may make a real contribution to higher education in America if they will thus give concrete expression to the very real differences among the various curricula with respect to the abilities and attainments required of students in order to acquit themselves creditably.

Articulation of Accounts and Business Management

The problem of devising a uniform system of accounting and reporting for the higher institutions of Oregon is complicated by the variety of sources from which income is drawn; by the necessity of accounting by funds for the money secured from a large number of these sources; by the diverse requirements of the several Federal funds; by the "salvage" character of some income; by the variety of activities for which money is expended whose value can be measured only in terms of changes produced in human beings; and by the number of persons that must be responsible for the determination of the expenditures needed to carry on different educational processes. Of all these factors the most important is the fact that the significance of cost lies wholly in the type of educational use that is made of any item for which expense is incurred. Educational use can be determined by the professional staff only. Any system of accounting or form of business management which in the interests of uniformity prevents the use of these professional judgments will defeat the educational purposes of the institution. A uniform system of accounting and reporting must serve both educational requirements and business methods but the primary emphasis must be upon educational administration.

Common practice has not provided a standard of educational accounting or of financial reporting among higher institutions. However, certain essential functions may be defined:

1. Such a system must provide for fund accounting.
2. It must set up certain general classifications that are of administrative and educational value into which all institutional activities may be fitted as units.
3. It must be so simple that the cost of its operation is not excessive.
4. It must permit of reporting to the public in a fashion that will reflect the nature of the educational program of the institution.
5. It must be suitable for statistical correlation with student and faculty activities.
6. It must not involve so many restrictions and processes that it is easier to fail in the educational enterprise than to overcome the intricacies of the financial system.

The body of this report has set up a suggested outline for financial reporting. This system or a similar one supported by detailed schedules should provide definitions of items and directions for classification of activities that will permit institutions of different types and size to distribute all items of capital investment, income, and expenditure under appropriate headings and thus afford comparable financial pictures of their operations. The report does not present a system of accounting. There are many sound accounting processes and methods; it is the function of experts in that field to adapt these features to specific educational requirements. At the present time there are five different systems of management in handling the business of Oregon's institutions of higher learning. Each of these systems has its own policies, its own procedures, its own records and business forms, and its own method of report making. The commission does not recommend the concentration of all business operations of all the institutions in one office. Administrative officers of the institutions must be in a position to control the financial instruments through which the educational program may be carried out. Dual responsibility upon the one hand for finances and upon the other for education would create a situation as difficult to coordinate as would be the coordination of the right hand of one person with the left hand of another. This conclusion is justified by the experience of other States that have attempted centralized forms of business management of different institutions.

At the same time the commission recognizes that there are elements of waste in the present system of independent conduct of business operations by five separate offices. A larger proportion of the combined operating expenses of the university and the State college

is being spent upon the mere operation of business machinery than would be required if these two institutions were under one administration and one business management. The problem is one of suggesting methods whereby educational effectiveness may be preserved and more economical business operation secured. For this purpose the survey commission recommends the creation in the State department of higher education of a centralized service organization to perform certain functions that are not inherently local and involved in preservation of institutional administrative control. Business activities which involve contact with students, immediate supervision of buildings and grounds, and of clerical help, the issuing of supplies, care of equipment, and the operation of local enterprises such as dining halls, laundries, and dormitories, must be performed locally. The custody, preservation, and investment of funds, and the keeping of records thereof are not necessarily a local function required for the preservation of institutional administrative control. These functions may be carried on effectively and more economically at a central point. Statistical study of financial records and their correlations with records of attendance, grades, graduation, and so on may, with modern equipment, be performed quickly and economically at a central office. In the opinion of the survey commission it is desirable that the State board of higher education establish a centralized statistical and recording service, and it is believed that its uses and economies will develop rapidly as the institutions discover its value for purposes of financial and educational research and control.

Coordination of Capital Investment

Duplication of work as between institutions does not necessarily mean wasteful doubling of plant equipment for the conduct of such work, nevertheless, concentration of work in one place is likely to result in economy of capital investment even in the case when such concentration is accompanied by no corresponding saving in the direct costs of instruction. Study of present use of the buildings of Oregon's higher institutions tends to show rather low efficiency at Ashland and La Grande. These institutions are new, however, and the low efficiency may be ascribed to wise provision for the future. The normal school at Monmouth shows a very low median percentage use of buildings. This is explained by the fact that the administration building is old, the rooms large and poorly arranged. It is impossible to maintain the variety of offerings required by a modern teacher-training curriculum and at the same time develop classes which will fill rooms to their rated seating capacity. No relief can be found by partitioning large rooms nor by adapting

space now devoted to offices and to the library. It is recommended that the State provide approximately $500,000 for new construction and for remodeling the plant at Monmouth. The new plant should provide for a new modern library building, for a safe auditorium, and for class and laboratory rooms to permit the simultaneous meeting of one-half again as many classes as exist at present.

The university does not show a very efficient use of the plant as a whole or of any single building. This is largely due to unwise planning which has resulted in the multiplication of small units and the building of extravagantly cheap structures. It is in part due to the wide variety of subjects offered on the upper division level and in part to the type of class scheduling that seeks to concentrate classes in the morning hours.

At Corvallis the median plant usage as a whole is somewhat higher than at Eugene, but falls considerably short of the proposed standard. Part of this failure is due to highly specialized offerings and to concentration of scheduling during the early part of the day.

The commission recommends as means to improve plant development and use (1) class scheduling to insure use of rooms for a greater number of hours per day, (2) distinct separation of funds available for educational purposes from those available for capital purposes, (3) allotment of institutional function in accordance with the recommendations made by Chapters II, III, and IV of this report.

The second of these recommendations requires some further explanation. The fact that a single fund, such as the millage or student fees, may be used either for instruction purposes or for plant development tends to conceal from the people and from legislators their responsibilities in the matter of plant development. The commission recommends (1) that specified millage taxes be limited to expenditures for operation and maintenance, and (2) that capital investment be provided for by special millage tax or by special appropriation. A third source of funds for development of the physical plant of the higher institutions of the State should be that of private donation. Wealthy men of the State should take pride in devoting some of their resources to building up the State institutions. The commission recommends that student fees be used exclusively for instruction purposes.

Future building construction at the university and the State college should be planned with reference to the coordination of program proposed by the commission. Its object should be to secure some of the economies that might be obtained if the institutions had been developed upon a single campus or if they were a single institution upon two campuses. Subject to modification as a result of possible

failure to secure the complete coordination proposed by the commission, it is recommended that the university be provided with a library building whose ultimate cost should be $500,000, of which the first unit should cost approximately $350,000. The university is also in urgent need of modern provision for laboratories and class space for lower division work in the sciences. In the opinion of the survey commission practically the entire plant of the university should be rebuilt by replacing obsolete and flimsy structures by fireproof, well-designed buildings.

It is recommended that the institution at Corvallis be provided with a biological science building in the immediate future and also that a chemistry building be provided for this important aspect of the work of the State college. The provision of these facilities becomes especially urgent in view of the recommendation of the commission that upper-division science be confined to the campus at Corvallis.

Attention has already been called to the need at Corvallis for a campus training school. The commission recommends further that a training school entirely under the control of the institution be erected at La Grande and that the plants both at La Grande and Ashland be provided in the immediate future with dormitory facilities. Both institutions also need special facilities for health and physical education work.

The State board of higher education is urged to adopt for use by all State higher educational institutions the system in use at Corvallis to maintain complete knowledge of the condition and uses made of the physical plant.

Libraries

The library staffs of the Oregon higher institutions are well prepared by training and experience for the duties that they are called upon to perform. They compare very favorably with the training of librarians of colleges and universities in the United States as a whole. The staff at the normal schools should be increased to meet the accepted standard of two full-time persons in schools of less than 500 students.

The university is spending about 80 per cent more on the annual maintenance of the library than is being expended by the State college. This condition has existed over a period of some years. The State college is below the standard of expenditures per student for library purposes in the land-grant colleges and universities of the United States. Further, the resources as indicated by possession of complete sets of certain journals required for scientific research are smaller than those in the majority of the land-grant institutions.

The library resources at Monmouth meet standard requirements. Those at Ashland and La Grande should be considerably increased. The size of their collections should be raised to at least 5,000 volumes each. Funds should be provided at both Ashland and La Grande for binding journals and important periodicals. Provision should be made at Ashland for larger reading room space.

Coordination of the library holdings at Eugene and Corvallis to correspond to the allocation of functions recommended by the commission should result in transfer by deposit of considerable proportions of the collections now possessed by these libraries. Future purchases should be coordinated to insure the minimum duplication of resources between the institutions.

Faculties

As compared with the distribution of academic ranks in the land-grant universities and colleges of the United States, both the university and the State college show a rather large percentage of staff members in the lower ranks. This condition suggests that both institutions should make a special study to determine whether an undue proportion of the teaching in these institutions is being carried on by instructors and teaching fellows.

The training of the staff of the university as represented by years of education beyond high school, and by degrees earned, compares very favorably indeed with that of staffs in the universities of the United States. At the State college the training of the faculty compares favorably with that of staffs in the land-grant colleges and universities of the United States except that the percentages with seven years or more of study beyond high school and with the doctor's degree fall considerably below the average for the United States as a whole.

The staff of the normal school at Monmouth has a rather large proportion of members who have not reached the minimum standard for teachers in normal schools, four years of study above high school. Larger percentages of the staffs of the normal schools at Ashland and La Grande satisfy this standard but all these institutions should make provision for reducing the proportions of staff members who fail to reach this minimum.

A large proportion of the staffs of the university and the State college have had all their teaching experience in the institutions by which they are now employed, but this undesirable condition is mitigated to a considerable degree at the State college and to a somewhat less degree at the university, by the fact that members of the faculty have had graduate training in other institutions. Inbreeding does not appear to be a serious problem at either the university or the State college.

The faculties of the normal schools all contain rather large percentages of members who have had no experience teaching in the public schools for which they are preparing teachers. This condition is serious in view of the failure to meet minimum standards of academic training as represented by years of education beyond high school and by the higher degrees earned.

The distribution of age groups among the faculties of the five State institutions shows that neither extreme "elderliness" nor youth characterizes the staffs of the higher institutions. Distribution of age groups among the different academic ranks shows a fairly regular increase of age with increase of rank and no undue concentration of any rank in a single age group.

In order to provide for further training, it is urgently recommended that a system of sabbatical leave be established at all the higher institutions and that salary schedules and conditions of employment be so arranged that staff members normally on the 12-month basis be permitted three months leave every third summer for purposes of travel, study or other forms of recuperation and self-improvement. It is also highly desirable that a system of pensions or retiring allowances be developed which will be applicable to the faculties of all the State institutions. Participation should be compulsory.

The median salary paid every academic rank in the university falls below the median for similar institutions in the United States. The median salaries at the State college are still less than those at the university in every rank except that of instructor. The medians in both institutions are below those paid by similar institutions in the group of Western States. Salaries paid by the normal school at Monmouth compare favorably with those paid in the normal schools of the United States but those paid at Ashland are slightly lower and those at La Grande much lower.

If Oregon is to meet the general trend in salaries among the public universities and colleges of the United States, as its economic and social resources would seem to warrant, and if it is to compete with them for competent faculty members, as it must in order to maintain comparable educational standards, it will be necessary to increase the levels of salaries paid to practically every rank in Oregon's higher educational institutions. The commission recommends that more nearly comparable salaries be provided for staff members of similar training, experience, and responsibility. Mechanical and automatic devices for assigning rank and salary increases should be avoided however; administrative judgment that is guided by minimum requirements defined in general terms affords

the best basis for determining the value of any individual to the State's higher educational institutions.

In the opinion of the survey commission the excessive turnover of the faculties that now prevails in Oregon institutions may be remedied by adjustment of salary scales, by liberal provision for leaves, and by the creation of a generous system of retiring allowances.

Students

More than 7,000 students cooperated in the study of the student bodies in Oregon's institutions of higher education. The following series of statements summarizes some of the more interesting and important facts disclosed by this study:

(1) More than 16 per cent of the students in Oregon's higher institutions are 24 or more years of age.

(2) Almost 28 per cent earn all of their own way through college by work while in attendance or during intervals between attendance. A larger percentage (57 per cent) of the students at La Grande earn little or none of their college expenses than at any other institution, although 40 per cent at the university do not help themselves to any great extent by their earnings.

(3) Almost twice as many students class their families as of less than average means as class them as well to do, but approximately 90 per cent class their families as of average means.

(4) Fourteen per cent of the students at Ashland and Monmouth come from families with incomes reported as $3,600 or more; 17 per cent at La Grande; 36 per cent at Corvallis; and 45 per cent at Eugene.

(5) Twenty-five per cent of the students come from homes in the open country. The university draws 34 per cent from cities of over 50,000 population while the State college draws 26 per cent from this source.

(6) Twenty-three per cent of the students live less than 25 miles from the institution they attend and approximately 80 per cent of these students live at home while in attendance.

(7) More than 27 per cent chose their college because of convenience to home or for reasons of economy.

(8) Only 1 per cent chose their college because of scholarship aid. This reflects the notable lack of such assistance in Oregon institutions.

(9) Thirty-five per cent said they intended to teach. Other occupational objectives and major courses of study followed show that the coordinating program recommended by the commission should result in economies with disturbance of a minimum number of students.

(10) Distribution of the occupations of the fathers of students raises interesting questions concerning the shifting of occupational emphasis, the redistribution of Oregon's economic population, and the changing size of agricultural and business units.

The University of Oregon provides residence halls for but 14 per cent of its men students and 22 per cent of its women students. The State college provides housing for approximately the same percentage of its men but houses 47 per cent of its women. Both institutions compare very favorably with the land-grant universities and colleges of the United States, as a whole, which house only 9 per cent of their men students and 6 per cent of their women. The fraternities and sororities at both institutions serve to supplement institutional provision of student housing to a considerable degree, since at the university they care for 48 per cent of both men and women and at the State college for 26 per cent of the women and 45 per cent of the men.

Unusually meagre provision has been made for housing students at the Oregon normal schools. The dormitory at Monmouth is excellently run but the facilities should be extended. No dormitories are provided at Ashland and La Grande; their programs of social education are being seriously retarded by the lack of such facilities.

Placement of graduates of the higher institutions of Oregon is organized too largely about teacher placement. It is recommended that the central placement offices at the university and the State college act in the capacity of information-gathering and record keeping agencies and make a special effort to educate the faculties to the use of these aids. The placement bureaus should cooperatively make a careful study of [illegible] possible fields for employment of graduates upon a state-[illegible]sis. Coordinated educational and vocational guidance is s[illegible] in an embryonic stage in Oregon's higher institutions; all should give increased attention to this phase of State and educational service.

Physical Welfare and Athletics

In Oregon institutions, as in many other States, physical education programs have been subordinated to intercollegiate athletics. In Oregon this situation is aggravated by the degree of control accorded to students and alumni of the university and State college through the financial and administrative powers exercised by the executive council of the Associated Students. The commission recommends a complete reorganization of the present plan of management of intercollegiate athletics. In order to correct the prevailing conditions and to place physical education upon a simple but sound foundation it is recommended:

(1) That the present boards of control composed of students, alumni, and faculty members be abolished.

(2) That control of intercollegiate athletics be incorporated in the schools of physical education and be administered upon the same basis as are the academic major divisions.

(3) That all coaches be employed in the same manner as other staff members and receive no larger compensation than is provided in the regular salary schedules of the faculty.

(4) That all receipts from intercollegiate games be handled through the same channels as other departmental earnings and be budgeted by the administrations and that budgeting be approved by the board as is the case of other institutional funds.

(5) That the policy of supporting intramural athletics by means of institutional and State funds be adopted and that the proposal to finance intramural sports from intercollegiate receipts be rejected.

(6) That emphasis be placed upon intramural sports with the definite objective of securing participation by all students, both men and women.

Fraternities and Sororities

The fraternities and sororities are to be commended for the services that they render the institutions, particularly for the housing facilities provided. Increasingly and through cooperative relationships the institutions should regard these social organizations as instruments and agencies for social and community education. They may well be made examples of the advantages and benefits to be derived from the social association of small groups of students and serve to encourage similar nonfraternity organizations upon the campuses of the State institutions.

Relationships Between Institutional Administration and Governing Control

The survey commission has proposed a plan for the coordination of the offerings of the five State institutions of higher learning. This plan and the recommendations that arise from it introduce serious problems of administrative relationships among the institutions and between the institutions and the State board of higher education. Responsibility for securing coordination rests primarily with the board; it must of necessity exercise the powers required to accomplish this purpose. At the same time responsibility for actual operation of the institutions rests with their respective administrative heads. The reconciliation of the responsibilities of the board with those of the institutional heads will require a period of adjustment when the normal distinctions between functions of the governing body and the functions of institutional administrations will be

somewhat obscured. The commission has recommended the creation of a number of interinstitutional committees and of three interinstitutional councils, a research council, an extramural council, and an education council, to assist in the process of adjustment and in the operation of the coordinated program. The success of these instruments and of the whole program will depend upon the willingness of the institutional heads to cooperate heartily in their use and upon the willingness of the board to permit such interinstitutional cooperation to devise ways and means of accomplishing the purposes embodied in the board's policies. The wisdom of the board will be shown by the extent to which it adheres to the policy of noninterference with interinstitutional methods of accomplishing the policies enunciated by the board; it will be compelled to take action when unwillingness to carry out these policies is demonstrated. Board representation upon the major interinstitutional committees and upon the councils will provide it with a sufficient means for obtaining factual information concerning progress in the development of its program. The commission is convinced that the devotion of the institutional administrations to the interests of the State is such as to insure their cooperation and earnest effort in creating a unified program of higher education in Oregon; professional propriety will require such action upon their part as will enable the board to carry out the mandate laid upon it by the people of the State.

On the other hand, the board should, during the process of adjustment, hold firmly to the ultimate purpose of limiting its functions to the powers and duties of governing boards formulated by President E. C. Elliott, of Purdue University, and presented here with some minor paraphrasing to make the statement applicable to the Oregon situation.

1. The selection of the presidents and, upon their recommendation, the other principal executive officers of the institutions.
2. The firm guidance and sympathetic support of the presidents and executive officers in all institutional matters.
3. The devising of ways and means for raising adequate funds with which to provide and to secure well-balanced support for the educational and scientific programs of the institutions.
4. The preparation of a comprehensive plan for the future physical development of the institutions, and the utilization of only a proper proportion of the resources for such development.
5. The requirement of regular, concise, and intelligent financial and educational reports from officers and departments, which will enable a ready understanding of the results of the operation of the institutions.
6. The service by individual members as agents for effective contact with the public and consequently a better understanding and sounder confidence in the work of the institutions.

7. The understanding of the educational aims and goals of the institutions as formulated by the faculties and by interinstitutional committees and councils.

8. The approving of an annual budget which protects the institutions from debilitating deficits. The budget should represent that business acumen and foresight which are among the principal constructive contributions of the board of control.

9. The formulation in clear terms of the fundamental duties of the faculty, and the recognition of the right and the responsibility of the faculty to organize itself for the proper performance of the designated duties.

10. The creation of proper mechanisms whereby the board may be brought into cooperative relations with the faculty and the organized student body.

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