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# State Higher Education in California Report of the Carnegie Foundation for the Advancement of Teaching

## Recommendations of the Commission of Seven

*The Commission of Seven*

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Sacramento, 1932

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### Letter Of Transmittal

## THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING

522 Fifth Avenue  
NEW YORK  
Office of the President  
June 24, 1932.

MY DEAR GOVERNOR:

The Carnegie Foundation for the Advancement of Teaching, on your nomination, and acting under a statute of the State of California, has made a survey of the tax-supported institutions in the State that are beyond high school grade with the purpose of making recommendations as to a suitable future policy and a plan of operation.

The facts needed to understand the present policies, operations, and effects of the State system of tax-supported schools of higher than high school grade have been gathered by the staff of the Carnegie Foundation, and submitted to a special Commission of Seven for their critical and constructive interpretation and report.

The appraisals and recommendations of this special Commission of Seven have been accepted by the Carnegie Foundation, and I have the honor to present to you their findings as the official report of the Carnegie Foundation.

Yours very truly

HENRY SUZZALLO, President.

The Honorable James Rolph, Jr., Governor of California, Sacramento, California.

# **The Legislative Act**

**The act under which this study was conducted is as follows:**

## **STATE OF CALIFORNIA, SENATE BILL No. 895**

### **Chapter 493**

**(Title omitted)**

**(Approved by the Governor, May 29, 1931)**

*The people of the State of California do enact as follows:*

Section 1. The governor of the State of California is hereby authorized to select and for the performance of the work hereinafter described to engage the services of an educational research foundation of nation-wide scope engaged or organized to engage in the work of making critical surveys in the field of education and in particular prepared to make such surveys in respect of the organization, conduct, operation, and efficiency of educational work as carried on in colleges and universities. The governor shall require of the foundation or other organization by him so selected and engaged that it make a survey of the present system, plan of organization, and conduct of public education of higher than high school grade in the State of California, make recommendations as to suitable future policy and plan of operation with relation thereto and present to him a written report of its survey with its recommendations on or before the first day of July, 1932. The survey herein provided for shall be made by the foundation or other organization selected independently and without the participation of any department, institution, university or college of the state or officer of state or officer of any department, institution, university or college of the state, except in so far as such participation may be requested by the foundation or other organization selected.

Sec. 2. Within the limits of the appropriation hereinafter made and in the name of the State of California, the governor is hereby authorized to agree to pay such sum of money to the foundation or other organization by him selected and engaged as authorized in section 1 of this act, as compensation for its services, as he may deem to be reasonable and to fix the time and other terms of such payment and to provide for the payment of all expenses incidental to the carrying out of the provisions of this act.

Sec. 3. The sum of twenty-five thousand dollars is hereby appropriated out of any funds in the state treasury not otherwise appropriated, to be expended in accordance with law in the manner and for the purposes prescribed by this act.

Sec. 4. The governor is hereby authorized and empowered to receive such gifts and donations of money, property or services, either from public or private sources, as may be offered unconditionally or as may be offered under conditions which are in the judgment of the governor proper and consistent with the purposes and conditions of this act, and to use and employ such gifts and donations in furtherance of the work to be carried out as in this act provided.

# State Higher Education In California

## Personnel Of The Inquiry

### *The Commission of Seven*

SAMUEL P. CAPEN, Chancellor, University of Buffalo, Chairman.

LOTUS D. COFFMAN, President, University of Minnesota.

CHARLES H. JUDD, Dean, School of Education, University of Chicago.

ORVAL R. LATHAM, President, Iowa State Teachers College.

ALBERT B. MEREDITH, Professor of Education and Head of Department of Administration, School of Education, New York University.

JAMES E. RUSSELL, Dean Emeritus, Teachers College, Columbia University.

GEORGE F. ZOOK, President, University of Akron.

### *The Carnegie Foundation for the Advancement of Teaching*

HENRY SUZZALLO, President.

HOWARD J. SAVAGE, Secretary, Educational Organization and Administration.

WILLIAM S. LEARNED, Staff Member, Curriculum and Instruction.

ALFRED Z. REED, Staff Member, Professional Education.

PAUL E. WEBB, Staff Associate for the California Study.

DAVID S. HILL, Staff Associate for the California Study.

THOMAS FANSLER, Staff Associate for the California Study.

California educators and others especially invited by the Carnegie Foundation to cooperate in the conferences, deliberations, public hearings, and fact-finding efforts of the Foundation staff and the Commission of Seven:

#### **I. For the University of California:**

MARVIN L. DARSIE, Dean of Teachers College, University of California at Los Angeles, Los Angeles, California.

MONROE E. DEUTSCH, Vice President, University of California, Berkeley, California.

W. W. KEMP, Dean, School of Education, University of California, Berkeley, California.

CHARLES B. LIPMAN, Dean, University of California, Berkeley, California.

ERNEST C. MOORE, Director, University of California at Los Angeles, Los Angeles, California.

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LUTHER A. NICHOLS, Comptroller, University of California, Berkeley, California.

ROBERT G. SPROUL, President, University of California, Berkeley, California.

BALDWIN M. WOODS, University of California, Berkeley, California.

#### **II. For the State Board of Education, the State Department of Education, and other State offices:**

A. T. ARCHER, State Board of Education, Los Angeles, California.

CLAIR C. BARNES, State Department of Finance, Sacramento, California.

J. C. BESWICK, Commission for Vocational Education, and Chief, Bureau of Trade and Industrial Education, State Department of Education, Sacramento, California.

J. A. BURKMAN, State Department of Education, Sacramento, California.

H. F. CHAPPELL, Regional Supervisor of Agricultural Education, State Department of Education, Sacramento, California.

EVELYN CLEMENT, Chief, Division of Teacher Training and Certification, State Department of Education, Sacramento, California.

SAM H. COHN, Deputy Superintendent of Public Instruction, State Department of Education, Sacramento, California.

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NICHOLAS RICCIARDI, Chief, Division of Secondary Education, State Department of Education, Sacramento, California.  
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**III. For the State Teachers Colleges:**

ARTHUR S. GIST, President Humboldt State Teachers College, Arcata, California.  
A. J. HAMILTON, President, State Teachers College, Chico, California.  
EDWARD L. HARDY, President, State Teachers College, San Diego, California.  
T. W. MACQUARRIE, President, State Teachers College, San Jose, California.  
H. F. MINNSEN, Vice President, State Teachers College, San Jose, California.  
C. L. PHELPS, President, State Teachers College, Santa Barbara, California.  
ALEXANDER C. ROBERTS, President, State Teachers College, San Francisco, California.  
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**IV. For the Junior Colleges:**

FLOYD P. BAILEY, Principal, Junior College, Santa Rosa, California.  
DWIGHT C. BAKER, Principal, Junior College, Modesto, California.  
RALPH H. BUSH, Director, Junior College, Santa Monica, California.  
MCKEE FISK, Dean, Junior College, Santa Ana, California.  
J. B. GRIFFING, President, Junior College, San Bernardino, California.  
JOHN W. HARBESON, Principal, Junior College, Pasadena, California.  
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A. G. PAUL, Director, Junior College, Riverside, California.  
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**V. For the Privately-controlled Institutions:**

JAMES A. BLAISDELL, President, Claremont Colleges, Claremont, California.  
AUBREY A. DOUGLASS, Head, Department of Education, Claremont Colleges, Claremont, California.  
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J. B. SEARS, Department of Education, Stanford University, California.  
JAMES H. SINCLAIR, Professor of Education, Occidental College, Los Angeles, California.  
FRANK C. TOUTON, Professor of Education, University of Southern California, Los Angeles, California.

**VI. For the Public Schools; Citizens of the State:**

C. A. ANDERSON, Berkeley, California.  
LEO B. BAISDEN, Assistant City Superintendent of Schools, Sacramento, California.  
MRS. J. C. BESWICK, Florin, California.  
GEORGE R. BLISS, Assemblyman, Carpinteria, California.  
DR. WILLIAM L. BURDICK, Principal, High School, Sacramento, California.  
MRS. WILLIAM L. BURDICK, Sacramento, California.  
J. F. BURSCH, Director, Division of Research, City School Department, Sacramento, California.  
A. R. CLIFTON, Superintendent, Los Angeles County Schools, Los Angeles, California.  
DR. LESTER H. DANIELS, Chairman, Four-year College Committee, Chamber of Commerce, Sacramento, California.  
MRS. GEORGE R. DAVIS, Sacramento, California.

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C. L. GEER, District Superintendent of Schools, Coalinga, California.  
ARTHUR GOULD, Assistant Superintendent of Schools, Los Angeles, California.  
WALTER R. HEPNER, Superintendent of Schools, San Diego, California.  
A. N. HENDERSON, Sacramento, California.  
CHARLES C. HUGHES, City Superintendent of Schools, Sacramento, California.  
GEORGE C. JENSEN, Assistant City Superintendent for Secondary Education, Sacramento, California.  
MRS. GEORGE C. JENSEN, Sacramento, California.  
I. H. LINDER, Vice-Principal, Senior High School, Sacramento, California.  
M. S. MEEKER, Assemblyman, Kerman, California.  
ROLAND M. MILLER, Principal, Evening High School, Sacramento, California.

A. H. MOROSCO, California Taxpayers Association, Los Angeles, California.  
J. R. OVERTURF, Deputy Superintendent of Schools, Sacramento, California.  
LUCIAN POWERS, Fresno, California.  
FRANK E. SEARLE, Alhambra, California.  
K. L. STOCKTON, Principal, Huntington Park High School, Huntington Park, California.  
CHARLES R. TUPPER, Director of Research, San Diego Public Schools, San Diego, California.  
HILLIARD E. WELCH, Vice-President, Bank of America, Sacramento, California.

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## Cooperating Subcommittees Of California Educators

*On certification and the training of teachers*, appointed by Dr. Suzzallo on nomination of Mr. Kersey, State Superintendent of Public Instruction, February 1, 1932: Evelyn Clement, Chief, Division of Teacher Training and Certification, State Department of Education, Sacramento, Chairman; Walter E. Morgan, Chief, Division of Research and Statistics, State Department of Education, Sacramento; F. W. Thomas, President, Fresno State Teachers College; M. L. Darsie, Dean of the Teachers College, University of California at Los Angeles.

*On occupational and vocational training at all levels*, appointed by Dr. Suzzallo, January 8, 1932: T. W. MacQuarrie, President, San Jose State Teachers College, Chairman; Baldwin M. Woods, University of California at Berkeley; Nicholas Ricciardi, State Department of Education, Sacramento; George Jensen, Assistant Superintendent of Schools, Sacramento; William H. Snyder, Director, Los Angeles Junior College.

*On the reorganization and financing of junior colleges*, appointed by Chairman Capen on vote of the Commission of Seven, March 30, 1932: C. S. Morris, San Mateo Junior College, Chairman; Robert G. Sproul, President, University of California; William H. Snyder, Director, Los Angeles Junior College; Frank W. Thomas, Fresno Junior College; Vierling Kersey, State Superintendent of Public Instruction; Rolland A. Vandegrift, State Director of Finance.

*On the organization and financing of adult education*, appointed by Chairman Capen on vote of the Commission of Seven, March 30, 1932: J. B. Griffing, San Bernardino Valley Junior College, Chairman; Lyman Bryson, Executive Director, California Association for Adult Education; Vierling Kersey, State Superintendent of Public Instruction; L. B. Travers, Chief, Division of Adult Education, State Department of Education; L. C. Phelps, President, Santa Barbara State Teachers College; C. S. Morris, San Mateo Junior College; Leon G. Richardson, University of California.

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## Preface

*Study Authorized by Legislature.* By an act passed by the Legislature and approved by the Governor, May 29, 1931, the chief executive of the State was authorized to select and engage the services of an educational research foundation to make a survey and present a written report on tax-supported education in California of higher than high school grade on or before the first day of July, 1932.

*Agency Designated by Governor.* On the twenty-second day of September, 1931, Governor James Rolph, Jr., invited the Carnegie Foundation for the Advancement of Teaching to make this study and report a plan of operation.

*The Foundation Accepts.* After being assured of the financial cooperation of Carnegie Corporation, made necessary by the inadequacy of the State appropriation and the limited available funds of the Carnegie Foundation for the Advancement of Teaching, the Executive Committee of the Carnegie Foundation voted to

undertake the study and so notified the Governor under date of October 10, 1931.

*Preliminary Survey and Conferences.* Beginning October 19th the president and the secretary of the Foundation made in California a preliminary study of the situation, in order to ascertain the issues and problems involved, to determine the procedures necessary for the study including the organization of professional personnel required to find the essential facts and to recommend the policies and operations needed to give the tax-supported higher schools of the State both social and educational effectiveness.

Preliminary hearings and special conferences were held in Sacramento, at which representatives of the University of California, the State teachers colleges, the various associations of junior colleges, the State Board of Education, and the State Department of Education were present on invitation of the Foundation. Some of the sessions were attended by representatives of the Legislature and committees of citizens having a particular interest in the problems under consideration. Additional conferences were held in Los Angeles and in the Bay Region.

It was clearly perceived that the effectiveness of any final report would depend upon the quality and degree of cooperation which the Foundation could get at the outset from public officers, educational functionaries, and the laity of the State, both in fact finding and in thoughtful consideration of state-wide educational problems. This cooperation was given in unusual degree. Save for occasional temptations to resume a partisan, institutional, or regional point of view this cooperative relationship between the Foundation and local groups has been successfully maintained throughout the inquiry, with promise that the findings of the reported may be received with a degree of openmindedness that otherwise might not have been possible. Many of the data upon which this report is based have been furnished by the institutions

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concerned. The Foundation appreciates the hearty cooperation of all those who aided in this compilation.

*Organization of the Study.* The preliminary conferences and field visits readily and quickly revealed the outstanding issues and difficulties in the California situation, and the work of the Foundation was organized accordingly.

The Foundation decided to utilize as far as possible its own staff organization and to supplement this personnel with staff associates specially selected for the enterprise. To this regular and special staff was assigned the task of fact-finding.

The Foundation decided to assign to a special Commission of Seven, organized under its auspices, the task of interpreting and appraising the pertinent facts and of recommending the policies and operations needed in the future.

This independent Commission, consisting of seven educators of national standing, unconnected with the State of California, includes men whose experience and scholarship cover every phase of the complex problems presented by the California situation. The Foundation accepts their recommendations without amendment and herewith transmits them to the Governor of the State of California as the recommendations of the Carnegie Foundation for the Advancement of Teaching.

HENRY SUZZALLO.

## **[Transmittal Letter]**

*To the President,*

*The Carnegie Foundation for the Advancement of Teaching*

In accordance with your request, we have considered the problems and analyzed the data presented by the Carnegie Foundation upon public education of higher than high school grade in the State of California, and we submit to you in the following document our recommendations concerning suitable future policy and plan of operation in accordance with the terms of the legislative reference.

We desire to express our appreciation for the cooperation of those educators, officers, and others of the State of California, who by furnishing underlying data and materials have made our work possible.

L. D. COFFMAN  
CHARLES H. JUDD  
O. R. LATHAM  
A. B. MEREDITH  
JAS. E. RUSSELL  
GEORGE F. ZOOK  
S. P. CAPEN, Chairman.  
June 14, 1932.

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## **Part One: The Educational Situation In California As Presented To The Commission**

*Educational Unrest.* The present situation of education in California involves problems of policy and organization, particularly with relation to the operations of all higher education.<sup>1</sup> Unrest with respect to education is not peculiar to California; it is national. It assumes special forms in California because of the advanced position which the State has taken in educational matters. Superior cultural and social aspirations and favorable economic conditions within the State have permitted certain experiments and developments not possible in equal measure in other commonwealths.

Evidences of this unrest have been apparent for some time, but they have assumed more intense forms during the current economic stringency. Within the State, numerous major criticisms have impressed themselves upon the Commission. Some relate to the amount of money spent upon education, the distribution of educational expenditures, the cost of education in comparison with other State expenditures, the cost to the taxpayer, to the parent, and to the student. Others relate to the distribution of educational facilities upon all levels above the high school, an alleged restriction of educational opportunity through arbitrary standards, a lack of development of occupational education, and wide variations in the relation of cost to facilities available.

It is even charged that all these differences amount to a discrimination wholly alien to the spirit of an American democratic state.

Above this welter of criticism and conflict certain facts stand out. These facts are concerned with the control, the financing, and the articulation of the various integral units of the educational system.

*Control.* There is a notable lack of unity in the administration of education. To make this point evident it is only necessary to call to mind the powers of certain of the controlling officers and boards of education: the Board of Regents of the University of California, with constitutional authority; the State Board of Education, under legislative authority; the State Superintendent of Public Instruction, an elective officer responsible to the people for the conduct of educational matters; the Director of Finance, an officer appointed by the Governor. Such plurality of control has naturally resulted in overlapping of functions, waste, inefficiency, and lack of

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1. When the phrase "higher education" occurs in the pages that follow it is used to mean publicly-controlled education of higher than high school grade, including the junior college.

unified policy. It has resulted also in absence of proper use of the results of experimentation.

*Finance.* The burden of financing education is not equitably distributed throughout the State. Some communities have available facilities for higher education which cost them little or nothing in terms

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of local taxation, while other communities tax themselves heavily to make local facilities available to their children.

*Articulation.* There is lack of articulation among the various units of the educational system. This has resulted in vigorous controversies over admission requirements, transfer regulations, and curricula. These controversies are aggravated by regional rivalries and local ambitions.

These conditions are in part the product of the present ineffective State organization on the higher educational levels. They are fundamentally the results of the divided control of higher education. On the one hand, the university has been rigid in its preparatory requirements without due consideration of the other functions of secondary schooling, and the State Board of Education has failed to maintain an integrated policy and control within its own domain of responsibility. The situation has grown out of an historical development; it reflects no deliberate or conscious wavering or evasion.

The past quarter century of California State education has been a period of extensive experimentation. The time has now come to evaluate the results of this development. The Commission, so far as time has permitted, has sought to appraise the processes and results of this experimental period and to point the way to conserving the best achievement and improving the less worthy. State-wide educational success depends, first, upon the formulation of a strictly defined policy based upon a clear understanding of the purposes and meaning of education, and, secondly, upon willing and informed cooperation among legislators, State officers, teachers and administrators, parents and citizens.

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## **Part Two: Recommendations of the Commission**

The staff of the Carnegie Foundation having submitted to the Commission its analysis of the educational situation in California above the high school, the Commission presents herewith its recommendations, constituting a "suitable future policy and plan of operation," to be made effective by whatever legislative resolutions, statutes, and constitutional amendments are necessary to enable the appropriate policy-making bodies and administrative officers to bring the recommendations into operation, and to stimulate better cooperation among the citizens to these ends.

The Commission finds that much of the confusion in the educational system arises from the fact that no authority competent to plan and speak for the State as a whole has determined in clear and unmistakable terms the social and educational functions to be performed by various units of the system in serving the present needs of civilization in California.

The Commission therefore suggests that the following statements concerning the functions of the educational system be accepted as the basis for a resolution by the Legislature, which shall serve to declare its own future policy and to guide the people of the State and the various boards and officers charged with the performance of educational services.

### **I The Functions of the Educational System**

The fundamental functions of the State educational system are to educate the people to greater and greater competency, in performing

First, the general social obligations of citizenship or membership in American civilization required of all men and women and

Second, the particular or specialized services to society allotted to different occupational groups, membership in any one of which is a matter of individual choice and fitness.

These educational functions correspond with the two types of requirement which modern social life lays upon every citizen. Every person has social, political, or other responsibilities which he should bear in common with other persons, as in his membership in the family, the neighborhood, the local community, the State, the nation, and humanity at large. On the other hand, every person has, under our economic system of subdivision of work or services, a particular obligation which he meets, usually by the services he renders through his special remunerative occupation.

#### **A. The First Function of the Common School System.**

It is the primary and fundamental function of the common school system extending from the earliest years of schooling, through kindergarten,

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elementary school, junior and senior high school, and the junior college, to educate the citizen for effective participation in all those common understandings and cooperations which are necessary to sustain the best in our complex contemporaneous civilization which is American.

Our common schools must be dedicated primarily to educating men and women so that they may work and live together more successfully in and through the institutions of a civilization that must be constantly adapted to changing conditions. Failure of citizens to understand many of our current problems and their tragic inability to cooperate in the solution of them constitute one cause that has led to breakdowns in our current civilization.

A common school system rededicated to the original social purposes which warranted tax-support by all the citizens of the State, must aim mainly at the fullest possible development of a social rather than a selfish personality. It will seek to develop an enlightened citizenship, rather than an enlightened selfishness. Much of the current criticism of the behavior of citizens as the product of schools is based on the fact that the common schools, above the elementary school are not really utilized by the student nor fully managed by teachers and administrators for this fundamental civilizing purpose. When this ideal is realized, subject boundaries will be less sharply defined. New and more practical groupings of materials will be devised, and the process of learning will be reorganized, much as is now being done in comprehensive courses at some 160 institutions in the United States. Problems will become more important than topics, libraries than textbooks.

The points at which public and professional criticism are now mainly directed are the secondary rather than the elementary stages of general or common schooling. That reform has been at work for some time in the field of secondary education is attested by the increase in junior high schools, senior high schools, and junior colleges. Modifications of the curriculum, changed methods of teaching and learning, educational and vocational counseling are merely additional symptoms of the attempt to meet current dissatisfaction with the schools as they are or have been. A complete reconstruction, somewhat similar to that which began in the elementary school in the '80s and '90s seems now well inaugurated in the secondary stages of general education.

The reconstruction of secondary education, necessarily a concern of this Commission which deals with its later stages in the junior colleges and the lower divisions of the teachers colleges and the university, will involve several marked changes from the traditional outlook and method.

In the first place, secondary education will be not less intellectual but more social and adaptive. It will be directed toward giving the student an understanding of the natural and social world in which he lives. The

mastery of the academic letters, arts, and sciences will be no longer the end of his school mastery, but the educational means of understanding life. Whatever other resources of experience lie outside of the traditional disciplines, such as industrial arts and fine arts, will be utilized with full scholastic respectability as valued aids in realizing the new and broader conception of the human and social purposes of the common schools.

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In the second place, secondary education will focus its attention more steadily on contemporaneous life, with its oncoming problems. The lag between what the school teachers and what present and impending citizenship requires will be decreased. Scholarship, once chiefly related to the past, will now be related to the present, with study of the past still highly valued to the extent that the contributions of the past inevitably persist in the present.

Thirdly, schooling will not be thought of as practically the end of education or learning, now too commonly and so fatally the case. Education will be regarded as a continuous process, coterminous with life, to which schools merely give impetus for further and continuous personal inquiry and growth. An education at school will be regarded as preparatory to continuous adult learning. How much academic ground is covered in the school building under a licensed or accredited teacher, will no longer be so important as it has been. What one learns anywhere in life, and the degree to which one has the impulse and power to continue to learn and think accurately will be far more important to all concerned—to the world, to the university, and, most of all, to the student himself.

#### **B. The Second Function of the Common School System.**

It is a second and equally important function of the educational system to prepare young people for productive living. In so far as the individual differences of students—intellectual, social, economic—warrant, this end will be accomplished through occupational training of different types.

The most significant body of psychological fact concerning human nature that has recently influenced our thinking or our action is that which reveals the astounding range of individual differences in a social or school population. People are not all alike. To believe they are and to treat them as though they were is to commit a grave human injustice to many individuals, and to deprive society of the use of their full powers. Social and educational justice is far more nearly realized by treating students differently than by treating them identically.

Differentiated treatment is necessary the moment individual differences begin to assert themselves in such a manner as to make inadequate the traditional curriculum and method of common schools. It may first express itself in allowing or providing a different mode of approach to the study of the world and civilization.

Inability or lack of interest exhibited by a pupil demand a redirection of intellectual interest and provision for a shift of educational emphasis. A change of emphasis from the academic to other domains of arts, letters, or science, on the part of a student, often salvages a school career and acts as a spur to continuous learning. After some years of common schooling a considerable portion of students in compulsory attendance show a lapse of interest. The fact that such persons display limited ability in liberal studies may indicate that their chief powers lie in other directions than the purely literary or mathematical. Here arises the necessity for providing vocational courses of a quality and value equal to and coordinate with those of an academic nature. This situation involves growing numbers of cases as larger and larger groups of the population move through the school

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system toward the upper levels of common schooling. New intellectual opportunities and new opportunities for specialized, vocational training are then plainly indicated, the more so because little by little the school has been forced to assume responsibilities that the home and industry can not or will not longer perform. But in all such cases the trade or industrial teacher still has the responsibility of socializing or civilizing the

student through connecting in the fullest possible extent his vocational activity with the rest of civilized life. Sometimes late, sometimes early, the readjustment just implied takes place for every student.

### **C. The Main Function of the University System.**

It is the main function of the university system, which includes the upper divisions of colleges, the graduate schools, and the professional schools, to educate specialists for the strategically important social services which modern civilization requires, and to do this with full regard to the number of such specialists that society can utilize. Among the specialized callings for which the university system educates are research, teaching, the ministry, the law, medicine and surgery, engineering, and similar professions.

Provision for general education in the United States commonly closes at the end of the second college year, or at the end of the lower division or junior college. Certainly, it is a very general practice throughout the United States, particularly in most institutions west of the Appalachian Mountains, to begin scholarly concentration in the arts, sciences, and letters with the third (or junior) college year; that is, with the senior college proper, and to begin either professional or specialized preprofessional education at the same stage in school progress. The exceptions, though conspicuous, merely accentuate the general trend of current practice.

In California both the university and the teachers colleges recognize a functional articulation between the lower and upper divisions, and legislative enactment recognizes that the local, but state-aided, junior college (or college, as it perhaps ought to be termed), is a part of the provision for tax supported secondary education.

A profession may be provisionally defined as “a vocation involving relations to the affairs of others of such a nature as to require for its proper conduct an equipment of learning or skill, or both, and to warrant the community in making restrictions in respect to its exercise.” The effective or ineffective performance of professional duties is preservative or destructive of some fundamental potentiality, right, or other value of crucial importance to society or the individual. For this reason ethical practice is as important as expert practice. This is obviously true respecting a career in law, medicine, teaching, engineering, or the ministry, and ought to be true respecting journalism and business management. Complete devotion to professional specialization is not now usually regarded as the major undertaking of the student until the conclusion of the period of liberal, general, or civilizing schooling.

Since expert practice is essential to make devoted ethical interest effective in result, special preprofessional training is often required in studies basic to professional understanding. Mastery of practical skill is usually acquired under mature supervision in either an internship

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or an apprenticeship. In further protection of society, the State finally licenses only those graduates who meet its standards.

The selection of those students who are promising material for such specialized professional education and the determination of the nature of their preliminary or professional education, should rest not with the common schools, but with the university. The university should utilize the advice of its professional teachers and those actively engaged in professional practice, as well as the findings now available from modern personnel studies.

The right to admit to specialized courses is properly lodged in the university system, but in so far as the university method of judging the ability and educational promise of the applicant is antiquated and inadequate, injustice ensues to the individual and therefore ultimately to society. Of such injustice the layman has a right to complain.

The right of the university to refuse admittance to a professional course requiring special and high qualifications rests in some measure upon other grounds than that of personal fitness. The Commission is not unmindful of the necessity of giving some attention to the relation of supply to the probable demand in

the several professions. Only a limited number of certain types of professionals can be utilized by society, and overproduction in these particular fields may readily become a social and professional evil, as well as an unwarranted cost to the university and the public. For this reason, admission to some professional schools will soon become, if it is not already, a matter of discriminative selection. Every large consideration involved in this problem of professional school admission-whether it be personal or social, financial, or professional-confirms this policy. The selective functions of a university system are primarily social in purpose, and the individual is and ought to be of secondary consideration.

What has been said of admission to specialized professional schools in the university may not at first thought seem to apply to all those who seek admission to the senior college of arts, letters, and science. The university should be concerned not only with clearly professional subject matter but also with the various fields included within the division of letters, the arts, and the sciences, which from their very nature prepare through special mastery for superior civic service. The same discriminative and selective principles must be exercised in admitting students to the senior college as are applicable in respect of the professional schools.

In this section, the Commission has stated its views concerning general matter for the guidance of legislative policy. It proceeds in the subsequent section to outline the specific means by which these general, fundamental tenets can be effectuated.

## **II Boards for Educational Control**

The Commission is of the opinion that much of the confusion in the educational situation in the State of California has arisen from a lack of the necessary machinery to make effective the coordination of the several phases of higher education, and to make continuous the beneficial results of such coordination. A solution of many of the State's educational problems would require much more time than the

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Commission has had at its disposal. The first endeavor of the Commission in its recommendations has been to provide for such an organization as would insure and continue the necessary coordination, whereby these problems may be solved.

Before presenting recommendations the Commission desires to point out that the inclusive university system of the State now actually consists of the University of California at Berkeley, Los Angeles, and elsewhere, with its graduate and professional schools and both upper and lower divisions, and the State teachers colleges with whatever junior colleges may be attached to them.

In order therefore to bring into effect under economical and efficient controls the State policy as to the functions to be performed and the services to be rendered by the tax-supported educational system as a whole, as well as by its two functionally different parts, namely, the common school system and the university system, the Commission makes the following recommendations as to the requisite boards:

### **A. Board of Regents for the University System.**

*1. The Commission recommends that the functions of the Regents of the University of California be so extended as to give the Regents jurisdiction over the entire State university system-that is, over all State institutions the primary function of which is to offer instruction which is specialized on a level above that of the common school system (in other words, above the junior college), including the State university and the State teachers colleges. For purposes of practical administration the lower divisions of teachers colleges, and of the University of California at Berkeley and Los Angeles, are included in the university system of management.*

*Unification.* In effect this recommendation would concentrate the management of all specialized professional education for law, medicine, pharmacy, dentistry, engineering, teaching, etc., under one State board. It would remove the seven State teachers colleges at Arcata, Chico, Fresno, San Francisco, San Jose, Santa Barbara, and San Diego from the jurisdiction of the State Board of Education and the State Director of Education and place them under the Regents. The Regents already control the eighth State teachers college, which is now an integral part of the University of California at Los Angeles. The various State professional schools and courses now located in different parts of the State but under the management of two State boards are more closely related to each other in function, technique, and management than they are to the conduct of the common schools, which have an emphatically different function and are largely managed by local boards. All aspects of higher occupational specialization—that is, professional education—should be under the management of one State board and not illogically distributed between two boards as at present.

*Teacher Training.* Certainly the professional training of all teachers and other common school functionaries should be under one direction or management. Extension of the jurisdiction of the Board of Regents would not only unify the planning of professional education

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but integrate all plans and policies where coordination is most needed, namely, in the field of the professional training of teachers and other school officials.

*Coordination.* Integration is most needed in this field of service, for elementary school teachers are now trained in seven independent State teachers colleges and one university teachers college, geographically separated from each other, and secondary school teachers are completely trained in the University of California at Berkeley and partially or fully prepared in some fields at various teachers colleges as well. All the professional graduate school specialization for teachers and educational administrators is given at the University of California at Berkeley, but the eight teachers colleges also train certain supervisors and administrators in a fifth year offering. Privately controlled colleges and universities also train teachers. Finally, the task of coordinating State effort with that of institutions outside the State system is immensely complicated when State management is divided.

Unified management is more urgently needed in professional training for service in the public schools than in any other professional field in which the State is involved. With nine State institutions (School of Education at Berkeley; Teachers College, University of California at Los Angeles; State Teachers Colleges at Chico, Fresno, Humboldt, San Diego, San Francisco, San Jose, Santa Barbara) geographically scattered, the ever-present danger of duplication at high cost alternates with the peril of meager support and inefficiency.

*Restrictions.* In 1915 the State Legislature began gradually to limit the powers of the seven separate boards for normal schools. Finally in 1921 it gave to the State Board or Department of Education complete control over all. Unification of state-supported teacher training has always been needed in California. It has now become an urgent necessity. The amount of public money involved in this service is large. The present and an impending further increase in the over-supply of licensed teachers makes the problem of dividing and distributing functions among teacher-training institutions crucial.

*Policy-Making.* With a decrease of professional emphasis in the field of teacher training, long foreseen and now increasingly induced by changing conditions and lack of coordination in the system, there is a natural local disposition on the part of the teachers colleges toward undue expansion so as more fully to utilize the existing staff and other facilities. This has called and will increasingly call for additional capital and operating expenditures which are demanded by local initiative rather than by wise state-wide planning. In addition, teacher training has shown a natural disposition at each of the seven teachers colleges to overdo somewhat the liberal program. Educational policy-making and expenditures thus become the accidental product of local educational and political pressure and not the fulfillment of a state-wide plan based on a scientific anticipation

of genuine educational needs.

*Teachers Colleges.* The Commission believes that the argument frequently heard that the State Board of Education, in charge of common schools, should still be left in charge of teachers colleges so as to control the source of supply for the schools under their management is not of sufficient weight against all the other major advantages to the

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State of having them in and under the university system. Any validity which this argument may seem to have applies equally to the education of high school teachers which is now under the University. Such authority as the State Board of Education needs to exercise in the interest of the public schools may be exerted through its control of licensure or certification prior to employment.

Originally, when the teachers colleges were normal schools with courses so brief and admission requirements so low as to be vocational schools of secondary grade, there was no warrant for making them part of the higher educational system.

Inasmuch as the professional courses in State teachers colleges now rest on lower or junior college divisions, under their own control, a condition similar to that in the university at both Berkeley and Los Angeles, similar problems therein involved would be handled by the same agency.

With the extension of the jurisdiction of the Regents of the University of California to cover the whole University System of the State, a period of transition will ensue which may prove difficult unless adequate provision is made for the necessary readjustments. The Commission is therefore of the opinion that for this period of transition a special committee of Regents should be constituted for the seven State teachers colleges. By this means the needs and problems of the teachers colleges, will be more readily and fully become known to the whole Board of Regents.

*Expansion.* There are two present problems in teachers college expansion. One involves vertical extension upward into advanced work of professional or graduate status. The other includes horizontal extension of the academic work of the teachers colleges into the domain of the liberal or cultural. These problems are similar to problems often met in university management. They are better dealt with in a unified way by a board that is by tradition and function experienced in dealing with such actual or potential developments at other points in the State.

The Commission is not disposed to recommend any change in the method of government for the University of California, not merely because any change would involve the difficulties of constitutional amendment, but because the present organization has worked unusually well. A comparative study of the efficiency of arrangements for State university control in other American states affirms this view. Such defects as current criticism of university management implies would not be corrected in any large degree by changing the present method of governance. The major criticisms of the university pertain to the articulation of the university with the common school system. The specific shortcomings indicated require correction through better coordination and articulation of the two systems and intelligent cooperation. Coordination, not reconstruction, is the need.

It is true that appointments *ex officio* are no longer generally regarded as effective in composing educational boards. In 1930, among the forty-eight states only twelve had boards of education composed mostly of members *ex officio*, thirty had wholly or mostly appointed or elected boards, while six states had no state board of education. Nevertheless, appointment *ex officio* has amply justified itself in connection with the University of California Regents. Experience in California,

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as well as in other states, indicates that long term appointment by the governor of the majority of the board is desirable for a university system, because stability and continuity in board membership are required to

maintain the highly technical and specialized services of a university. The governor of the State can select more readily and more discerningly than the electorate those citizens eminent in the professions and in human affairs who will be of special worth in formulating university policy. Formerly the State Senate had power to approve or reject such appointments by the governor. This characteristic American check was omitted, apparently inadvertently, when other desirable changes were being made.

#### **B. Board of Education for the Common School System.**

*2. The Commission recommends that the present State Board of Education shall have jurisdiction over common schools of all grades, including all public junior colleges (except those now attached to the university or State teachers colleges) and all schools below them of whatever variety and purpose, together with the Schools for the Deaf and Blind at Berkeley.*

It will be perceived that in most cases this jurisdiction is continuing and traditional.

*3. The Commission recommends that in order truly to coordinate the management of federally-aided vocational training within the State, the present practice of designating the State Board of Education as the State Board for Vocational Education should be continued, so that one board controls all State activities of junior college grade and below, by fact of coincident personnel, in spite of separate organization of boards to meet legal requirements imposed by the Federal government.*

*4. The Commission recommends that the State Board of Education should have supervisory responsibility for the formally organized educational activities in state-supported institutions maintained for charitable, eleemosynary, reformatory, disciplinary, or custodial purposes now under the control of the Director of Finance.*

*Junior Colleges in Secondary Education.* Under the tradition, the law, and the fact in California, the junior colleges (except those incorporated as a part of State higher institutions such as the university and the teachers colleges), are a part of secondary education included within the common school system and should continue to be managed as local schools under the general supervision of the State Board of Education, along with other common and local schools.

It is only because junior college work historically was merely the first two years of a standard four-year college course, as it still is in many instances, that it is popularly regarded as part of higher or university education. In most four-year colleges, the point of articulation between the first two and the last two college years is so marked, that functionally they should be regarded as substantially different,

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One terminates general education; the other begins concentration or specialization. Their close association in the same institution under a single administration with no degree or title marking the close of education below the true university level, a degree being given only on the basis of a four-year study, is the obvious fact which confuses the laymen and conceals the one outstanding point, where secondary and higher education join, and where education changes its function more markedly than at any other point in a student's continuous progress through the school system. It must be remembered that education is a continuous process. If yearly and other administrative units are artificial, then institutional units embracing several years may be equally artificial.

In this case the transfer from the basic and wider social education of common schooling to the specialized education of university curricula occurs midway in the traditional four-year college. Traditional institutional forms and organizations thus persist after functions change. The essential fact of change of function is recognized by the California law dealing with junior colleges and by the granting of the junior certificate by the University of California at the end of the second college year. The public, parents and students in particular should be made fully cognizant of the fact that general education, liberal and social in its main intent, really

completes its school provisions at the end of the junior college.

*Special Boards.* The previous custom was to have a special board of trustees for each state-maintained institution (educational, eleemosynary, or custodial) having a state-wide clientele and function. In the interest of unified and coordinated policy and administrative efficiency this custom is rapidly passing. In California it has passed for the teachers colleges and for the institutions for the deaf and the blind. It should pass for the Whittier State School and the Ventura School for Girls. Institutions, custodial and eleemosynary, under State management other than that of the State Department of Education, with formally organized educational activities similar to those in public schools as a part of their program of care usually tend to fall below the standards prevailing in the public school system. While ultimate control in the management of such institutions should rest with the State Director of Finance or his special departmental head, no course of study should be adopted without the approval of the State Department of Education, and no appointment should be made to a purely educational position within such institutions except from nominations of the State Superintendent of Public Instruction.

*5. The Commission recommends that the State Board of Education for common schools should be a board, none of whom is at present charged with any official responsibility for education within the State or its institutions or school districts.*

A long and widely distributed experience indicates that a board of education, either State or local, charged with public policy and the management of school finance should, with an occasional exception, consist of laymen representing the general outlook of society rather than the technical outlook of the profession of teaching. The specific

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experience of California with professional members on its State Board of Education affirms the general American experience.

*6. The Commission recommends that the State Board of Education for Common Schools consist of one member ex officio and ten (10) other persons, appointed by the governor with the consent of two-thirds of the Senate, for terms of ten (10) years each, two to be appointed each biennium.*

In recommending this fundamental change in the method of selecting the State Board of Education, the Commission points again to the general American experience. That experience has clearly demonstrated that there is greater likelihood of securing qualified members for boards charged with controlling the expert functions of government through appointment by a responsible public officer than through popular election. Among the states, only Michigan still elects its State Board of Education.

*Size and Term of Board.* Analysis of the effectiveness of deliberative boards charged with the determination of educational policy indicates that the size of the board should range from seven to eleven members, large enough not to be dominated by one or more personalities, large enough to be representative of different points of view, without being too large to engage in effective discussion and decision. Members should hold office for a fairly long term of years, one sufficiently long to extend considerably beyond the period of first apprenticeship. In nineteen states board members hold office for six years or more; in three for eight years or more, one being as high as twelve years. Only a small minority of the California Board should be subject to potential retirement from the board at one time.

*7. The Commission recommends that owing to the fact that the State Superintendent of Public Instruction sits ex officio with the University Board of Regents, to foster coordination of the university system with the common school system, a constitutional arrangement which the Commission accepts, the President of the University System should for similar reasons sit on the State Board of Education.*

In order that the State Board of Education controlling the system of common schools, and policies and plans related thereto, may have a staff competent to make proper recommendations to the State Board and the Legislature and to execute the statutes, constitutional mandates, and resolutions which emanate from the State authorities, it will be necessary to reorganize the staff of the Department of Education now provided for that purpose.

*8. The Commission recommends that the chief officer in the State Department of Education should be an appointive commissioner of education, supplanting the present State Superintendent of Public Instruction. He should be appointed by the State Board of Education, serving continuously at its pleasure. His qualifications should be equivalent to or greater than those required for the highest administrative certificate issued by the State Department of Education.*

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He should be adequately experienced in the field of education and especially equipped by professional training and scholarship to deal with the problems in this field. He need not, necessarily, be a resident or citizen of the State of California at the time of appointment.

In making Recommendations 7 and 8, the Commission is fully cognizant of the difficulties involved. It is, however, unanimous in the judgment that only by such a procedure can the State make adequate provision for the future development of its educational program. It is essential that the State Superintendent of Education be an appointive officer responsible to the State Board of Education.

*Elective Superintendents.* For a State as mature and advanced in its educational practice as is the State of California the continuance of the antiquated policy of electing a State Superintendent of Public Instruction is an historical anomaly perpetuated by the difficulty which is associated with the need to amend the constitution. Experience throughout the United States for a long period of time has fully demonstrated that so technical a service as that of supervision and direction of education is better performed by a professional officer who is appointed by and responsible to a lay board charged with the determination of general public policy. Cities have long since abolished the practice of electing superintendents of schools, counties are slowly doing so, and a number of the more enlightened states are now appointing the chief state educational officer. The chief educational officer of a city, county, or State, who must be elected by popular vote, will never be completely an educator and he will seldom give his whole mind, energy, and time to the technical professional duties which accompany his educational responsibility. He will always be half-politician and half-educator, if not more than half-politician.

If, in California, local political tradition should insist that the electorate shall have a direct choice of some of the officers charged with the State management of public education, it would be far preferable that the electorate should choose the board that makes policy rather than the executive who merely administers it.

The present constitutional limit on the remuneration that may be paid to a Superintendent of Public Instruction prevents the State from requisitioning the services of the ablest educators available for the work. This is the general experience throughout the United States. That California should have had unusual good fortune in the occupants of this office, is an exceptional circumstance, credit for which must be given to the sacrificial devotion of these men who have done a large work at a much lower compensation than they could have had in some other professional position. But it must also be noted that it has not been possible to hold these men in service continuously, and that sooner or later they have had to step out of the State superintendency into some other position or occupation. The State Board of Education should be allowed to fix the annual salary of the new State Commissioner of Education at such a figure as will attract the most talented professional service that can be obtained in the United States. Nationally, California's is regarded as one of the most advanced State programs of education in the Union—a system that requires the most competent directive talent. No private corporation

that expends one hundred sixty-four millions of dollars a year would think of seeking a four-or-five-thousand-dollar executive. Yet the public corporation in charge of the State system of common schools is in just this absurd and ineffectual situation. An adequately paid officer could save the State millions of dollars through his superior initiative in laying out the policies, the plans, and the procedures of the State school system for a population of five and a half millions.

### **C. State Council for Educational Planning and Coordination.**

*9. The Commission recommends that provision for cooperative understanding and coordinated effort in the operation and articulation of the common school system and in the university system, be made by the establishment of a State Council for Educational Planning and Coordination.*

The Commission has seriously considered the establishment of a super board for coordination and planning with powers superior to the State Board of Education for the common schools and to the Regents of the university system in certain limited fields. These fields would have included the distribution of functions, the provision of facilities, budgetary allotments, and other fundamental aspects of administration. The suggestion has proved impracticable.

And yet some central means of effectual coordination is needed to guarantee the unified and intelligent planning requisite to the maintenance of a state-wide educational system, covering all types of education, and effectively and economically to guarantee the widest distribution of educational opportunity possible with the limited moneys made available to education by the people of the State. For these reasons an interlocking and advisory council for educational coordination is recommended instead of a super board of educational control.

*Full Unification.* The American educational experience, many times reviewed by State surveys (Alabama, Arizona, Georgia, Iowa, Mississippi, Montana, New Jersey, North Carolina, Oregon, South Carolina, Vermont) has almost always decided against this extreme unification of control, because it does not yet promise to be effective. The university system and the common school system represent such contrasting functions, traditions, and conditions of operation that it is almost impossible to recruit for membership in such a super board laymen who are amply competent, or would readily become so with experience, in both the university and the common school fields.

*Cooperation, not Coercion.* Experience also reveals that cooperation and coordination in the management of intellectual and educational affairs achieved through mere legal or coercive measures bring about formal rather than genuine unity of effort. Because effective and economical administration of diversified functions is the product of intelligent understanding (based on responsible experience and knowledge of fact) and free common agreement (based on adequate discussion), the Commission believes that for a considerable period in the future, the trend toward state-wide planning and coordination could be better accelerated by a State council with fact-finding powers, interlocking membership, and the right to make public its recommendations.

*University in State Constitution.* In the case of California there are well established local traditions of educational management now operating with success in the major fields they cover which should be conserved, not disturbed. One of these is the constitutional status of the university, which has given it a freedom from political interference of the obnoxious partisan type that is shared by very few State university systems. Scientific or scholarly research and advanced study of the university type contribute in effective service to American civilization only when they are afforded such constitutional protection as the university has in California. The confidence which the people of the State have in the university under its semiautonomy is a large financial asset to the State, as the endowments and other gifts to the university indicate. This condition tends to relieve the State of much expense, and to aid in better achieving university research

and study. The State Council for Educational Planning and Coordination conserves the best elements of the existing practice.

*10. The Commission recommends that while the membership on the State Board of Education and the University Board of Regents should be restricted to laymen wherever these are not members ex officio, the State Council for Educational Planning and Coordination should have a mixed membership of persons representing the two lay boards charged with the management of the two systems (common schools and university) and the personnel charged with administration or teaching in important units of the two systems.*

*Membership.* The council should have a membership of eleven, as follows: Two (2) members of the State Board of Education, selected by the board to sit for two years; two (2) members of the Board of Regents, selected by the regents, to sit for two years; the State Commission of Education *ex officio*; the president or chief administrative officer of the university system *ex officio*; the State Director of Finance *ex officio*; four (4) other members serving for four years each, one retiring annually, to be selected by the then sitting members of the council for special ability to contribute to the solution of some problem then of major importance in the current work of better planning and coordination. Of these four members not more than two should be drawn from the State system of education.

*Meetings.* The State Council of Educational Planning and Coordination should meet four or five times a year to consider the state of the educational system, to determine what special problems require detailed consideration and the facts which need to be gathered to inform discussion, and to formulate constructive recommendations. From time to time it may invite qualified members of the State educational system, as well as representatives of privately controlled institutions, to sit with it and to contribute to its deliberations.

*Problems.* Among matters which might early be considered by the council the Commission mentions the following problems: the costs of all publicly-controlled institutions of higher education; the articulation of university work with work of the lower divisions, particularly in engineering dentistry, and pharmacy; adult education; vocational education; the relation of teachers colleges to the university system;

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the quality and relationships of privately endowed colleges; problems connected with the granting and extending of charters of institutions of higher education, both public and private; teacher tenure and remuneration; the number, function, differentiation of function, duplication, and specialization of various units of the higher educational system, especially the State teachers colleges, all of which should be examined into constantly; a study of professional needs and opportunities within the State. The council should inquire into the expediency of consolidating some of the State teachers colleges. In matters of controversy the council might serve somewhat in the nature of a court of arbitration. Conclusions and recommendations of the council should be transmitted promptly to the institutions involved, and such publicity should be given them as is desirable. The Commission anticipates that certain questions will be referred to the council by other administrative boards in the State educational system, but it points out that it is equally important that the council should upon its own initiative undertake such inquiries as it deems necessary or desirable.

*Fact-Finding.* The State Council for Educational Planning and Coordination should have its own Division of Fact-finding and Analysis. This division should be in charge of a director of research, who also would act as executive secretary of the council and sit with it. A small, highly competent staff of secretaries and assistants is essential, and this staff should be so organized as to be capable of enlargement and contraction from time to time as the studies required by the council expand and decrease. Much of the effectiveness of the council's work will be conditioned by the quality of the work done in the division of fact-finding and analysis. The division will not deal in routine surveys or statistics which are adequately provided by the State Department of Education and the university for their own purposes. In collecting data, the division should utilize all existing

facilities in State institutions and departments. Its inquiries and studies should provide the means by which the council reaches its decisions in planning and coordinating all educational activities for the entire State.

*Appropriations.* The Legislature should make financial provision for the work of the council independently of provision for any other board or institution in the State. From biennial legislative appropriation the traveling expenses of members of the council, and others whom they may invite to sit with them, should be met. From it also should be paid the costs of maintaining the Division of Fact-finding and Analysis. The Commission suggests the sum of twenty thousand dollars (\$20,000) a year as a modest amount to be used for purposes of the council and the division.

*State Council the Key.* It is the considered opinion of the Commission that the newly devised State Council for Educational Planning and Coordination is the key to the improvement of the whole educational situation in California. If the proposed State Council operates effectually, all education within the State will be effective.

### **III The Organization of Education**

Education is one of the largest enterprises of the State government. In 1930, according to the Director of Finance, it cost about \$40,457,000.

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Only the State's expenditures for highways are larger (about \$55,000,000). Education, however, is far and away the most complex undertaking of the State. It serves every diversity of human interest; it touches the whole population in all its varieties of ability, interests, and handicaps; it operates wherever people are living. The problem of a proper organization of educational facilities is therefore far from simple. Nor is the problem of the Commission less complex because it has had to focus its attention upon education of higher than high school grade. All education is so functionally interrelated that a proper distribution of State facilities for education must always take into account services upon every level, whether publicly or privately controlled, whether tax-supported or endowed, compulsory or voluntary.

In considering a proper State organization of educational facilities two canons must be continuously held in mind: (a) efficiency and (b) economy. Both of these terms have specific meanings for educational organization.

*Efficiency.* An efficient school organization will provide, first, all the types of school education that the social civilization of the State requires; but it will not attempt to provide types of education, training, or apprenticeship that can be better provided elsewhere, whether in the home, in industry, or in other institutions.

Secondly, each kind of schooling provided will enlist the students best fitted to receive it, in sufficient numbers to render the social service for which the education is designed. General education must reach all to the extent that each may profit by it. Special education must reach those fitted for it, in numbers adequate to the social need.

Thirdly, in setting up a type of school for State service, the school must be competent to perform its function as measured by the best current judgment, and nothing less. Merely to call an institution a junior college, a senior college, a vocational or professional school, or a graduate school does not make it one. To establish such an institution without adequate staff, libraries, laboratories, and other facilities, and to hope that it will operate effectively is a waste of tax moneys. It amounts to self-deception. This fact needs to be kept particularly in mind in California where local demand for expensive higher-type schools is insistent beyond the point where finance permits such establishments to fulfill the service they are expected to give to the student, the community, and the State. A name and an appearance may satisfy an undiscerning pride, but an institution that has them only is not performing its allotted social duty.

*Economy.* If efficiency measures school organization largely in terms of actual productive results, then the standard of economy appraises it in terms of ways and means employed to deliver certain desirable and real

results. Efficiency and economy are two closely interdependent phases of the same thing. Each emphasizes its own approach and standard. In the present California situation economy signifies a thrifty use of public funds in achieving a state-wide educational benefit. Niggardliness that defeats achievement of socially needed educational results, which the State is really in an economic position to afford, is not economy; but for a State to spend for a special purpose more money than necessary or to duplicate its facilities merely because the accident of local wealth or political power permits the money to

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be had may be an advantage to a particular locality and its citizens, but it is shamefully wasteful of the assets of the State as a whole. In the long run waste in one place will cripple effort in another.

School organization must meet these standards in (a) performing effectively and economically all the different functions which a school system should include and (b) distributing the school facilities effectively and economically so as to reach all the population that should be reached, though it be scattered over so vast and irregular a geographical area as it is in California.

*Experimenting for Efficiency and Economy.* The Commission does not wish to be understood as in any sense discouraging experimentation designed to improve curriculum making, methods of learning and teaching, school organization, and administration. At every period where public or professional dissatisfaction calls for new types of education or for the improvement of old types, it is essential both to ultimate economy and to ultimate efficiency that initiative in experimentation be encouraged and aided both scientifically and financially. A period of preliminary experimentation in the establishment of junior colleges was necessary. But sufficient experience has not been accumulated to permit the State Department of Education to substitute a state-wide plan for the location of junior colleges for the present dependence on local community initiative, subject only to State discouragement or encouragement.

There has in fact been too little free experimentation in the domain of junior college organization and administration. The experimental organization of junior colleges into institutions extending over more than two school years is much needed to determine the best unit of operation. Only a few places, notably Pasadena, have been able to overcome the existing inflexibilities of school support and school accounting, and the traditional notion that the junior college is a two-year unit of the old-type college.

In curriculum making and improved modes of teaching, experimentation has been singularly scant save in a few places, markedly at Los Angeles, and the whole program of making the junior colleges something beside preparatory schools for the university has suffered greatly, especially in the proper development of completion curricula of the liberal type for those who do not intend and will not actually transfer to some university, and in the formulation of properly distributed vocational courses appropriate to the junior college student body.

In this latter domain more experimentation and demonstration of a valuable sort has occurred outside the State of California than within it, though no other state has developed so complete a system of tax-supported junior colleges. The failure of the people of California to recognize the large new purposes of the junior college system and the dominant influence of the State University have not been conducive to needed experimentation. The State Board of Education in charge of the public policy of junior colleges has not been a sufficiently positive counter-force to resist tradition and the dominant university influence.

Sooner or later, however, in any field where properly stimulated and controlled experimentation is under way there arises the need for scientific educational appraisal of what is effective or noneffective in all

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these efforts, so that successful reform practice may be widely diffused by voluntary substitution and State board rulings. Finally, experimentation thus conducted is highly contributive to both efficiency and economy.

With these general and fundamental considerations in mind, the Commission offers its recommendations with regard to each important functionally organized unit of the higher school system with which it is particularly concerned.

#### **A. The Junior College System.**

*11. The Commission affirms and recommends the continuance of the existing policy which recognizes legally, if not completely in fact, that the junior college period is the last stage of the upper or secondary period of common schooling, the dominant purpose of which is general to all the purposes of civilized life in so far as different students wish to or can achieve them.*

If there is a general trend throughout the United States, it affirms the practice of the State of California. The comparative cultural and economic position of the State has warranted the geographical spread of this upward extension of common schooling by the inauguration of a system of local junior colleges.

*12. The Commission recommends that the State now regard the early free experimental period as having now lasted sufficiently long to warrant immediate appraising and reorganizing of the entire program of education at this level. It is time to consolidate the good results and eliminate the obvious weaknesses.*

Appraisal and reorganization will involve the correction of wrong emphases in function, a more effective and economical distribution, the improved organization and administration of individual schools and the system as a whole, and the better coordination of this administrative unit with the other units of the secondary school system below it, and with the differently purposed university system above it.

*13. The Commission recommends that initiative for the reorganization of the secondary school system involving the junior college level be made the prime responsibility of a newly appointed State Board of Education and its administrative officers, and that a cooperative responsibility be placed on the Board of Regents of the University of California for the reorganization of those lower divisions or junior colleges on this level which are and will be left attached to the two senior colleges of the university and the teachers colleges under its legal jurisdiction, and that the responsibility involved in fostering cooperation between the two governing boards, be placed on the Council for Planning and Coordination.*

*14. The Commissioner further recommends that all authorities recognize within their jurisdictions that the end*

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of the junior college or collegiate-lower-division period of education is the formal close of secondary education as such by granting the title of Associate in Arts. This should not be considered as marking the successful completion of a two-year course but as the local institutional recognition of the completion of a secondary schooling, the different years of which may have been taken at different schools.

The title of Associate in Arts thus bestowed is not to be confused with the qualifying function of a junior certificate or any other title or document designed to attest fitness to enter a senior college or a professional school.

*Popular Misconceptions.* Such a step is necessary to clear up a most troublesome confusion in the minds of the public, the parents, and the students. Academic persons and public school teachers recognize that the general social purposes of education are not mainly and directly served beyond the sophomore year of college. The granting of the baccalaureate degree as a first degree or title traditionally indicating the completing of schooling devoted to general or liberal education, misleads the nonprofessional public and stimulates the student to persist in his schooling beyond the point where intellectual or educational motives give him warrant. Hence under the present confusion, thousands of students persist in passing from junior college to senior college when they are in many cases neither genuinely interested nor intellectually fitted to do advanced and

specialized work. Most of the dissatisfaction with the university, the high schools, and the junior colleges, noted by the Commission while in the State, results from grievances based on misunderstanding of the functions and relations of the university and common school systems, a misunderstanding perpetuated by the fact that school units and degrees have not yet been completely readjusted to changes under way for a quarter of a century.

*Associate in Arts.* The practice of granting the title of Associate in Arts has sufficient precedent for its extension. In 1928, twenty-two American public junior colleges and fifty private junior colleges awarded this title or degree. The title has been in use since 1891. The State Board of Education is to be commended for having authorized it in the junior colleges under its jurisdiction. The junior colleges or lower divisions now under the State Board of Education should immediately be authorized to take this step. The University Regents should give similar authorization within their jurisdiction.

*15. The Commission recommends that it be the policy of the State Board of Education to recognize that the system of junior college education may properly include groups of functions or services, five in number, as follows:*

*a. Curriculum for Social Intelligence. A curriculum devised to give the student about to complete his general education a unitary conception of our developing civilization. This curriculum should be provided in all institutions offering education on a junior college level. It should be the most important curriculum, in as much as it aims to train for social citizenship in American civilization.*

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Whether or not other curricula are offered, this curriculum in social intelligence should be. Analysis of the desires and intentions of most parents and students, as revealed by enrollment figures and interviews, indicate that this curriculum should enroll a large majority of the students on the junior college level. Here should be enrolled many students now taking university preparatory courses, for of the students who entered junior colleges in the autumn of 1929 classified as of “recommended” status, 28 per cent graduated and continued with senior college or professional school work, while of those classified as of “nonrecommended” status, only 9 per cent graduated and continued. Here also should be enrolled those who plan to spend only two years, more or less, in further schooling, save those whose interests or economic situation make it preferable to enroll in specialized vocational courses. Moreover, here should be enrolled many students who have fled from detailed courses in the arts and sciences, which are really only senior college preparatory courses for specialized advanced work in the university, to the vocational courses which interest them, without, however, being motivated by a chosen life career.

*Core Curriculum.* The new curriculum for social citizenship, recommended as the future central core of junior college work, will differ markedly from university preparation in its purpose, scope, selection of material, and method of approach. To the larger central group, approximating 85 per cent of the junior college student body, this difference in the two types of courses is fundamental. It may be well to note certain probable reorganizations of material implied in the new-type course. A few will illustrate.

The courses will tend to organize knowledge and intelligence for effective social behavior rather than for the intense and detailed mastery required for professional or avocational scholarship. They will be comprehensive rather than intensive presenting major bodies of important fact in their relations to each other in a whole, rather than resolving them into their precise details through minute analysis. Orientation and summary gain a new importance. The organization of the curriculum will often disregard normal academic subject boundaries. Certain aspects of civilized life, highly valued in cultured, social living, which are omitted or subordinated in the ordinary academic curriculum, will be added or made important. Literature, as contrasted with languages, will be emphasized. Music and the visual arts will be given a new recognition. Since the purpose will be appreciation of social values as well as of scientific facts, the methods of teaching and learning will be more varied than in traditional university courses. In the sciences, demonstration will become very much more

general and more varied in its application.

*University Requirements.* Many graduates who might complete the liberal course for social intelligence in the junior college might be as well prepared and in many instances better grounded for specialization than numerous graduates now admitted without question from the university preparatory curricula. Of this fact the admission requirements of the university at present take no account. Requiring such specific patterns of preuniversity training as are now commonly demanded assumes an efficacy which the present policy does not possess.

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The intellectual ability of the student far outweighs all other considerations in a successful university career.

*Comprehensive Examination.* In any case, a new type of comprehensive entrance examination should open the university to many graduates of the liberal curriculum for social citizenship. This would salvage many students for the university and society. If such an examination were framed by a body of university men with the cooperation of selected public school teachers, it would offer a welcome escape from the domination of the opinions of individual professors, who assume that their own personal judgments on proper methods of preparation are the only correct measure of ability to do advanced study. The best evidence reveals that a consensus is better than the opinion of any one person, however gifted.

*Conformity or Experimentation.* Under this new plan, junior college teachers could be allowed greater discretion than they now dare to assume. The fact is that very generally they fear to jeopardize the academic future of their students and their own professional standing by varying their courses to any considerable extent from similar courses given in the lower division of the university. The degree to which university lower division courses are slavishly imitated in the junior college as to both content and method, is indictable from almost every point of view. It is one of the main sources of discontent with so-called university domination among public school instructors, parents, and students. Needless to say, for this situation the university as a whole is not to blame. The exactions of particular university departments or even of a few individual university instructors, exercising the prerogatives which they assume to be theirs because of the traditional code of academic freedom and independence associated with university teaching, exert an influence which the university administration would not wittingly exercise. On the other hand, the public school has some responsibility for asserting its own independence and self-confidence in its own methods. In too many cases it is found more comfortable to conform than to experiment toward better instruction.

The junior college which is a part of the University of California, however, stands in a special relation to the advanced courses which are conducted in that institution. This junior college may properly provide courses which are directly preparatory to the professional lines of work which students will enter when they pass into the upper divisions of the university.

It is, however, the judgment of the Commission that provision for fundamental training in citizenship which has just been urged as the major function of the secondary school system of the State, should be emphasized at Berkeley no less than at any other center. The professional curricula which begin at the junior college level of the university should be thought of as secondary to training for citizenship.

b. *Specialized Vocational Curricula.* A group of specialized vocational curricula more advanced than those offered in the high school, aimed to care for the needs of those registrants who will probably soon terminate their schooling to enter the occupations.

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From the standpoint of the purposes of the common school, this group of courses is second in importance to the inclusive general curriculum preparatory for social citizenship or social intelligence. The content and nature of these courses will be determined largely by the vocational or semiprofessional opportunities offered

by the State or the region, the extent and distribution of which can only be ascertained by careful survey. All work offered in this group should be sanctioned by the State Board of Education before being put into local operation.

From the testimony of those concerned, it would seem that specialized vocational courses are generally unsuccessful in attracting students unless the institution is fairly successful in placing its students in remunerative jobs. Changing employment conditions, which are part of normal progress, and the present economic situation have had a demoralizing effect on vocational enrollments. The Commission therefore feels both the importance of having the establishment of such vocational courses sanctioned by the facts of need as revealed by regional and state-wide surveys such as might be initiated by the council for educational planning and coordination, frequently corrected for change, and also the wisdom of the junior college maintaining a placement service to cooperate with and to enlist the cooperation of employing concerns. The junior college that operates in academic isolation from life, without contacts with those activities of the community which give rise to its educational offerings and in which its human product ultimately finds a place, is doomed to ineffectiveness in the vocational field.

c. Preprofessional Curricula. A group of preprofessional courses, preparatory to university professional courses, the nature of which is legitimately determined by professional school requirements of the university. Such a group of courses properly parallels work given in the lower division of the university, though more flexibility and experimentation should be encouraged than is now the case.

The Commission recognizes that under existing practice certain professional offerings in special fields must begin in the junior college. *But not all preprofessional courses preparing for university professional curricula should be offered in every junior college.* Not all junior colleges have a student body or staff sufficiently large to warrant a full complement of these courses. Not all have sufficient clientele for each. The number of these preprofessional offerings should be adjusted to considerations of efficiency and economy, even if some students have to attend a junior college elsewhere. Economy for a few parents may be poor economy for the State and a district. In every instance sanction should be had from the State Department of Education.

d. Preacademic Curricula. A group of curricula preparatory to university concentration in one or more of a group of arts, sciences, and literatures, provided by the senior colleges to give an advanced education in some phase of civilization for avocational or civic purposes, or provided as preprofessional preparation for advanced work leading to a professional career of scholarship in research or teaching.

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Such academic preparatory curricula should be open only to students qualified to pursue one of the well-defined purposes stated above. Students whose record of performance is not intellectually promising and whose interest is not definitely set upon the purposes of advanced academic study in the university should be discouraged or estopped from taking such a senior college preparatory course. Inasmuch as the chief function of all such curricula is social in nature, they should all provide for the fundamentals of social training as well as for the specializations indicated. Here again the university requirements for transfer may legitimately determine the quality, extent, and method of courses offered to effectuate transfer from junior college to senior college.

Such curricula would be intended for a comparatively small proportion of those enrolled in the junior college system as a whole. Unfortunately, this is not now the case. Except in the Los Angeles Junior College, the vast majority of the students enrolled are taking the university preparatory courses of either academic or preprofessional type. This fact betrays the largest single functional failure of the junior college system in California.

The reeducation of both students and parents, and much rearrangement and reorganization of junior college offerings, accompanied by more effective educational guidance, curricula-making, and teaching will be needed before the junior college can overcome this essential weakness by giving in each case the right kind of education to each of its different groups.

e. Adult Education. The function of adult education may well be associated with the junior college as a supplementary service. It concerns not the regular full-time student body but the citizens of the community, both men and women, who have terminated their formal schooling and wish to advance their self-education with the stimulus, direction, and aid which the present-day organization of adult or extension education provides. Junior colleges are local or community institutions and may well be cultural community centers.

Such a function may be properly associated with any and every secondary school. The ranking officer of a junior college may well include adult education among his community services without impairing the finances of the school district, *for the cost of adult education can, and ought, to be largely carried by those who enroll*; their status is generally not that of economically dependent youth but of self-sustaining adults. Save for overhead expenses and some instances of adult education where the purpose is obviously for the protection of society, as in the special effort to Americanize foreigners to combat illiteracy, or to foster parental education, the work should be self-supporting and ought not to be permitted to be a growing drain upon secondary school funds. The problems of adult education should be early considered by the State Council for Education Planning and Coordination.

*Effect.* The effect of this restatement of the curricula to be offered in junior colleges involves an extensive reorganization. Major attention

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will fall on the interests of society rather than on those of individuals. In so far as the interests of groups of individuals are concerned, the principal energies are to be directed toward the large majority who (regardless of misleading statistics of intention) will not enter the university courses, rather than to the small minority who will. This is the reverse of the present emphasis.

*Ways and Means.* In view of the magnitude of the task proposed, the Commission offers the following practical suggestions as to ways and means by which this five-fold offering may be put in operation. The largest problem concerns the making of the new curriculum for social intelligence or social citizenship. This curriculum should be directly designed for training appreciative and thoughtful socialized citizens for our American civilization. Here and there throughout the State, notably at the Los Angeles Junior College, promising experimental work has been done in differentiating liberal courses for immediate citizenship from liberal subject courses for University preparation. All such scattered efforts should be studied, analyzed, and made known throughout the State through the encouragement and direction of the State Department of Education. The reason this reconstruction of the curriculum has not already gone further-although it has been much discussed in indefinite terms- is readily understandable; such a reconstruction is a huge intellectual undertaking that may well take years to accomplish.

As a first step, the State teachers colleges, all of which have junior colleges or lower divisions, should take the lead in formulating the main or core curriculum for social citizenship with the cooperation of the teachers of the neighboring junior colleges. One member of the State Department of Education should be designated to give his full attention to this matter and to utilize at least one member of the staff of each teachers college as a regional agent of the State Department of Education in incorporating these materials in the new-type courses.

*16. The present policy of admitting all high school graduates and those over eighteen years of age to the junior college being a proper one, the Commission recommends that it be continued, provided the institutions have power to assign, in exceptional cases, the work to be undertaken and to drop students who fail to meet the standards of the institution.*

*The Commission further recommends that individual student counseling, which has had a wide development throughout the junior colleges, be continued and made more effectual. As guidance techniques are improved, the results of intensive personnel studies should be made more binding upon the students. The better training of counselors is commended to the university and teachers college authorities and to the State Board of Education.*

There should be no sharp gap between the lower reaches of common schooling and the junior colleges, which is its last stage. The proper point for examining everyone who would proceed further is at the meeting point of common social education and of specialized university education.

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In certain junior colleges local counseling has been highly developed. So much experience has been accumulated that the State Board of Education should now interpret the significant experiences which are available, and provide for that exchange of effective practice which would bring all the junior college counselors to a more enriched and uniform procedure. The record cards which are now the basis of individual diagnosis and direction are not always ample, and they vary considerably from place to place.

*17. The Commission recommends that a continuous record card, such as that devised by the American Council on Education, which is in wide use throughout the country, particularly in the schools and colleges of Pennsylvania, be issued in a standard form suitable to California practice and used throughout all the secondary schools of California.*

*Records and Guidance.* The whole function of distributing or classifying students on the basis of their, guided volitions is a policy of fundamental importance under the American system of education. It has always been implied in our theory of one school for all. But it has only recently become an explicit theory in our educational consciousness, because of two facts: the increase in numbers of students with different interests and abilities advancing upward into secondary and higher levels of education; and the accumulation of psychological evidence of the great importance of differentiating education to satisfy individual differences.

Although under our democratic system it is not for the school but for the youth and his parents to make the decisions, it is a responsibility of the school organization to record the pertinent facts, make them available, and utilize them in advising the student. In the past, educational careers have been too largely determined by personal whim. Now that experience and psychological investigation indicate that a specific educational or vocational interest is not a good index to the possession of ability in a specific field, we are compelled to take into account both ability and interest, the first for social efficiency, and the second for personal happiness. Both of these are desirable social goals.

Intelligent guidance which leads to wise decisions is important for the right adjustment of the student to life, but it is even more important to society, in that it searches out from the whole school population the different kinds of ability which society requires and directs them toward the education that makes their abilities effective and their services significant. The common schools should be profoundly concerned with finding and encouraging submerged talents of which the possessor himself is not aware.

*18. The Commission recommends that more attention be given by all concerned to the problems of so forming administrative units as to secure economy of time in common schooling.*

*Administrative Units.* Certain heads of California junior colleges have shown an admirable initiative, too rare in the existing situation, in experimenting with a wider grouping of years within the junior college administrative unit. They have integrated three or four years instead of the traditional two. These experimental demonstrations

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should have wider use, if we are to discover what the upper unit of secondary education should really be. It seems to the Commission that the 6-4-4 plan, which has been adopted in some centers in California, has the great advantage of articulating closely the last years of the high school and the years of junior college. This organization, as a first step in the proper adjustment of the high school and junior college, should be regarded as an experimental undertaking. Diligent and competent students can doubtless, under the 6-4-4 plan, complete the work in less than the normal time. Ultimately it is to be hoped that the present fourteen-year program will evolve into a shortened twelve-year period of common schooling organized on a 6-3-3 plan for the great majority of the students.

A shortened period of common schooling offers several marked advantages. First, it will enable a larger number of persons to complete their schooling for social citizenship. At present two-thirds of the California population at ages 18, 19 and 20 are not in school, while only 18 per cent of the population between ages 16 and 17 are not in school. Secondly, the saving of two years of school time will permit the restoration of a two-year apprenticeship to industry, commerce, or the professions. There is ample evidence that two years gained in the elementary school have been lost in the secondary school and that secondary education can be readily shortened by one or more years, as indicated by the practice in some states, in Canada, and in certain cities of the United States (Kansas City, Salt Lake City). Finally, shortening the period of common schooling will reduce the cost of education to both taxpayer and parent.

*19. The Commission recommends that the future location and distribution of junior colleges throughout the State be among the first studies to be undertaken by direction of the State Council for Planning and Coordination, through its Division of Fact-finding and Analysis.*

The present distribution of junior colleges in California is the product of a policy of State encouragement of local initiative- a policy of permissive establishment warranted in the earlier developmental period now to be regarded as terminated. Both the Legislature and the State Board of Education have decreed that no junior college may be now established save by permission of the State Board of Education, and then only after careful preliminary survey. The Commission commends this action.

*Planning Junior College System. The California junior colleges of today form a collection, not a system.* There are junior colleges which are too small to operate effectively and economically. Junior colleges exist where they ought not to exist, and do not exist where they ought. They are not so distributed each with regard to its neighboring institutions as to facilitate equality of opportunity with the lowest expenditure of tax moneys.

The State has now entered the stage where it recognizes that local initiative and State aid can not longer be relied upon to provide an adequate junior college system. There must be State planning based upon accurate knowledge and clearly defined policy. The study recently made by Mr. Arthur Walter, of Stanford University, is sufficiently

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accurate in its analysis to suggest the basis for a new and desirable state-wide plan for junior college distribution.

One other matter of general educational purport the Commission wishes to emphasize. When junior college management looks upward to the university to discover its functions, its point of view, its procedures, and its social philosophy, it creates the largest possible gap between itself and the community high school, whereas it ought to be looking outward upon the community and its life to discover how all its unselected and different kinds of students may be educated to intelligent cooperation and useful membership in society.

It is a false pride, on the part of the town, the school authority, and the students, which proposes to regard the junior college as mainly an inferior part of the academic university rather than as the highest part of community education for a general civilized life. That false pride has abetted the early tendency of junior

college faculties to make junior colleges mere university preparatory schools, and to debase in prestige the vocational courses which many students want and ought to take, but do not take because of their supposed inferior status in a school community. This undemocratic trend must be reversed. Any and all legislation and administration which will integrate junior colleges with the rest of community schooling will be of inestimable value in making the public support of junior colleges a good social investment.

The term "junior college" is unfortunate. It is not junior to anything—certainly not to the university in its primary or main functions. It is really senior to all common schooling below it—the capstone of socializing or civilizing education.

In the new, shortened 6-3-3 plan, the latter two of these units might be better termed respectively high school and college, leaving the term "university" for the professional schools and the higher levels of intellectual work in letters, the arts, and the sciences. This is a sharp break with traditional terminology, but in public institutions terminology must as rapidly as possible be brought into accord with function. Probably much time will be needed for this reconstruction.

## **B. The University System.**

The functions which differentiate the university system from the common school system have already been analyzed and indicated. The university system must be considered with two factors in mind; the first concerns the relationship between publicly- and privately-controlled institutions; the second concerns the distribution of specialized facilities which must be limited.

*Public and Private Institutions.* First, then, the total university system socially available to the population of California for its public purposes consists of both publicly- and privately-controlled institutions. In the formulation of policies and plans for university education this important fact is not always considered. Failure in this respect can lead, as it often has led, to serious consequences, for ignoring it points to unnecessary and wasteful duplication of facilities.

*Functions and Costs.* Secondly, the university system is necessarily the most expensive part of the whole range of educational service. It deals with that realm of knowledge which changes most

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quickly under modern scientific investigation and scrutiny. In the university system books and equipment suffer most rapid obsolescence and demand constant and costly replacement. University education represents specialized training under guidance of highly expert teachers for membership in comparatively small social-service groups. The danger of wasteful and inefficient duplication of facilities and functions for the comparatively small group involved is multiplied to a degree that never exists in the common school. For example, in a total population of five and a half millions, California includes only about 185,000 in certain of the professions, according to the definitions of the 1930 United States Census. These represent only about one wage earner in every thirty persons. They include 10,028 doctors, 10,109 lawyers, 5,971 clergymen, 20,585 engineers and 57,351 educators, and represent only about three per cent of the total population. One has only to compare, for instance, the small number of physicians or of lawyers to be trained annually in the higher system with the large numbers (the total population between six and eighteen years of age) to be trained annually in social citizenship, to comprehend the implications of these figures. For these practical reasons the principle of concentration of facilities is always stressed in good higher educational organization, whereas the principle of wide distribution is emphasized in providing common schooling. There is nothing inherently wasteful in having two, three, or four state universities at different points within a commonwealth, provided always that the proportionate population exists and that taxpayers can and will adequately support so many true universities.

*A True University.* But adequate money alone will not build a university system. A university is an intellectual and spiritual structure. Time is necessary to attract scholars and collect the rare and numerous books needed for research and advanced study. Failure of education at the level at which scientists, teachers, doctors, lawyers, and other similar professionals are educated is of far greater consequence to society than it is to the individual. University education is not a personal privilege or right, though all should have equal opportunity to compete for its offerings. Social necessity creates its provisions and aims to recruit and educate the fittest who offer themselves.

In determining a policy for State provision of university training and a social and economical plan of procedure, it will be necessary to simplify the complex problems by considering in turn each of the major groups of typical specialized schools or curricula which are the constituent units of a full university system.

Every complete university system now consists of (1) the senior colleges (upper divisions) (2) the graduate schools, and (3) the various professional schools.

### *1. Senior Colleges.*

The actual differences in function and procedure which sharply distinguish upper divisions of four-year colleges, or senior colleges, from junior colleges, have been presented in the analysis of the functions of the school system. The State of California maintains such

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senior colleges at Berkeley and Los Angeles, the former associated with many other units of the university system, the latter associated with a teachers college and the lower division.

It is apparent that the teachers colleges, now that they offer four-year courses, tend to be utilized more and more as senior colleges for concentrated study in some aspect of the academic arts, sciences, and letters. This development, as reflected in the enrollments in the pre-secondary curricula, has proceeded far in the case of at least three of the teachers colleges: Fresno and San Diego to a considerable extent, and San Jose somewhat less. In 1931-32, the second year after the practice was authorized, upper division enrollments in pre-secondary curricula in these institutions were as follows: Fresno, 220; San Diego, 142; San Jose, 113. These represent 48, 36 and 13 per cent, respectively, of the total upper division enrollments. The other four teachers colleges (Arcata, Chico, San Francisco, Santa Barbara) have not enrolled many pre-secondary students in their divisions. Nevertheless, all four of these have been given permission by the State Board of Education to add various fields of specialized, academic training, which offer the student opportunity to concentrate on some academic *field under the legal guise of taking at the teachers college four years of work preliminary to securing a secondary credential through a fifth year at the university.*

*Community Influences.* On the basis of different theories of the case, not as yet legalized, and under the social pressure of the communities in which they are located, the teachers colleges at Fresno and San Diego have developed in the direction of senior colleges *de facto*. This development has been without sanction from the traditional intent of teachers colleges, from the long established subdivision of function between the university and the State teachers colleges, from the university regents who have controlled senior college work, or from the Legislature of the State. What has been done rests upon permission given by the State Board of Education to add to their professional work in the training of elementary teachers the right to give the early stage of the preparation for secondary teachers, a function which clearly rests with the university. To be sure, all those who are pursuing these preparatory secondary teachers courses with the real intent to get a senior college education have done so at the price of twelve semester credit-hours of work in the field of professional education. The State Board of Education obviously had no right to relieve upper division students in the teachers colleges of the requirement to take these professional courses. There the matter stands. If this requirement of twelve semester credit-hours in education were removed, the teachers colleges would at once begin to perform the functions of both teachers colleges and senior colleges, in name as well as in fact. Some teachers college

presidents believe this ought to be done, and their theories and attitudes have coincided with the aspirations of their local communities. So far has the development gone that the movement to sanction this expansion of functions and increase in student enrollment bred in the last Legislature crucial political controversy. The present inquiry was voted in order that this problem among others should be solved upon an educational rather than a political basis.

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The legislative issue was further complicated by the proposal that a senior college, emphasizing occupational training, be established at Sacramento.

*Proposed Extensions.* Diverse arguments have been presented on all of these proposals, many of them so plausible as to confuse the layman. Sanction has been sought to develop three state-supported senior colleges in addition to the two at Berkeley and Los Angeles. The fundamental and legitimate argument which the Commission has had to consider with the utmost seriousness is based upon two statements: first, that there are not now adequate senior college facilities to take care of those wishing, and entitled, to pursue a senior college education; and, second, that since further facilities are needed they can be just as efficiently and economically established at three new points as they can be added at Berkeley and Los Angeles. Such a step, it is said, would greatly convenience the students and reduce the boarding-away-from-home cost to families in other centers of population.

It is to these two main contentions in particular that the Foundation's staff and the Commission have given close attention. The Commission returns to its original and fundamental statement of policy arrived at by considering the State school system as a whole before it considered the political issues arising from the claims of certain localities or regions; namely, that under the California system of education tax supported, *general education ends at the close of the sophomore year or the junior college*, and that admission to senior colleges above this level is open only to persons of unusual ability and interest, who wish to prepare themselves for superior civic services which issue from the special mastery of some aspect of civilization as represented in those arts, letters, and sciences which interpret our American civilization.

It is apparent that those who complain that they can not enter the University of California do not meet these standards, and that they are seeking to complete a general education which they think ends with the bachelor's degree, when, in fact, state-provided facilities for the fulfillment of this proper aspiration in reality end with the junior college. Enrollment figures clearly indicate that the State is amply providing for the general education of all and for the specialized training of those qualified to benefit by it. Of 4416 "nonrecommended" students who entered junior colleges in the autumn of 1929, only 713, or sixteen per cent, completed the two year course and graduated. Of these graduates, 381 were evidently qualified and entered senior colleges. Ninety-four returned to junior colleges for postgraduate work. It is highly probable that the majority of the remaining 238 graduates (five per cent of the original 4416) found it necessary to engage in some occupational pursuit. At present the State is not bound to provide the additional facilities at the high cost necessary, particularly at a time when State finances are likely to be strained for a decade and when proper financing of the recently established junior college system has not been adequately provided. For the State under political pressure to respond to these local demands to extend general education upward two years is to reverse not only the trend in the United States

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but likewise the whole trend and accepted theory as it is manifested in the California public school system.

Senior colleges present a far more exacting and expensive kind of education than junior colleges; the tax costs naturally jump suddenly when a student passes from a junior college to a senior college. Studies made by the California Taxpayers' Association, in cooperation with the University of California, display the following unit instructional costs: On the basis of enrollment hours, lower division, \$3.53; upper division, \$5.88; graduate

division, \$24.41; on the basis of units granted, lower division \$5.53; upper division, \$7.86; graduate division, \$32.56. Comparable averages for five of the largest teachers colleges are: on the basis of enrollment hours, lower division, \$2.75; upper division, \$5.70; on the basis of units granted, lower division, \$4.22; upper division, \$8.21.

When the student body is distributed among special courses, the cost of staff, library, and laboratory facilities increases, classes become smaller, and distribution lies within restricted rather than larger groups. Opportunities for economical administration of teaching grow markedly less.

As the population of the State of California grows, and larger and larger numbers of gifted students complete the junior colleges and justly elect, for avocational or civic purposes, to prepare for leadership and citizenship, the need of more senior college facilities will doubtless increase. The question is by what steps this need is to be filled.

The answer involves recognition of the constantly changing conditions in the State. The Commission can only point out principles to be followed and make such specific recommendations as the immediate exigencies of the situation demand. The determination of any further extension of senior college facilities should be made only upon recommendation of the State Council for Educational Planning and Coordination.

*Policy for Senior Colleges.* The Commission therefore commends to the State the adoption of the following guiding principles in formulating a policy concerning senior colleges:

First, *existing facilities should be utilized to the point of saturation.*

Second, facilities should be extended only at those points where they can be provided most economically and effectively for the State as a whole.

So far as the Commission can now foresee, without prejudice to the findings of the Council, the first step to be taken would be to utilize the facilities at Berkeley and Los Angeles to the point of saturation. The second step should be a detailed study by the Council of what State needs, if any, exist for a further extension of senior-college facilities. Such a study might indicate, though not in the immediate future, the possibility of establishing another senior college unit in the university system, at some such point as Fresno, San Diego, San Jose, or Sacramento.

The attempt to get the Legislature to establish such senior colleges apart from university management and under the control of separate State boards, operating locally, is something to which the State ought never to consent. The whole recent evolution in the United States is

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toward integrated management of the university system (Alabama, Georgia, Mississippi, Montana, New Jersey, North Carolina, Oregon, Wisconsin). The fact that the teachers colleges *have been developing pseudo-senior colleges, not completely legalized, is a clear indication that the State Board of Education mainly charged with the management of common schools, has been developing a system of university schools without proper understanding of what a university system should be and apparently without thought of conference and cooperation with the University Board of Regents.*

The Commission calls to the attention of the people of those regions now demanding additional senior colleges the relative function of junior and senior colleges as indicated elsewhere in this report. But what is more important for their consideration, is that the mere multiplication of senior colleges in name may not, and probably will not, give them senior colleges of that high American standard which California now has. The people of California do not desire for their children additional opportunities which are second-rate. It would be years before anything comparable to the staff and facilities provided at Berkeley and Los Angeles could be provided at any other locality.

The higher reaches of specialized education on the university level can not for financial reasons be distributed as local schools. The university system has always been provided by state-wide support and should always be treated as a State institution with branches. The indiscriminate establishing of regional senior colleges would multiply university units in such a way as wholly to deplete the financial resources for university education and reduce the functioning of all such higher institutions to a mediocrity of service and achievement that is antithetical to the whole university ideal of high selection and unusual quality and efficiency.

*20. The Commission recommends that for the present the Legislature authorize no further expansion of senior college facilities apart from Berkeley and Los Angeles.*

*When, however, it is clear that the use of facilities at Berkeley and Los Angeles has reached the saturation point and that the finances of the State are sufficiently prosperous, then detailed inquiry should be undertaken by the State Council for Educational Planning and Coordination, which should recommend the location of a third senior college, if any, under the Regents of the university system, wherever geographical and population factors promise the largest service and economy in university organization.*

*Intermediate Vocational Training.* It has been widely agreed both throughout the United States and in California that there is a need for an intermediate type of training of a specialized vocational and civic-broadening nature placed somewhere between the vocational work of the high school and the professional work of the university. If related tasks or jobs are graded in a single series concerned with any one industrial, agricultural, or commercial operation, the need of some provision of semiprofessional training appears. It is this provision which the junior college has attempted. Only in isolated instances,

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particularly at Los Angeles, has it succeeded to any large extent. In this matter the following considerations, among others, are important:

First, the demand of California students in junior colleges, as well as of their parents, *for purely vocational education was, and is, overestimated.* Students can not be forced to elect this work when, and if, they do not wish it. In any case, the number appears under most favorable circumstances and unusual management to approximate only 25 or 30 per cent of those enrolled.

Secondly, a large majority of junior college students seek cultural, liberal courses in some form; subject enrollment in junior colleges in 1931-32 showed 65 per cent in lower division courses paralleling those in the University of California, 18 per cent in cultural "terminal" courses, but only 17 per cent in vocational or semiprofessional courses. Vocational courses may now be affording a refuge from college preparatory courses because such preparatory courses are too highly specialized and also because the cultural liberal courses desired are not offered. At the Los Angeles Junior College, where all three types of courses are offered, enrollment figures (1931-32) indicate that about 43 per cent of the students desire cultural liberal courses; 28 per cent, specialized academic courses; and 29 per cent, vocational courses.

Thirdly, the intermediate vocational studies provided in the junior college do not seem to have an adequate organization and development. Too frequently these intermediate courses merely repeat the first courses given below. Inability to find and develop new, advanced types of training also adversely affects the interests of large groups of citizens. In agricultural education, for example, there is a wide gap between the vocational training given in the high schools and the work of the agricultural college of the university. The Commission favors a careful study of civic needs with a view to the development of a special course designed to continue the education of high school graduates in agriculture, supplemented and extended by general studies in fields that contribute most to intelligent leadership in rural life. Such a course, beginning on the junior college level, should be located in a thriving farming community, from which it should draw its chief inspiration and in which it should find its most important problems. It might be located at Davis or Fresno or in connection with some other institution; but it should maintain its own integrity as a liberalizing agency in a field of paramount

importance to our social well-being. What has here been said concerning agriculture applies equally to other occupations, concerning which detailed studies should be made.

*Junior College Vocational Education.* With considerable care the Commission has given attention to another aspect of this argument, strongly urged by both the lay and professional representatives of two important localities in the State seeking the development of senior colleges. It is argued that there is a stage of training in a considerable number of semiprofessions above the junior college but below the true professional school.

Since, however, vocational education on the junior college level is still in an early and experimental stage.

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*21. The Commission recommends that no experimentation in the field of semiprofessional or occupational training on the senior college level be undertaken until it can be demonstrated that the junior college does not offer the solution of the problem.*

To be sure, the difficulties involved are not perceived to be serious by the proponents of senior college vocational training, but it is not without significance that in the two communities in question the junior colleges have attempted no considerable program of development of vocational education. They have not had, therefore, close and responsible experience with the difficulties of intermediate vocational training which are general to the junior college system.

## *2. The Graduate School.*

The provision of advanced or graduate work beyond the baccalaureate degree involves a very considerable heightening of both the quality and the cost of the education given. Both through State appropriations and large voluntary endowments provided by the citizens of California the scope and quality of its work in research have brought the University of California unusual eminence among American universities and rare eminence among State universities in particular. In addition to its activities in the field of research, the University has carried on in its postbaccalaureate work two other responsibilities auxiliary and related thereto: first, advanced professional training in many lines; and, second, intense work in the arts and sciences advancing to the A.M. or its equivalent and, in more highly selected cases, proceeding to the doctorates, and devised for the training of teaching scholars for the high schools, junior colleges, and the University System. It will thus be seen that the postgraduate level of study is by no means homogeneous.

*The Doctorate.* The question has been raised in California whether the graduate school should be superimposed upon the senior college at the University of California at Los Angeles. In so far as this proposal carries the implication that the central and essential function of a graduate school is research and the professional training of advanced students in research, the Commission is of the negative opinion. It will be many years before work for the doctorate in philosophy will need to be given elsewhere than at Berkeley. But these statements should not be construed to express any notion that there should be a limitation upon the research activities of the members of the faculties themselves. Duplication of the Berkeley facilities, or of similar facilities in somewhat different fields, is a task requiring vast expenditure, such help in endowment and gifts as the institution at Berkeley has had, and a long period necessary for maturing. With three other institutions on an endowed basis developing facilities on this level, two of which are at, or near, Los Angeles, the necessity is not pressing nor will it be in the immediate future.

*The Master's Degree.* The situation is quite different as regards advanced study in the arts, sciences, and letters carried beyond the bachelor's degree to the master's degree, involving a year or a year and a half of advanced study. While such work grows increasingly

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rigid in its requirement of superior technique, it is not professional training where the essential element is

research. The real line of demarcation between senior college work and the true graduate school has moved upward approximately a year or a year and a half from the achievement marked by the bachelor's degree to that of the master's. The work preceding the master's degree and its conduct by the faculty is much more closely related to senior college work than to true graduate work. There is no such gap between work for the A.B. and work for the A.M. as lies between the work for either of these two degrees and that for the doctorate in research.

The Commission believes, therefore, that it is time to recognize that the upper division of the old four-year college has been extended upward so that it approximates a three-year unit for an increasing number of students.

This fact needs to be recognized in university organization and management. The State of California is responsible in large degree for the impetus that has brought this about, for its early example of requiring high school teachers to pursue five years of education beyond the high school has greatly increased the fifth-year attendance in the University of California and in other California institutions. The movement has spread over the country until it amounts to a national tendency, the effects of which on postgraduate study have been more or less similar to those noted within the State.

The well-accredited, independent small colleges, largely restricted to teaching the arts, sciences, and letters, have responded to this upward projection of function. Approximately 85 per cent of the small colleges accredited by the Association of American Universities now grant the master's degree to selected students in selected fields, and the work is actually administered by the same personnel as grant the baccalaureate degree. A few universities also have tended to recognize the new line of demarcation on the basis of the facts, arguments, and precedents suggested above.

*22. The Commission recommends that the University of California at Los Angeles should ultimately be developed to a point where it awards the master's degree.*

That this is not possible in the present financial situation in the State is obvious. The development should be slow—a field at a time; work of this advanced quality requires a gradual and deliberate development of both teaching staff and facilities.

The State teachers colleges now offer a two-year professional course for the training of elementary teachers, and a year's advanced professional training for supervisors and administrators. Although all the teachers colleges, in theory, and a few of them in fact, are offering in the restricted professional fields of supervision and administration the fair equivalent of the master's degree as now generally given, they are not permitted to issue more than a certificate.

*23. The Commission recommends that teachers colleges be permitted to grant the degree of master of arts in education for advanced study in specially assigned fields whenever, in the judgment of the authorities of the university system, they are competent to do so.*

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Advanced work leading to the master's degree in the field of general school administration, beyond the training of elementary and junior high school supervisors and principals, should be reserved to the University of California at Berkeley.

It is the general opinion of those in charge of the teachers colleges that these institutions should not aspire to train for research in education leading to the doctor's degree. In this judgment the Commission concurs. It favors reserving this work to the School of Education of the University of California at Berkeley.

*3. Professional Education.*

The professional schools and curricula of the university system constitute the third large group of activities, which together with the senior colleges and the graduate school comprises that complex institution called the university. The portion of this field that does not pertain to the training of teachers and other educational officers is not subject to any intense controversies at the present time. Three phases of professional education, however, call for comment: provision and distribution of facilities; articulation with the common schools; and the selection of an adequate supply of professionally trained men and women for the service of society.

*Provision of Facilities.* The demand for duplication of facilities for professional training under State appropriations has not been insistent, and public pressure of a local or regional sort has therefore not launched an unwilling university upon uneconomical and inefficient duplications except in the single field of training for service in the common school system. To this exceptional field of current controversy the Commission gives special attention on other pages. In the meantime, it presents a few observations and suggestions concerning the general field of professional education and certain specific phases which attract the attention of the critical educationist.

*Professional Training Costly.* The provision of even a single full complement of university professional schools and curricula is one of the most expensive of educational undertakings. They should be duplicated at other places than the central point only with the utmost caution and after the most meticulous survey to determine whether the need of duplication exists. In the nineteen states where the separated universities and land grant colleges subsequently termed State colleges, are or have been managed under separate boards, the most grievous source of inefficiency and waste of public moneys is found in the unnecessary duplication of professional curricula. Thus far, California has partially escaped this unhappy result because the second center of university training at Los Angeles was developed under the same Board of Regents as is in charge of the university at Berkeley. If, however, the entire present situation, including teachers colleges, be regarded from the point of view of a single university system, all the evils of early, scattered management and recent dual board control are egregiously manifest. To this topic the Commission returns later.

*Duplication in Legal Education.* One instance of duplication of professional function is in the field of law. Under the jurisdiction of

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the university, subject to legal restrictions, Hastings College of the Law is maintained at San Francisco and the School of Jurisprudence at Berkeley. This duplication on two sides of the bay is without adequate warrant from the point of view of efficient and economical organization. The Commission, although realizing the legal and other difficulties, calls the attention of the Board of Regents to its very definite responsibility for the reorganization and consolidation of these two professional schools.

*University and Common Schools.* Turning, now, to the problem of articulation of the university with the common schools, and of transition upward, the Commission first calls attention to the fact that the points of entrance to professional curricula and the length of training provided, always constitute a serious problem in university organization. When these items, particularly the points of entrance to the State University, are compared with similar provisions in other western State universities, and even with privately-controlled universities in the State of California, particularly Stanford University, the conclusion is justified that the University of California, an integral part of the whole public educational system, has been less concerned than it should be with articulation with the schools below it. It has not fulfilled its obligation of partnership with the rest of the State schools. The professional schools and curricula of Stanford University in no case begin before the close of the junior college period, which, in California, is assumed to represent the conclusion of general education. This is true even with respect to engineering. But it is not true for the University of California.

A single instance of the difficulties created by weak articulation between the common school system and the university system may be mentioned. The place of engineering in the University of California, with its

beginning in the freshman year, affects the junior college system of the State. The vast majority of these junior colleges are largely compelled to imitate the first two years of university engineering work. The result is that small classes and high cost are unnecessarily forced upon the taxpayers of local communities. This, and other instances of faulty articulation (commerce, dentistry, pharmacy, mining) should be a subject of inquiry by the State Council for Educational Planning and Coordination.

The third problem in this connection is the adequate supply of professionally trained men and women for the service of society. There is much discussion of the assertions that too few or too many persons are being educated for the higher professions at large expense to the State and to the individual. Because such professions can utilize only a limited number of individuals the real problem involved is the maintaining of an approximate equilibrium between supply and demand. An extreme in either direction creates undesirable social effects.

The number of practitioners needed in any one profession can never be accurately determined. At best the number trained for a particular profession must be safely larger than the most accurate estimate, so that possible individual failures may be rejected and uncontrollable inequalities of geographical and social distribution may

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not exact too high a price from sparsely populated regions and less fortunate economic groups.

The service that a State university system should render through its professional schools and curricula is not merely quantitative. It is first of all qualitative. A university's first obligation is to select and educate those who give promise of becoming the ethical and scholarly leaders in their professions. The training of adequate numbers is an important but a secondary university obligation.

*24. The Commission recommends that the Legislature take action conferring upon the Board of Regents of the university system the sole right to grant charters to institutions of higher education, and that such charters shall be recommended to the Legislature by the Board of Regents only after study and report by the State Council for Educational Planning and Coordination.*

The State university is in duty bound to set a standard of education and service that will protect that portion of society that has the good sense to be discriminating.

*Supply of Professionals.* After canvassing all the obligations of a State university, the university may have some assurance as to its policy and provision in the establishment and location of professional schools. It may then proceed to determine how many students should be enrolled in the beginning classes and how many should be graduated; and, finally, of what probable quality they should be in terms of previous general education, special preprofessional education, and the length of the professional curriculum.

*25. The Commission recommends that questions concerning the proper number of persons to be included in professional training be referred by the Board of Regents, before final decision, to the State Council for Educational Planning and Coordination for preliminary discussion and report.*

The theory of limitation of numbers for those entering each type of professional education should be accepted for all professional fields. At present the condition arising from dual control within the State university system renders it impossible to say that the State has any clear general policy in the matter. The numbers of students admitted to studies utilizing laboratory and clinical facilities are determined by the quantity of facilities—for example, the number of laboratory benches or places—and not by the probable number of students that the State needs to have preparing themselves for particular professions. This, to be sure, is limitation of professional students, but not on a basis of social needs. A far better way to accomplish the end scientifically would be to have the State Council for Educational Planning and Coordination determine the approximate needs of

the State respecting each profession, disseminate this information widely so as to indicate what the general situation is, and thereby so far as possible attain voluntary limitation of numbers of candidates for professional work and also a voluntary sorting of such candidates among the various callings.

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Current testimony seems to indicate that the establishing of State teachers colleges has been partly the product of geographic-political considerations rather than of thoughtful determination of needs. The California Polytechnic School at San Luis Obispo seems to have been a similar product. The cost of such institutions, which can not always be justified after they have been put into operation, emphasizes the worth of State planning.

## **IV Certification; the Education of Teachers**

The licensure and education of teachers, the Commission believes, are fundamental to the maintenance of effective instruction at all levels of education within the State. The certification of teachers represents a minimum standard. The education of teachers goes far beyond this minimum.

### **A. State Certification of Teachers.**

It must be recalled that the State Board of Education has general direction and supervision of all the common schools of the State. It embraces all general community schooling, up to and including education on the junior college level, and also including such special schools and specialized vocational curricula as may be properly supplemental to its main function of socializing all the different kinds of students enrolled in the common schools. The Board is responsible for formulating and effectuating all the fundamental and general policies which should control the function and procedures for such schools; and for the supervision of all planning which involves financial and other provisions for an efficient and economical distribution of school facilities, which will enhance equality of opportunity in every part of the State.

In addition, it has certain large and important ancillary duties, chief of which is the recruiting of an adequate and competent staff of teachers and other educational officers needed for each level and type of education. Its legal method of controlling the quantity and quality of teacher supply is through licensure or certification.

*26. The Commission recommends that no teacher or other educational functionary should be hired for service in any tax-supported school except under legal license issued by the State Department of Education; that all county, or other local certification be abolished; and that no further life certificates be issued.*

Certificates should be issued for employment within specified fields of service, upon the basis either of recommendation from accredited institutions or of examination, or both. In the case of teachers trained outside the State, the present method of licensing should be continued; it combines acceptance of training outside the State wherever feasible, with supplemental examination or study in accredited institutions within the State.

The first certificates should be issued for a probationary period and should be renewable for such subsequent periods as the State Department may determine, on the basis of successful experience and additional professional training if such be deemed necessary.

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*27. The Commission recommends that with these fundamental considerations in mind, the State Department of Education should formulate an inclusive and stable policy and plan for the recruiting and licensing of educational functionaries for all types of service required by the common schools up to and including the junior college.*

Where common schooling on the junior college or collegiate lower division level is delegated to the management of the university system, the teachers and officers employed therein should be free from the requirements of State licensure with the understanding that the standards maintained by the managing board in control shall not be lower than an approximate, but not specific, equivalent to those required by the State Department of Education in schools of similar level directly under the jurisdiction of the State Board of Education.

*Certificates.* The following certificates are indicated:

1. A credential to cover teaching in the kindergarten and primary levels, grades up to 3, inclusive.
2. A credential to cover teaching at the elementary level from grades 1 to 9, inclusive.
3. A credential to cover teaching at the secondary level, with emphasis as justified, upon high school teaching, from grades 7 to 14, inclusive. This credential should indicate the major fields of teaching competence (e.g., social science, literature and language, science, physical education, foreign languages preferably by name, art, home economics, mechanical and industrial arts, etc.).
4. A credential to cover teaching at the secondary level with emphasis as justified, upon junior college teaching, from grades 9 to 14, inclusive. This credential should indicate the major fields of teaching competence as suggested above.
5. A credential to cover supervisory competence in fields and at levels for which the teacher is already certificated.
6. A credential to cover administration.
7. A credential to cover competence in such special fields of staff work as counseling, research, assisting in administrative capacities, etc., to apply to all levels.

This scheme of credentials purposely provides certain overlapping features which are necessary for the period of adjustment to the new type of school organization.

#### **B. State Policy and Plan for the Education of Teachers.**

*28. The Commission recommends that the State Council for Educational Planning and Coordination survey the field of teacher-education within the State, determine the number of institutions which should be devoted to this purpose, establish a policy and plan for the training of all educationists, and take into account the probable numbers and quality of such persons as society may need for the various educational services to be performed for the system of common schools.*

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Once this information is made available to the regents of the university system, and a well-defined policy decided upon, they can allocate among public institutions the type or types of professional training each is to perform, and accredit them for the service. The regents may then act to close or to put to other uses any institution which by reason of location or other causes can not be made to function efficiently and economically in the field to which it is at present dedicated. Any limitation of numbers that may prove to be desirable may be accomplished by guidance on a voluntary basis in the case of individual candidates according to their own desires and especially their own aptitudes on the one hand, and the needs of the State as a whole as manifested by information collected by the State Council on the other.

Where privately controlled higher institutions are competent to perform one or more of the specific teacher-training functions, these institutions may be permitted to apply to the State Board of Education for accreditation within a given field. It must be recognized that here, as elsewhere, privately controlled as well as

publicly controlled institutions in the university system are part of the educational resources of the State as a whole.

While the State Department of Education must place its first reliance for the education of teachers upon publicly controlled institutions, it should by no means fail to utilize privately controlled institutions in the public service where these are adequately equipped to give the competent professional education required for licensing. To ignore these privately controlled institutions, which draw their support from the voluntary contributions of society, is merely to necessitate enlarged facilities in publicly controlled institutions, to increase the tax burdens of the State, and at the same time to weaken the support of private institutions from fees and endowments which now relieve the taxpayer.

In general the policies in connection with privately controlled institutions should follow the lines of differentiation in the professional training of teachers which hold in tax-supported institutions; specifically, four-year colleges or senior colleges of university type should be restricted to the education of teachers and functionaries for the secondary schools, and only in special instances should they be permitted to accredit for educating teachers in the kindergarten and elementary fields.

The services that the public school system requires determine the need in attracting and selecting teachers, educating, and licensing them. The whole problem should be referred by the State Board of Education to the State Council for Educational Planning and Coordination to ascertain and analyze the facts. The Commission could not within its limited time present such highly specific statements and recommendations as the situation requires. But on the basis of the large number of available facts it was able to collect, it wishes to present certain given statements of fact and the recommendations appropriate thereto.

Six months ago it was obvious on the basis of facts collected by the State Department of Education, the appointment bureaus of the university and teachers colleges, and the placement sources of the California State Teachers Association that there was within the State an oversupply of high school teachers and an impending oversupply of elementary teachers. With retrenchment programs in order, the

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situation will be further aggravated in 1932-33. Yet no planned effort has been made to bring into operation a due adjustment of supply to demand. Only the economic forces are at work. Adjustment is the responsibility, not of the individual, but of the State.

Two remedial policies suggest themselves at once:

The first is to restrict by raising the standards of professional education, more particularly through a lengthened period of preparation. This is not favored. The Commission is of the opinion that the remuneration now paid the teachers would not justify the additional personal investment involved.

The second is to restrict by not utilizing the teacher training agencies now least qualified to perform the public service required. This is favored by the Commission.

When subdivision and special emphasis in the training of teachers were introduced into the system of state-supported higher schools, the education of secondary teachers alone was assigned to the senior colleges of the university, and the education of elementary teachers alone to the State teachers colleges. If the distinction is not to be applied to privately controlled institutions special care should be taken in accreditation.

Historically the training of elementary teachers was assigned to special normal schools or teachers colleges because the spirit and method of existing academic colleges and universities were unfavorable to the training of teachers of the youngest children.

*29. Recognizing that the training of teachers for the elementary certificate requires a special type of interest on the part of a faculty not usually present in university departments, the Commission strongly*

*recommends that no further training of elementary teachers be done at the University of California at Berkeley.*

Those students now enrolled at the University of California at Berkeley in preparation for the basal elementary certificate should be allowed to complete their work, but no new students of this type should be enrolled.

*Special Curricula.* Mere inspection of the lists of special curricula offered by the several State teachers colleges convinces the Commission that the State Board of Education has probably been too lavish in authorizing the preparation of teachers for special fields at the several teachers colleges. This has led to unnecessary duplication of facilities at increasing cost to the State. The Commission believes that a better quality of work could be performed were these authorizations allocated to a limited number of institutions.

*30. The Commission recommends that the whole matter of the allocation of specialized curricula to the several State teachers colleges be opened for review, and that reallocations of instruction in special fields (e. g. home economics, music art, etc.) be made by the Board of Regents of the university system after study and recommendation by the State Council for Educational Planning and Coordination.*

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*31. The Commission recommends that the eight State teachers colleges do not enroll students beyond the junior college division for professional or academic curricula looking forward to preparation for basic secondary school certification, but transfer all students of such intention to the appropriate colleges and universities.*

It is legitimate to accept such students in the junior college but not in the senior professional college for the preparation of elementary teachers. The secondary school field is now overcrowded. The capacity of the University and the privately controlled colleges and universities of the State accredited to perform this service are ample and probably excessive. *It would not be sound policy to add to this field the productive capacity of eight more State teachers colleges.*

*32. The Commission recommends that each of the State teachers colleges as fast as it has finances and facilities, so develop its present lower division as to perform all the functions of the junior college which may be appropriate.*

The lower divisions or first two years of all the State teachers colleges should become junior colleges in fact, conferring the title of Associate in Arts at the completion of secondary education. From the point of view of efficiency and economy in the use of existing equipment, already expanded beyond the State's need for the professional education of elementary teachers, such further use of the teachers college organization and equipment is highly desirable.

*Elementary Teacher Training.* An examination of the courses offered for the basic professional training of elementary teachers in the California State teachers colleges indicates a tendency toward diminishing the quantity of preprofessional and professional work especially useful to the successful practitioner in the teaching profession. Apart from psychology and tests and measurements, various types of courses providing for curricula organization and implying teaching procedure, and the practice teaching and other minor courses, required by law, too little seems generally to be offered in the field of strictly professional study. So far as the professional curricula indicate, the elementary teacher has been regarded as functioning chiefly within the classroom, where the academic arts and modern school activities are utilized to bring about a development of individuals and groups. While the Commission is chiefly concerned with large state-wide policies and functions, it can not refrain from suggesting that obvious gaps appear in the professional education of teachers as now given.

The curricula of the teachers colleges do not amply provide for, first, historical and comparative approaches to the study of education peculiarly valuable in revealing the sociological elements in the field; and, second, an understanding of all the school situations and functions beyond each individual's field of specialized responsibility, appreciation of which is fundamental to mutual cooperation and unity of effort in school organization.

Elementary teachers and supervisors who are competent to carry their work to advanced stages and show mastery, should be allowed to do so in the teachers colleges. When they have met the generally

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accepted standards of this level of senior colleges or university work, they should be granted the degree of Master of Arts in Education, as previously indicated.

*33. The Commission recommends that special teachers of agriculture for the secondary schools, including the junior college, should be educated by the University of California at Davis and elsewhere.*

This is plainly a direct obligation. With the superior facilities of that institution in all the branches of scientific and practical agriculture, with its specialized agricultural stations distributed over the State, and with its facilities at Davis, not to mention a University School of Education ready to cooperate in the service, it is difficult to understand the apparent neglect or unwillingness of the university to render this service effectively.

*Agricultural Teachers.* This failure of the university is apparent from the testimony of those connected with vocational agriculture in the high school. For years past, approximately seventy per cent of the teachers in this field have been recruited for California high schools from educational institutions outside the State (Oregon, Washington, Nevada, Utah, and elsewhere). In order to utilize the agricultural graduates of the University of California, the State Department has been compelled to organize a cooperative training course in connection with the California Polytechnic Institute at San Luis Obispo, because it could not get the work done effectively elsewhere. Thus what seems to be a State junior college is being transformed into a post-graduate teachers college training agricultural teachers for secondary schools. A ninth teachers college is superfluous. The obligation to educate teachers of vocational agriculture should be taken over by the university, in spite of the present complete absorption in research of a distinguished agricultural faculty. Research in agriculture, as in other fields, has a certain primacy in any true university, *but a State university has other obligations to agriculture beyond that of research.*

The Commission wishes finally to express strongly a view which it has suggested or implied throughout its discussions, namely, that neither all the teachers colleges nor all the schools of education in colleges and university, both public and private, should be of one pattern of function or organization. Apart from curricula leading to the several main basic certificates for teaching, the other special fields of professional education, either parallel or advanced, should be assigned to particular institutions and probably never to all. Such institutional specialization has been recognized in the past, though the sharp edges of this individualization have been greatly dulled of late by the recent tendency of every higher institution to do what every other does. Somewhere, but not everywhere in the State, the curriculum needed can be maintained with a highly effective staff and equipment and at the lowest possible and least duplicated cost to the State as a whole.

Two other problems that are of concern in the question of teacher efficiency remain to be considered: Tenure and retirement.

*Teacher Tenure.* The teacher tenure law of the State has failed to realize the ideals of its proponents. Although the present controversies over the effects of this law concern mainly elementary and high

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school teachers, the problem may involve a considerable number of junior college teachers in the future. Therefore

34. *The Commission, regarding the present tenure law as now being reviewed by the courts as ineffective, recommends that this be one of the earliest subjects to be dealt with by the Council for Educational Planning and Coordination with the general recommendation that this Commission does not favor the enactment of permanent tenure laws which interfere with efficient administration of public schools.*

*Teachers Retirement.* Finally, as a means of egress from long active professional work

35. *The Commission recommends for the whole State educational system (excepting the University of California) a sound retirement system upon an actuarial basis to include all officers, teachers, and employees.*

Such a system should be free of the taint of final average salary, and even from average salary over the whole period of service, as a basis for providing retiring allowances; should be joint contributory, the State to duplicate contributions of members; and should guarantee a rate of interest from the beginning of membership in the system. Its establishment should be preceded by competent actuarial and social study. The system should provide options in the amount and nature of the retiring allowance, representation of members upon the directing board, and opportunity for migration within the State as well as transfer into and out of the system. It is not essential that institutions at the university level be arbitrarily included in this proposed state-wide teachers retirement system, inasmuch as other provision is now in force to this end at the university. It is essential, however, that teachers in other parts of the University System than those situated at Berkeley and Los Angeles have their retirement assured on a joint contributory basis.

Such a retirement system, the principles governing which are widely recognized and clearly defined, will ultimately assure the State of opportunity to retire in dignified and modestly comfortable circumstances those men and women who, having taught in the schools of the State, reach a time of life at which their work should be handed over to others.

## **V State Finance and Education**

The Commission understands that when the Legislature requested the Carnegie Foundation to make recommendations as to suitable future policy and plan of operation for State education above the high school, one of its reasons was the current public fear that new educational expansions would entail mounting expenditure that would strain the financial ability of the State and of its taxpayers.

In consequence, throughout the Commission's deliberations, the financial issue has been omnipresent. The great increase in expenditures for education in the State of California during recent years, and the presence of an economic situation which is crippling the financial capacity of the taxpayer and the State, necessarily suggest to the

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Commission that the present and the near future is a time not for new and expensive undertakings but for judicious curtailments. At the same time, the Commission recognizes that recommendations involving long-time planning for a growing State and a sound organization and method of procedure can not be based upon the peaks of prosperity nor the depths of adversity, but on the assumption, warranted by all the basic comparative studies, that there is a stable upward trend of average economic development. Out of line with this trend governmental costs in general and educational costs in particular should not move.

The average upward trend, so far as State expenditures are concerned, will be determined by a number of purely fiscal factors the relative weight of which is partly economic and partly a matter of State policy. The items which are matters of State policy are: first, what portion of the total tax raised in the State shall be levied by the State and utilized for state-wide services?

Second, by what system, or systems, of taxation shall the State raise the moneys for performing the services to which it is committed by the constitution, statutes, and other policies previously established?

Third, what is a fair proportion of State funds which should be allotted to education, as compared with other State services?

Fourth, to what degree should State income from specific tax sources be definitely allocated to specific State functions, and to what extent should legislatures be permitted to make readjustments or reallocations to meet changing needs and circumstances?

The Commission is not prepared to pass upon these larger fiscal policies of the State, which expert bodies are now adequately considering, and upon which the body politic must make its own final decision. Could this educational Commission rearrange the taxation and fiscal policy of the State, it might make somewhat different recommendations as to educational policy, plan, and procedure from those it now presents.

The Commission assumes that the State will maintain its present fundamental fiscal policies, in all the important items mentioned above save such amendments as will keep a State fiscal system evolving step by step toward those changes that will be cumulative rather than revolutionary. On this assumption the Commission, keeping constantly in mind the necessity for economy and efficiency in organization and administration will present fiscal recommendations incident to the educational policy and organization which it proposes.

*36. The Commission recommends that those educational services to which the State has already committed itself be brought to a high state of effectiveness before any major expansion shall be considered.*

In illustration, the present junior college system must be made effective before further expansion of education on higher levels is even considered. Again, vocational education at the secondary level including the junior college must be made more effective for society and the population served before considering an extension of *still higher occupational training for more restricted groups*. The Junior College Fund, created by the Act of 1921, has proved to be inadequate to provide

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State aid of \$100 per pupil in average daily attendance, even with such additional appropriations as have been possible from the general fund.

*37. The Commission recommends that the system of charging educational costs, particularly of junior college education, be more equitably distributed as between communities and as between the State and communities.*

The system of financing the junior college level of education, as has been suggested elsewhere in this report, is full of unfair discriminations. In one place the student pays practically nothing, in another place fifty dollars a year while the taxpayers, State or local, pay the rest. In one place the State pays all the expense, in another all but fifty dollars tuition, and in still others it merely aids as it would a high school or somewhat more in the case of junior college districts, and local taxation bears the major burden.

*38. The Commission recommends that the whole system of financing education on the junior college or lower division level be completely changed, so as to make costs to the State, the local community, and the parent or student equitable as between one institution and another, one locality and another.*

*Charging Back.* The system of charging back costs is now followed only in the case of district junior colleges. Such a system is fair and equitable. The policy should be extended to cover all institutions on the junior college level, aided or supported by State appropriations. The amount of charge for junior college or lower division instruction should be the same in all cases.

39. *The Commission recommends that for every student attending an approved junior college (district colleges, departmental junior colleges, lower divisions included in the State university system) the State shall contribute out of general funds a certain sum annually, and that an additional sum shall be paid by the county of domicile to be collected by the State Department of Finance and paid by that department to the junior college attended. In such a method of charging, the State should pay \$100 toward the cost, \$50 to be charged back to the county of domicile, these two amounts to be used to provide a minimum program in accordance with specifications recommended by the Council for Educational Planning and Coordination. The cost of extending the program above this minimum should be paid by the district in which the junior college is located.*

*In cases where the district provides the junior college plant, for each student domiciled outside the district in which the junior college or lower division is located, an additional \$60 should be paid by the county of domicile on account of rental charges.*

*When a student attends the lower division of the University of California or of a teachers college the \$60 rental charge should be paid by the county of domicile to the State.*

40. *The Commission recommends that all students enrolled in the university system, above the junior colleges*

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*or lower divisions, including those preparing for teaching, be charged increased tuition fees.*

*Fees.* The Commission does not attempt to determine the amount of the fees to be thus charged, or the increases, if any, implied, as between the various professional courses and schools. It suggests, however, a minimum upper division fee of \$40 a semester (\$80 annually), and a minimum professional school fee of \$40 a semester (\$80 annually), to include any incidentals at both levels. Professional courses involving an unusual cost require proportionate fees, such as are now charged in practice at the university.

Although the Commission's reference includes only the upper levels of public education in California, it expresses the opinion that a uniform principle and a uniform method of applying it should underlie all State aid or support of public education in the State, with suitable deviations in the interests, not of regions or localities, but of the citizenry as a whole. Minimal standards as to size, attendance, ability to support, and curricula, to be proposed by the Council for Educational Planning and Coordination are, of course, implicit in any question of State aid. Probably the present is not a suitable time to make drastic changes to effectuate this principle and method.

The Commission believes that a census basis offers a sound approach for computing amounts of State aid in lower divisions and in junior colleges of both types. This method is grounded upon an average of the number of students enrolled for ten hours or more work each week for each semester, the census to be taken one month after the opening of the semester.

41. *In view of the fact that only at the university is a nonresident fee charged to students domiciled outside the State, some of whom might attend a junior college or the lower division of a teachers college without paying a nonresident fee, the Commission recommends that a special fee of \$150 be charged to all nonresident students enrolled in public institutions of higher education including the junior college level (lower divisions of the university system, junior colleges).*

In the autumn of 1931-32, a total of 1341 nonresident students were enrolled in the junior colleges and in the lower divisions of the university and the teachers colleges of California. Of this total, only 382 attended the university, where a nonresident fee was charged. Had the plan proposed been operative the net income to the State from junior college and teachers college nonresident tuitions would have been \$143,850.

On the principle that junior college education wherever offered by the State, should be offered on identical terms to all those qualified to avail themselves of it, the Commission points out that either (a) the term fee of \$25 (\$50 annually) now charged in the lower division of the university should be exacted from all public junior college students throughout the State, or else (b) this fee of \$25 should be abolished. The former course (a) would bring perhaps \$1,160,850 net into the funds of the State at the expense of the individual student

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and his family. The latter course (b) would increase the State's direct payments for education by about \$389,000.

*Free Education or Fees?* The principle of free public education has been universally recognized. In California, the junior college has been legally designated an integral part of the secondary school system.

*42. The Commission recommends that, if possible, the State continue its policy of furnishing free tuition to residents through the junior college level.*

If, however, financial reasons make necessary a choice between sacrificing the quality of the educational program of the junior colleges and imposing a fee upon all junior college students, the Commission would recommend that the fee be imposed.

*43. The Commission recommends that students in the "junior college" (lower division) of the University of California be treated as regards fees exactly as students in other State junior colleges are treated.*

*Junior College Salaries.* The Commission has heard much concerning alleged inequalities in the salaries paid to teachers as between one junior college and another, and as between men and women teachers. It has accumulated a considerable amount of data in this connection. Apparently the present situation as regards junior college salaries is not only unsatisfactory but positively injurious to the quality of education at this level.

*44. The Commission recommends that the State Board of Education prepare uniform and comparable salary scales for teachers in all junior colleges to be presented to all local employing boards throughout the State.*

*Curtailments.* As first steps toward the curtailing of unnecessary educational expense, the Commission presents recommendations dealing with two State schools.

*California Polytechnic Institute.* Inasmuch as the cost per student for education now being furnished by the California Polytechnic Institute at San Luis Obispo is exceptionally high (\$355 per student), and inasmuch as the functions which it is performing are not different from those which are being performed at many junior colleges and high schools throughout the State, the Commission after the most careful consideration believes that in the interests of economy this wasteful duplication should be eliminated.

*45. The Commission recommends that the California Polytechnic Institute at San Luis Obispo be abolished as a State institution. The Commission believes that the facilities now at San Luis Obispo might be properly utilized for junior college work, custodial work, or some other general State purpose.*

*California State Nautical School.* The California State Nautical School at Tiburon is another example of the tendency to expand at large cost educational facilities for a small clientele. A personnel for

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the merchant marine service could be more economically and perhaps more effectively trained through a system of apprenticeship under private auspices cooperatively organized. Although students were first admitted to the school in 1931, since 1929 the institution has cost the State about \$200,000. Supplementing this sum, \$75,000 of Federal subsidy has been expended, making a total of some \$275,000. Thus far the school has registered only 116 students. In view of these considerations

46. *The Commission recommends that the California State Nautical School at Tiburon be abolished.*

Other possible curtailments are involved in many of the Commission's recommendations on policy. The Commission has not had sufficient time to study and report upon the detailed application of those policies, which, at appropriate points throughout this report, are referred to the State Council for Educational Planning and Coordination for fact-finding, analysis, and recommendation: among them, the number and distribution of State teachers colleges; the limitation and reallocation of their functions; and the redistribution and consolidation of junior college functions and facilities.

47. *The Commission recommends that in order to avoid the premature or unwarranted expansions which have in the past been the costly product of enthusiastic local or group aspirations, and to avoid wasteful duplicate operations of separate boards in the same fields, all matters involving educational finance be referred before action to the State Council for Educational Planning and Coordination.*

In conclusion, the Commission reemphasizes the fact that it has studied the higher educational situation in California from the point of view of the State at a whole. Its specific recommendations are therefore presented not as suggestions concerning isolated phases of the general situation, but as interrelated and interdependent essentials constituting a unified State program for higher education. No individual recommendation should be omitted or modified without calculating its effect upon all of the others. The educational efficiency and economy sought by the Commission in its labors are based upon the concept of a thoroughly integrated State system of education.

The economical and efficient integration which the Commission has sought in all its deliberations depends upon the effectiveness with which the State Council for Educational Planning and Coordination is organized in the first instance and maintained thereafter in competency. The factors that will determine its success are adequate fact-finding, careful analysis, full and unbiased discussion considerate of every interest of the State, whole-hearted cooperation of all governing bodies in effectuating the Council's recommendations, and the full informing of the public.

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## **Part Three: Material Selected From Staff Reports**

In Part Three is presented a series of charts and tables designed to illustrate a few of the important topics mentioned in the text of the report. An attempt has been made to include only material not readily available from other sources. A complete file of these special studies together with statistical data is in the offices of the Carnegie Foundation for the Advancement of Teaching. The contents of Part Three are as follows:

### **TABLES**

1. *Educational Service, 1920-1930.* The number of persons enrolled and taught on the various educational levels in publicly controlled and privately controlled institutions, compiled from State Department of Education Biennial Reports, United States Office of Education Biennial Surveys.
2. *Holding Power of California Junior Colleges as Revealed by Follow-up Study of Class Entering September, 1929.* A summary showing the numbers of recommended students and nonrecommended students entering junior colleges September, 1929, who completed one, two, three, and four semesters, and the number who transferred to other colleges, compiled from individual records furnished by the officials of the junior colleges.
3. *Factors Determining Unit Costs in Junior Colleges for the First Semester, 1931-32.* A summary of a study of unit costs in California junior colleges presenting institutional averages for salary, class size, teacher load, and unit cost based upon enrollment hours, units attempted, and units granted.
4. *Number of Courses in Junior Colleges as of October, 1931.* The number of courses in which students

were actually enrolled during the first semester of the year 1931-32, compiled from data submitted by officials of the respective junior colleges.

5. *Number of Students Enrolled in Junior College Courses as of October, 1931.* Compiled from the same sources as Table 4.

6. *Distribution of Junior College Students by Institutions and Counties, 1931-32.* A summary of the number of students in junior colleges and in the lower divisions of the University of California and the State teachers colleges domiciled in each of the counties, compiled from data furnished by the several institutions.

7. *Enrollment in California State Teachers Colleges by Years and Curricula, First Semester, 1931-32.* A summary by years of the students enrolled in credential curricula and in pre-secondary curricula, compiled from data furnished by the several institutions.

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8. *Census of the Professions in California, 1910-1930.* A summary of the number of persons engaged in the several professions, the numbers in each one hundred thousand population, and the percentage of increase since 1910.

## CHARTS

I. *Sources of Revenue and Allotments for Education, 1920, 1925, 1930.* Compiled from data furnished by the State Department of Finance.

II. *Holding Power of Junior Colleges.* (See Table 2.)

III. *Average Annual Salaries Paid in California Junior Colleges, First Semester, 1931-32.* (See Table 3.)

IV. *Average Size of Classes, California Junior Colleges, First Semester, 1931-32.* (See Table 3.)

V. *Cost per Unit Attempted, California Junior Colleges, First Semester, 1931-32.* (See Table 3.)

VI. *Cost per Unit Granted, California Junior Colleges, First Semester, 1931-32.* (See Table 3.)

VII. *Diagrammatic Representation of Proposed State System of Education.* A schematic indication of various boards and officers of educational control showing lines of direct authority or power of appointment, advisory relationships, and supervision of educational functions.

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**State Higher Education in California**  
**EDUCATIONAL SERVICE - CALIFORNIA, 1920 - 1930**  
**Table 1**

No. of persons enrolled and taught	Pre-Elementary	Elementary (1-6) (1-8)	Secondary <sup>2</sup> (Jr.H.S.) (H.S.)	Secondary (District Jr. Coll.)	Teachers Colleges	Special Schools	University	Total	Sources
Public 1920 <sup>3</sup>	32,944	500,367	162,732	-	2,721	429	13,944	712,818	# Including post-grad. High School and Departmental Junior College enrolment.
1921	36,796	543,591	195,741	-	3,848	455	17,599	798,030	(1) Supt. Pub. Inst. Biennial Report, 1920, p.189.
1922	39,775	571,678	227,334	246	6,505	457	19,234	865,229	(2) Supt. Pub. Inst. Biennial Report, 1924, p.197.
1923 <sup>4</sup>	43,674	598,777	270,094	1,427	6,859	520	22,087	943,438	(3) Supt. Pub. Inst. Biennial Report, 1926, p.322.
1924 <sup>5</sup>	51,383	662,213	306,143	2,391	7,516	399	25,707	1,055,752	(4) State Dept. Ed. Biennial Report, 1928, p.514-515.
1925 <sup>6</sup>	58,762	675,049	345,874	3,327	8,722	420	24,318	1,118,416	(5) State D. E. Biennial Report, 1930, Part II, p.520.
1926 <sup>7</sup>	68,142	691,534	381,717	3,479	10,340	594	25,375	1,183,474	(6) St. Dept. of Ed. Bulletin, 1932, No.1, State of Cal. Jr. Colleges, 1931, p. 41
1927 <sup>8</sup>	73,210	660,638	471,384	5,585	10,072	686	25,850	1,249,913	-
1928 <sup>9</sup>	77,139	667,701	533,004	7,981	10,725	684	25,837	1,335,476	-
1929 <sup>10</sup>	79,448	685,373	567,753	11,716	11,257	737	25,922	1,352,523	-
1930 <sup>11</sup>	82,442	696,729	612,517	16,918	12,079	738	25,567	1,438,640	-
1931	-	-	-	21,260	-	-	-	-	-
-	-	-	-	-	-	Commercial and business schools	Univs., colls., and professional schools	Columns 2,3,5,7.	-
Private 1920 <sup>12</sup>	1,680	21,373	6,865	-	101	20,223	11,037	39,375	(7)U.S.B.E Bulletin 1923 No. 16, Stat. Survey of Education, 1919-20, p.5-8, U.S.B.E. Biennial Survey Ed., 1918-1920, p.292, Washington, 1923, p. 556, 594, 454.

2. # # Including post-grad. High School and Departmental Junior College enrolment.  
3. (1) (1) Supt. Pub. Inst. Biennial Report, 1920, p.189.  
4. (2) (2) Supt. Pub. Inst. Biennial Report, 1924, p.197.  
5. (2) (2) Supt. Pub. Inst. Biennial Report, 1924, p.197.  
6. (3) (3) Supt. Pub. Inst. Biennial Report, 1926, p.322.  
7. (3) (3) Supt. Pub. Inst. Biennial Report, 1926, p.322.  
8. (4) (4) State Dept. Ed. Biennial Report, 1928, p.514-515.  
9. (4) (4) State Dept. Ed. Biennial Report, 1928, p.514-515.  
10. (5) (5) State D. E. Biennial Report, 1930, Part II, p.520.  
11. (6) (6) St. Dept. of Ed. Bulletin, 1932, No.1, State of Cal. Jr. Colleges, 1931, p. 41

**State Higher Education in California**  
**EDUCATIONAL SERVICE - CALIFORNIA, 1920 - 1930**  
**Table 1**

1921	-	-	-	-	-	-	-	-	-
1922 <sup>13</sup>	996	28,527	14,841	-	200	-	10,981	54,549	(8)U.S.B.E Bulletin, 1924, No. 38, Statistical Survey of Education, 1921-22, p.6.
1923	-	-	-	-	-	-	-	-	(9)U.S.B.E. Bulletin 1926, No. 19, Statistical Summary of Education, 1923-24, p. 7.
1924 <sup>14</sup>	1,469	28,527	11,344	-	151	-	14,868	54,890	(10)U.S.B.E. Bulletin 1928, No. 12, Statistical Survey of Education, 1925-26, p. 13.
1925	-	-	-	-	-	-	-	-	(11) U.S.Office of Ed. Biennial Survey of Ed., 1926-28, pp. 428,884,727.
1926 <sup>15</sup>	-	45,147	11,910	-	222	11,294	17,692 (1925)	75,171	-
-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-
1928 <sup>16</sup>	-	43,692	15,810	-	216	-	29,043	88,761	-

Sources

Carnegie Foundation *California Study-1932* T.F.

12. (7) (7)U.S.B.E Bulletin 1923 No. 16, Stat. Survey of Education, 1919-20, p.5-8, U.S.B.E. Biennial Survey Ed., 1918-1920, p.292, Washington, 1923, p. 556, 594, 454.

13. (8) (8)U.S.B.E Bulletin, 1924, No. 38, Statistical Survey of Education, 1921-22, p.6.

14. (9) (9)U.S.B.E. Bulletin 1926, No. 19, Statistical Summary of Education, 1923-24, p. 7.

15. (10) (10)U.S.B.E. Bulletin 1928, No. 12, Statistical Survey of Education, 1925-26, p. 13.

16. (11) (11) U.S.Office of Ed. Biennial Survey of Ed., 1926-28, pp. 428,884,727.

State Higher Education in California HOLDING POWER CALIFORNIA JUNIOR COLLEGES AS REVEALED BY FOLLOW-UP STUDY OF CLASS ENTERING SEPTEMBER 1929 Table 2												
Follow-up Study of Students Entering with Recommend Status							-	-	-	-	-	-
	-	-	Transferred to Other Colleges		-	Still Attending (Autumn 1931)	-					
-	Number	Percent	Number	Percent	Number	Percent						
Enrolled September 1929	2392	100	-	-	-	-						
Completed One Semester	2238	94	65	3	10	-						
Completed Two Semesters	2055	84	245	10	19	1						
Completed Three Semesters	1506	63	31	1	37	2						
Completed Four Semesters	1360	57	140	6	167	7						
Graduated	954	40	663	28	54	2						
Follow-up Study of Students Entering with Non- Recommended Status	-	-	-	-	-	-						
	-	-	Transferred to Other Colleges		-	Still Attending (Autumn 1931)	-					
-	Number	Percent	Number	Percent	Number	Percent						
Enrolled September 1929	4416	100	-	-	-	-						
Completed One Semester	3775	85	106	2	22	-						
Completed Two Semesters	3080	68	267	6	42	1						
Completed Three Semesters	2089	45	76	2	80	2						
Completed Four Semesters	1696	38	199	5	503	11						
Graduated	713	16	381	9	94	2						

Read Table as follows: Of the 2392 recommended students that entered California Junior Colleges in the autumn of 1929, 2238 or 94% completed one semester. Of those 2238 students, 2055 continued and completed two semesters, 65 transferred to another college or university, and 10 returned to the original junior college and were still in attendance during the autumn of 1931.

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**State Higher Education in California Table 3 FACTORS DETERMINING UNIT COSTS IN JUNIOR COLLEGES, FIRST SEMESTER 1931-1932**

Junior Colleges Ranked in Order of Enrollment	Average Salary	Average Class Size	Average Teacher Load <sup>17</sup>	Cost per Enrolment Hour	Cost per Unit Attempted	Cost per Unit Granted
Los Angeles	\$1325.55	31.31	489.04	\$2.71	\$3.56	\$4.35
Pasadena	1425.70	25.99	407.64	3.50	4.87	5.84
Sacramento	1546.17	30.83	488.28	3.17	4.27	5.25
Long Beach	1468.21	27.88	437.72	3.36	4.28	5.31
Modesto	1439.76	25.38	460.81	3.12	4.13	4.80
San Mateo	1507.13	26.86	501.64	3.00	3.89	5.45
Compton	1240.51	29.14	525.01	2.36	3.13	3.81
Santa Ana	1446.86	26.21	445.38	3.25	3.92	4.79
Glendale	1492.85	25.33	414.67	3.60	4.64	5.64
Chaffey	1487.06	32.51	446.76	3.21	4.19	6.33
San Bernardino	1505.15	25.40	363.78	4.14	5.32	6.16
Fullerton	1429.95	25.43	388.13	3.68	5.17	6.36
Santa Monica	1474.59	30.49	532.77	2.77	3.59	4.55
Riverside	1434.58	20.11	294.99	4.86	6.23	6.81
Kern	1348.21	29.52	513.22	2.63	3.73	5.37
Marin	1538.16	27.65	424.37	3.62	4.84	5.59
Santa Rosa	1297.94	21.45	377.59	3.44	5.32	6.07
Ventura	1213.95	19.98	351.48	3.45	4.46	5.32
Taft	1482.13	25.76	407.35	3.64	5.92	8.81
Yuba	1322.57	18.60	307.08	4.31	5.54	7.25
Pomona	1215.67	22.2	539.91	2.25	3.12	3.47
Visalia	1313.61	30.26	505.05	2.60	2.96	3.62
Porterville	1168.57	31.76	512.17	2.28	3.24	3.81
El Centro	1315.08	24.38	344.76	3.81	4.83	6.84
Salinas	1362.44	22.94	465.53	2.93	3.90	5.80
Santa Maria	1362.88	17.79	322.63	4.22	6.44	7.93
Citrus	1342.79	28.52	444.73	3.02	3.54	4.27
San Benito	1384.65	17.35	266.59	5.19	6.21	7.47

17. \* Student-Hours per Week

State Higher Education in California Table 3 FACTORS DETERMINING UNIT COSTS IN JUNIOR COLLEGES, FIRST SEMESTER 1931-1932						
Reedley	1144.41	18.55	381.05	3.03	3.71	4.20
Brawley	1271.91	18.88	336.69	3.78	5.10	5.55
Lassen	1180.07	10.06	202.70	5.98	8.48	9.80
Antelope	1102.47	8.6	154.94	7.12	8.54	9.73
Average District	1425.57	25.28	442.49	3.22	4.24	5.19
Average Departmental	1331.75	24.39	433.01	3.07	4.12	5.27
Average Total	1411.98	25.14	441.13	3.20	4.23	5.20

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**State Higher Education in California**  
**Table 4**  
**NUMBER OF COURSES IN JUNIOR COLLEGES AS OF OCTOBER 1931**

Junior Colleges Ranked in Order of Enrollment	Biological Sciences	English	Languages (Modern)	Languages (Ancient)	Mathematics	Philosophy	Physical Sciences	Social Sciences	Agriculture	Art	Civic Health	Commerce and Law	Engineering (Mechanical Arts, etc.)	Aviation	Music	Orientation	Social Arts (Home Economics)	TOTAL
Los Angeles	19	37	38	1	16	8	35	25	-	19	7	41	45	8	34	-	2	335
Pasadena	18/cell>	21	17	3	13	1	9	23	-	11	-	33	19	-	15	1	9	193
Sacramento	9	23	17	4	9	4	16	21	-	25	-	-	5	3	36	1	-	173
Long Beach	5	16	15	-	12	2	13	21	-	7	-	18	14	-	4	-	-	127
Modesto	5	30	8	1	6	3	11	12	7	7	-	9	8	3	11	-	9	130
San Mateo	6	9	14	1	10	1	10	18	-	11	-	12	7	-	8	-	-	107
Compton	5	9	13	2	8	2	7	12	-	3	-	6	12	-	18	-	-	97
Santa Ana	4	12	8	1	6	3	10	16	-	8	-	18	18	1	15	-	4	124
Glendale	3	12	9	-	10	1	13	13	-	10	-	14	2	3	8	1	4	103
Chaffey	6	10	7	2	4	1	6	11	4	4	-	12	6	-	10	1	4	88
San Bernardino	6	1	8	1	5	1	10	9	-	5	-	10	3	1	8	1	-	79
Fullerton	7	11	13	-	9	3	8	12	-	4	-	15	13	2	8	2	6	113
Santa Monica	3	8	12	-	6	2	7	7	-	5	-	9	-	-	8	-	-	67
Riverside	10	7	8	5	5	2	10	8	-	7	3	5	3	-	11	-	-	84
Kern	3	11	8	1	5	1	9	7	-	2	-	11	4	-	4	3	-	69
Marin	3	9	9	-	7	1	7	10	-	4	-	-	7	-	5	1	-	63
Santa Rosa	6	10	6	1	8	2	11	10	2	2	-	-	2	-	7	-	-	67
Ventura	2	8	6	1	1	-	4	8	3	6	-	16	4	-	5	-	7	71
Taft	1	6	4	-	3	1	5	4	-	-	-	1	8	2	1	-	-	36
Yuba	2	6	2	-	2	1	4	5	-	2	-	8	1	2	16	1	1	53
Pomona	3	8	5	-	3	1	2	5	-	1	-	-	2	2	4	1	-	37
Visalia	1	7	3	-	1	-	3	2	-	1	-	6	2	1	5	1	1	34
Porterville	2	5	5	-	-	-	1	5	-	-	-	1	3	-	2	1	-	25
El Centro	1	5	3	-	5	1	6	5	1	1	-	8	5	-	3	1	-	45
Salinas	1	5	4	-	4	-	1	5	-	1	-	8	1	1	-	1	1	33

State Higher Education in California Table 4 NUMBER OF COURSES IN JUNIOR COLLEGES AS OF OCTOBER 1931																		
Santa Maria	2	4	4	-	3	1	5	3	-	2	-	2	-	-	2	-	-	28
Citrus	1	5	4	-	3	-	3	2	-	1	-	6	2	-	-	1	-	28
San Benito	1	5	3	-	1	2	1	4	-	-	-	-	-	-	-	1	-	18
Reedley	1	5	3	-	3	-	3	2	-	1	-	-	-	-	-	1	-	19
Brawley	1	3	1	-	3	1	3	3	-	1	-	6	-	-	-	1	-	23
Lassen	1	2	3	-	2	-	1	4	-	-	-	2	-	-	-	-	-	15
Antelope	-	4	2	-	1	-	1	3	-	-	-	1	-	-	-	1	-	13
TOTALS	138	324	262	24	174	46	235	295	17	151	10	278	196	29	248	22	48	2497
MEDIAN	3	8	6	0	5	1	7	7	0	2	0	6	3	0	5	1	0	67
PERCENT EACH IS OF LAST COLUMN	5.5	13.	10.5	1.0	7.0	1.8	9.4	11.8	.7	6.0	.4	11.1	7.8	1.2	9.9	.9	1.9	-

Fresno and San Jose Junior Colleges have been omitted because they are operated in conjunction with Teachers Colleges.

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State Higher Education in California NUMBER OF STUDENTS ENROLLED IN JUNIOR COLLEGE COURSES, OCTOBER 1931 Table 5																			
Junior Colleges Ranked in Order of Enrollment	Enrollment	Biological Sciences	English	Languages (Modern)	Languages (Ancient)	Mathematics	Philosophy	Physical Sciences	Social Sciences	Agriculture	Art	Civic Health	Commerce and Law	Engineering (Mechanical Arts, etc.)	Aviation	Music	Orientation	Social Arts (Home Economics)	TOTAL
Los Angeles	3484	1080	3877	1548	17	1002	567	1797	3023	-	1064	449	2971	1592	187	1543	-	129	20,846
Pasadena	1904	599	1415	610	43	449	185	754	1390	-	461	-	1913	290	-	512	146	298	9,065
Sacramento	1714	642	1444	801	50	423	241	722	1963	-	616	-	-	212	86	854	651	-	8,705
Long Beach	1143	264	763	632	-	302	152	555	1454	-	140	-	601	191	-	101	-	-	5,155
Modesto	800	263	1125	384	9	224	153	522	716	51	94	-	303	159	29	346	-	157	4,535
San Mateo	793	385	440	471	3	220	66	399	907	-	214	-	434	140	-	178	-	-	3,857
Compton	735	220	654	443	35	230	142	226	834	-	35	-	46	38	-	212	-	-	3,115
Santa Ana	714	144	484	252	12	155	103	299	925	-	96	-	615	161	13	239	-	54	3,562

**State Higher Education in California NUMBER OF STUDENTS ENROLLED IN JUNIOR COLLEGE COURSES, OCTOBER 1931**

**Table 5**

Glendale	703	128	661	406	-	223	65	356	598	-	106	-	324	43	29	139	320	36	3,434
Chaffey	644	214	481	220	20	99	57	239	498	114	67	-	350	53	-	204	10	79	2,705
San Bernardino	627	195	462	211	9	161	56	280	365	-	95	-	404	38	34	195	203	-	2,709
Fullerton	596	163	523	423	-	200	84	246	517	-	57	-	399	135	13	141	171	76	3,148
Santa Monica	548	220	505	415	-	92	82	207	655	-	8	-	37	-	-	38	-	-	2,259
Riverside	490	188	409	262	18	81	74	210	363	-	64	23	152	24	-	111	-	-	1,979
Kern	481	51	396	208	10	91	25	206	315	-	29	-	316	55	-	64	408	-	2,274
Marin	413	181	369	185	-	135	59	223	367	-	38	-	-	127	-	82	182	-	1,948
Santa Rosa	366	101	344	199	7	91	93	191	221	20	45	-	-	19	-	165	-	-	1,496
Ventura	335	51	215	138	4	14	-	82	225	23	40	-	303	49	-	21	-	56	1,221
Taft	219	16	108	52	-	34	40	56	72	-	-	-	17	92	25	38	-	-	550
Yuba	204	80	184	56	-	25	19	62	162	-	12	-	94	7	15	176	99	2	993
Pomona	197	110	150	121	-	30	57	66	123	-	7	-	-	17	23	38	26	-	768
Visalia	183	31	177	57	-	12	-	77	68	-	20	-	177	18	2	29	150	2	820
Porterville	162	65	153	103	-	-	-	20	181	-	-	-	24	22	-	47	81	-	696
El Centro	150	24	150	41	-	37	47	74	124	8	3	-	75	21	-	20	8	-	632
Salinas	144	27	103	69	-	56	-	25	154	-	7	-	143	5	7	-	81	2	679
Santa Maria	143	25	99	43	-	13	20	78	102	-	47	-	10	-	-	10	-	-	447
Citrus	141	34	118	64	-	52	-	42	106	-	6	-	100	18	-	-	87	-	627
San Benito	120	20	58	33	-	6	34	13	89	-	-	-	-	-	-	-	36	-	269
Reedley	94	76	95	33	-	28	-	72	70	-	19	-	-	-	-	-	18	-	411
Brawley	77	15	71	19	-	18	3	45	55	-	7	-	68	-	-	-	30	-	331
Lassen	44	10	20	24	-	6	-	9	44	-	-	-	17	-	-	-	-	-	130
Antelope	30	-	33	10	-	3	-	7	32	-	-	-	7	-	-	-	12	-	104
TOTALS	-	5722	16,086	8533	237	4512	2424	8160	16,729	216	3397	472	9900	3526	463	5503	2719	891	89,490
PERCENT EACH IS OF FINAL COLUMN	-	6.4	18.	9.5	.3	5.	2.7	9.1	18.7	.2	3.8	.5	11.1	3.9	.5	6.2	3.	1.	99.9

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**State Higher Education in California**  
**DISTRIBUTION OF JUNIOR COLLEGE STUDENTS BY INSTITUTIONS AND COUNTIES, 1931 - 1932**  
**Table 6**

COUNTIES	UNIVERSITY CALIFORNIA	TEACHERS COLLEGES	DISTRICT JUNIOR COLLEGES	DEPARTMENTAL JUNIOR COLLEGES	TOTAL
Alameda	1905	266	365	10	2,546
Alpine	-	-	9	-	9
Amador	11	4	1	-	16
Butte	31	239	22	1	293
Calaveras		4	2	-	6
Colusa	13	16	25	1	55
Contra Costa	104	50	70	-	224
Del Norte	-	8	1	-	9
El Dorado	11	3	16	-	30
Fresno	47	529	23	324	923
Glenn	3	41	16	-	60
Humboldt	7	184	7	-	198
Imperial	20	9	6	227	262
Inyo	10	2	11	-	23
Kern	39	35	7	746	827
Kings	13	39	13	11	76
Lake	6	6	36	-	48
Lassen	1	11	1	44	57
Los Angeles	2990	109	8172	896	12,167
Madera	2	24	2	14	42
Marin	30	21	194	1	246
Mariposa	9	5	-	-	14
Mendocino	30	17	23	8	78
Merced	35	31	46	-	112
Modoc	5	8	10	1	24
Mono	-	-	-	-	-
Monterey	32	22	28	154	236

**State Higher Education in California**  
**DISTRIBUTION OF JUNIOR COLLEGE STUDENTS BY INSTITUTIONS AND COUNTIES, 1931 - 1932**

Table 6

Napa	29	5	18	-	52
Nevada	16	3	7	-	26
Orange	55	4	1106	5	1170
Placer	22	8	98	-	128
Plumas	-	3	14	-	17
Riverside	40	12	467	1	520
Sacramento	43	18	1083	1	1,145
San Benito	11	10	3	41	65
San Bernardino	50	9	932	2	993
San Diego	70	815	22	4	911
San Francisco	770	483	427	4	1,684
San Josquin	76	26	154	-	256
San Luis Obispo	31	22	16	32	101
San Mateo	51	35	500	-	506
Santa Barbara	38	218	6	127	389
Santa Clara	55	454	567	6	1,082
Santa Cruz	20	44	33	10	107
Shasta	7	29	12	1	49
Sierra	3	-	1	-	4
Siakiyou	17	27	35	-	79
Solano	40	21	42	1	104
Sonome	43	23	318	-	384
Stanislaus	29	13	515	3	560
Sutter	6	12	115	-	133
Tehama	17	37	1	1	56
Trinity	1	1	1	-	3
Tulare	37	51	13	347	448
Tuolumne	11	5	8	-	24
Ventura	50	19	13	329	410
Yolo	24	-	96	-	129

State Higher Education in California DISTRIBUTION OF JUNIOR COLLEGE STUDENTS BY INSTITUTIONS AND COUNTIES, 1931 - 1932 Table 6					
Yuba	4	2	104	1	111
Other States and Countries	38	148	532	135	1,197
TOTAL	7402	4249	16,365	3488	31,504

Figures for the University of California and the State Teachers Colleges include only the students enrolled in the Lower Divisions.

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State Higher Education in California ENROLLMENT IN CALIFORNIA STATE TEACHERS COLLEGES BY YEARS AND CURRICULA, FIRST SEMESTER 1931-1932 Table 7										
-	First Yr.	-	Second Yr.	-	Third Yr.	-	Fourth Yr.	-	Total	-
-	C.C.	P.C.	C.C.	P.C.	C.C.	P.C.	C.C.	P.C.	C.C.	P.C.
Chico	134	114	106	82	99	6	129	3	468	205
Fresno	180	201	167	143	125	128	183	92	655	564
Humboldt	70	79	38	17	44	6	41	7	193	109
San Diego	171	326	166	207	146	101	111	41	594	675
San Francisco	444	129	219	33	204	8	175	5	1042	175
San Jose	389	40	287	2	385	74	350	39	1411	180
Santa Barbara	125	66	152	52	147	-	132	-	556	118
TOTAL	1513	955	1135	561	1150	323	1121	187	4919	2026
Percent	-	38.6	-	33.1	-	21.9	-	14.3	-	29.4

“C.C.” — Credential Curricula

“P.C.” — Pre-Secondary Curricula

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State Higher Education in California CENSUS OF THE PROFESSIONS IN CALIFORNIA 1910 - 1930 Table 8				
A. Number	-	-	-	-
Occupation	1910 <sup>18</sup>	1920 <sup>19</sup>	1930 <sup>20</sup>	% Increase since 1910
Actors	1,715	6,122	8,587	401%

**State Higher Education in California CENSUS OF THE PROFESSIONS IN CALIFORNIA 1910 - 1930**  
**Table 8**

Architects	1,235	1,359	2,004	62%
Artists, Sculptors, Teachers of Art	2,172	3,154	6,594	204%
Authors, Editors, Reporters	2,259	3,255	7,384	227%
Authors	361	1,070	2,849	689
Editors, Reporters	1,898	2,185	4,535	139%
Chemists, Assayers, Metallurgists	921	1,637	3,015	227%
Technical Engineers	4,946	10,925 <sup>21</sup>	20,585 <sup>22</sup>	316%
Civil Engineers and Surveyors	3,711	5,054	10,503	183%
Mining Engineers	1,235	1,368	1,971	60%
Clergymen	3,180	4,129	5,971	88%
College Presidents and Professors	774	1,303	3,213	315%
Dentists	2,085	3,269	5,487	164%
Designers, Draftmen, Inventors	1,828	2,869	6,270	243%
Designers	231	571	1,559	575%
Draftsmen	1,451	2,020	4,342	199%
Inventors	146	278	369	155%
Lawyers, Judges, Justices	4,908	6,745	10,109	106%
Librarians	(x)	1,267	3,013	-
Musicians, Teachers of Music	6,729	8,975	16,468	145%
Osteopaths	(x)	521	700	-
Photographers	1,622	2,913	4,662	181%
Physicians and Surgeons	6,031	6,814	9,765	62%
Showmen	1,191	1,503	3,360	181%
Teachers	16,615	27,686	53,178	221%
Teachers (Athletics, Dancing, etc.)	200	800	2,053	927%

18. 1 (1) Thirteenth Census of U.S., 1910, Vol. 4, Washington, 1914, pp.106,108.

19. 2 (2) Fourteenth Census of U.S., 1920, Vol. 4, Washington, 1923, p. 70.

20. 3 (3) Unpublished data from U.S. Bureau of Census.

21. 4 (4) Includes 1646 Electrical and 2857 Mechanical Engineers.

22. 5 (5) Includes 4176 Electrical and 3932 Mechanical Engineers.

State Higher Education in California CENSUS OF THE PROFESSIONS IN CALIFORNIA 1910 - 1930				
Table 8				
Teachers (School)	6,415	26,286	51,125	211%
Trained Nurses	4,860	10,168	23,275	399%
Veterinary Surgeons	400	439	563	41%
Other Professional Pursuits	899	1,544	4,842 <sup>23</sup>	439%
Semiprofessional Pursuits	4,174	8,738	19,348	368%
Abstractors, Notaries, Justices of Peace	558	750	1,018	82%
Fortune Tellers, Hypnotists, Spiritualists, etc.	139	85	(x) Probably included in some other category.	-
Healers (except Physicians and Surgeons)	683	2,000	2,897	324%
Keepers of Charitable of Penal Institutions	253	596	799	216%
Officials of Lodges, Societies, etc.	546	800	1,258	130%
Religious and Charity Workers	872	2,338	4,780	548%
Theatrical Owners, Managers, etc.	564	3,670	1,555	175%
Other Occupations	559	489	9,538	1609%
Attendants and Helpers (Professional)	909	2,307	13,476	1382%
TOTAL	69,455	115,412	235,386	239%
TOTAL STATE POPULATION	2,377,349	3,426,861	5,677,251	139%

B. Number per 100,000 Population	-	-	-
Occupation	1910	1920	1930
Actors and Showmen	122	221	208
Architects	52	59	35
Artists, etc. (including Photographers)	159	176	198
Authors, Journalists, etc.	95	95	130
Chemists, etc.	39	48	53
Clergymen	133	120	105

23. 6 (6) Does not include 2517 Social and Welfare Workers which number has been added to figures for Religious Workers.

Dentists	87	95	95
Designers, Draftsmen, etc.	77	83	110
Educators (College Presidents, Professors, School Teachers, Librarians)	722	864	1009
Engineers	208	316	393
Lawyers, Judges, etc.	206	197	178
Musicians	283	262	290
Physicians, etc. (including Osteopaths and Veterinary Surgeons)	269	225	193
Religious and Charity Workers	36	68	84
Trained Nurses	204	297	409
ALL PROFESSIONS AND SEMI-PROFESSIONS	2921	3397	4146

C. Percent Increase, 1910-1930			-	-
Rank	Occupation	-		
1.	Religious and Charity Workers	548%		
2.	Trained Nurses	399%		
3.	Engineers	316%		
4.	Actors and Showmen	311%		
5.	Designers, Draftsmen, etc.	243%		
6.	Educators (Colleges and Schools, Librarians)	253%		
7.	Authors, Journalists, etc.	227%		
8.	Chemists, etc.	227%		
9.	Artists, etc. (including Photographers)	196%		
10.	Dentists	164%		
11.	Musicians	145%		
12.	TOTAL STATE POPULATION	139%		
13.	Lawyers	106%		
14.	Clergymen	88%		
15.	Physicians, etc. (including Osteopaths and Veterinary Surgeons)	71%		
16.	Architects	62%		

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## Sources

### **Carnegie Foundation *California Study-1932* T.F.**

#### **Sources: [Educational Service-California, 1920-1930][Table 1]**

# Including post-grad. High School and Departmental Junior College enrolment.

- (1) Supt. Pub. Inst. Biennial Report, 1920, p.189.
- (2) Supt. Pub. Inst. Biennial Report, 1924, p.197.
- (3) Supt. Pub. Inst. Biennial Report, 1926, p.322.
- (4) State Dept. Ed. Biennial Report, 1928, p.514-515.
- (5) State D. E. Biennial Report, 1930, Part II, p.520.
- (6) St. Dept. of Ed. Bulletin, 1932, No.1, State of Cal. Jr. Colleges, 1931, p. 41
- (7)U.S.B.E Bulletin 1923 No. 16, Stat. Survey of Education, 1919-20, p.5-8, U.S.B.E. Biennial Survey Ed., 1918-1920, p.292, Washington, 1923, p. 556, 594, 454.
- (8)U.S.B.E Bulletin, 1924, No. 38, Statistical Survey of Education, 1921-22, p.6.
- (9)U.S.B.E. Bulletin 1926, No. 19, Statistical Summary of Education, 1923-24, p. 7.
- (10)U.S.B.E. Bulletin 1928, No. 12, Statistical Survey of Education, 1925-26, p. 13.
- (11) U.S.Office of Ed. Biennial Survey of Ed., 1926-28, pp. 428,884,727.

#### **Sources: [Factors Determining Unit Costs in Junior Colleges, First Semester 1931-1932][Table 3]**

\* Student-Hours per Week

#### **Sources: [Census of the Professions in California, 1910-1930][Table 8]**

- (1) Thirteenth Census of U.S., 1910, Vol. 4, Washington, 1914, pp.106,108.
- (2) Fourteenth Census of U.S., 1920, Vol. 4, Washington, 1923, p. 70.
- (3) Unpublished data from U.S. Bureau of Census.
- (4) Includes 1646 Electrical and 2857 Mechanical Engineers.
- (5) Includes 4176 Electrical and 3932 Mechanical Engineers.

- (6) Does not include 2517 Social and Welfare Workers which number has been added to figures for Religious Workers.
- (x) Probably included in some other category.