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The Undergraduate Student and His Higher Education: Policies of California Colleges and Universities in the Next Decade.

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This review of public higher education in California identifies problems in the policies and processes that directly affect a student's admission to college, his persistence, and his progress toward graduation. The study is based on 3 questions: who shall be admitted to higher education (addresses existing policies of selection and admission); who shall be graduated from college (concerns policies for retention, progress toward graduation, and identification of the reasons why students leave college; and where shall the students be educated (relates to policies concerning physical facilities, finance, and student choice). Of primary interest is the diversion of students to junior colleges, which currently offer the best educational opportunity for students of lower ability or limited financial capacity, have a policy of unrestricted intake of students, but experience the largest proportion of attrition in the state. Three areas are singled out for immediate attention: (1) standards for admission and selection of students in state colleges and the University of California should be more flexible, (2) the policy of limiting the lower division in 4-year institutions and diverting students to junior colleges should be reexamined; the value of 2 years in a junior college and transfer to a 4-year institution needs further exploration, and (3) the quality of programs and the problem of persistence in the junior colleges need to be studied. (WM)

COORDINATING COUNCIL FOR HIGHER EDUCATION

THE UNDERGRADUATE STUDENT AND HIS HIGHER EDUCATION

POLICIES OF CALIFORNIA COLLEGES AND UNIVERSITIES IN THE NEXT DECADE

COORDINATING COUNCIL for HIGHER EDUCATION
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FOREWORD

This study has been prepared by the Council staff for use in the Council's current review of the 1959 Master Plan for Higher Education. Its primary purpose is to raise questions for immediate study. The report does not develop a list of definitive recommendations for action, because any changes in existing policies affecting students should be made only after full consideration and study of each important issue. The suggested subjects for immediate study proposed in the report were approved by the Council on March 4, 1969 after review of an earlier version of this report.

Since the undergraduate student is the focus of the study report, the higher education system is examined primarily from his standpoint. Although the Master Plan Survey Team in 1959 grappled with many important problems relating to the rapid growth of California public higher education, it developed no overall educational policies in respect to students. Rather it gave attention to a number of administrative and procedural details which concerned students. As a result, the full impact of Master Plan recommendations as they affected students were not fully anticipated.

The experience of the past few years suggests the need to take new looks at the undergraduate student and his relationship to higher education.

An effort has been made in this report to apply results of research conducted on students during recent years rather than to conduct a new study. Many significant studies, with important implications, have had little effect upon policy development. The report is hopefully a step toward developing new policies based upon recent research about undergraduate students.

Finally, it should be noted that problems and policies affecting the graduate may be different from those discussed herein in respect to the undergraduate. The graduate student should be the subject of a future study.

The report has been prepared by John M. Smart and Courtland Washburn of the Council staff under the general direction of Willard Spalding. Thierry Koenig assisted. The staff has been ably advised by an ad hoc committee which included: Dr. Robert O. Bess and Dr. William F. Long of the California State Colleges; Dr. Frank Kidner and Mr. Lyle Gainsley of the University of California; Dr. Edward Betz and Mr. Kenton Corwin of the private colleges and universities; Mr. Harvey S. Irwin, Superintendent of Victor Valley Joint Junior College District, and Dr. Otto Roemmich, President, San Jose City College. Responsibility for the study is, however, solely that of the Council staff.

Acknowledgement must also be made to Dr. Dorothy Knoell who read and commented upon a draft of the document. Dr. Knoell is well-known for her research and writing on the student in higher education. Further, a special note of thanks is made to the American Council on Education. Dr. Alexander Astin assisted the staff immeasurably by making available the draft manuscript of a major national survey and by providing results of the A.C.E. annual freshman survey for California institutions.

OWEN ALBERT KNORR
Director

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CHAPTER I

NEED FOR REVIEW

A recent report considering the outlook for all levels of education to 1975 stated:

> It has often been said that American education is in a state of constant crisis. In the 1950's we experienced the crisis of quality, and during the 1960's we have been weathering the crisis of increasing enrollments. It is very likely that in the 1970's we shall face the crises of equalizing educational attainment. The makings of the crisis are already upon us.[1]

In great measure this statement reflects what has occurred in California public higher education. Reflection of the pattern is seen in a review of findings and recommendations of the three major reviews of higher education conducted in California since World War II: the Strayer Report of 1948, the Restudy of the Needs of Higher Education in 1955 and the Master Plan for California Higher Education of 1959. Each stressed the improvement in quality of public institutions, particularly the Junior Colleges and the State Colleges.

There was a very real fear in the 1950's that the demand for higher education, even among the most intellectually able students, could not be met by the then existing institutions. The emphasis of the Restudy and Master Plan, therefore, was upon physical growth of the systems and the maintenance of quality defined in terms of student qualifications, trained faculty and supporting services.

The question of ways to assure that opportunity for higher education was truly open to all, both the intellectually able and college capable, did not enter in great degree into the Restudy or Master Plan. This may be justification enough to again review the general subject of the student and higher education before the backdrop of today's problems and what are estimated to be the concerns of the 1970's.

Research during the last ten years, if brought to bear, should permit a more sophisticated study of the student and higher education, than could have been done previously. Information on selection, student characteristics, attrition, college impact on student performance,

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[1] Education in the Seventies (Washington, D. C.: U.S. Office of Education, 1968), OE-10051, p. 1.

and the like, is now at hand for application to the California situation. For example, we can tell today in sufficient detail who is being brought into higher education and who is not. There are some indications as to who fails and why.

Finally, the increasing realization of the need for a continuing process of education for individuals to succeed in a technological society creates a demand for policies and procedures which cannot be ignored. The part-time student, for example, is not an aberration of the moment, but will continue to be a major client of the higher education system.

The Growth of Higher Education

Pursuit of some variety of post-high school training is becoming a common occurrence in the lives of many of California's citizens. The trend is for greater and greater numbers of students to seek some college training immediately following high school (in recent years this trend has been assisted by selective service policies). A new G.I. Bill gives an incentive to returning veterans to enroll in college. Similarly, larger numbers of older persons are beginning college work or are returning to continue programs begun in prior years. Retraining and up-dating is a pattern in many persons' lives. Much of this continuing demand for education is caused by a technology requiring higher levels of skills or new skills for many workers and professionals. Education throughout a lifetime will be essential for an increasing number of people as this country moves into the post-industrial society.

The structure and function of higher education in the society in the years ahead has been, and will remain, a subject of debate. Higher education itself is only now beginning to look forward in an attempt to develop alternative ways to adapt to requirements of the years ahead. However, even though the future for higher education is not entirely clear, some future problems may be suggested by the changing college populations of today.

Public higher education is continuing to grow in terms of students educated and number of collegiate centers both in California and across the country.[1] This growth, though somewhat slower than in the recent past, should continue through the 1970's, and perhaps beyond, depending upon the increase in the college-going rate and the extension of the period of time during which persons remain in post-secondary educational activities. Table I-1 presents some summary data in this respect.

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[1]This growth is not the case among private institutions taken together.

TABLE I-1

PROJECTIONS RELATED TO DEMAND FOR HIGHER EDUCATION 1968-1985

	United States	California[c]
Population[a]		
1968	200,000,000	19,600,000
1970	207,300,000	20,600,000
1975	223,800,000	23,200,000
1980	243,300,000	26,000,000
1985	264,600,000	29,000,000
High School Graduates[b]		
1968	2,740,000	260,000
1970	3,000,000	280,000
1975	3,400,000	330,000
1980	3,690,000	350,000
1985	3,460,000	330,000
18-24 Year Olds[a]		
1968	21,100,000	2,110,000
1970	24,000,000	2,370,000
1975	27,000,000	2,860,000
1980	29,000,000	3,260,000
1985	29,000,000	3,250,000
Degree-Credit Enrollments[b]		
1968	6,900,000	560,000
1970	7,300,000	650,000
1975	9,090,000	850,000
1976	9,400,000	880,000

[a]Series B projections for U.S. Bureau of the Census, Current Population Reports, p. 25. Series I-D, California, Estimated and Projected Populations of California, 1960-2000. See also Fact Book on Higher Education, A.C.E. 1968.

[b]U.S. totals, Projections of Education Statistics to 1976-1977; California, Department of Finance projections, 1980 and 1985.

[c]California figures under degree-credit enrollments are derived from full-time student projections developed by the Department of Finance. Thus, they are below figures which would be derived from use of credit earned by both part-time and full-time students.

Who Graduates from High School

It must be remembered that the pool of potential college students consists primarily of the high school graduating classes. The twelfth grade class in California in a given year is not wholly representative of the characteristics of the overall population in terms of ethnic and racial background and family income.

A survey of California schools in 1968 summarized in Table I-2 suggests that as students move from the first grade on through the end of high school the Mexican-American group (Spanish surname in the survey) and the Negro students become fewer proportionately as the years go on. The percentage of white and oriental students shows a corresponding increase. (This finding is qualified to the extent that it is based on the situation at one point in time.) Historical data are not available and the extent to which higher birthrates among the individual ethnic groups result in the changing proportions is not taken into account. The variation from grade 9 through 12, however, appears to support the general accuracy of the finding. Other data indicate the existence of high attrition rates in particular schools in ghetto areas. Data supplied the McCone Commission in 1965 indicated a drop-out rate between grades 9 through 12 of some two-thirds at such schools.[1]

On a statewide basis some 18% of the ninth grade class of 1964-65 were no longer in school in 1967-68 when they would normally have been in the twelfth grade.[2] Attrition rates have decreased considerably over the past ten years. The high school graduating class of 1956 was some 25% less than the eighth grade class five years before. In contrast, the 1964 graduating class was only 13% smaller than the corresponding eighth grade class. The percentage, however, has remained at this latter figure through 1967.[3]

Another method of viewing the high school drop-out problem is to examine the percentage of the appropriate age-groups in school. Such perspective shows the major drop-out occurring at age 16 and age 17 (Table I-3).

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[1]Kenneth A. Martyn, Increasing Opportunities for Disadvantaged Students: A Preliminary Outline, Calif. State Assembly, Jt. Comm. on Higher Educ., Vol. 1, No. 8, December 1967.

[2]This conclusion is based on comparison of enrollments of the classes in the different years. In-migration is not taken into account. According to the Bureau of Personnel Services, Department of Education, this factor is thought to be less significant than formerly was the case.

[3]Data provided by the Bureau of Pupil Personnel Services, State Department of Education.

TABLE I-2

DISTRIBUTION OF PUBLIC SCHOOL STUDENTS
BY RACIAL AND ETHNIC GROUPINGS, SELECTED CLASSES
1967-68

	Spanish Surname	Other White	Negro	Chinese Japanese Korean	American Indian	Other Non-white	Total
Grade 1	16.4%	71.1%	9.4%	2.0%	.3%	.8%	99.6%
Grade 5	13.8	74.7	8.3	2.2	.4	.7	99.7
Grade 7	13.1	75.8	8.2	2.0	.3	.5	99.8
Grade 8	12.9	76.5	7.9	2.0	.3	.6	99.6
Grade 9	12.6	77.5	7.2	2.0	.2	.5	99.7
Grade 10	12.3	77.5	7.4	2.0	.2	.5	99.7
Grade 11	11.2	78.9	6.9	2.2	.2	.6	99.7
Grade 12	9.9	80.6	6.3	2.4	.2	.6	99.6
All Grades & Other Categories Fall 1967	14.3%	74.2%	8.4%	2.2%	.3%	.7%	99.6%
Fall 1966[a]	13.5	75.1	8.2	2.1	.2	.6	99.7
Total Cal. Pop. (July 1, 1967-est,)	11.1%	78.8%	7.2%	2.0%	.3%	.6%	100.0%

[a]Excludes preschool

SOURCES: School data, Bureau of Intergroup Relations, State Dept. of Education; California population, Financial and Population Research Section, Department of Finance.

TABLE I-3
PERCENTAGE OF POPULATION 6 TO 17 YEARS OF AGE
IN CALIFORNIA SCHOOLS, PUBLIC AND PRIVATE, 1966

Age	Percent of Age Group in School
6-13	98.2%
14	98.4
15	96.4
16	89.1
17	84.3
(14-17)	(92.3)

SOURCE: Table 3, Appendix A, Citizens for the 21st Century, Part Two, Final Report of SCOPE to the State Bd. of Educ., June 1968.

A number of factors are involved in the decision of a student to drop-out before completion of high school work. A recent survey in the Fresno County Schools found lack of interest, need for employment, and marriage accounting for half of the drop-out cases. A composite picture developed in the Fresno survey showed the drop-out to be about seventeen years of age, male or female (there is apparently less difference in drop-out rates by sex than previously was the case), of average or slightly lower than average intelligence, about two years behind academically, and a student who has failed subjects immediately prior to leaving. He has little interest in school and was irregular in attendance; his family has a low income, and his parents and brothers and sisters of low educational attainment.[1]

[1]Fresno County Schools, Drop Out Study, August 1965.

Who Attends Post-Secondary Education

A number of recent national surveys suggest that more than half of the total graduating class from high school enters some kind of post-secondary education immediately after leaving high school. Additional individuals will enter at a later time. Table I-5 illustrates findings of a number of comprehensive studies which illustrate not only the percentages of students going on to post-secondary education, but also points to an apparent trend of continuing, increasing percentages.

Up to the early 1950's college attendance was largely limited to children of the financially well-off. However, since World War II with the G.I. Bill and expansion of financial aid and talent identification programs to assure attendance for the most able, college-going has become more nearly the rule for those with academic abilities regardless of socio-economic background. (This is not to say that all are finishing, however.)

Table I-4 cites the results of a 1953 survey and a 1960 study which illustrate the increased college-going rates of the top quarter and the second quarter in ability over the seven-year span.

TABLE I-4
PROPORTION OF STUDENTS ENTERING COLLEGE, 1953 AND 1960

Ability Levels	Wolfe 1953	Talent 1960
Top quarter	48%	80%
Second quarter	38%	54%
Third quarter	32%	32%
Lowest quarter	20%	19%

SOURCE: K. Patricia Cross, The Junior College Student: A Research Description (Princeton, N. J.: Educational Testing Service, 1968), p. 13.

Though results of the two studies are not precisely comparable, it can be seen that during the seven-year period, 1953-1960, while college-going on the part of the higher ability levels increased substantially, little change apparently occurred within the bottom fifty percent.

Since 1960, however, the steady increases in the college-going rate reflected in Table I-5 suggest that the expansion of the college population beyond the factor of growth of the age group may be coming from the middle and lower ability groups. The lower socio-economic groups are becoming better represented on college campuses. These students may also appear to be more often of lower academic ability as measured by existing tests and high school grade-point averages.

In a May 1967 CCHE survey, (conducted in cooperation with the State Colleges and the University) high school seniors were asked to indicate if they planned to attend college, and if so where. Among the students in the sample who were found to be eligible to enter the University of California, i.e., within at least the top one-eighth, nearly 92% planned to go on to college (this was, of course, a statement of intention but for students in this group the decision probably had been made with a degree of finality). Among those students eligible to attend a State College and not the University as well--roughly between the top one-eighth and the top one-third--some 83% indicated their intention to go on. Of the remaining two-thirds, 57% stated they planned to go on to a post-secondary institution in the following academic year.[1]

As students from lower economic groups and those with less than top ability are brought into higher education some student bodies will become less homogeneous. The most selective of institutions, public or private, however, should not look forward to great changes in student body composition. Evidence suggests that they are now serving the great bulk of the intellectually able students, with perhaps only a proportionately small number of students of high ability still to be brought into higher education from lower economic groups.[2]

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[1]CCHE, Financial Assistance Programs for California College and University Students, 67-13, Revised, October 1967, p. I-9.

[2]William W. Turnbull, "How Can We Make Testing More Relevant," College Board Review, 67 (Spring 1968), pp. 7-8.

TABLE I-5
HIGH SCHOOL GRADUATES ATTENDING
COLLEGE AND OTHER SCHOOLS IN SAME YEAR OF GRADUATION;
RESULTS OF RECENT SURVEYS

Study	Population	Number in Survey	Percent Attending	Percent Attending
			All Schools	Two and Four-Year
Project Talent	National			
H.S. Class of '60	"	49,470	56.9%[a]	39.2%
H.S. Class of '61	"	46,118	58.9%[a]	40.7%
H.S. Class of '62	"	42,619	67.9%[a]	46.4%
H.S. Class of '63	"	46,972	68.1%[a]	48.3%
Beyond High School				
H.S. Class of '59	National	9,778	50.0%[e]	43.0%[c]
SCOPE				
H.S. Class of '66	California	7,558	58.1%[e]	ca. 56.1%
CCHE, UC, CSC Jt. Study				
H.S. Class of '67 (Intentions)	California	7,993	69.8%[b]	ca. 63.1%[b]
Connecticut				
H.S. Class of '67	Conn. H.S. Grads.	30,765[f]	66.4%	51.7%
Oregon	Oregon			
Educ. Beyond H.S. Survey	H.S. Class of '61	1,964[d]	51.2%[e]	45.7%
	'62	2,046	51.9%[e]	45.8%
	'63	2,269	54.2%[e]	47.1%
	'64	2,513	57.4%[e]	50.2%
	'65	3,228	62.0%[e]	55.1%
Illinois, 1963 Master Plan Survey	H.S. Class of '62	10,000	50.4%[e]	N/A
New York, 1968 (Intentions)	H.S. Class of '64	N/A[g]	61.0%[e]	54.0%
	'65	N/A	60.0%[e]	53.0%
	'66	N/A	61.0%[e]	53.0%

[a] Incl. Armed Forces Schools.
[b] Intention as of May 1967.
[c] Survey showed another 6% entering full or part-time between 1960 and 1963.
[d] 10% random sample of H.S. Grads.
[e] Excludes military training schools.
[f] Connecticut State Department of Education, Bureau of Research Statistics and Finance.
[g] Based on Secondary School Reports - 94% of New York high schools, public and private, reporting. See: A Study of Plans of New York State High School Graduates (Albany: SUNY, Dept. of Educ., 1968).

The Junior Colleges of California, as well as those nationally, will--as they do now--serve the bulk of the new groups of students entering higher education in the years to come. Data from the SCOPE study show that in fall 1967, the Junior College attracted greater proportions of the middle third and lowest third of academic ability as determined by current methods than did four-year colleges (Table I-6).

TABLE I-6
RELATIONSHIP BETWEEN ACADEMIC ABILITY AND
ACTIVITY AFTER HIGH SCHOOL GRADUATION
(Based on Data from Calif., Ill., Mass. and North Carolina)
N=35,000

(California data in parentheses)

Total AAT Score	Non-college		Junior College		Four-Year College	
Top Third	16%	(23%)	36%	(41%)	71%	(80%)
Middle Third	35	(34)	39	(35)	23	(16)
Lowest Third	49	(43)	25	(24)	6	(4)

SOURCE: Adopted from Cross, op. cit., p. 12. California data courtesy SCOPE study staff.

Substantial numbers of low ability students (generally identified on the basis of test scores and/or grades) do go on to some additional training. The Medsker-Trent studies, for example, found as much as 29% of the bottom 20% (as measured by SCAT) attended some special school or college, 22% of the bottom 20% attending a four or two-year college.[1]

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[1] Leland L. Medsker, and James W. Trent, The Influence of Different Types of Public Higher Institutions on College Attendance from Varying Socioeconomic and Ability Levels (Berkeley: Center for Research and Development in Higher Education, U.C.-B., 1965), Table 16, p. 28, and Table 17 p. 31. Additional data is reported in Beyond High School (1967) by the same authors.

The Potential Pool of College Attenders--A Summary

Several generalizations may be made concerning the overall expectation of college attendance in the years ahead which serves as a background for more detailed discussion in the following chapters. In summary form they are:

1. Higher education will continue to grow in enrollment in the decade ahead much as has been the pattern in recent years. However, growth may slow with lowering birthrates. If a growth plateau is to occur, it will begin in approximately 1980.[1]

The growth in California enrollments in the immediate years ahead will result from four factors:

a. Continued increases in the high school graduating classes due to expansion of the population. A lowering of high school drop-out rates will contribute to the pool as well, though great changes should not be expected in California.[2]

b. Increasing college-going rates as society places greater emphasis on the need for post-high school training.

c. Extension of the period of time individuals attend college--expansion of graduate work, more persons completing bachelors degrees, increasing need for skills--resulting in expanded college enrollments at a given point in time.

d. Continued part-time attendance of adults in higher education to complete collegiate work and/or retrain for advancing technologies.

2. Today nearly all high school graduates of higher demonstrated ability are entering higher education. Increases in the college-going rate in the years ahead will result from expansion of the proportions of middle and lower academic ability students engaging in some post-high school training. Expansion of the college-going rate thus will

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[1]For discussion of California projections see CCHE, Meeting the Enrollment Demand for Public Higher Education in California Through 1977, Staff Report 69-2, February 3-4, 1969.

[2]The high school drop-out of today may not be as much a potential college-goer as in the past in that the group is mainly from hard-core poverty levels, low social status and minority groups. Abraham Tannenbaum raises some key questions in "The School Drop-out Today," IRCD Bulletin, IV (September 1968).

bring greater numbers of students on campus with poorer academic records and greater financial need.[1]

3. At the present time it is estimated that some 60% of the high school graduating class in California enters some two or four-year college in the year following graduation. National data indicate that today about half of the graduating class enters degree-credit programs soon after graduation. Estimates are that the national rate will reach the 60% level in ten years. Whether California will also increase its "college-going" rate by a factor of 10% is difficult to determine. A lesser percentage increase can probably be expected because California's present rate is due in great measure to the general availability of Junior College programs, not yet the case in many areas of the country.

Implications

The above generalizations indicate that public institutions will probably be receiving greater numbers of lower income, culturally diverse, and, often, more poorly prepared students as college-going increases in the years ahead. The characteristics of the changing group of students will probably require adjustments in both program and form of higher education to a much greater extent than resulted from the increase in gross numbers in higher education during the late 1940's and the 1950's.[2] The full impact of changing patterns of attendance is being felt by the open-door community college, the least by the highly selective college and university and/or the high

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[1]It might be suggested that newer faculty too are from more diverse socio-economic backgrounds than the faculty entering colleges in the 1930's and 1940's. The G.I. bill not only enabled great numbers of students from a wider social spectrum to enter higher education, but many to pursue doctoral programs as preparation for college teaching. Greater numbers of students with greater cultural, social, and economic class diversity have thus been trained as college instructors; their values are necessarily affected in the instructional process.

[2]A cautionary note may be appropriate:

> "While increasing the number of students going to college from low-income households would, at least in appearance, indicate an improvement in the distribution of educational opportunity, it is neither a necessary nor sufficient condition for improvement in the distribution of income. A change in the earning capacity of a disadvantaged youth must be preceded by improvements in his productive ability. If students drop out prior to the end of their second year in college, the benefits to their future productivity from their attendance are likely to be small. In fact, failure in college may offset whatever improvements in the disadvantaged students' self-image had been brought about by efforts to motivate them to enter college." (Emphasis added)

U.S. Office of Education, Students and Buildings; An Analysis of Selected Federal Programs for Higher Education, USGPO, OE-50054, May 1968, pp. 32-33.

However, many individuals even after one year of Junior College training may find better jobs and be more productive than would be the case otherwise.

cost institution. (This is not to say that small groups of students cannot have a profound influence on any college. But it is assumed that larger groups of students with differing characteristics are required before pervasive changes occur.)

Reforms in public school programs, special compensatory education efforts and the like may result in more homogeneous academically able high school graduates. However, the impact of such programs will not be felt fully in the decade ahead. Thus higher education must either adjust to the high school "product" as it is or deny entrance to groups without typical academic ability and background--an option which in effect no longer exists.

Focus of the Study

With the foregoing general findings and their implications in mind, the following chapters consider in greater detail the policies and processes affecting students seeking admission to--and completion of--a higher education. Such consideration is required in order to identify those problems in need of immediate solution which may affect students in higher education in the years ahead.

There are four general questions under which policies and programs for the students in California higher education may be examined for purposes of review.

1. Who shall be admitted to higher education?

2. Who shall be graduated from the segments?

3. Where shall the students be educated?

4. How shall the students be educated?

The first question is addressed to policies of selection and admission of students, a key aspect of the California Master Plan. The second concerns the output of the systems. It includes consideration of policies for progress toward graduation or retention, and identification of the reasons students leave higher education. This question has received only limited attention in past statewide reviews. The locus for education of the student, the third major question, relates to policies concerning segmental physical facilities and finance as well as student choice. It is also closely tied to the first question's primary concern--selection of students--for selection has been seen as the primary vehicle by which to channel students to one segment or another in the California system of public higher education. Of primary emphasis in this present review is the matter of the diversion of students to Junior Colleges--a major objective of the 1959 Master Plan.

The foregoing three questions serve as the framework for this review. The fourth question is, of course, one of the central concerns upon which all of higher education is constructed. But it is of such scope, involving the whole fabric of higher education, that it cannot be comprehensively treated in any examination of this sort. The question of programs for students and all that pertains thereto, must be retained in the background as an area for future study as the material presented here is considered.

This report is in great measure based on existing research findings and other available materials. Much more is now known concerning the student and his collegiate career than was the case ten years ago. Effort is made to apply the more important findings to the problems of California and to develop therefrom an analysis of present policies and practices, their implications, and an indication where changes may be effected.

CHAPTER II

THE PROCESS OF SELECTION

In great measure students "make" the college. As there is diversity among students so is there diversity among colleges. The more demanding the college in selecting the student, presumably the "better" the institution. Aptitude for success in academic pursuits is generally viewed as the basis upon which this selection proceeds, and high school grades when combined with test scores have been clearly established as the best predictors of this kind of "success" in college. However, it has been pointed out that:

> . . . Distinguished performance outside the classroom, whether in high school or in college, bears little relation to high school grades, college grades, or tests of academic potential. Furthermore, the literature on the relationship of college grades to measures of adult success is consistent in showing that the two are either unrelated, or, at best, modestly related.[1]

The "inarticulate major premises in college admissions" across the country have been set forth by Thresher:[2]

1. The way the learning process is now organized is valid and if the student doesn't conform to it he is a failure.

2. If some selection is good, more is better.

3. Dropping out is a bad thing.

4. Prediction is of first importance. "So we get a tight, closed circle of prediction . . . followed by selection, based on the prediction, followed by validation against grade-point average, from which new prediction equations are generated, and the closed circle continues."

5. One should necessarily seek to assemble as many "good" students as possible in a given college.

6. The most successful high school student as measured by tests and grades will be the one to go most far.

7. Achievements of alumni reflect the college experience.

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[1]Donald P. Hoyt, Forecasting Academic Success in Specific Colleges (Iowa City, Iowa: American College Testing Program, ACT Research Report, No. 27, August 1968), p. 25.

[2]B. Alden Thresher, "Frozen Assumptions in Admissions," in College Admissions Policies for the 1970's (New York: College Entrance Examination Board, 1968), pp. 13-22.

Given the relative uniformity of practice among most colleges and universities, it is quite possible to predict how well a student will succeed in a given institution. The data required for such prediction includes: (1) the prospective student's grade-point average in high school courses (and then only certain courses), (2) an aptitude test score, and (3) certain college characteristics from which a grading standard may be derived. Indeed this has been done by Hoyt for nearly 1,000 four-year colleges.[1] In this case the probability of achieving a given G.P.A. at a given institution may be determined for a particular student. In a similar manner the odds a person has of being admitted to a particular college may be predicted as well--even when admissions standards are flexible.

California Higher Education and Student Selection

The University of California and the California State Colleges in their admissions policies stress selectivity as do many of the private colleges and universities.[2] Both now use test scores and grade-point averages to determine eligibility for freshman admission--the University only very recently incorporating the use of test scores into its admission criteria.

The University's admissions requirements are standard for all campuses and require a specified pattern of courses in which a minimum grade-point average is to be obtained. (The detailed policies are shown in Appendix A.) A University publication states that admission requirements are based on two principles:

1. The best predictor of success in the University is high scholarship in previous work.

2. The study of certain subjects in high school gives a student good preparation for University work and reasonable freedom in choosing an area for specialized study.[3]

The high school course pattern dictates that a student must make an early decision as to whether he will attend the University. Such a decision typically must occur by the beginning of the tenth grade for the student to efficiently meet the pattern of course requirements. It should be noted that the University is not alone in such high school "college prep" requirements. Most colleges and universities comparable to the University across the country have similar if not early identical prerequisites for student admission.

California State College requirements, designed to select from the top one-third of high school graduates, are based upon the assumption that the best predictor of success in the State Colleges is a score based upon a weighted combination of high school grade point averages and results from

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[1] Hoyt, op. cit., p. 25.

[2] More precisely, California public four-year colleges establish a minimum floor for screening entrants from non-entrants. This floor is based upon objective criteria with a limited percentage of "exceptions" allowed.

[3] Undergraduate Admissions Circular, University-Wide Bulletin, September 1968.

either the American College Test or the College Entrance Examination Board's Scholastic Aptitude Test. These standards were developed after an intensive study of freshmen students in the State Colleges in 1963 and put into effect in 1965. (See Appendix B for detailed discussion.)

To be eligible for freshman admission to the University of California a "B" or 3.0 average is generally the minimum requirement. For the State Colleges about 2.75 or "B-" is required. These standards place the State Colleges and University among the most selective in terms of high school record among the public institutions in the United States. The University is apparently the most selective nationally. Senior colleges of the City University of New York are comparable, selecting from the top 25% of high school graduates. A recent catalogue survey found the University of Washington among the most selective with a "C+," 2.5 requirement, followed by the University of Oregon with 2.25. In 44 states a resident student may enter his state university with a 2.0 high school record, by being in the top 50% of his high school class, or by having passed some 15-16 Carnegie units. Requirements for state colleges are typically the same or lower as for state universities.[1] However, it should be noted that many universities use published requirements as a floor and then select students from above that level. Thus a student may be eligible but not be assured a space.

The University of California is more selective than many of California's private colleges and universities; the State Colleges approximately equal to them. A survey conducted by the Council staff for this study disclosed the following concerning private college admissions:

Required High School Grade-Point Average for Admission (37 colleges reporting)	Number of Colleges
3.5 - 4.0	2
3.0 - 3.49	1
3.0 minimum	10
2.5 - 2.99	11
2.0 minimum	5
less than 2.0	-

As with the public segments, test scores are normally employed in conjunction with high school record in determining admissability (40 of 42 schools replying used high school record; 37 of the 42 used college entrance tests of one variety or another). As a rule, academic record is given the heaviest weight--typically 50% in making a determination on admission. The test score will account for an average of about 20% and personal interviews and recommendations will comprise the balance of the admissions criteria in most colleges.[2]

California Junior Colleges, of course, are open to almost all comers: any high school graduate or any person over 18 years of age who is determined able to profit from junior college training. The "open-door," however, does not

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[1] State Department of Education, Division of Higher Education, Information Bulletin No. 18, December 20, 1967.

[2] Study conducted with the cooperation of the Association for Independent California Colleges and Universities. See Appendix D for description of study findings.

imply that individual colleges cannot channel students into particular programs. Most colleges employ examinations on entrance, which in conjunction with high school records result in assignment of the student to particular levels of courses. Students may, however, despite poor test performance and poor high school record, declare a college transfer intention and enroll in "transfer" courses. Later performance will determine whether their objective can be attained.

The general difficulty facing the low achiever in a Junior College--as in any other collegiate situation--is that he is called upon to perform in a situation much similar to that in which he has not done well in the past. Many existing remedial programs are being geared to talent identification or development, but most are devoted to improving skills of learning in a college classroom situation.[1]

"Selection-out" of Students

The selection process is not necessarily limited to the time of initial admissions. Initial terms of college are also part of the screening process. Indeed certain courses often serve as the vehicle to discourage certain students. Examination of pass-fail records for individual freshmen and sophomore courses in most any institution will find this process at work. (This is termed the "gate-keeping" function by some.) Selection via course occurs not only in the beginning portion of the student's college career, but may occur once more as individual departments "select" prospective majors as they progress through required courses generally at the junior level.

In the California context a great deal of the selection of eventual college graduates is conducted in Junior Colleges. The requirement imposed by the Master Plan that neither segment accept Junior College transfers who were originally not eligible for initial freshman admission until completion of nearly two full years of college work, assures screening of these students in Junior Colleges. Furthermore, additional University requirements that a C+ average be obtained for such students (higher than that demanded to remain in good standing at the University) further restricts the entrance of students of apparent lesser academic ability and thereby precludes their possible receipt of a degree from the University.[2]

The basic assumptions underlying the recent trends and practices of the "selection" process are coming into question. This review is caused by a number of factors. Among them are (1) the pressures of new socio-economic groups seeking a higher education, (2) the evolution of the baccalaureate degree from primarily a mark of scholarly achievement to one of certification for entrance into a wide range of occupations as well as graduate work, and (3) a recognition of the need for a process of continuing education of individuals. Perhaps most important, "We have grasped the idea that talent, to a much greater degree than anyone realized, is not something stumbled upon and found, here and there; it is an artifact, something that can be produced."[3]

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[1]For a recent description of programs see Ernest H. Berg and Dayton Axtell, Programs for Disadvantaged Students in the California Community Colleges (Peralta Junior College District, 1968).

[2]The University is currently reexamining this policy and may require a C average in the future.

[3]Thresher, op. cit., p. 11.

Since an individual may enlarge his capacity over his lifetime any selection process which is inflexible enough to exclude individuals permanently from a given system of higher education and does not provide for a reevaluation of the person as his capability and capacity enlarge is open to serious question.

Determining what are valid criteria for admission is difficult. High school grades and/or test scores do measure the ability of an individual to pursue college work which essentially is similar to high school training. What appears called for are ways of determining those persons in whom talent can be developed and to develop programs which do, in fact, develop talent.

The Student Selects the College

Selection is not, of course, exclusively the providence of the institution. The student himself plays the primary role of determining where he will attend college. This fact, in itself, may frustrate some institutional efforts at achieving a desired mix of students.

It may be hypothesized that the higher the academic ability of the student, the "higher" his expectation of college he wishes to attend, and the more likely he will "hedge" his bets by multiple application to other institutions he would like to attend. Information on entering freshmen for fall 1967 in general supports the hypothesis. Data collected by the American Council on Education shows:

	UC	C.S.C.	Private College	J.C.
Percent of Freshmen with High School G.P.A.'s B+ or Better	72.1%	47.3%	57.5%	8.8%
Percent of Freshmen applying to one other college	27.3%	27.0%	21.3%	11.0%
Percent of Freshmen applying to two or more other colleges	26.1%	18.2%	57.0%	5.6%
Percent Applying to no other colleges	46.6%*	54.8%	21.8%	83.4%

SOURCE: Appendix E, Table E-1.

*Applications are made to the University as a whole with campus preference stated. Students, it is assumed, would state they made no other applications even if they did not get the campus of their first choice. Thus, the percent may be overstated. This would not be true in the case of the State Colleges under present practices.

Though the above data tend to support the hypothesis, further information about the financial status of students and multiple applications is needed before final conclusions can be drawn.

Freshmen data cited do, as well, point up the wide disparity between the percentages of students in the several systems as measured by high school grade-point averages. Of Junior College students, 52.9% had average high school grades of C+ or lower, 10.2% of private college entering freshmen had similar records, 3.9% of State College students and only 1.4% of University entering freshmen. The State College and University percentages, are, of course, the result of the high admission standards emphasizing high school grade-point averages. (See Appendix E, Table E-2. See also Table E-3 concerning degree objectives.)

The high ability student in California today has his choice of attending an institution in any of the public higher education systems. Further, he will very probably be encouraged to enroll by many of the state's private institutions as well. Though socio-economic background may restrict the student's choice of institution to some degree,[1] existing institutional financial aid programs, (the State Scholarship program, National Merit Scholarships, Regents' Scholarships and the like) reasonably assure that the most able, regardless of socio-economic situation, not only have access to higher education, but also a choice of institution to attend.

Some students with good academic records may be attracted to a particular public institution, such as the University of California at Santa Cruz, because of program, location and reputation. If denied admission to that campus (but eligible to the University as a whole) because of limited capacity, they may, and do, seek out private institutions in California or in the east rather than attend another University campus. In such instances, policies of diversion and redirection within California public higher education may serve to direct students out of public supported higher education entirely.

However, for the middle and lower ability students, choice of institution is generally limited. The student who is not eligible to enter as a freshman any one of the State Colleges probably must attend his local Junior College. He is usually discouraged from attending any other Junior College because of district barriers and attendance agreements. He would probably be unable to attend most of the state's private colleges or universities as well.

Finally, for the middle and lower ability students, the financial capacity to finance a higher education is of more importance, serving to reduce the student's options further. For these students, financial aid programs have been typically lacking. Even with recent development of federal programs, the emphasis is upon work and loans, with only limited numbers of outright grants available.

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[1]Current criteria for determining parents' capacity to provide funds for the higher education of children may place undue burdens on middle-income families. The students from a low income family has the best chance of receiving aid.

Without discussing further the many reasons which serve to direct a student from one institution over another, the point is that the process of selection involves institutional policies on the one hand, and the student and his ability to compete in and understand the academic marketplace on the other. Though institutional policies may change to serve a particular objective, the objective may not be fully realized if the student himself has other options which he exercises.[1]

The Result of the Selection Process

The selection process, both that which is under institutional control i.e., applications of admissions policies, and that which is not--motivational and socio-economic factors--have resulted in college populations of rather homogeneous ability in many four-year California colleges and universities, public and private. (This is a great deal less true in the case of the Junior Colleges.) However, this is not to say that current college populations are not considerably more diverse than those of the past. Major changes have occurred in all institutions as greater and greater numbers of students from lower socio-economic origins and ethnic groups have entered higher education[2] as well as a greater age-spread among attenders.

Data collected by the American Council on Education and made available to the Council and other surveys conducted during 1967 and 1968 provide data which assist in presenting a profile of students in the systems.[3]

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[1]The Master Plan and subsequent publicity stressing the selectivity of the University of California, (i.e., the top 12-1/2%, etc.), may have actually served to encourage the University eligible high school graduate to attend a University campus, rather than a State College or Junior College. Given less public stress on the "selectiveness" of the University even though the admissions policies were unchanged the student might have chosen to remain at home for a year or two attending his local Junior College, rather than immediately going to a University campus as a matter of "prestige." This may account for some of the difficulties the University has encountered in implementing the 60-40 relationship discussed elsewhere. A stratification of student elites based on academic ability (i.e., high school performance) is the possible result. This was not the explicit objective of the Master Plan. There is however, no data to support this hypotheses--or to refute it--at the present time. It is noted that considerable numbers of University eligibles do attend Junior Colleges.

[2]Private college populations may not be changing in significant degree as increasing costs preclude entrance of many persons even who might have attended in the past. Financial aid programs are, of course, used to increase the economic heterogeneity of the student bodies, but students from middle-income families may be squeezed out.

[3]See CEEB, University of California Financial Aid Study, 2 Vol., 1967 and California State Colleges, A First Partial Report on Student Demographic Characteristics and Financial Aid, September 15, 1967. Freshman data has been provided by the American Council on Education, Division of Research.

These surveys, though not wholly comparable, provide some indication as to the socio-economic patterns of college attendance in California (at least through the academic year 1967-68). Table II-1 suggests rather clearly that students in the four-year systems are most likely to be white--in a proportion greater than in public elementary and secondary school enrollments. Orientals are the single minority group which is well represented, indeed, typically in a proportion greater than in the total population. Negro and Mexican-American students are comparatively under-represented in the four-year college populations. The Junior Colleges show a distribution of enrollments most closely approximating total public school distributions. Some increase in the proportion of Mexican-American and black students has been noted in the last two years.

Examinations of available data concerning family income of students in the California systems shows the Junior Colleges attracting greater proportions of the lower income groups than the other systems--though the University of California and the State Colleges do have a comparatively large percentage of students from the lowest of income categories. Private colleges, and to some degree the University, attract students from the highest income brackets; the Junior Colleges only to a very limited extent. The State Colleges, from available data, appear to have student bodies drawn predominately from middle-income levels. Ethnic and income data would suggest that the State College population is typically the most homogeneous in these respects as a system. A recent State College study noted this in concluding that "the State College student . . . [is] a product of a middle-class, middle-income environment."[1] Individual colleges and universities, public and private, of course, vary in their extent of homogeneity both in terms of race and income distribution. Geographical location is the primary determinant of what the profile of the student body is, or could be, in the case of Junior Colleges. (Recent proposals of the California Junior Colleges may make community socio-economic characteristics, as reflected in individual college programs, a benchmark for use in accreditation.)

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[1] California State Colleges, Office of the Chancellor, A First Partial Report on Student Demographic Characteristics and Financial Aid, September 15, 1967, p. IV-1.

TABLE II-1

ETHNIC COMPOSITION, CALIFORNIA
EDUCATION SYSTEMS
1967-68

SYSTEM	MEX-AM %	NEGRO %	AMER.IND. %	ORIENTAL %	WHITE %	OTHER %
University of California						
All students[a]	1.57	2.08	0.24	0.82	N/A	*
Freshmen[b]	N/A	1.5	0.1	6.7	90.6	1.0
California State Colleges						
All students[c]	2.9	2.9	0.7	3.4	N/A	90.1
Freshmen[d]	N/A	0.6	0.3	3.6	94.4	1.2
Junior Colleges						
All students[e]	8.0	6.1	.1	2.8	82.3	.7
Private Colleges & Universities						
All students[f]	N/A	2.8	N/A	N/A	91.1	6.1
Freshmen[g]	N/A	3.1	0.3	4.1	90.6	1.9
California Public Schools[h]	14.3	8.4	.3	2.2	74.2	.7

[a]Office of Analytical Studies, University of California. Survey of fall 1968 enrollment.

[b]ACE, Office of Research. N = 9,604, fall 1967, Freshmen.

[c]Based upon student self-reporting for H.E.W. Civil Rights Compliance Report, fall 1968.

[d]ACE, Office of Research, N = 1,627.

[e]Bureau of Intergroup Relations, State Department of Education, fall 1966 data show some changes: Mex.-Am. = 7.7; Negro = 5.6; Amer. Ind. = .1; Oriental = 2.6; Other and White = 83.1.

[f]1967 U. S. Office of Civil Rights Survey, N = 50,314, 27 institutions reporting.

[g]ACE, Office of Research, N = 3,140.

[h]Bureau of Intergroup Relations.

*0.8 "other" and 7.8 Foreign.

TABLE II-2

FAMILY INCOME,
CALIFORNIA HIGHER EDUCATION STUDENTS

	University of California[a]	California State Colleges[b]	Public Junior Colleges[c]	Private Colleges[e]	High School Seniors[f]
$ 0 - 3,999	4.6%	3.0%	5.4%	2.9%	5.2%
4,000 - 5,999	6.6	6.6	8.7	4.2	7.6
6,000 - 7,999	10.5	12.4	11.6	7.4	11.7
8,000 - 9,999	12.5	13.8	12.6	9.3	13.9
10,000 - 12,499	18.4	18.5[d]	22.4	23.1	20.1
12,500 - 14,999	12.9	14.2[d]			11.5
15,000 - 17,499	9.2	13.0[d]	8.2	11.5	9.0
17,500 - 19,999	6.1	6.4[d]			3.7
20,000 - 24,999	7.8	5.8	3.2	7.6	4.2
25,000 +	11.4	6.3	3.6	16.3	8.0
Don't know	g	g	24.3	17.6	8.0

[a]University of California Spring Quarter 1967 survey (see Table 7, Appendix G, CEEB, Financial Aid Study). Survey included enrolled undergraduates returning questionnaire.

[b]State College spring term sample; 10% sample of all students. Data shown are for full-time students only and includes graduates. See Table I-10, CCHE, Financial Assistance Programs . . ., Staff Report 67-13 Revised, October 1967.

[c]Source: American Council on Education full-time freshmen data, fall 1967. N = 8193 from 10 public Junior Colleges.

[d]Percentages for intervals used in State College survey: $10,000-11,999; $12,000-13,999; $14,000-16,999; $17,000-19,999.

[e]ACE full-time freshmen data, fall 1967. N = 3069 from 20 private colleges and universities.

[f]As reported in CCHE 1967 survey.

[g]"Don't know" distributed according to other replies in these two surveys.

Summary

1. California four-year institutions, as most other colleges throughout the country, emphasize criteria of selection stressing past performances. Efforts to identify those in whom talent (whether academic or otherwise) may be developed are not generally made. Junior Colleges in great measure offer the student without previous successes his only opportunity for higher education. However, even in these open-door colleges the kinds of performances initially expected of him are generally of the same sort in which he has previously not done well during his high school career.

2. California has developed a pattern of higher education wherein criteria of selection are used to distribute students among the segments, though individual student choices serve to modify in some degree the institutional distribution desired. This pattern was given force and definition by the 1959 Master Plan.

3. The selection criteria in part are reflected in the resulting socio-economic as well as academic characteristics of the student bodies of the several systems. The limited dependence on private higher education in California perhaps serves to make the effect in the two, public four-year segments all the more apparent.

4. Junior Colleges emerge clearly as the colleges offering the greatest opportunity for higher education to those of lower ability, or limited financial capacity or from minority ethnic groups.

Implications

Current criteria for selecting students for California public higher education tend to produce student bodies which are not fully representative of all socio-economic classes, nor of all students with potential capacity to succeed in college. Efforts to obtain more nearly representative student bodies will require active recruitment by all three segments of public higher education. Each segment will need to develop special programs in which a student's latent capacity is discovered and encouraged to grow. Increased student financial aids are essential. In addition, the University and State Colleges will find it necessary to review criteria for selecting students thoroughly and frequently.

If either the University or the State Colleges were to become less selective, then their roles as well as the role of the Junior Colleges would need to be reexamined. However, selectivity in terms of proportion of high school graduates admitted could be maintained with changed criteria for selection. Aspects of this latter alternative are considered in Chapter V.

CHAPTER III

THE PROGRESS OF STUDENTS TOWARD GRADUATION

Persistence and Attrition

Most studies of the persistence of students toward graduation or of attrition before graduation use extremely gross figures. Thus, if a freshman class totals 200,000 in one year, and a sophomore class totals 125,000 in the next year, attrition is deemed to be 75,000 students; 125,000 are considered to have persisted toward a degree. But, as a few studies of particular colleges show, some of the 75,000 drop-outs may have transferred elsewhere; some may and will return after a period of absence; some may have learned all that they desire to learn. Further, some of the 125,000 sophomores may be returning drop-outs from earlier years; some may be enrolled for their third or fourth consecutive year as part-time students; some may be transfers from elsewhere.

This chapter will use both gross data and more refined data in order to determine what areas of the problems of persistence and attrition deserve most immediate attention in California's higher education.

Recently a report of the Joint Committee on Higher Education of the California Legislature noted that "as California's system of higher education enrolls increasing number of students, the proportion of these students who complete degrees may be declining. It might be said that the system seems to be enrolling students more and graduating them less."[1] This conclusion was based upon comparisons of aggregate enrollment and degree production over a period of time.

In comparison with national data, California appears to be taking into its higher education system a better than average proportion of its population, but, as the Joint Committee report points out, its production of baccalaureate and first professional degrees is below that which might be expected as it is at a percentage level below California's share of the national population. Production of graduate degrees, however, exceeds this number. Some of these comparisons are summarized below in Table III-1.

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[1]Joint Committee on Higher Education, California Legislature, The Academic State (Sacramento: The Committee, 1968), p. 20.

TABLE III-1

PERFORMANCES OF THE CALIFORNIA SYSTEM OF HIGHER EDUCATION AND NATIONAL NORMS

Selected Measures

High School Graduates

In 1968 California graduated 274,150 or 15.9% of the total number 15-19 year olds in the state.

Nationally, 2,742,000 students graduated or 15.0% of the total number of 15-19 year olds in the country.

California thus produces high school graduates very close to the national norms.

First-Time Freshmen

In fall 1967, there were 140,468 full-time, first-time freshmen in California higher education institutions. This number represented 52% of the number of high school graduates of the preceding June.

Nationally, in fall 1967 full-time, first-time freshmen equalled 50.34% of the total number of high school graduates of the preceding June.

On this measure, California appears to exceed the national rate by a small margin.

Total College Enrollment

In the fall 1967, total college enrollment full and part-time in California was 900,332. This represents 45.40% of the population in the 18-24 year old age group--the grouping from which most college students come.

In the United States in fall 1967 there were a total of 6,670,416 college enrollees or approximately one-third of the national population, 18-24 years of age.

In terms of gross numbers in college, California appears to be substantially above the national rate. Much of this is the result of the many part-time students in California Junior Colleges and State Colleges. Junior Colleges in California in the fall of 1967 alone accounted for 34.79% of the total national Junior College enrollment. However, four-year college enrollments were 6.45% of those nationally. Graduate enrollments represented 11.43% of the national total.

TABLE III-1, Cont.

In considering these comparisons it should be noted that California in 1967 contained 9.9% of the population of the United States. Its share of 18-24 year olds is approximately the same.

Degrees Awarded

In the academic year 1965-66, California institutions awarded 46,177 bachelors or first professional degrees. This represented 8.30% of all such degrees awarded nationally. Master's degrees awarded numbered 13,049 or 9.27% of the national total. Ph.D.'s or their equivalent were granted to 2,011--11% of the number nationally.

The California system appears to produce somewhat fewer bachelor's degrees and significantly more doctoral degrees than might be anticipated in comparison to the total proportion of students in California higher education, the proportion of high school graduates and the population of the state as a whole in relation to that of the United States.

SOURCE: U.S. Office of Education, various publications.

The evidence shows that in comparison with national totals California produces about its share of master's degrees and significantly more than its share of doctoral degrees, but somewhat fewer, proportionately, baccalaureate holders. In our increasingly complex society the need for more and more expert research scholars becomes increasingly obvious. But is this need greater than the need for more and more citizens with bachelor's degrees? By what criteria can one compare these needs? If funds sufficient to meet both needs are available, no choice between them is needed. Is this likely to be the case? If not, by whom should the choice be made? Upon what evidence should it be based?

In considering the California "performance" it should be noted that California has been unique in its widespread development of Junior Colleges, and even now, only a few states approach it in the degree to which Junior Colleges are readily available to their college age populations. With an open door to all who might profit from instruction, California Junior Colleges offer a great variety of programs leading to employment before or at the end of two years of college work. One can speculate that some students in some other states with fewer Junior College opportunities complete bachelor's degree programs to achieve the same occupational goals.

Another impact of the Junior College segment is seen in comparisons of subsequent year enrollments for a given entering class which illustrate in gross terms an apparent failure to persist on the part of substantial numbers

of students. This raises some important policy questions for higher education. For example, the report of the Joint Committee on Higher Education points out that for the year 1966-67 in California, sophomore enrollments were only 41.3% of the freshman enrollment of the previous year among all institutions, public and private. The bulk of the reduction between freshman and sophomore years occurred in the Junior Colleges. Senior enrollments appear to be as little as 18.8% of the total entering class statewide of three years before (32.5% when full-time students were taken as the base). These data distort the effectiveness of the four-year segments because of the high attrition in Junior Colleges.

For example, sophomore enrollments in Junior Colleges amount to only one-third of those of the year's preceding freshman class, whereas four-year college enrollments are approximately 80%.[1] Unfortunately data are not available nationally to indicate if the California experience is unique or not.

Though the implications of the gross statistical presentation are not clear, attention must be paid to the question of persistence in college as such. Effort should be made to determine what factors are most important in persistence and which of those are in fact most susceptible to manipulation. The question must also be posed as to what degree of persistence is desirable.

The following pages review some of the more important results of major studies considering the factors relating to attrition and persistence in higher education. Some of the findings of these studies, though concerning populations other than those in California, may be closely related to this state's concerns. Astin, for example, points out after examining some 248 colleges and universities of all types and the kinds of students entering therein: "When type of institution is controlled, differences between the entering student bodies in different geographical regions are negligible."[2] From this observation the sort of institution--junior college, university or state college, public and private or perhaps sub-classifications such as "urban junior colleges"--holds the key to analysis of student progress rather than the particular state or regional situation.

Expectation of Degree Completion

Dorothy Knoell, in reviewing the findings and methodologies of many attrition studies, has found that research to date has tended to be microscopic in nature and fails to look to overall, significant student flow patterns. She classifies extant studies into four categories: (1) the census study--"how many students have withdrawn;" (2) the "autopsy" study citing reasons for attrition; (3) the case study of an individual institution's experience; and (4) the investigation designed to develop measures to predict who is the potential drop-out. Knoell continues by pointing out

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[1]This is pointed out clearly in the Academic State. Unfortunately since 1967, data collected by the State Department of Finance makes no distinction between freshmen and sophomore--but now uses only "lower division-upper division." One major problem with the freshman-sophomore distinction particularly in Junior Colleges is the fact many students take more than two semesters to achieve sophomore status.

[2]Alexander W. Astin, Who Goes Where to College? (Chicago, Illinois: Science Research Associates, Inc., 1965), p. 40.

areas seldom given attention: (1) the limited research on the effects changes in institutional policies have on attrition; (2) examination of the techniques used to identify the potential early drop-out; (3) development of programs to reduce attrition in certain student subgroups (a point most relevant with the increasing effort to bring ethnic minorities into higher education); and (4) the need to study the drop-out after he has departed and to develop appropriate action programs to return him to higher education if this appears needed.[1]

Recent research studies have tended to show that students' patterns of attendance may result in a completion of programs once begun to a much greater extent than previously thought. Whereas about only 40% of the nation's students entering a four-year college graduate from the institution of initial registry in the expected four-year term, something like 70% of this group may eventually complete their training at some college or university.

Recent studies have disclosed the following findings concerning the percentages of students graduating at the end of the expected four-year term from the institution of their first registration:[2]

Univ. of Georgia	35%	City Univ. of New York	48%
Univ. of Iowa	37%	Beyond High School	
Univ. of Wisconsin	38%	Sample (1959-63)	28%
Pennsylvania State Univ.	43%	Univ. of Calif.-Berkeley	
Hollins College	53%	Class of 1959	33%
Princeton	80%	Class of 1965	33%
		Univ. of Illinois	
		Class of 1956 (men)	28.5%

Summerskill survey of 35 studies	37% (median)
Iffert, 149 institutions (1950-54)	39.5%
a. Public colleges & universities	33%
b. Private colleges & universities	48%
Universities only	39.1%
Liberal Arts Colleges only	40%

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[1]Dorothy M. Knoell, "A Critical Review of Research," in Lawrence A. Pervin, et al., eds., The College Dropout and the Utilization of Talent (Princeton, N.J.: Princeton University Press, 1966), pp. 63-65.

[2]Colleges in the first column are listed in Pervin, et al. Eckland provides information on Illinois; other sources include the Iffert-U.S.O.E. survey, the University of California-Berkeley survey and the Beyond High School sample of the Center for Research and Development in Higher Education. Summerskill's survey appears in the American College, Sanford ed. See also, Bruce K. Eckland, "College Droputs Who came Back," Harvard Educational Review, 34 (Summer 1964) 402-420; and Office of Institutional Research, University of California-Berkeley, Student Performance and Attrition at the University of California, Berkeley; A Follow-up of the Entering Freshmen Classes of Fall 1955 and Fall 1960. The Illinois study followed 1,332 freshmen men of 1952 for a 10-year period. The University of California-Berkeley study examined two entering classes through the Fall Semester 1965--10 years for the freshmen class of 1955 and 5 years for the freshmen class of 1960.

Though the graduation rate from colleges of initial attendance appear comparatively low at the end of a four-year period, a study of University of Illinois male students and other studies recently completed at the University of California at Berkeley and for the City University of New York suggest that graduation might be expected for 70% or more of the entering freshmen at four-year colleges over an extended period of time. The CUNY study of Brooklyn and Queens college freshmen of 1960 found almost 80% had received a degree after seven years.[1] Similarly a study of 2,516 Pennsylvania State freshmen in 1955 conducted eight years later found 70.5% having completed some degree or certificate. Seventy-five percent were assumed as eventually completing a course of study.[2]

Some improvement in the "rate" of degree receipt may be found in the recent study of the University of California at Berkeley. In this study of the entering freshman class of 1960, 65% had received a degree at some institution by fall 1965 (51% of the group at Berkeley), whereas of the 1955 Berkeley class, a degree-receipt total of some 60% had been recorded after twice the lapse of time.

One of the most extensive longitudinal studies reported to date discloses that some 65% of the students entering four-year colleges and universities in 1961 had completed four or more years of college by 1965. This survey included some 37,000 students from 246 colleges and universities (no two-year colleges were involved.)[3]

In another major study the Center for Research and Development in Higher Education followed some 10,000 high school graduates from a cross-section of communities across the country. This survey found that about 52% of the group attending some college (51% of the total) either had received degrees or were still in college after four years. In this survey the women were more likely to have received degrees in the four-year period than the men, but less likely to be among the group still in college.[4]

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[1] Office of the Coordinator of Institutional Research, How Many Graduate, CUNY, November 1968.

[2] Donald H. Ford and Hugh B. Urban "College Drop-outs: Successes or Failures," Educational Record 46 (Spring 1965), 77-92.

[3] Robert J. Panos and Alexander W. Astin, Attrition Among College Students, Research Reports, vol. 2, 1967, (Washington, D.C.: American Council on Education, Office of Research, 1967). An effort was made to extract the data for California colleges included in the survey for comparison with the national norms for this and other comparisons. However, the California institutions were not considered sufficiently representative. Subsequent annual student surveys in the A.C.E. research program have included University of California campuses and a number of State Colleges and Junior Colleges; thus future analysis of California data from these national, comprehensive student data banks will be more productive and should be quite useful. Alexander Astin has been most helpful to the staff in discussing the question of attrition studies in general as well as making available data reported elsewhere for California and in other studies.

[4] James W. Trent and Leland L. Medsker, Beyond High School (Berkeley, Cal.: Center for Research and Development in Higher Education, University of California at Berkeley, 1967). Astin and Panos suggest that the relationship between male and female persistence--and presumably degree receipt--is due to the fact women tend to enter colleges with better high school records largely because of greater tendencies to conform.

The above studies reveal in a gross sense that for substantial numbers of persons a four-year period of uninterrrupted attendance is not sufficient to achieve a degree. Students take less than full loads, change majors requiring additional work, etc. This has been termed a "stretch-out" phenomenon. A recent study of a graduating class in the California State Colleges revealed that the average student required 6.44 years to complete his degree program.[1]

The question whether on the average it takes longer today to obtain a baccalaureate degree as a rule than was the case in the past, is difficult to substantiate from available studies--and will likely continue to be so. Differences in degree-receipt rates can, however, be found when kinds of institutions are considered.

An institution such as Princeton can show a remarkable "success" rate even for its "drop-outs"--some 97% of the class of 1960 who had left Princeton either entered another college or re-entered Princeton at a later period. Some 88% of these "drop-outs" had received a degree at the time of a recent survey.[2]

The studies reported above, with the exception of the Beyond High School survey, have emphasized progress toward graduation on the part of students beginning a four-year institution. Very few investigations of a comprehensive nature have investigated the matter of persistence and related factors of Junior College students. In one exception, a survey examined the records of 22,322 students from 57 Junior Colleges in 21 states who entered in the fall of 1961. By the end of the spring semester of 1965 some 66% had either withdrawn, transferred, completed a less than two-year program, or were dismissed before completing 60 units of work--the normal two-year program. The other third either had completed work on the associate of arts degree or had completed 60 units or more (many students including transfers in effect "complete" work in Junior College but never receive the associate degree).[3]

Withdrawal From College and Its Likelihood

Nationally the Iffert study of the early 1950's found that 11% of entering freshmen nationally had withdrawn from the institution of registration within the first term, by the end of the first year some 27.5%. Another 15% were found to leave during or at the end of the second year. According to this study the most critical period is the second half or last two-thirds of the freshman year.[4] Another survey of six public institutions in Colorado

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[1]California State Colleges, Division of Institutional Research, Those Who Made It: Selected Characteristics of the June 1967 California State College Baccalaureate Graduates.

[2]Pervin, et al., op. cit.

[3]Results of a study reported by Dale Tillery as stated by Edmund J. Gleazer, Jr., "Recognizing the Expanding Role of Junior Colleges in Higher Education," in College Admissions Policies for the 1970's (New York: CEEB, 1968), pp. 74-75.

[4]See Robert Earl Iffert, "Drop-Outs: Nature and Causes; Effects on Student, Family and Society," in Current Issues in Higher Education 1956 (American Association for Higher Education, 1956) and Iffert, Retention and Withdrawal of College Students, Bulletin 1958, No. 1 (Washington D.C.: U.S. Office of Education, 1957).

found an average freshman-sophomore loss of 26.1% over the years from 1952 through 1959.[1]

Many students leaving the institution of their first registration transfer to another. In the survey conducted by Astin and Panos it was found that of the male students leaving the college of their initial registration in the four-year period 1961-65, 47.5% attended one other college, 12.5% two other colleges and some 2.2% three or more. Similar percentage distributions were found for the women students.

The study of June 1967 State College graduates disclosed that only 25% graduated from the college in which they began their collegiate career. Thirty percent had transferred two times, 17% three times.[2]

Reasons for Withdrawal. A review of the literature concerning attrition and persistence discloses many reasons for an individual withdrawing from one college to attend another, to cease his higher education altogether, or to interrupt college programs with the intention to return later (distinctions are seldom made among the groups). Many of these studies may be biased depending on whether the student is asked to state the reasons himself or if an objective person concludes what the reasons were. Very likely no single reason is paramount in the individual's mind but his decision is the result of a number of factors, some of which he may not wish to admit to himself or to others.

Change of career plans, poor academic work (often the result of other problems), and marriage for women students appear to be among the reasons typically cited by students along with general dissatisfaction with the particular college attended. The Astin-Panos survey of 1961 freshmen may be cited, as well as results of the Project Talent surveys for high school classes, 1960 through 1963, as representative of reasons stated by students for their leaving. (See Tables III-2 and III-3.)

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[1]Theodore E. Albers, Student Attrition in Colorado State-Supported Institutions of Higher Education (Association of State Institution of Higher Education in Colorado, April 1965).

[2]California State Colleges, Division of Institutional Research, Those Who Made It: Selected Characteristics of the June 1967 California State College Baccalaureate Graduates.

TABLE III-2

REASONS GIVEN FOR LEAVING COLLEGE OF MATRICULATION IN 1961

Astin-Panos Survey, 246 Colleges

Item	Men		Women	
	Major Reason	Minor Reason	Major Reason	Minor Reason
Changed Career Plans	22.1%	15.4%	20.7%	13.6%
Dissatisfied With College Environment	26.7	22.3	27.0	19.7
Scholarship Terminated	2.8	3.1	1.4	2.5
Wanted Time To Reconsider Interests And Goals	26.4	22.4	17.7	16.2
Marriage	7.8	3.1	29.0	6.1
Pregnancy	1.1	0.6	8.2	1.4
Tired Of Being A Student	11.3	16.3	6.0	14.0
Could Not Afford Cost	23.6	15.6	17.8	12.7
Academic Record Unsatisfactory	15.5	20.8	5.8	11.1
Drafted	1.4	0.9	0.0	0.1

TABLE III-3

PROJECT TALENT, 1960 HIGH SCHOOL GRADUATING CLASS
ATTENDING COLLEGE RESPONSES AS TO REASON
FOR DROPPING OUT OF COLLEGE

	Men	Women	Total
Was Offered Good Job	10.0%	15.9%	12.8%
Became Homesick	.3	.5	.4
Didn't Enjoy Social Life	.9	1.1	1.0
Got Married	2.8	22.8	12.2
College Work Was Boring	2.7	1.4	2.1
Had To Work Too Hard	1.7	0.7	1.3
Was Afraid Of Failing	3.1	1.6	2.4
Failed	22.1	6.6	14.9
Had Financial Difficulties	16.6	13.4	15.1
Became Ill	1.9	6.1	3.8
Emergency In Family	1.4	1.2	1.3
Some Other Reason	36.3	28.7	32.7
	99.8	100.0	100.0

(The American High School Student, Table 10-3)

Iffert in his survey of some 2,400 student drop-outs in 20 colleges from the 147 included in his earlier withdrawal study, found academic reasons topping the list of causes for withdrawing from the institutions. Academic problems were found to have been cited as the most important reason for withdrawing among 60% of those leaving privately controlled institutions and some 36% of those formerly attending publicly controlled institutions. Health and family reasons were cited as the next most important with financial reasons being given in about 15% of the cases.[1]

A study of withdrawals from six public institutions in Colorado indicated that financial reasons, disinterest in course work and limited desire to continue were most often cited as reasons for leaving the institution of first registry. Table III-4 indicates the ten most cited reasons by male and female in this study. Though financial reasons appear significant in most studies noted, the Astin-Panos survey found that the majority of students dropping out would not have changed their decision with additional funds.[2] Similarly, the Beyond High School study, probably the most sophisticated, intensive study of major scope published to date suggests "there is reason to challenge the popular myth that finances account for a large proportion of college withdrawals."[3] The study found:

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[1]Robert E. Iffert and Betty S. Clarke, College Applicants, Entrants and Dropouts (Washington, D.C.: U.S. Office of Education, 1965), OE 540340.

[2]Astin-Panos, unpublished manuscript, p. II-25.

[3]Trent and Medsker, op. cit., p. 133.

TABLE III-4

TEN MOST FREQUENTLY REPORTED REASONS FOR WITHDRAWAL IN ORDER OF FREQUENCY GIVEN BY 971 WITHDRAWALS FROM THE FALL, 1960, FIRST-TIME-ENTERING FRESHMAN CLASS AT SIX COLORADO STATE-SUPPORTED INSTITUTIONS OF HIGHER EDUCATION, BY SEX

Reasons in order of frequency given	Male		Female		Total Number
	No.	Pct.	No.	Pct.	
1. Not Enough Money to Meet College Expenses	179	59.9	120	40.1	299
2. Some Required Courses of Little or no Value	149	52.3	136	47.7	285
3. Lacked the Desire to Continue	169	60.6	110	39.4	279
4. One or More Teachers Used Poor Instructional Methods	100	54.3	84	45.7	184
5. Got Married and Felt You Should Leave School	26	16.0	137	84.0	163
6. High School Preparation Inadequate	95	64.2	53	35.8	148
7. Asked to Withdraw by College Officials	96	67.1	47	32.9	143
8. One or More Teachers Unconcerned About Student Academic Welfare	74	56.5	57	43.5	131
9. Insufficient or Poor Counseling in High School	83	63.8	47	36.2	130
10. Felt Decision to Enroll at the Institution was a Mistake	78	62.4	47	37.6	125
Totals	1,049	55.6	838	44.4	1,887

SOURCE: Theodore E. Albers, Student Attrition in Colorado State Supported Institutions of Higher Education, April 1965. Table XXVI, p. 55.

> What becomes increasingly evident is that lack of interest and motivation account for attrition as much or more than ability or financial resources. When the withdrawals . . . were questioned about their specific reasons for leaving college, only about one-half of the men and considerably less than one-third of the women listed academic or financial reasons, and the proportions of withdrawals who listed these reasons varied relatively little by socio-economic or ability level.[1]

A recent study of students leaving Long Beach State College supports much of the findings of other studies. In this investigation students were asked reasons for withdrawing and at the same time counselors listed what appeared to be the true reasons based on discussion. Securing a job was generally a reason cited by the student, however, in one-half the cases the counselors determined this was not the actual reason.[2]

In California, a study at Orange Coast College conducted concerning withdrawing Junior College students in spring 1966, disclosed that finances, health, personal problems and academic deficiencies entered into the decision to withdraw. Another study at Mira Costa College showed that the drop-out rate was directly related to the unrealistic image of college life held by entering students. This led the college to seek to improve its counseling procedures in an effort to adjust individual college goals with aptitudes, interests and prior record.[3] Review of available studies concerning the Junior College drop-out led one analyst to conclude:

> . . . Little research has been implemented that evaluates the accomplishments of students who leave the Junior College prior to earning a degree or completing a program of instruction. This group, representing the overwhelming majority of Junior College students, has not yet been the subject of major Junior College institutional research efforts.[4]

The Characteristics of the Withdrawer. A number of reasons may lead the person to withdraw from one college and either attend another or end his college career. How in fact does the persister differ from the non-persister?

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[1]Ibid., p. 137.

[2]George D. Demos, Analysis of College Dropouts--Some Manifest & Covert Reasons, March 1967, ERIC, ED. 014735. Interestingly, 10% of the group decided to remain after being interviewed even though the interview was not designed to encourage their remaining.

[3]John E. Roueche, "Research Studies of the Junior College Dropout" in Junior College Research Review, ERIC, Clearinghouse for Junior College Information, October 1967, ED 013659.

[4]Ibid.

Research on the whole has underlined the relationship between high school record and success in college.[1] Similarly a relation between persistence and socio-economic level of family has been generally found to exist.[2]

Additional perspective is provided from the Beyond High School investigation results.

> They [the persisters] were more selective in choosing their colleges and saw more reasons for attending. They studied harder and were less prone to allow social life to interfere with their studies. They tended to be more intellectual, self-reliant, and open-minded before entering college, and even more intellectually oriented and autonomous after four years. None of these findings could be attributed to differences in ability or socio-economic status to any major extent. Therefore, a tenable interpretation of the findings is that the persisters entered college with the necessary predisposition, or what Sanford has termed the state of readiness, to persist and develop in college.[3]

Concerning ability, a recent study focusing on low-ability (as measured by academic grades) students in four California Junior Colleges found that about one student in four would not persist beyond the first semester, one in two not beyond the second semester. Only one of four could be expected to complete the fourth semester in this group. However, the persistence rates varied substantially from one Junior College to another, varying from a low of 17% to a high of 40% in the fourth semester.[4]

Much of what occurs during the college process seems in great measure due to the kinds of students present in the institution, and other related factors. The Astin-Panos survey concludes that students in their sample were more likely to complete four years of college and to obtain the bachelor's degree during the four years following matriculation if they attended a selective institution with a cohesive peer environment located in a region other than the west or southwest. Student employment appears to reduce the chances for continued attendance.[5]

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[1]A recent review of the literature points out this finding. See Norman D. Kurland, Transition From School To College, New Dimensions in Higher Education No. 17 (Durham, N.C.: Duke University, April 1967 for U.S. Office of Education).

[2]For example, the Astin-Panos study supports this relationship as well as that concerning high school grades. However some studies discount socio-economic factors. A study of Univ. of Florida students showed that when ability was controlled socio-economic variables studied did not relate to dropping out. Parents' marital status did. Barger and Hall, "Interaction of Ability Levels . . .", Educational & Psychological Measurement 25 (Summer 1965), pp. 501-508.

[3]Trent and Medsker, op. cit., p. 153.

[4]Ernest H. Berg, "Selected Factors Bearing on the Persistence and Academic Performance of Low Ability Students in Four California Junior Colleges," (unpublished dissertation, University of California at Berkeley, 1965).

[5]Astin-Panos, Manuscript, III-20-1.

The Institutions and Who Graduates

The foregoing has emphasized the fact of withdrawal and the reasons the student withdraws. But are there factors in the institutional environment which research has shown to be particularly related to persistence? Apparently not.

Institutions tend to select the kinds of student presumed to succeed in that environment and/or the student himself identifies the institution which appears to meet his own disposition and his then perceived goal. There appears to be a congruence between student personality and the characteristics of an institution.[1]

It would appear clear that the more the institution is able to be selective, using a broad range of criteria, then the higher the anticipated graduation rate. Ability level alone is not the sole predictor of success. Economic, social and motivational factors appear to enter into a complex process of general "fit" of the student to the institution and vice versa.[2]

> . . . With respect to the problem of the interaction between the individual and his environment, these findings suggest that the large observed differences among institutions in educational outcomes are more a function of differences in their entering students than of differences in measurable characteristics of their environment.[3]

The influences of the institution on the student in respect to his continued persistence, as well as the relative increase in the individual's worth and experience is extremely difficult to identify. In terms of attitude change and values, "The evidence seems to be that college experience does not exert a profound influence on the great majority of students."[4]

Who Graduates

The preceding research findings have generally been focused upon entering college groups with attempts to find out what happened to them. Few studies have paid attention to the characteristics of the

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[1]Arthur W. Chickering, Institutional Differences and Student Characteristics, ERIC, ED 014099, May 1966.

[2]A survey of 100 colleges with low and high drop-out rates found the low drop-out colleges to be more selective, of smaller size and in a small community and more affluent. Other surveys don't bear this out directly. See A. Gordon Nelson, "College Characteristics Associated with Freshmen Attrition," Personnel & Guidance Journal 44 (June 1966), 1046-50.

[3]Astin-Panos, op.cit., p. III-24.

[4]Mervin B. Freedman, The Student and Campus Climate of Learning New Dimensions in Higher Education, No. 18 Everett H. Hopkins, ed., (Durham, N.C.: Duke University for U.S. Office of Education), 1967.

graduates themselves. A significant exception is the recently completed study of the graduates of June 1967 from California State Colleges.[1]

Major findings of the survey disclosed:

-- 27% of the graduates had begun their education at the institution granting them their degree.
-- 50% of the graduates had attended a California Junior College, 14% another State College.
-- 48% of the transfer students (35% of all graduates) had transferred more than one time.
-- Two-thirds of the graduates required more than four years of college work to receive their degrees.
-- The average graduate required 6.44 years to complete the degree; the average graduate was 25.86 years old, though 47% graduate before becoming 23.
-- One-third of the students graduated with more than 135 units of work (124 is the normal minimum); 23% with more than 140.
-- Though graduates' average G.P.A. stood at 2.67 (2.75 = B minus), almost one in four graduates had been on probation and 6.6% had been dismissed one or more times.

Similar studies have not been conducted within the University of California system, nor among the private colleges, nor the Junior Colleges. The implications of the State College survey's findings are many (some will be discussed later in this report in respect to transfer questions).

The study points out graphically that higher education for most State College graduates, at least, has not been one of the traditional four-year pattern in one institution. It also indicates the extent to which the Junior Colleges and to a surprising extent other State Colleges are providing the first year or two of college work.[2]

Summary

1. Gross statistics suggest that though California admits great numbers of students to higher education, in terms of production of baccalaureate degrees, the state's colleges and universities may not produce as many baccalaureate degree holders as might be expected, given California's population and its numbers of college enrollments. In terms of master's degrees, California produces about its theoretical share; in terms of doctoral degrees it produces significantly more than its share.

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[1] C.S.C., Division of Institutional Research, Those Who Made It: Selected Characteristics of the June 1967 California State College Baccalaureate Graduates.

[2] Ibid., p. 20.

2. There is a considerable body of research concerning student persistence and attrition results of which may be suggestive of what is occurring in California.

Research findings suggest that:

a. The persistence rates in California public four-year colleges are probably not too dissimilar from the patterns of other similar institutions. It is likely that today in California approximately 33-40% of an entering freshman class of a public four-year college will complete a baccalaureate degree "on-time" within the anticipated four-year period at the same institution, and that some 70%, if not more, of those entering a four-year college initially will eventually complete a degree at some college.

b. The fact of withdrawing from one institution to enter another is a common occurrence. Further, those students who do leave and don't immediately transfer hope to continue their studies--though the longer he stays away, the less likely it appears the student will return.

c. Individuals withdrawing from college do so for a number of reasons both academic and personal. There is a positive relationship between student characteristics, especially ability, and likelihood of persistence and achievement in college. Consequently it is most difficult to identify ways and means to increase persistence other than through emphasizing selection methods designed to assure identification of students who will succeed in a given college.

d. The Junior College which plays a major role in California higher education is apparently the locus of the greatest extent of attrition of students--it is also the institution most noted for its heterogeneous student bodies and comprehensiveness of program. However, the number of withdrawing students who transfer, complete a less than two-year program, or otherwise achieve their educational goals, is unknown. Much more detailed study of Junior College students seems essential.

Implications

Research to date gives little clear indication as to what kinds of policies markedly increase the likelihood of student persistence, other than those policies based on screening admission to an institution in the first

place. With the great dependence of California upon the Junior Colleges for the initial two years of college and in light of apparent high attrition rates of these open-door institutions, the focus of efforts to determine ways and means to increase persistence should be on these colleges.[1] The lack of comprehensive evaluation of these colleges is apparent.

Although it is too soon to arrive at a final conclusion, efforts in all segments of higher education to increase the numbers of ethnic minority students and persons from lower economic groups, many of whom are educationally handicapped, may temporarily lower persistence rates, (although higher motivation may off-set any tendencies to lessened persistence because of academic skills). Counseling programs to develop latent talent and other special attention are required to compensate.

Studies of graduates such as that recently conducted by the California State Colleges may lead to greater insights than many past studies of student progress through higher education--for the characteristics of those who do achieve a baccalaureate degree sheds light upon those who drop along the way.

Policies and procedures concerning transfer of students and the academic performance expected of them should, however, be considered before any generalizations are made concerning possibilities of increasing student persistence.

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[1] A research project investigating first-semester drop-outs among 23 Northern California Junior Colleges has as its objectives the prediction of the potential drop-out and then the development of the kinds of counseling necessary to reduce the actual drop-out rate.

CHAPTER IV

INSTITUTIONAL POLICIES THAT AFFECT PROGRESS TO GRADUATION

Institutional policies with respect to the placing of students on academic probation, removal from such probation, and dismissal for academic reasons, along with policies on the admission of transferring students to advanced standing and the satisfaction of general education-breadth requirements, all have substantial effects upon the progress students make towards graduation. Policies of California's public segments of higher education in each of these areas are presented and discussed in the sections that follow.

Policy on Academic Probation-Dismissal

Academic probation is the result of a student's falling below the grade-point average an institution requires for graduation. It is, therefore, not a penalty but a warning to both the student and the institution that remedial action is needed. Adequate counseling and guidance should be provided for diagnosing difficulties and checking on recovery. When necessary, a student's curricular and extra-curricular activities should be restricted, or his ultimate objectives in programs or majors may need revision.

Unfortunately, as will be shown later, the thrust of University and State Colleges policy on academic probation is not toward the remedial aspects but toward the mechanics of the procedure. Junior College policy gives much more concern to counseling and guidance services.

Academic dismissal, generally occuring after a period of academic probation, is based on the assumption that continued attendance will not lead to improved academic performance or that the student can pursue his education more effectively elsewhere. It may occur when the student's grade-point average falls below a point from which recovery to the grade-point average required for graduation is not possible. Academic-dismissal may also occur without the probation process if a student's grade-point average falls below a specific level. Dismissal occurs only after careful consideration of what seems best in each case, often by a faculty committee.

The Master Plan, in its consideration of academic probation-dismissal,[1] was apparently concerned only with the attainment of uniformity in policy and practice among the segments, and did not give consideration to benefits that students could derive from the probation process.

California Public Junior Colleges. Minimum standards for academic probation and dismissal of Junior College students are contained in Title V of the California Administrative Code. These standards, as revised in 1967, require that all full-time students and all part-time students who have attempted 12 semester units of college courses be placed on probation at the end of any semester in which they have received a grade-point average of less than 2.0 (C average) and be so notified immediately.

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[1] Master Plan, p. 6.

Students transferring to a Junior College with less than a 2.0 grade-point average are also placed on probation. The Code further specifies that Junior Colleges shall provide each student on probation with individual counseling and guidance services, and shall regulate his program according to his aptitude and achievements. Students whose grade-point average in each of three consecutive semesters is less than 1.75 may be dismissed and cannot be reinstated until one semester has elapsed.

The governing board of each Junior College can adopt standards which exceed these minimum state standards. They can also adopt rules setting forth the circumstances that shall warrant exceptions to the minimum state dismissal standards.

Information supplied the Board of Governors of the California Community Colleges indicates that students in all Junior Colleges are placed on probation according to the state minimum standard. However, students in nearly two-thirds of the Junior Colleges face dismissal standards that exceed the minimum contained in Title V--36 Junior Colleges dismissing students after they have had a grade-point average of less than 1.75 for two consecutive semesters and another 17 dismissing students after one semester with a 1.75 grade-point average.

The California State Colleges. Uniform minimum standards governing academic probation and dismissal for the California State Colleges became effective in 1964.[1] The standards state that a student shall be placed on academic probation if either his cumulative grade-point average or his grade-point average at the State College at which he is enrolled falls below 2.0. Such students shall be promptly advised of their status. The student shall be removed from probation when his cumulative grade-point average in all academic work attempted reaches 2.0.

A student on probation is disqualified (dismissed) if as a lower division student (less than 60 units) he falls 15 or more grade points below a 2.0 average in all units attempted, or if as a junior (60-89 units) he falls 9 or more grade points below a 2.0 average, or if as a senior (90+ units) 6 or more below. Segmental policy does not provide for the readmission of dismissed students.

A review of college catalogues indicates that all individual State Colleges generally adhere to the policy indicated above.

The University of California. Policies governing academic probation and dismissal at the University[2] state that a student shall be placed on probation if at the end of any term his grade-point average, computed on all courses undertaken in the University, falls below 2.0. A student is subject to dismissal if after one term on probation his grade-point average on all courses undertaken at the University is still below 2.0. A student is also subject to dismissal if his grade-point average for any one term

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[1]See Appendix H.
[2]Appendix I.

falls below 1.5 regardless of his overall record. A student who fails to meet these minimum scholarship requirements is subject to such supervision as the faculty of his college or school may determine. The faculty may dismiss a student; may suspend his dismissal, continuing him on probation; or may re-admit on probation a dismissed student.

The University policy is adhered to rather uniformly on all University campuses. The principal variations occur at the Los Angeles campus where a student is placed on probation whenever his grade-point average for a single term (instead of for all work) falls below 2.0. He has two terms (instead of only one) in which to bring his overall average to 2.0 before being subject to dismissal. A student at the Berkeley campus also has two terms in which to achieve an overall average of 2.0. It is not uncommon for students at other campuses to be continued on probation more than one term even though they are subject to dismissal after only one term.

Policy on Admission to Advanced Standing

Approximately three-fourths of all lower division students in California public higher education are enrolled in the Junior Colleges and many of these students are in the Junior Colleges as a result of University and State College policies which encourage freshmen who are eligible for admission to the University or State Colleges to complete the first two years of their undergraduate programs in the Junior Colleges. A large percentage of these students will transfer to the California State Colleges with a limited number transferring to the University or other colleges for the completion of their undergraduate programs. The policy of the State Colleges and the University with respect to the admission of these transferring students to advanced standing, therefore, assumes particular importance, for this policy can either permit normal progress towards graduation or introduce factors that complicate and delay progress.

Admission Policy for Advanced Standing in the University of California.[1] The University defines an "advanced standing applicant" as a high school graduate who has been a registered student in another college or university or in college-level extension classes. Requirements for admission to advanced standing vary according to an applicant's high school record. A nonresident applicant must meet requirements in addition to those required of a resident. If the applicant has less than twelve units of transferable college credit since high school graduation, the examination requirement for freshman applicants must also be satisfied.

An advanced standing applicant must meet one of the following conditions:

1. If eligible for admission to the University as a freshman, the applicant may be admitted in advanced standing any time after having established an overall grade-point average of 2.0 or better in another college or university.

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[1]From the Undergraduate Admission Circular, September, 1968, University of California.

2. If not eligible for admission as a freshman only because one or more of the required high school subjects[1] had not been studied, the applicant may be admitted after: a) Establishing an overall grade-point average of 2.0 or better in another college or university, b) Completing, with a grade of C or better, appropriate college courses in the high school subjects that the applicant lacked, and c) Completing twelve or more units of transferable college credit since high school graduation or have successfully passed the CEEB tests required of freshman applicants. There is an exception to this requirement.

   Up to two units of credit in the required high school subjects will be excused if the applicant has earned a grade-point average of 2.4 or better in 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer. Any deficiency over two units in the required high school subjects must be made up by completing appropriate college courses with a grade of C or better.

3. If ineligible for admission to the University as a freshman because of low scholarship or a combination of low scholarship and a lack of required subjects, the applicant must have: a) Earned a grade-point average of 2.4[2] or better at least 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer, and b) Satisfied the high school subject requirement by completing appropriate college courses with a grade of C or better.

   The exception described in 2 c above also applies in this case.

In addition to meeting the regular requirements for admission in advanced standing, a nonresident applicant must also have a grade-point average of 2.8 or higher in the college courses he has taken that are accepted by the University for transfer credit. A nonresident applicant who graduated from high school with less than a 3.4 average in the subjects required for admission must have completed at least 84 quarter units (56 semester units) of transferable work with a grade-point average of 2.8 or higher.

Admission to advanced standing through special procedures is available to a limited number of those applicants who would have been ineligible for admission as first-time freshmen and who have not completed 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer. (See Chapter V for discussion of the exceptions quotas.)

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[1]See subject requirement discussion, Chapter V.

[2]This requirement is being reviewed by the University and may be reduced to 2.0.

Admission Policy for Advanced Standing in the California State Colleges.[1] Applicants for advanced standing in the California State Colleges who have completed at least 60 semester units of college credit may be admitted to advanced standing if: a) They have maintained a grade-point average of at least 2.0 (C on a five-point scale) and were in good standing at the last college attended, b) If in the judgment of the appropriate college authority they can succeed at the State College. While at several of the State Colleges an entrance examination is required of such applicants, it is never used in determining eligibility for those applicants qualifying under "a" above. In those instances it is used as a counseling and research instrument.

Applicants for advanced standing who have completed fewer than 60 semester units of college credit must first present evidence of eligibility (high school record and the specified test score) as a first-time freshman. If so eligible, he may be admitted if: a) He has maintained a grade-point average of at least 2.0 (C on a five-point scale) in all college units attempted, b) He was in good standing at the last college attended.

An applicant for advanced standing who has completed fewer than 60 semester units of college credit and was not eligible as first-time freshman, may be admitted if: a) His degree objective is such that at least 60 semester units or the equivalent of appropriate course work are not offered at the college from which he seeks to transfer and he has completed that portion of his degree program available at that college, b) He has maintained a grade-point average of at least 2.0 (C on a five-point scale) in all college units attempted, c) He was in good standing at the last college attended.

(Certain applicants who were not eligible as first-time freshmen and have not completed 60 semester units may be admitted under exception procedures discussed in Chapter V.)

Policy on General Education-Breadth Requirements

Policy with respect to the degree to which the general education-breadth requirements of the State Colleges and of the University can be satisfied by prior course work of the transferring student is an additional factor affecting the transferring student's progress toward completion of the undergraduate program. Indeed, student progress can be delayed more by this policy than that related to admissions. General education-breadth policy is also of importance to those large numbers of students who transfer among the various colleges or campuses within the University and State Colleges.

Recognition that State College general education requirements and University breadth requirements can be potential obstacles to a smooth flow of students among the segments of public higher education in California has long been of concern to California higher education.

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[1]Extracted from Title V California Administrative Code, statement from the Chancellor's Office and State College Bulletins.

The subject has been considered in several Council reports. Current University and State College policy with respect to general education-breadth requirements and Council reaction to their policies are considered in the remaining sections of this chapter.

The California State Colleges. A revised policy regarding general education requirements was adopted by the State Colleges in December of 1967.[1] The revised policy was reviewed by the Coordinating Council on February 19, 1968. At that time the Council staff commented:

> The revised policy will reduce the minimum general education requirements from 45 to 40 semester units and will increase the requirements within or among specified categories from 31 semester units to 32 units. The Colleges will have greater freedom in determining the number of the 32 units to be required in each specified category. Each State College may specify general education requirements beyond the minimum 40 units, provided they apply equally to transfer and non-transfer students. Of particular interest is the provision that the President of any accredited college may certify that the minimum general education requirements have been satisfied, in part or in toto, by a student through the student's completion of course requirements designated as general education in the catalogue of the college. Further, this provision assures such a student that if he decides to transfer to a different State College, he will have satisfied at least 40 units of that College's general education requirement.
>
> The revised policy represents a distinct improvement over the existing requirement, particularly with respect to certification by a college president that the completion of course requirements designated as general education by a student in his college satisfies the general education requirements of the State College to which the student is transferring.
>
> Under the revised policy, however, each State College may specify general education requirements beyond the minimum of 40 units and these are not subject to the above certification. Since each State College currently requires a minimum of 45 units of general education courses and since more than one-half of the State Colleges exceed this minimum by from 5 to 13 units, the 40-unit minimum is exceeded; the transfer student may still be required to take additional general education courses.[2]

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[1]See Appendix F.

[2]Since Council consideration of this revised policy, at least one State College has specified six additional units that cannot be satisfied by courses taken in any Junior College (or any other State College).

> The revised policy does not satisfy fully the staff's concern that, when a student has been certified as having completed satisfactorily the general education or breadth requirements of a particular State College or University campus, other institutions in both segments should accept such certification as satisfactory completion of its general education or breadth requirements. Nevertheless, the policy does permit Junior Colleges to certify that the minimum general education requirements of a State College have been satisfied by a student.

After consideration of the revised general education policy, the Council endorsed it, but requested the State Colleges to review the effect of any increases in general education-breadth requirements beyond the 40 semester unit minimum contained in the revision upon students transferring to the State Colleges during the 1968-69 and 1969-70 academic years and report to the Council by December 1, 1970. This review will include information relative to the number of students involved and the number of additional units required.

The University of California. The minimum breadth requirement of the colleges of the University of California offering non-professional majors, and the mutual acceptability policies of the Colleges of Letters and Sciences are included with this report as Appendix G.

Council concern that these requirements might be impeding transfer process resulted in a Council request that representatives of the University confer with appropriate Junior College representatives in an attempt to develop mutually acceptable policies concerning transferability and acceptability of breadth requirements and to determine if there was evidence that Junior College transfers found it necessary to take additional courses to satisfy breadth requirements. In response to this request the University submitted a report on the matter to the Council in January 1968. The report was based on the result of four special studies on the subject and the considerations of an ad hoc committee[1] established to consider the findings derived from the four special studies and to review articulation procedures.

After consideration of the studies and the implications for the University and the Junior Colleges, the ad hoc committee reached the following conclusions:

1. The breadth requirements of the various University colleges have not required the Junior Colleges to initiate new courses which they would not otherwise have established.

2. The Junior College transfer student's progress toward a degree closely parallels that of the native student.

3. The breadth requirements of the University's colleges constitute no greater impediment to the Junior College transfer student's progress toward a degree than they do for the native student.

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[1]Composed of representatives from the Junior Colleges, the State Department of Education and the University.

4. The University will continue its efforts to encourage greater mutual acceptability of breadth requirements among the Colleges of Letters and Sciences and their equivalents on all campuses and greater flexibility in accepting work completed in Junior College toward fulfillment of breadth requirements.

5. The University's colleges should state the purpose and philosophy of their breadth requirements and the nature of courses needed to satisfy them. Junior College courses to be used in fulfilling breadth requirements are to be determined by the Junior College concerned but subject to review and acceptance by the faculty of the University college concerned. The transferability of courses is to be determined by the procedures now in effect. A cardinal principle of this policy should be that no student who has taken a course determined by a Junior College as acceptable toward fulfilling a breadth requirement shall incur any loss of credit toward satisfaction of such breadth requirement if the course is subsequently disallowed by the University faculty concerned.

6. Although the studies have uncovered no major obstacles facing the Junior College student who plans to transfer to the University, the University and the Junior College should and will continue to work together to improve every aspect of the articulation process.

The University's report and the following Council staff comment on the report were considered by the Coordinating Council on February 19, 1968:

> The University report shows that Junior College presidents are now aware of any obstacles to transfer presented by the breadth requirements of the various colleges of the University and are generally satisfied with the University's articulation process. The report further indicates that the breadth requirements have not made it necessary for Junior Colleges to initiate new courses that would not otherwise have been established. The report also points out that students who had transferred to the University at the time of the study had not experienced any inconveniences as a result of the breadth requirements and were progressing towards a degree at about the same rate as the University's native students.
>
> The report, however, does not provide any evidence as to the numbers (if any) of Junior College students who did not transfer to the University because of obstacles presented by the breadth requirements.
>
> It would appear from the conclusions presented in the University report that complete agreement has yet to be reached on mutually acceptable policies concerning transferability and acceptability of breadth requirements.

Following this consideration, the Council commended the University for its expressed intent to continue efforts to further facilitate articulation with Junior Colleges as indicated in conclusions 4 and 5 above and requested the University to inform the Council by May 1, 1969, about progress made in these two areas.

The Council further requested the University and the California State Colleges, with the cooperation of the Junior Colleges, to explore jointly the relationship of the breadth requirements of the various colleges of the University and the State College general education requirements to each other in order to arrive at the greatest possible compatibility of the respective breadth requirements consistent with appropriate segmental individuality and report findings and recommendations, if any, to the Council by May 1, 1969.

Summary

1. University and State College policies on academic probation do not provide for the remedial aspects to be derived from a probationary procedure, whereas Junior College policies direct that counseling and guidance services be provided each individual on probation.

2. The probation policies of the University and State Colleges, in contrast to those of the Junior Colleges, do not put a student on probationary status until his overall record has fallen to an unsatisfactory level, i.e., below a "C" or 2.0 grade-point average. Students who previously have had a good record may not be identified and placed on probation until considerable time after academic difficulties have developed. Further, when placed on probation they must effect an immediate improvement or soon be subject to dismissal.

3. University and State College policies on academic dismissal allow a student to be dismissed without having been placed on probation.

4. State College probationary policy utilizing a graduated scale for dismissal provides considerable flexibility to rescue a student who begins poorly and then makes necessary adjustments. University policy, on the other hand, combining a relatively high cut-off point for immediate dismissal (1.5 G.P.A. for one term) and the rapid adjustment required of the student on probation reduces the probability that a student will overcome a poor start.

5. Nearly two-thirds of the Junior Colleges have academic dismissal policies that exceed the state's minimum standards.

6. The Master Plan, in its consideration of academic probation-dismissal was more concerned with the attainment of uniformity in policy and practice among the segments than about the segments' provision for the remedial aspects of probation.

7. An applicant for advanced standing in the University who was not originally eligible for admission as a first-time freshman must have achieved a 2.4 grade-point average in 56 semester units of lower-division courses before being considered for admission, whereas an applicant who was eligible for admission as a first-time freshman must achieve only a 2.0 average.[1]

8. University and State College policy in satisfaction of general education-breadth requirements were last reviewed by the Council in February, 1968, and found to be offering no unnecessary obstacle to transfer. The policy will again be reviewed in 1970.

9. At least one State College has specified additional units of general education courses that cannot be satisfied by courses taken in a Junior College.

Implications

The high admission standards of the University and State Colleges, which limit University selection of first-time freshmen to 1/8 of the state's high school graduates and State College selection to 1/3, and which are based entirely on high school grade-point averages and test scores, should select a student body wherein few are on academic probation. Further, such individuals when put on probation should be able to profit from adequate remedial procedures. It would seem reasonable for the two segments to stress and provide for the remedial aspects of academic probation.

Such high selection procedures would also indicate that a policy subjecting students so selected to academic dismissal without having been on probation is of questionable merit.

Consideration could also be given to policy changes which allow a longer period for students on probation to make up their deficiencies and to policy changes which may allow for the forgiveness of deficiencies after a student has demonstrated satisfactory progress.

Individual Junior College academic-dismissal policies which exceed the state minimum and result in excessive dismissals do not reflect favorably on the mission of the Junior Colleges.

Academic dismissal may also serve as an element in the selection of new entering students. Institutions required to admit students from a broad range of ability sometime dismiss a disproportionate number at the end of the first or second term. Through this devise both the "open door" and the "high standards" image of an institution can be maintained.

The State Colleges were widely acclaimed for recent changes in policy related to satisfaction of general education-breadth requirements to allow for greater flexibility and remove potential obstacles to transfer. It would be a disservice to higher education if individual State Colleges impose general education requirements that become new obstacles.

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[1]This requirement is being reviewed by the University.

CHAPTER V

SHOULD CHANGES BE MADE IN THE SELECTION PROCESS?

Policies and procedures for the admission of students to institutions of higher education are generally established to select those individuals most likely to succeed in the educational programs offered by the institution. Some institutions also select individuals emphasizing characteristics such as good health, character, personality, emotional stability, maturity, promise of performance in extra-curricular activities, and good social habits. One institution, for example, has a selection process designed to give the most weight to those individuals with the greatest facility in the use of the English language and the greatest understanding of the fundamental mathematical processes.

As was noted earlier, the admission policies of the University of California and the California State Colleges are designed not only to select individuals with the greatest probability of academic success in the programs offered by the two segments, but, as directed by the Master Plan, to limit the number of individuals from which first-time freshmen are selected to one-eighth of each year's high school graduates in the case of the University and to one-third in the case of the State Colleges. The University selection is based upon the applicant's completion of certain high school subjects with a minimum scholastic requirement and the submission of acceptable scores from specified College Entrance Examination Board tests. The State Colleges selection is based upon the applicant's attainment of a minimum eligibility index derived from his score on either the American College Test or the Scholastic Aptitude Test[1] and the applicant's high school grade-point average based on all courses taken in the last three years of school excluding physical education and military science.

It will also be recalled that the standards of the University and State Colleges for the admission of applicants to advanced standing, require applicants who were not eligible for admission as first-time freshmen to complete fifty-six semester units of acceptable lower division credits[2] in another institution before being eligible for admission to advanced standing.

What kinds of changes might be made in the selection process? This chapter considers aspects of this question.

Changes in the selection process may be of two kinds--changes in method of selection and changes in the number of students selected. Criteria for selection can be varied such as depending on high school record, or not

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[1]Which test varies with individual State Colleges.

[2]The State Colleges require 60 units.

The University requires applicants for admission to advanced standing who were not eligible for admission to the University as first-time freshmen, to attain a grade-point average of 2.4 in 56 units of lower division courses before being considered for admission. On the other hand, the University requires those applicants who were eligible for admission as first-time freshmen to only attain a 2.0 average. This may work to discourage some Junior College transfers as well. This policy is presently under University review.

depending on tests or not, depending on promise or not. Such changes can, of course, result in the actual admission of a specific number of students.

Alternatively, the selection process may be changed by focusing on the number of students determined desirable to take into the institution or system. Here quotas may be set and methods of selection adjusted to achieve an outcome equal to the quota. The quota might be set to equal the college population at a given point in time or to equal the number of students space and utilization standards determine to be "100% capacity."

Many policy questions are inherent in any major change in the selection process for first-time freshmen in the California State Colleges and the University of California.

Admission by Special Procedures

The Master Plan permitted the University and State Colleges to make exceptions to the admission standards for first-time freshmen up to a number equal to 2% of each year's freshmen admissions, and, to make exceptions for those applicants for advanced standing normally required to complete 57-60 semester units of lower-division work, up to a number equal to 2% of all applicants for advanced standing.

In February 1968, the Coordinating Council advised the segments that additional exceptions should be allowed to accommodate applicants for freshman status or advanced standing from disadvantaged socio-economic backgrounds, not otherwise eligible but with collegiate ability, up to the number that could be absorbed into special programs developed for such students. The number admitted, however, was not to exceed an additional 2% of all first-time freshmen admitted and an additional 2% of all applicants for advanced standing. Thus the former 2% exception levels are now 4%.

The University and State Colleges have both indicated that their primary consideration in admitting applicants through these special procedures is the same as for other applicants--the probability of success.

The University reports[1] that students are admitted by special action by the Chancellor of each campus in consultation with the admissions officer. Factors are taken into consideration as: 1) a very good

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[1]From a report prepared by Vice President Frank L. Kidner of the University of California in response to question 3 associated with item 91 of the Budget Act of 1968 appearing on page 5 of the "Supplementary Report of the Committee on Conference Reflecting Agreed Language on Statements of Intent, Limitations or Requested Studies contained in Senate Finance and Assembly Ways and Means Committee Reports on the Budget Bill 1968-69 Fiscal Year."

academic record but a minor technical departure from the standard admission criteria; 2) evidence of some outstanding capacity or talent which leads one to suppose that the applicant can successfully pursue a course of study in the University; 3) having come from disadvantaged segments of society and it is believed that an applicant has the potential, with some special assistance in the Educational Opportunity Program, to successfully complete an undergraduate program in the University.

The University admitted 400 freshmen by special action for fall 1967. As reported by the University:

> The first-quarter scholarship records of freshmen admitted by special action, when compared with the records of regularly admitted freshmen, show the special action group performing less satisfactorily. If the analysis is limited to looking at the percentage of students above and below a 'C' average for both groups, the difference is not greatly significant. Comparative measures of scholarship performance should be considered in the light of the higher risk normally associated with special action admission. Less precise measures for predicting academic success are often employed resulting in a greater chance for error.[1]

Two hundred and fifty four advanced standing students were admitted by special action for fall 1967 and students with special abilities and competencies represented the largest number admitted. The University has indicated that: "The first-quarter academic performance reports for these students show 78% achieving a 'C' average or better. In general, this level of achievement compares favorably with summary performance reports prepared for eligible advanced standing students admitted from Junior Colleges."[2]

The California State Colleges have found[3] that the majority of exceptions reflect the judgment by a senior administrative officer or faculty committee that there have been extenuating circumstances and the applicant does possess a reasonable chance of succeeding. The responsible officer or committee looks to all evidence which might indicate that ordinary measures of ability and aptitude do not tell the whole story. They consider evidence of marked improvement in academic performance, high ability and aptitude do not tell the whole story. They consider evidence of marked improvement in academic performance, high ability and aptitude in relation to major area(s) of interest and special talents which might offset a generally unsatisfactory record. Finally, there must be a belief that the students' educational interest will best be served by favorable action.

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[1] Ibid., p. 2.

[2] Ibid., p. 2.

[3] CCHE, The Flow of Students in California Higher Education, 1968, No. 68-10, May 1968, p. 37.

The State Colleges use the grade-point averages of the students' performance in college as the criterion to measure the success of students admitted by special procedures. Data for students admitted and enrolled as first-time freshmen through special procedures for the fall term 1966, show that 4% did not complete a full term, 29% earned grade-point averages higher than the mean for all freshmen, 15% performed as well, while 56% earned grade-point averages below the freshmen mean. Sixty-one percent achieved grade-point averages above that which would be predicted for students meeting minimum eligibility standards. Since the minimum eligibility index represents a predicted grade-point average of 1.90, it might be said that these were successes. Data for students admitted to advanced standing in the lower division showed that for lower division "exceptions" admitted in fall 1966, 4% did not complete a full term. Of the remainder, 55% did as well or better than the mean for regularly admitted students. Probation and disqualification data submitted for 297 of the total group showed that 21 (7%) had been disqualified, 61 (21%) were on probation, 215 (72%) had either achieved or maintained clear standing.

Alternatives to current procedures include expanding the percentage of exceptions permitted, removing provision for exceptions entirely, or permitting the systems to make exceptions in any number they choose. It is noted that the selection process and procedures might be such that no "exceptions" need be made. The procedures could have built into them substantial "quotas" or proportions where complete flexibility is permitted.

Patterns of High School Courses Required for Admission

To be eligible for admission to the University of California as a freshman, or as a transfer[1] student, an applicant must complete the pattern of subjects found in Appendix A. Admission requirements of institutions used for U.C. salary comparisons were examined to determine the pattern of high school courses these institutions require or recommend for admission to freshman standing. The results of this examination are shown in Table V-1 along with the position of the University of California. The table reveals that in general, these comparison institutions require about the same pattern of high school courses as the University. Only two, Harvard and Yale Universities, recommend rather than require a pattern of academic courses.

Research, however, indicates that, except where completion of specific material is essential for further study (e.g., mathematics for prospective engineers) academic success is not generally related to any particular pattern of courses taken in high school.[2]

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[1]See page 46 for a minor exception in the case of transfer students.

[2]Wilford M. Aikin, The Story of the Eight-Year Study, Harper, 1942. J. Wayne Wrightson, Appraisal of Experimental High School Practices, TC, 1936. Calvin E. Wright and Larry E. Kitchen, The California State Colleges 1963 Admissions Study, Division of Institutional Research, Office of the Chancellor, California State Colleges, Los Angeles, October 1965.

TABLE V-1

PATTERN OF HIGH SCHOOL COURSES REQUIRED OR RECOMMENDED
FOR ADMISSION TO FRESHMAN STANDING*

Institution	Required										Recommended							
	Total Units	Math	English	Foreign Language	Lab Science	History	Social Studies	Other Academic	Other		Math	English	Foreign Language	Lab Science	Social Studies	History	Other Academic	Other
State University of New York (Buffalo)	16	2	4	2	1												7	
Cornell University	16	3	4	3	1		1										4	
Harvard University	0										4	4	4	1		2		
Stanford University	15	2	3	2	1												7	
University of Illinois	15	2	3	2													2	6
University of Michigan	15		3					12										
University of Wisconsin	16	2	3	← 4 →				3	4									
Yale University	0										3-4	4	2-4	1-2		1-2	3-4	
University of California	15	2	3	2	1	1		1-2									4-5	

*Source: Cartter, Allan M., ed., American Universities and Colleges, 9th Ed. (Washington, D.C., 1964).

A student, after completing 11-15 units of specified high school course with the required high academic standards, and with University attendance in mind, may be reluctant to attend a Junior College rather than the University--particularly when he could have attended the Junior College with much different and possibly less demanding preparation. Admission data for the fall term of 1965, 1966 and 1967, tend to reinforce this assumption, for they show that high school graduates eligible to enroll at the University as first-time freshmen are much more likely to do so than are high school graduates eligible to enroll in the State Colleges as first-time freshmen.

Implications

Only a small proportion of State College eligible students seek entrance as freshmen to a State College. Somewhat less than half of University eligibles indicate a desire to attend a campus of the University of California on leaving high school. Assuming continuance of policies to admit all eligibles who apply,[1] any marked change in the proportion of eligibles seeking admission at a given point in time will have profound impact on the segments. If this is determined to be a major difficulty in the orderly growth of higher education alternative methods and policies should be considered. In this examination the need for flexibility should be considered. The "exception" under the flexible standards should not be necessary.

The foregoing suggests that consideration could be given to limiting freshmen enrollments at the University and State Colleges to a number approximately equal to the number that now enroll or some other determined total. Admission requirements might or might not be changed as well. For example, the University's general admission requirements could be modified so as to increase the percentage of high school graduates from which the quota would be selected from the current 12 1/2% to a percentage approaching that used by the State Colleges. Consideration could then be given to permitting each college or campus in the two segments to add other factors of selection thought to be unique to a particular college or campus so as to enable a better match to be made between college and student, while not increasing the number of students admitted beyond that determined by quota. Efforts toward reassessing criteria for eligibility should be worthwhile in any event.

It appears from the limited data so far available that students selected for admission through special procedures at both the University and State Colleges perform at a level sufficient to give some support to the policy consideration of broadening or eliminating entirely quotas for the admission of such applicants. If such action were taken after all regularly qualified applicants have been provided for, the segments could admit such students without restriction up to limits imposed by the budgetary situation or instruction policy. Regular reports might then be made to interested groups such as the Council on the success of

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[1]Both segments formally urge students to attend Junior Colleges for their first years.

such students, using not only the generally accepted measure of success (grade-point average), but also those measures uniquely associated with such a group, i.e., persistence towards a degree, preparation for a vocation related to their opportunity for college attendance, etc.

A review by the University of its pattern of courses required for admission, with attention both to the findings of research and to the extent to which University freshman courses are, in fact, based upon work done in high school would seem desirable. The University could give serious consideration to the development of admission requirements similar to those of the California State Colleges, but with a differing level of selectivity.

CHAPTER VI

SOME METHODS OF FACILITATING STUDENT PROGRESS TO DEGREE COMPLETION

A composite picture of traditional undergraduate college training might be described much as follows:

> Undergraduate education should continue for four years and should be pursued primarily, if not exclusively, in the classroom and laboratory on a full-time basis. Furthermore, undergraduate education is designed for students who are between 18 and about 24 years of age. The student during his four-year tenure in college will pursue a general curriculum in the arts, sciences and humanities for the first two years, and then undertake specialization in the last two. The whole of the four-year period will be structured for the student. A certain pattern of courses and a limited group of elective courses (often structured in their pattern as well) must be followed for the student to receive his certification of completion--a baccalaureate degree. This pattern of courses, and their contents, is developed by the college's particular faculty. In many cases it need only bear a very general relationship to that specified in the same subject area for another student in another college.

This description of undergraduate education should be a familiar one. It continues to be a relatively accurate description of the "typical" four-year college as it has been for most of this century.

In the past many questions have been raised concerning the validity of all, or part, of the undergraduate higher education program and its organization. Reforms have been suggested and some have been tried, but to date, few colleges have departed significantly from the basic set of requirements for degrees, the time required to complete them, and the physical setting in which that time has been spent. (This is not to say, however, that the content of a higher education has not changed in a number of ways.)

The preceding chapters have pointed to the changing groups of students pursuing a higher education. Today a great deal of evidence indicates that for many students, perhaps a majority, their collegiate years differ greatly from that implied in the traditional description of undergraduate education.

The form and duration of higher education have been designed, however, with one kind of student in mind. New groups of students are required to accommodate themselves to the prevailing form, which has been assumed to be the one most likely to ensure an education of quality. Little evidence is available to test this assumption.

The "four-year" norm gives rise to the belief, held strongly by many scholars, that campus life at each particular college contributes significantly and uniquely to the educational development of students. This belief contrasts sharply with the recent position of many observers of student unrest who argue that colleges should provide ample opportunities for students to become intimately involved in social issues of today's world. But the belief persists--its influences upon a student's progress to a degree are found in nearly every college catalogue in such forms as residency requirements, limits upon the amount of course work which is transferable from other institutions, and limits upon course work taken in extension. Belief in the value of campus life over four years also affects the scheduling of classes and programs so that students are held over a period of time on a particular college campus.

Some reforms and innovations have, of course, gone forward among California colleges and universities. Year-round operations being instituted in many State Colleges and at University campuses can assist students, if they desire, in moving to their objectives sooner than otherwise. The development of education-abroad programs is another example of increasing flexibility in an undergraduate curriculum. Internships in community problems are increasingly being used as learning vehicles. A few attempts at experimental colleges and similar programs designed to meet a variety of purposes have been tried. Independent study and honor programs for better students have become much more general in the past few years than was the case previously.

But for the most part, the student in higher education is held to roughly the same pattern and form of education as was his counterpart in the 1930's, in the 1920's, and earlier. What is perhaps most significant is that the overall form of higher education has changed so little considering its clientele has changed so significantly. Further, the significance of the baccalaureate degree has changed markedly as has the content of higher education.[1]

While major changes in the form of higher education are not here proposed, the following pages do consider some ways and means by which the student's progress through higher education might be facilitated. (The transfer question has been considered in Chapter IV.) In this discussion it is assumed that the purpose of an undergraduate education is to train the student to a minimum level of competence in a given area and in addition to include some contact with knowledge beyond the more

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[1]Content in many programs is considerably more advanced from that thirty years ago; also many occupational curricula have appeared where before they did not exist.

good performances on the examinations assist students in accelerating their programs.

Though individual colleges provide for challenging of specific courses by examination and most recognize results of Advanced Placement examinations as meeting some initial college requirements, overall, relatively few students in California higher education are affected. Generally those students who are, are of top ability and academic performance levels.

A national examination program much different from the Advanced Placement Program is currently developing which potentially may provide the opportunity for substantial numbers of students to successfully challenge college-level subjects and gain credit, depending on institutional policies. This program, the College Level Examination Program, has been mounted by the College Entrance Examination Board with the assistance of the Carnegie Foundation. Since 1965 "CLEP" has provided examinations in general areas such as the humanities as well as a series of examinations designed to test for knowledges equivalent to the content of many introductory college courses such as, introductory economics, money and banking, geology, etc. Individuals through the area tests may be certified for credit in general education requirements. By taking subject tests students may meet specific college requirements.

CLEP has been designed to assess competence in terms of the norms of college students, not superior performances as is Advanced Placement. It also is designed to replace courses rather than to certify for advanced work in specific subject areas. It is being used to assist in recognizing abilities and knowledge of adults working for degrees on a part-time basis, as an alternative way for students to meet specific subject area requirements for degrees, in conjunction with the USAFI program for the military, and even for testing persons seeking admission to special graduate programs who do not have a baccalaureate degree. Colleges and universities making use of the program include the University of Iowa, Boston University, City University of New York, University of Washington, University of Oregon and Colorado State University. In California (as of June 1968), State Colleges at Fullerton and San Diego, Yuba College, Loyola University, Pepperdine, U.S. International University and University of San Diego used the examinations for one purpose or another.[1]

New York is the only state to operate a similar comprehensive program for examining students. Predating CLEP, the program is designed for individuals seeking credit in New York institutions and includes not only examination in a number of basic undergraduate subjects, but a program of examinations for persons seeking teaching credentials and who have a baccalaureate degree. In this program (College Proficiency Examination Program) individual colleges have the option of excepting results of the examinations and may give credit as they determine appropriate. "CPEP" recommends a credit value reflecting the scope of the examination.

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[1] A State College conference on Credit by Examination is planned in 1969.

Large-scale "credit by examination" programs, of course, should only be considered after intensive study including close examination of the experience of those colleges using the approach extensively. It should not result in lowering of the standards set for degrees, but should be instituted primarily to assist in student progress, and, if possible, to result in a better qualified degree recipient. Ideally, the program might assist in developing a greater interest in higher education by providing a commonly available vehicle by which the student may prove minimum competence in subjects of marginal interest to him, so that he might better use his time to pursue other subjects closer to his interest and abilities. Student response to such programs must be closely examined as well.

Certainly credit by examination has a particular relevance to the adult student who does have additional experiences and knowledges and who may be seeking a degree in a minimum amount of time (which may in fact be several years due to part-time attendance).

The disadvantages of such proposals are many. Students may lose the benefits of student-faculty contact which may stimulate further studies. Also a depth of knowledge is often difficult to acquire on one's own. Though a student may be able to pass an examination, he may be rather ill-equipped to go further in the subject. Finally, a college education is (or has been) mostly one of student-faculty contact in a face-to-face situation. Dependence on examinations, self-study, impersonal media such as television and correspondence courses, may be educational--but not a "higher" education by traditional definition and practices.

The Part-time Student: Programs and Degrees

The segments of California higher education, public and private, vary remarkably in policies toward the part-time student, development of special programs geared to him, as well as the kind of demands made of him to obtain a degree. In some instances the part-time student is treated much as the regular student. In others he is discouraged from attending at all; in still others special programs are designed for him.

A survey of continuing higher education programs, which encompass programs for the part-time student, conducted for the Council by the Stanford Research Institute concludes that there is a lack of focus for existing programs and most certainly room for considerable program expansion and innovative development.

Directing attention particularly to the older, adult, part-time student seeking a degree, we may ask if ways and means may be found to facilitate his progress to completion of a baccalaureate yet assuring comparable equal academic standards for him as of the full-time, regular (and presumably younger) student?

In a number of institutions across the country special programs leading to a degree geared to adults have been instituted. These programs often have a liberal arts core, make use of credit by examination, and give credit for previous experience. The degree awarded may have a special label, such as "bachelors of liberal arts." No public California higher education institution maintains such a program. Nor do any of the state's major private colleges and universities.

The adult student in California is unable to obtain a baccalaureate degree through any of the existing adult, continuing education programs. University of California Extension does not award degrees, though its resources could be directed toward awarding certain kinds of baccalaureates for adults. State College extension is of more limited scope. Not only is the part-time student precluded from receiving a degree in courses offered under State College or University extension, but he is also limited in the number of credits earned in extension which may be applied to a degree once he is admitted to a regular program at an institution.[1]

Though the "evening college-extension" type degree program is almost unknown in California, this is not to say that the adult seeking a degree does not have considerable opportunity for higher education. Local Junior Colleges are remarkably open to adult part-time students. Programs, however, are not explicitly designed for adults, though many class sections given in evening hours may take on a different form from their counterparts offered in the day to younger, full-time freshmen and sophomores. State Colleges, as well, in many communities offer substantial programs in the evening to matriculated students. An adult may thus attend a Junior College to obtain the equivalent of two years of work and then transfer to a State College to complete a degree--all in the evening hours. This opportunity varies considerably from area to area depending on the State College close at hand, its policies and clientele served.

The adult has very little opportunity of attending a campus of the University of California on a part-time basis regardless of time of day due to University policies discouraging part-time attendance. For the most part, private colleges and universities do not encourage part-time attendance, especially at the undergraduate level.

There are many arguments for and against the development of special degree programs for adults. Assuming such degrees are desirable, are such programs needed in California? This question requires extensive consideration. Another question concerns the part-time student per se and

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[1]State Colleges typically have a unit limitation. The University does not, though residency requirements place a limit. Further, it would be most difficult for most adults to obtain a sufficient variety of courses in extension to come close to meeting degree requirements.

may be considered apart from the special degree program. To what extent should the University of California encourage part-time attendance especially on its metropolitan campuses? Are the needs of all part-time baccalaureate-seeking students being met by the State Colleges?

There is no attempt to answer these basic questions here. It is, however, pointed out that from the standpoint of the part-time and the adult student, progress toward degrees might be facilitated by one or a combination of a number of actions including:

a. Establishment of special degree programs for adults recognizing experience, maturity, and outside study.

b. Opportunity to pursue degree objectives more easily through extension programs, correspondence courses, use of T.V., taped lectures, programmed instruction, etc.

c. Permitting part-time students to attend the University of California and some State Colleges to a greater degree than is now possible. This implies the rescheduling of some classes. This has been suggested in the Council's recent review of the need for new centers for higher education.[1]

The above, particularly "a." and "b.", indicate the need for a state-wide plan for continuing higher education or, at a minimum, attention of the segments toward defining objectives. Included is the need to identify those programs which are most needed for the degree-seeking adult, the primary concern of this discussion.

Student Progress and His Major

It is assumed that for each student, regardless of goals, some focus of program is required. This focus will be particularly important to him and society as he seeks training in a specific occupational area, such as engineering, medical laboratory technician, pre-medicine, etc., at the undergraduate level. The focus, however, may need be somewhat less uniform when the student seeks a more general program or to prepare for graduate study in one of the disciplines of the social sciences, humanities and the arts.

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[1] If attendance on a part-time basis is educationally unsound, then ways and means may be sought to encourage part-time students to attend on a full-time basis.

For the student with a general objective, there may be ways of facilitating his progress through modifying requirements for degrees within broad subject areas. A rigid curriculum in some subject areas can be questioned when it is considered that a graduate from one institution with a particular course pattern receives essentially the same degree as does another graduate from another institution with a markedly different degree requirement pattern in the same subject matter. The views of individual faculties may be well-founded, but the output is judged at roughly the same value. (There are, of course, "prestige" degrees depending on the institution attended. This, however, is becoming less important at the undergraduate level, but is still very much the case at the graduate level. Even here, degree requirements vary greatly.)

Upper division "major" requirements in some instances appear more flexible than the general education pattern required of students. General education curricula are designed to expose students equally to all areas: the arts, sciences, social sciences and humanities. Empirical assessment of the values of general education requirements has been limited. There is no evidence any one pattern is more desirable than another.

A committee at Stanford University has recently addressed itself to some of these problems. The study found that some 75% of the undergraduates program was "required"--thus the student himself could select only one in four courses on his own. The committee recommended among other things that departments should determine no more than one-half of the students' program including courses in other departments. It also recommended eliminating freshmen English and western civilization and proposed that language and laboratory science requirements be left up to the departments.

An examination of selected college catalogues does reveal considerable flexibility in student choices of courses required for degree-receipt in his particular subject of concentration at the institution. There may be, in fact, more flexibility than was the case typically 10 years ago.

Systematic analysis of requirements in terms of student progress might reveal significant ways through which student programs can be made more functional. It may be suggested that for some subject areas and in some institutions, requirements exacted of students may be made more flexible. Very likely such flexibility would aid those students who change majors--indeed greater flexibility might reduce the need for formal major changes when students find they are most interested in a particular group of subjects as opposed to another. The public segments of higher education might well examine this question.

Residency Requirements

Most colleges and universities require students be in "residence" for a certain period before receiving a degree--this is either expressed as a minimum number of terms or as a minimum number of course credits. Typically California institutions require about one full academic year. In several instances this is expressed in terms of an amount of units greater than the average load for one semester (or two quarters), but less than two semesters.

By residence requirements the institution seeks to assure that an individual can perform at the level expected at that institution before awarding the student a degree. As a practical matter few students are able to transfer late in their undergraduate education without encountering problems in meeting the pattern of course requirements for a given degree since such requirements vary from college to college. For most, transferring after the beginning of the senior year would be difficult. Thus residency requirements may be unnecessary.

While existing requirements of the University of California and the California State Colleges do not appear excessive, some room for adjustments might be made to facilitate the progress of a limited number of students who transfer late in their undergraduate career with substantial work behind them. Further, each campus and college has a somewhat unique requirement. Greater uniformity might result in a more general understanding of what is in fact required of the student as he moves from college to college. Further, the use of comprehensive examinations in lieu of residence requirements deserves consideration.

Other Methods to Increase Usefulness of Students' Time

Higher education institutions are typically rather large and impersonal. They are not only bureaucratic in form but also possess many of the classical attributes of bureaus: hierarchy, systems of rules, impersonality, emphasis on the written record and even, to some degree, secrecy in certain operations. Size has necessitated development of procedures to handle large numbers of students. Traditional practices dictate the manner in which certain functions are carried out. New methods are very cautiously instituted. Budgetary limitations may require adherence to these old procedures even when new ones have been proven to be more efficient in the long run, from both the student's standpoint as well as the institution's. For example, cluster colleges seem to offer many opportunities to lessen impersonality, but in total they appear to cost more than does a similar sized massive institution.

In developing procedures for the conduct of operations of higher education institutions, comparatively little weight appears to be given to the factor of student time required to follow established procedures. Time required in admissions, registration, advising, and simply maintaining the student status through required actions apart from course work are important to students in that they detract in some measure from time which could be devoted to the learning process. (They do contribute by teaching the student body how to live within a bureaucratic process.)

The time and effort required of students in registration and re-registration in many instances may be reduced. Also the need for special petitions for acceptance of previous work, course waivers, and for other special purposes may be reduced. Arbitrary limits on numbers of units to be carried by students in a given term in some institutions may result in a waste of student time, either in not attempting a course load which could be handled, or at least in student and administrative time spent in approving the exceptions which may be neither fruitful to student or institution. Further, in considering procedures, differences can be noted in the extent and control needed over beginning freshmen students who may be more uncertain of what they may in fact be able to successfully accomplish, as opposed to the upper-division student who by this time should have a better notion of his own ability than those advising him.

The objective in developing procedures could be to delegate decisions on student progress and program to the lowest levels possible--in most instances the student, giving him as clearly as possible a statement of what is expected of him. Such statements could include accurate and up-to-date complete descriptions of college and departmental requirements, when key courses will be offered over a period of terms for advance planning, and explicit descriptions of ways in which the student may seek clarification of the rules. The time spent by faculty and administration in direct student contact could then be concentrated on student career problems rather than discussions on how to go about solving a procedural problem.

Student Acceleration

The foregoing discussion of the facilitating of student progress through higher education may imply a shortening of the time a student requires to reach his objective or a reduction of the amount of effort and hours spent in other than the learning process, or both.

Some comment should be made concerning acceleration as such. It is often argued that it serves little purpose to move students too quickly through a higher education program. For some individuals this is undoubtedly true in terms of their maturity, ability and interest. However, it is suggested that the four-year traditional pattern should be considered a "norm" rather than a minimum. Some students because of ability, objectives, and concentration can be encouraged to accelerate by taking heavier loads per term, attending college year-round, challenging courses, or perhaps through outside work. Other students should be encouraged to take breaks from their education or carry lower student loads, for any of a variety of reasons.

From the standpoint of the student it would appear that the option to accelerate should always be open. Indeed, the need for possibilities of acceleration may become greater as emphasis increases on graduate training as the minimum certification level for many professions. Teaching, engineering and social welfare are among the fields today typically requiring more than the equivalent of the traditional four academic years of work.

The content of college work is changing as well. Students are coming into higher education far better prepared than in the past. Where four years of college was once required to bring a student to a given level, less would be required today to attain this same point. While the college curriculum has changed too, it may be suggested that the student who is better prepared at the outset is thus capable of moving more quickly through the work which lies ahead of him. The top high school student of today has already been performing at a collegiate level to all intents and purposes and thus does not require the same kinds of academic adjustments required of him in the past in his initial months of higher education.

Summary

1. The traditional view of a college education as four academic years of full-time work at one college has influenced many of the procedures and policies toward students and their progress. Yet, evidence at hand indicates that for many students considerably more than four years is required to receive the baccalaureate. For some students complete course work is substantially beyond the minimum required for a degree. Also, a great number pursue their college work in two or more institutions each having differing rules and procedures which may work to the disadvantage of the student.

2. The progress of students to the baccalaureate degree could be facilitated in several ways, each with advantages as well as disadvantages:

   a. Challenging of courses and receipt of credit by examination.

   b. Greater recognition of outside experiences.

   c. Development of special programs and increased choices for the part-time students.

   d. Modification of "major" requirements in some subjects toward greater flexibility in course patterns.

   e. Changes in residency requirements.

   f. Modification of policies and procedures affecting students and unrelated to the learning process to reduce efforts of students simply to maintain their slot in the"system."

   g. Encouragement of acceleration of program for those students who are able and wish to reach objectives more quickly.

Implications

There is little evidence that most institutions have examined many of their policies and procedures with the explicit purpose of discovering ways in which the student's time may be spent most productively. Such a focus of individual self-studies should be most useful.

The possible benefits of wide-spread use of credit by examinations through programs such as the College Level Examination Program have not been explored to any significant degree by the segments of higher education in California. There appears to be need to do so.

Though there has been much discussion in recent years of "innovations" in higher education, few substantive proposals have been put forward, with even fewer attempts to place these proposals in action. Further such studies have seldom been of inter-institutional scope. One possible focus for study could be the question of student progress--what forms of higher education can assure the able and motivated student quick and efficient progress to his degree? What forms can accommodate those who need special help and assistance? Will the same forms serve both ends?

The part-time, adult student seeking a degree should receive more specific recognition in the California segments of higher education. There appears to be every indication that such students will continue to constitute a significant portion of the state's college-going population. With the premium placed upon "degrees" by the society, more and more adults will be seeking either the baccalaureate degree or those at the graduate level. In what ways should these facts be recognized?

CHAPTER VII

THE CONCEPT OF DIVERSION OF STUDENTS AND THE DISTRIBUTION OF UNDERGRADUATES

Every individual who is a high school graduate or over 18 years of age has the opportunity of attending a Junior College. The higher his capability then the greater the range of his choices of other publicly supported institutions. Also, the State Scholarship Program provides aid to persons of top ability as measured by grades and tests, the opportunity of attending either a private college or university by financing his tuition fees. To the student who has a poor high school record and low test results but who can prove his capability in Junior Colleges, the opportunities for transfer to the State College or University are generally open.

Existing policy, then, seeks a basic distribution of students through admissions standards. This distribution is modified to the extent that within the State Colleges and University system some students may be admissable to the system, but "assigned" a college other than his first choice to attend due to space limitations.[1] Also, Junior Colleges normally are open to persons in their own districts, residents of other districts may attend only under special conditions.

The Policy of Diversion

The 1959 Master Plan for Higher Education introduced a policy to "divert" students from the University and State Colleges to the Junior Colleges beyond the distributive effect of admissions standards. This policy, adopted by the Survey Team, and since supported by the Coordinating Council calls for the University and State Colleges to adopt policies to result in the diversion of lower division students otherwise eligible to the Junior Colleges and who might have been expected to attend the four-year institutions.

The Survey Team predicated its policy primarily upon the belief that the State Colleges and University should direct their emphasis to upper division and graduate programs rather than the lower division. This policy was an extension of that previously adopted by the Regents and State Board of Education on behalf of the State Colleges in 1955.

The Master Plan detailed other reasons supporting its policy:

> The Survey Team is convinced that the percentage increase in the lower division ought to be highest in the junior colleges, chiefly because of the following reasons:
>
> 1. Easy accessibility to students and the consequent reduction in cost to them

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[1]The University has a fully developed procedure for such intra-segmental redirection. The State Colleges are in the process of considering development of similar programs.

2. The high scholastic records made in both state colleges and the University by junior college transfers

3. The junior college screening function . . .

4. The adopted policy . . . for the University and the state colleges to place increased emphasis on upper division and graduate programs

5. The diversion of a portion of lower division students from the state colleges and the University of California to the junior colleges to aid in controlling the unmanageable size of certain institutions . . . [had growth continued unchecked]

6. Costs per student to the state for both operation and plant are lower in the junior colleges than in the state colleges and the University[1]

The objective of the Master Plan Survey Team was to see to it that a portion of the students who were projected to be entering the State Colleges and University campuses by the year 1975 would, instead, enter Junior Colleges. They estimated that the recommended increase in the admissions standards would account for 10,000 of these students. Others, the Survey Team suggested, could result from reducing the proportion of lower division to upper division enrollments by ten percentage points from the relationship which existed in 1960. The resulting number was suggested as 40,000 in 1975. With subsequent Council interpretation and clarification of this recommendation, the agreed to objective has been defined as an undergraduate enrollment division of 60% upper division and 40% lower division, this target to be achieved by 1975. If such a relationship exists, it is assumed the objective of diversion will be met, though actual numbers of students diverted as a result of this proportion cannot be specifically determined.

The methods by which students could be dissuaded from attending the University or State Colleges, even though eligible, were not spelled out precisely by the Master Plan, nor have either one of the systems[2] been able to isolate those methods which are most effective.

Today the State Colleges appear to be meeting the goal, the University of California, not.

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[1] Master Plan . . ., pp. 58-9.

[2] The Master Plan recommendation resembles Will Roger's plan to eliminate German U-Boats from the Atlantic by raising the temperature of the ocean to the boiling point. When asked how to do this, he replied, "I gave you the general idea, the rest is up to you."

Progress Since 1960

The subject of diversion has been the concern of a number of Council reports.[1] The findings of these reports suggest a number of observations concerning diversion and its implementation.

First, it should be pointed out that there are two orders of problems in considering the question of diversion: (1) the problems in carrying it out, and (2) the problems of measurement in order to see that it is being carried out. Often the two become intertwined, further complicating an already complex subject. This fact should be kept in mind in the following.

The State Colleges' higher admissions standards applied in the fall of 1965 thus reduced the numbers of eligible lower division students. The growing number of transfer students at the upper division level in State Colleges, most from Junior Colleges, appear to indicate that the Master Plan objective of diversion is being met in this segment. However, at the same time in the University evidence indicates that the proportion of high school graduates who are attracted to the University is growing and the number of Junior College transfers has been decreasing. This combination appears to be working against the University's achieving a 60:40, upper division-lower division ratio.

The problem of measurement is further complicated by the fact that many upper division students in the State Colleges were admitted under the former standard of the top 45%. Further the change from 45% to 33 1/3% in the State Colleges had an obviously greater impact on admissions than did the change from 15% to 12 1/2% by the University. Thus it is impossible to separate the effects of admission policies from the effects of diversion policies.

Determining progress to the 60:40 ratio itself, past Council reports have pointed out, is difficult. For example, changing definitions of the unit level upon which the upper division-lower division designation is made can seriously skew the percentages.

A major difficulty in considering diversion is that there is no "true" measure of who is, or is not, a "diverted" student beyond those diverted due to changes in admissions standards. It is difficult to say, for example, whether even more students would be attracted to the University if there had not been some public emphasis on diversion. Further, one might argue that the difficulty the University is encountering is in

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[1] See annual staff reports on the Flow of Students in Higher Education. The 1968 report (May 20, 1968) contains a complete summary of previous Council actions, data providing possible indirect measures of diversion, and other material.

fact the result of the emphasis placed on the selectivity of the University in the aftermath of the Master Plan. This hypothesis suggests that the student who might have gone to a Junior College, now chooses to attend a University campus initially because of the public stress on selectivity and the prestige attached to this image.

The student who voluntarily "diverts" himself is most difficult to identify. Should the high school graduate of top scholastic standing who decides that he will attend the local Junior College rather than attending a University campus he considered a "diverted" student? Is his decision traceable to a statement in a University catalogue encouraging him to attend a Junior College, or is his decision based on some other reason? The numbers of University of California or State College eligible students in Junior Colleges are only a very indirect measure of possible diversion in operation, for at no period in time have all University eligibles attended the University or have all State College eligibles attended a State College.

A factor which may be working to the University's disadvantage is the fact that in comparison to 1960, there are today several University campuses open to freshmen students which were not previously. Santa Cruz, Irvine and San Diego have all begun taking students since the time of the Master Plan. Davis's focus has changed during the past ten years from a specialized campus to a general university. The diversity of the character of these campuses may work to attract additional groups of students in greater proportions than was the case a decade ago when there were fewer campuses. Also the rapid increase in the costs of private education vs. public education undoubtedly has "diverted" some students to the University from the private segment.

Viewing the State College "success," it may be noted that the State Colleges are apparently especially attractive to the upper division transfer--thus enhancing the progress to the 60:40 relationship. This may be due to the proximity of State Colleges to many Junior Colleges and working relationships which have developed. The State Colleges also may be attracting many types of students who though finishing a Junior College program ten years ago would not have been motivated to go on to complete a baccalaureate degree, but today do so. This group, it is assumed, would find State College programs closer to their interests than those of the University.[1] However, more evidence is needed before any conclusions are warranted.

The progress of the State Colleges toward the 60:40 goal has been most rapid in the last three years. The progress has been such that the goal has been reached with as yet no indication of change in the trend to larger upper division proportions in the future. (The enrollment pressures of the spring term of 1969 will merely serve to further encourage the growth of the upper division as preference is given to Junior College transfers.) This progress poses a question not considered by the Master Plan Survey Team, namely, should the 60:40 relationship be maintained? Is a 70:30 relationship, for example, desirable? If the 60:40 relationship is an optimum, then ways

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[1] Examples could be police science majors, park and recreation management, industrial technologies, etc.

and means may be needed to assure either a greater intake of freshmen and sophomore students into the State Colleges by reducing the numbers of State College eligible students either attending the Junior Colleges or attending the University, or by reducing the number of transfers at the junior and senior level.

The foregoing suggests two major questions:

(1) Should diversion continue to be a major policy for public higher education in California?

(2) If so, how can it be carried out?

The Concept at the Present Time

The issues concerning diversion of students to the Junior Colleges may be highlighted in part by brief discussion of the reasons cited in the Master Plan supporting the policy.

The Master Plan Survey Team, at the outset, stated it believed that the State Colleges and the University should place greater emphasis upon upper division and graduate work; thus the Team sought to restrict the growth of the lower divisions in the two segments below the levels projected to be the case if nothing were done. The mechanism chosen for the limitation of lower division growth, in effect, was never recommended, but was left up to the State Colleges and University to determine. The Team could have, had it chosen to do so, specified certain enrollment limitations or quotas for the State Colleges and University. Such a policy has recently been adopted in Illinois. In this case lower division enrollments in public four-year colleges and universities are to be frozen at the level of 1971. Alternatively, the Team could have recommended restricting or eliminating lower divisions on existing colleges or campuses, or perhaps on the new colleges and university campuses then being developed. The Team did recognize the potential difficulties in implementing the policy by stating that in order to fully accomplish diversion, "eventually, the systems may have to resort to quotas and develop methods of selection in addition to basic admission requirements."[1]

Upper division and graduate emphasis in the two four-year segments has increased during the past ten years apart from any policy of diversion. The increasing premium placed on receipt of the baccalaureate degree coupled with the stress on graduate training for many careers has dictated that there would be a changing emphasis in the State Colleges and University in any event.

Among specific supporting reasons for the diversion policy, the Master Plan pointed to the easy accessibility of Junior Colleges to students and the consequent reduction in cost to them. Junior Colleges are, of course, even more accessible today than in 1960 as they continue to increase in numbers and scope of program. However, it should be noted that there are, as well, additional State Colleges and University campuses in operation which were not operating in 1959. The point of reduced cost to the student

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[1]Master Plan, pp. 79-80.

continues to be substantially correct, although as recent Council reports have pointed out, the student of ability in greatest financial need is far more likely to find fee waivers and subsistence grants as a student in a State College or on a University campus than at a Junior College. Furthermore, costs of education for the commuting lower division State College student remain relatively low, close to those of Junior College students.

The Master Plan also supports the concept of diversion by noting that Junior College students do well as transfers to State Colleges and University campuses. This continues to be true, but as discussed previously the procedures for transferring and articulation have created some problems over the years.

The Master Plan Team stressed the screening function of the Junior Colleges. In this notion the Junior Colleges are viewed essentially as part of the selection process for those students who are capable of performing upper division work and, therefore, are potential baccalaureate recipients. Since the concept of diversion relates primarily to the diversion of students otherwise eligible for the State Colleges or University, then apparently the intent was for the Junior Colleges to perform much the same "screening" which occurs in the lower division of the four-year college segments. Competition within junior colleges, even in college transfer programs, is necessarily less rigorous because of the more heterogeneous academic preparation and records of the Junior College student body as a whole as compared to the University and State College lower divisions with their more selective academic standards. In light of this, the rationale appears somewhat peripheral to the point of diversion.

Diversion was also seen as a method to aid in controlling the "unmanageable size" of certain institutions--or more precisely the size such institutions might reach if they grew unchecked. Though diversion "quotas" have been built into segmental enrollment projections upon which capital outlay programs have been developed, controls over size of institutions have primarily been achieved by redirection of students within a segment. For example, students have been redirected from Berkeley to other University campuses of their choice. But diversion of eligible students out of the University system has depended upon student decisions.

The final reason for the diversion policy cited by the Master Plan Survey Team is perhaps the most significant. This reason points to the fact that costs per student to the state for both operation and plant are lower in the Junior Colleges than in the State Colleges and the University.

The 1963 Cost and Statistical Analysis sponsored by the Council indicated that on a unit cost basis, operating costs for lower division programs were higher in both the State College and the University. It may be argued, however, that the lower division student on a University or State College campus has for his benefit many facilities and programs which would exist in any event for upper division and graduate programs. Overall, however, Junior Colleges' costs have tended to be lower for lower division transfer students.

The diversion of students to Junior Colleges does result in a major saving to the state, for it is essentially a transfer of the burden of the cost of education from the State General Fund to the local Junior College district which is primarily supported through local district tax sources.[1] Further, the state has only recently participated in any substantial way in Junior College capital outlay programs.

It could be argued in the same vein that if the cost of education for lower division students is lower in the State College than in the University, then a diversion should occur of potential University students to the State Colleges. The direct costs to the state would be lower for State College unit costs are less than those of the University. Furthermore, the lower division student who was diverted would very probably remain in the State College to graduation, thus saving further state expenditures.

Implicit in the support for the concept of diversion is the desire to support Junior College programs by, in part, assuring them of a cadre of top ability students. There are, of course, many State College and University eligible students in Junior Colleges. Surveys of full-time enrollment in Junior Colleges indicate the following:

	Junior College Students State College Eligible	Junior College Students University Eligible	Total Full-time J.C. Enrollment
Fall 1965	27.2%	7.94%	188,874
Fall 1966	26.7%	5.86%	198,135
Fall 1967	25.2%	5.39%	213,496

SOURCE: Flow of Students reports, 1966-1968.

Evidence indicates, then, that there is a substantial number of Junior College students who by virtue of high school record could be expected to perform well in a State College or University situation. Whether these students attend Junior Colleges because of diversion policies is unknown, though it is highly unlikely that many do. (The declining percentages may be a matter of concern in the years ahead. It is apparent, in any event, that a decline occurred in the three-year period despite the existence of diversion policies. However, percentages are not statistically significant for State College eligibles, though they are somewhat more so for University eligibles.)

[1]The Master Plan did recommend increased state participation in the funding of Junior College operations, however.

The enrollment projections available to the Master Plan Survey Team indicated a very rapid growth in lower division programs for the State Colleges and the University and a lesser proportionate growth in the Junior Colleges--though in absolute numbers Junior College enrollments were expected to grow considerably. The diversion concept was introduced in the effort to place a greater portion of the growth in the Junior Colleges. A "modified" projection applying diversion was then prepared which became the "official" Master Plan enrollment projection. In the period since (1960-67) University of California lower division enrollments have grown at rates substantially beyond the modified projections, but so have the Junior Colleges. The State College lower division growth rates on the other hand are below the modified projection and, therefore, considerably below the rate of the so-called "status-quo" projections with which the Survey Team began. Thus, some portion of Junior College growth and University lower division growth above estimates may be at the expense of what was projected in 1959 to be the share of the State Colleges.

A final point should be made in considering the policy of diversion. From the standpoint of the student, diversion may not be desirable, particularly if the fact of transfer results in additional work, possible lower grades and other personal adjustments. Comparatively little emphasis is placed upon these considerations in the Master Plan document.

The diversion policy in this connection presents a contradiction to the traditional concept of a higher education noted in Chapter VI which stresses the desirability of the student continuing year-by-year in a four-year program in one college. It appears counter to many of the suppositions upon which collegiate curricula are constructed. (The Survey Team did note that it ". . . received the general impression that insufficient attention is given to the selection and orientation of transfer students in both the state colleges and the University. There may still be need for orientation programs in the two segments."[1]) Furthermore, significant curriculum changes have not occurred to benefit the transfer nor has publicity been given to any benefits of transferring.

The weight of existing educational literature would support the desirability of a student with academic ability attending four years of college in one location if he has a degree objective--most particularly a graduate degree objective. While attending a Junior College may not be dysfunctional to the student of academic promise to any great degree, can it be argued to be of benefit to many students either? However, many students do, in fact, attend two, three or even more colleges before receiving a baccalaureate degree (see Chapter III). Any consideration of diversion must keep this reality in mind. To date no effort has been made to determine what methods can best identify which students of similar eligibility for admission to a four-year segment who can most profit from a University or State College or Junior College lower division education. The determination now is made solely by the student, perhaps aided by high school counselors or an on-campus visit to a four-year college and junior college.

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[1] Master Plan, p. 72.

Alternative Methods of Achieving Diversion

Detailed description of the several possible methods of directing students from one institution to another or from one higher educational segment to another is not attempted in this discussion. The following are listed with short comment for illustrative purposes only if it should be determined that further diversion is desirable.

1. The lower division on University campuses, at State Colleges, or at selected campuses or colleges may be wholly eliminated. The subject of an extensive report in 1967 to the Council, the phasing out of lower division was found to be feasible but not desirable in most situations due to a number of reasons. Commonly made objections to the proposition include: (a) upper division students need lower division courses, thus no substantial reduction in program is possible; (b) to recruit faculty in specialties it is necessary to fill out their programs with lower division programs; (c) the need for advanced graduate students intending to pursue an academic career to teach lower division courses under guidance; and (d) groups of students are denied the opportunity to begin their college in a creative and dynamic atmosphere made possible by interaction with senior students and faculty.

   Primary support for the proposition is on a cost basis. It has been pointed out as well that development of new forms of higher education may be possible should senior colleges with first-stage graduate programs be developed. Also large graduate research centers which now give limited emphasis to the lower division student might prefer eliminating or limiting lower division programs rather than attempting reforms which may be incompatible with a graduate emphasis. Finally, senior colleges now found in other states, Florida, New York, and soon in Illinois, have been developed to stimulate Junior College growth and to assure them of a core of academically able students.

2. The lower division can be restricted in size by arbitrary limits as a variation of (1) above. As mentioned earlier, this procedure will be used in Illinois.

3. The intake of students into the lower division may be restricted or limited as well through further adjustments of the academic-admission standards by using not only academic record but other factors such as socio-economic status, family educational level, and judgments as to motivation. Quotas may be established and students admitted on first-come—first-served basis, by lottery, by age, etc. Many of these methods, of course, would be applied with considerable hazzard.

4. The device of student charges and fees, too, may effectively divert students, especially if untempered by corresponding financial aid. The use of higher fees in one system and/or level may serve to redistribute some students--for example, higher fees at the University lower division may encourage attendance at State Colleges or Junior Colleges if their fees are kept to a minimum. If upper division fees are lower, transfer students might then be attracted.

Summary

1. Standards for admission to the State Colleges and the University of California make for a distribution of students whereby the students with the highest academic ability as determined from high school record and/or examinations have the greatest number of collegiate options open to them wholly or predominately supported by the public.

2. The Master Plan, in addition to the use of academic standards as a method of distribution of students, sought to direct greater numbers of students to the Junior Colleges who otherwise would attend a State College or University campus. The objective set was a "diversion" of lower division students of about 40,000 students in the year 1975. (An additional 10,000 were to have been diverted through admissions standards increases.)

3. Measure of progress toward this diversion is most difficult. To date students who have been admitted to State Colleges or the University have not been arbitrarily reassigned to a local Junior College.

4. The Council and the segments have accepted as an indirect measure of diversion State College and University progress toward achieving an upper division to lower division ratio of 60:40. Attaining this relationship in each segment by 1975 has been viewed as reasonable evidence that the called for diversion has occurred. Using this measure, the State Colleges appear to have already reached the desired relationship, the University however seems considerably away from the goal and is making little progress.

5. The State Colleges are attracting many Junior College transfers thus aiding in the growth of the State College upper division over the lower division. The University appears to have become less attractive to transfer students in recent years thus compounding its problem of reducing the lower division.

6. In examining the reasons upon which the Master Plan Survey Team supported the concept of diversion, we see that the student as an individual and his problems of transfer and adjustment do not appear to have been recognized to any great degree. The primary reasons for stressing the diversion policy (as well as the higher admissions standards) were less cost to the state through a diversion of students to locally-supported Junior Colleges, and a desire to assure the continued growth of Junior Colleges.

7. The pattern of growth of the lower divisions since 1960 in the three public segments, however, has not been that anticipated by the Survey Team. The Junior Colleges have grown more rapidly--even beyond the projected increment for "diversion;" the University lower division has grown even more so. The State Colleges, on the other hand, have seen a lesser proportionate growth in lower division than anticipated. (It should be noted, however, that generalizations are most difficult to make. It is of limited validity to compare today's enrollment patterns with what ten years before was anticipated would occur after certain policy actions had been carried out.)

8. The purpose of diversion to assure substantial numbers of lower division students in the Junior Colleges appears to have been substantially met. Whether this was a result of formal diversion policies is doubtful. The objective of cost savings to the state it is assumed, has also been partially met, for certainly if a lesser growth had occurred in the Junior Colleges with a corresponding increase in State College or University enrollments, then higher state costs would have resulted.

Implications

The essential point in this discussion of diversion--or more broadly the distribution of students in higher education--is whether the student is being served best by being persuaded to attend a Junior College when he might otherwise be able to pursue his education at a four-year college or university campus. The values of transfer <u>to the student</u> may be questionable. Further, if the transferring student is required to take additional

courses on transfer to complete work he could not on a Junior College campus, then the additional cost to the state may reduce any other presumed savings. Thus, the cost of diversion to the systems may be higher than anticipated. However, many students do in fact transfer. This fact should be kept in mind in considering further adherence to the diversion principle (however termed) or other propositions restricting the size or existence of lower division programs.

If continuance of the policy for diversion is to be the case, then the relationship of the lower division to the upper division in the State Colleges must be closely examined. For if recent trends are indicative at some State Colleges, the lower division is becoming proportionately quite small. Should action be taken to direct lower division students to selected colleges to provide more balanced enrollment? On the other hand, the status of the University's lower division would suggest that the only option which can reduce the University's lower division proportion is by installation of a quota, however it may be applied. It would appear that the voluntary efforts have had little result in dissuading individuals wishing to attend the University from doing so, so long as they are otherwise eligible. Some progress might be made in encouraging transfer students as well. In this connection, it appears that Junior Colleges (or State Colleges for that matter) are attractive to relatively few University-eligible students. The reasons for this should be explored if the diversion policy is to be implemented further.

It may be suggested that policies of "diversion" of specified numbers of students as proposed by the Master Plan from the two, four-year segments to a third are perhaps unrealistic short of assignment of individual students on mass bases. Existing student choices would need to be reduced markedly should this occur. From the point of view of the student this would be most undesirable. An alternative may be to permit the student free choice within the frame of academic eligibility. This would represent little change from what is now occurring, though the policy of diversion is now espoused, in effect a free marketplace now exists. In this free choice situation Junior Colleges are today receiving substantial numbers of University and State College eligibles. Studies to determine why such students choose to attend Junior Colleges may result in more positive Junior College efforts to attract additional highly qualified students.

There may be some value in discarding the concept of "diversion" in future discussions of California higher education policies concerning the distribution of students. If the objective is to restrict the growth of a segment of higher education (or an institution therein) by permitting only a certain proportion of those officially eligible to enter at the outset, then the policy should be so stated in these terms.

Notions of "diversion" students who are never formally admitted appear to unnecessarily obscure the primary policy questions, some of which are:

> Will all academically eligible students be permitted to attend a given institution in either the State College system or the University of California if they so desire?
>
> If not, how will their numbers be limited? And what goals are in fact being served by <u>not</u> permitting free student choice (assuming eligibility)? Of what service is it to the student to limit his opportunities, again assuming his eligibility?

These are among the most important questions facing higher education in California today.

CHAPTER VIII

CONCLUSION AND RECOMMENDED SUBJECTS FOR IMMEDIATE STUDY

Conclusions

Past statewide surveys concerning undergraduate higher education have given little direct attention to the client of higher education: the student. In contrast, this study has sought to consider a number of problems which directly affect the student's admission to higher education and his progress and persistence to graduation. The following are among the general conclusions which may be made from the foregoing discussion.

The pattern of the selection and consequent distribution of students, given form and emphasis by the 1959 Master Plan for Higher Education, has assured an opportunity for all to enroll as first-time freshmen in a segment of public higher education. Subsequent attendance depends upon academic achievement. Public policy provides the greatest number of alternative higher education opportunities initially to the most academically able. However, this stress on academic qualifications has been accompanied by economic and also ethnic stratification among the segments in some degree. Or perhaps more accurately, academic standards have tended to limit initial entrance of many lower income and minority ethnic group students as well as less academically able, middleclass students to the four-year colleges. If more heterogeneous student bodies in the California State Colleges and the University of California are considered desirable, major changes in selection criteria may be required as well as special developmental programs into which lower academic ability students may be placed.

The concerns of the late 1960's give rise to the question, "Are the selection criteria for initial admission to the State Colleges and the University of California too restrictive?" Certainly they are restrictive when viewed against those of many other state universities and colleges. However, California Junior Colleges are open to all, and are nearly universally available, not the case in every state; a point which should never be ignored.

California's institutions are enrolling numbers of students in proportions substantially above national averages. However, the percentages persisting to graduation with a baccalaureate degree appear somewhat lower than might be expected in view of the population of the state and the numbers in higher education programs. The question of student persistence to graduation has thus become a subject of recent emphasis and concern, as well it should in any event.

It is in the Junior Colleges of the California system that the largest proportion of attrition is being experienced. Comprehensive studies have yet to be reported which will enable development of policy statements as to the true extent and meaning to the numbers of students dropping out of California's Junior Colleges. A current study being conducted by the

Northern California Junior Colleges in conjunction with the California Junior College Association may contribute significantly to knowledge of the problem. Studies of this nature need to be completed before the meaning of gross statistics becomes apparent. Of special interest would be evidence of the proportion of students who achieve their educational goals and then drop out of college.

Research does indicate that the reasons for dropping out, be it temporarily or permanently, are complex. Many appear to be beyond the immediate control of the college as now constituted. Substantive changes in the form and content of higher education may be called for if changes are to occur in persistence rates. Careful study and additional research is clearly needed.

Institutional policies concerning academic probation and dismissal and transfer of students can affect the student's collegiate career to a profound extent. Probation policies should give greater emphasis to the remedial aspects of probation, and to extending the period in which a student can remedy academic deficiencies. Academic dismissal should not occur prior to a period of time on probation and an opportunity for improvement in scholarship. Junior Colleges should never close their "open door" through the imposition of academic dismissal policies that exceed the minimums established by the state.

The University and State Colleges have made progress in recent years in permitting Junior Colleges more flexibility in determining the degree to which transferring students have satisfied University and State College general education-breadth requirements through Junior College courses. More, however, needs to be done.

Limited data on the performance of students selected for admission through special procedures at both the University and State Colleges indicate a level of performance sufficient to give support to the policy consideration of eliminating quotas for the admission of such applicants, and instead, after providing for all regularly qualified applicants, admitting such students without restriction up to limits improved by budgetary situations.

A review by the University of its pattern of courses required for admission, with attention both to the findings of modern research and to the extent to which University freshmen courses are, in fact, based upon work done in high school would seem desirable.

The progress of a student through his undergraduate higher education may be made much more direct. Credit by examination, reduction in the time required to maintain the student status as such, flexibility in times of day and year in which programs may be pursued, assessment of outside work and experience--are among the ways through which institutions may assist the student's progress toward a degree. Expenditure of the student's time unnecessarily appear to have been too often ignored in developing institutional policies and procedures.

A major element of the Master Plan, elaborating on previously approved policies, was to see to it that a greater proportion of students who were eligible to the University of California and the California State Colleges entered Junior Colleges for their initial two years of training than was anticipated to be the case in 1959. The reasons for this policy centered around the lesser cost of lower division education in Junior Colleges as well as an interest in assuring a cadre of highly qualified students in the two-year institutions. The method of assuring that this would happen was through "diversion" of eligible students to the Junior Colleges. This concept has been difficult to implement (or at least to assess the degree to which diversion is occurring) because of dependence on voluntary, often private choices of students otherwise academically eligible to attend a given segment and given college. At the core of the policy to limit lower division programs is its effect upon the student. This should be given particular attention in any consideration of continuing the policy, extending it or discontinuing it.

At a minimum, there appears some benefit in considering the policy objective to be one of restricting lower division program size at the University and/or State Colleges rather than to continue discussions of the notion of "diversion". Establishment of admissions quotas appears the only effective method of restricting intake into a higher education segment (or individual college or university). There are, of course, differing ways to set and determine any quota. Effects upon the student with the consequent necessity for his transfer under such circumstances, was not given specific attention in the Master Plan. Transfer continues to create problems for some students even though great strides have been made in the last few years to make it as smooth as possible.

Finally, it should be noted that discontinuance of the existing procedures for "diversion" should have little impact on the future distribution of students for the system is now essentially one of free student choice once factors of academic eligibility are determined. (This does not, of course, include the policies of "redirection" of eligible students among colleges and campuses of the same segment which is now occurring and will continue in the future to a greater extent. Redirection is administratively determined taking into account student preferences but not being bound by them.)

Subjects Recommended for Immediate Study

Many subjects of importance to California public higher education for possible study and immediate or future action have been touched upon in this review. Many others directly concerning the student and his higher education could be suggested. All in a general sense relate to determining ways and means by which the student can profit more fully from his higher education.

Based on this review, there are three major topics which appear to be in need of immediate attention by California public higher education.

I. The standards for admission and selection of students in the California State Colleges and the University of California should closely be reexamined by the segments of public higher education and the Coordinating Council towards determining if, in fact, it would be desirable to make them more flexible. This flexibility, if determined to be needed, could take the form of increasing the proportion of the high school graduating class eligible in either or both segments, by redefining scholastic eligibility, by eliminating the need for formally approved "exceptions" quotas, or other ways which appear appropriate. It should be pointed out that flexibility of standards need not necessarily imply that more students should be admitted to the freshmen and sophomore years of the University or the State Colleges. The numbers of students may still be limited by means other than admissions standards.

II. The question of the desirability of limitation of the lower division in the California State Colleges and/or the University of California should be given immediate attention by the segments of public higher education and the Council. The state has pursued a policy of "diversion" of students to Junior Colleges for over a decade. The policy has been difficult to implement and direct results of the policy are nearly impossible to measure. The core policy issue is the need for, and desirability of, limitation of the lower division in the four-year institutions. At the present time both the policy and its true implications in respect to students affected are unclear.

The Council has had before it the question of operation of institutions without lower divisions for over two years without discussion. Meanwhile, the State College lower division programs have grown proportionately smaller, the University's not. The value to the student of two years in a Junior College and transfer to the State College or University has yet to be fully explored. Ways and means of facilitating transfer have been improved, but can they be further improved? If the state is to emphasize the Junior College as the locus of lower division training, what actions should be taken in the years ahead? Alternatively the University could continue a lower division emphasis and the State Colleges not--or vice versa. These are all aspects of the question of limitation of lower division.

III. The programs of the Junior Colleges, particularly those for the college transfer student, require close examination in respect to the question of any possible increased dependence on this segment to provide the initial two years of college work for those who would otherwise attend a University or State College campus. Further, the problem of persistence, greatest in the Junior Colleges with their unrestricted intake of students, requires close examination. Little, however, is known about ways and means of increasing persistence for varying groups of students in Junior Colleges--if it is determined to be needed. It is not clear whether the student eligible for a four-year college is in fact receiving a comparable, superior, or inferior education to that he would receive at the University or State College. Competition of peers, the stimulus of upper division students, and college standards, may have

significance for student achievement. Additionally, it is not known which kinds of students do best in Junior Colleges of those eligible to go elsewhere nor have ways and means been proposed to assist students in making such important personal decisions.[1]

A study, or series of studies, focusing on Junior College programs appears to be required. A suggested approach might be to examine in depth the program, students, faculty, and policies of a selected sample of colleges, representative of the 80-some colleges statewide. Such examination would give attention to the college transfer curricula and students but would also consider other curricula and students. Other statewide data might be brought to bear for normative purposes. (The Northern California Junior Colleges' study relating to persistence could be integrated with this effort.)

In identifying these three general subject areas, it is noted that California has developed an articulated and comprehensive system of higher education opportunities for the undergraduate. Nothing in this report is meant to detract from this fact. There is, however, need to assure that what has been established continues to be fully responsive to the needs of the present and of the immediate years ahead.

Specific Recommendations

Review of policies for admission, definition of policy concerning the distribution of lower division programs and in-depth assessment of Junior College programs for baccalaureate-seeking students are the three general subject areas in the staff's opinion among those in greatest need for study. The overall responsibility for these studies should be shared, for the results as translated into policy will affect every segment and institution of higher education in some degree.

Proposals and directions for studies of the scope suggested should be carefully drawn. In view of this, the Council staff recommends that it be charged with development of specific, detailed study proposals within the three general areas stated; these proposals to be developed after consultation with representatives of the segments of public higher education. Final study proposals may take the form of (a) proposed requests of the Council to the segments to perform certain reviews, (b) joint-studies to be conducted by the segments with or without Council staff participation, (c) suggestion that independent consulting groups conduct such reviews, (d) studies by Council staff itself, or (e) some combination of the above.

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[1]A few individual research projects have examined student groups in Junior Colleges in comparison with peers in other institutions. Such research should be extended and programs proposed to aid prospective college students in their decision to attend one kind of institution or another. One higher education leader has suggested that Junior Colleges provide a counseling service for all college-going students, regardless of academic preparation.

Other individual special topic studies may be proposed to the Council at a later date--such as concerning the question of credit by examination--following discussions with the segments and reactions to the observations in this report.

(The Council in receiving this report at its March 4, 1969, meeting directed that a proposal for a study or studies encompassing the three major topics above be developed and submitted to the Council.)

APPENDIX A

Freshman Admissions Requirements
University of California

To be eligible for admission to the University as a freshman, an applicant must meet the Subject Requirement, the Scholarship Requirement, and the Examination Requirement, which are described below.

If an applicant is not a resident of California, he must also meet certain additional requirements that are discussed later. A nonresident applicant must show exceptional academic promise in order to qualify for admission.

Subject Requirement.--An applicant must complete certain high school subjects with at least a grade of C in each semester of each course described below: (often referred to as the "a to f" requirement)

a. History 1 year
One year of United States history, or one-half year of United States history and one-half year of civics or American government.

b. English 3 years
Three years of English--composition literature, oral expression

c. Mathematics 2 years
Two years of mathematics--elementary algebra, geometry, intermediate and advanced algebra, trigonometry, calculus, elementary function, matrix algebra, probability, statistics, or courses combining these subjects. Nonacademic courses such as arithmetic and business mathematics may not be used.

d. Laboratory Science 1 year
A year course in one laboratory science designed for eleventh or twelfth-grade students.

e. Foreign Language 2 years
Two years of one foreign language. Any foreign language with a written literature may be used.

f. Advanced Course 1 or 2 years
This requirement must be satisfied by one of the following:

Mathematics
A total of one year of advanced mathematics--intermediate algebra, trigonometry, or other comparable mathematics courses.

Foreign Language
Either an additional year in the same language used for "e" above or two years of a second foreign language.

Science
A year course in either chemistry or physics in addition to the laboratory science used for "d" above.

Admission by Examination Alone.--If the scholarship and subject requirements for admission are not met, the applicant may be able to qualify for admission as a freshman by examination alone. To do so, the applicant must take the same CEEB tests discussed above but must earn higher scores. The required total score on the Scholastic Aptitude Test is 1100, and at least 500 on each Achievement Test must be earned. For a California applicant, the total score on the three Achievement Tests must be 1650 or higher. For a nonresident applicant, the total score on the three Achievement Tests must be 1725 or higher.

Admission Through Special Procedures.--There are three special procedures available for the admission of first-time freshmen applicants who are ineligible under regular procedures. The first is through admission to certain special programs and curricula that were in existence at the time of the Master Plan (and whose continuance was approved by the Donahoe Act) and to any new special programs and curricula that have been approved by the Coordinating Council. At the present time no such special programs and curricula exist at the University. The second procedure through which ineligible first-time freshmen applicants may be admitted as first-time freshmen is through the Master Plan recommendation which provides that the University and State Colleges can admit ineligible first-time freshmen applicants each year up to a number equal to 2% of all freshman admissions in the segment for that year.[1] A third special procedure for disadvantaged students who have collegiate ability but are not otherwise eligible academically permits the University to admit at their discretion, up to the full number that the special programs for such students, as developed by the University, may absorb (not to exceed an additional 2% of freshman admissions).

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[1]The University has indicated that the primary consideration in the admission of such students is the probability of success. The following criteria are examples of consideration that would lead to favorable action:

1. high test records.
2. ability to succeed according to judgment of high school principal.
3. exceptional strength in one or more fields or evidence of strong preparation for the applicant's objective.
4. a poor grade, semester, or year that seems out of line with the rest of the record.
5. marked tendency toward improved scholarship or a generally improving record.
6. circumstances such as illness or evidence of achievement in the face of physical handicap.
7. mature persons (e.g. graduate nurses) whose original plans did not include a university education.
8. outstanding ability in one or more special areas--art, athletics, drama, leadership, literature, mathematics, music.
9. evidence of strong motivation.

Elective Courses

The subjects listed above will account for ten to eleven of the fifteen high school credits[1] required for admission to the University. The remaining credits provide an excellent opportunity to broaden preparation for University work.

Scholarship Requirement.--An applicant must earn at least a C in each of the courses required for admission and also earn an overall average of B in those courses taken after the ninth grade. A non-resident applicant must have a grade-point average in the required subjects of 3.4 or higher. (A 3.0 average is equal to a B average.)

In determining the required B average, the University uses a semester grade of A in one course to balance a semester grade of C in another. Grades received in courses taken in the ninth grade or earlier are not used in determining scholarship average. Grades that appear on official high school transcripts, including those earned in accelerated and advanced courses, are the grades the University uses in evaluating records.

Courses may be repeated up to a total of two semester courses, in which a grade of D or lower was received in order to meet the subject and scholarship requirements. Grades earned in repeated courses are not counted higher than C in determining scholarship average. If courses that are repeated were taken before the ninth grade, they are treated as if they were taken for the first time.

Examination Requirement.--All freshman applicants must submit acceptable scores from the following College Entrance Examination Board tests. The scores must be from tests taken in the last half of the junior year; the University does not accept scores from tests taken before then.

1. Scholastic Aptitude Test (The verbal and mathematics scores must be from the same sitting.)

2. Three Achievement Tests, which must include (a) English composition, (b) social studies or foreign language, and (c) mathematics or science.

A California applicant with a scholarship average in the required high school subjects from 3.0 to 3.09 inclusive must earn a total score of 2500 or higher in these tests. The scores of all applicants are used to assist the University in counseling, guidance, and placement, and when possible, to satisfy the Subject A requirement.

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[1]A year course in high school is equivalent to one credit.

APPENDIX B

Freshman Admissions Requirements
California State Colleges

Admission as a first-time freshman is determined by high school grade-point average and results of the American College Test or the Scholastic Aptitude Test, as specified by the college. A weighted combination of these two items provides an eligibility index. A resident or graduate of a California high school must have an index placing him among the upper 1/3 of California high school graduates. Currently the minimum index is 3072 (grade-point average multiplied by 800 plus the total SAT score) or 741 (grade-point average X 200 + 10 X ACT composite score). Nonresidents who are graduates of high schools in other states must have an eligibility index of 3402 with SAT or 826 with ACT. The grade-point average is based on the last three years of high school and excludes physical education and military science.

Admission Through Special Procedures.--Three special procedures are also available to the State Colleges for the admission of first-time freshmen applicants who are ineligible under regular procedures. The first is through admission to certain special programs and curricula that were in existence at the time of the Master Plan (and whose continuance was approved by the Donahoe Act) and to any new special programs and curricula that have been approved by the Coordinating Council. At the present time the only such special programs and curricula are the three special programs in agricultural curricula operated by Chico, Fresno and Cal Poly (San Luis Obispo).[1] The second procedure through which ineligible applicants may be admitted as first-time freshmen is through the Master Plan recommendation which provides that the State Colleges can admit ineligible first-time freshmen applicants each year up to a number equal to 2% of all freshman admissions in the segment for that year. Through the third special procedure the State Colleges can admit disadvantaged students who have collegiate ability but are not otherwise eligible academically, without application of existing admission standards, up to the full number that the special programs for such students, may accommodate (not to exceed an additional 2% of freshman admissions and 2% of applications for transfer with less than 56 units).

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[1]Extracted from Title V, California Administration Code, Statements of Chancellor's Office and California State College Bulletins.

APPENDIX C

Freshman Admissions Requirements
California Junior Colleges

The admissions policy of the Junior Colleges is governed by the following sections of the Education Code:

"25503. The governing board of any district maintaining a two-year junior college shall admit to the junior college any high school graduate.

"Such governing board may admit to the junior college any apprentice, as defined in Section 3077 of the Labor Code, who, in the judgment of the governing board or of the principal of the junior college if he is so authorized by rule of the governing board, is capable of profiting from the instruction offered.

"Such governing board may by rule determine whether there shall be admitted to the junior college any other person who is over 18 years of age and who, in the judgment of the board or of the principal of the junior college if he is so authorized by the rule, is capable of profiting from the instruction offered. If the governing board determines to admit such other persons, any such person shall be admitted as a provisional student and thereafter shall be required to comply with the rules and regulations prescribed by the State Board of Education or the Superintendent of Public Instruction pertaining to the scholastic achievement and other standards to be met by provisional or probationary pupils, as a condition to being readmitted in any succeeding semester. The provisions of this paragraph shall not apply to persons in attendance in special classes and programs established for adults pursuant to Article 12 (commencing with Section 6351) of Chapter 6 of Division 6, or to any persons attending on a part-time basis only."

"25503.5. The principal of any two-year junior college may admit to the junior college as a special part-time student any 12th grade high school student whose admission is recommended by his high school principal. A principal of a high school may recommend a 12th grade high school student as a special part-time student pursuant to rules and regulations which may be adopted by the governing board of the district maintaining the high school. A principal of a high school shall not recommend a number of 12th grade high school students in excess of 5 percent of the total number of 12th grade students enrolled in the high school at the time of recommendation."

"25504. The principal of any junior college may, in accordance with such rules as the governing board of the district maintaining the junior college may adopt, admit to the junior college any person who has served in the active military service of the United States or of the State of California for at least 90 days during a war with any foreign power or during any period of national emergency declared by the President of the United States."

APPENDIX D

Summary of Survey, Private College and University Undergraduate Student Admissions Policies[1]

Freshman Admissions

Results of a questionnaire concerning private college and university admissions policies indicate that schools emphasize three factors for freshmen admissions to the exclusion of most others. Though many schools do consider factors such as high school awards and honors, high school activities, special talents, hobbies, and a relationship to alumni as factors, grades, test scores, and recommendations receive the most weight in the admissions decision.

	Admission Criteria	Employ? Yes	No
a.	High School Grade Point Averages	40	2
b.	Test scores	37	5
c.	Personal Interview	30	10
d.	Personal Recommendation	37	4
e.	High School Awards & Honors	24	16
f.	High School Activities	26	14
g.	Others	15	8

Twenty-nine of thirty-seven responses indicated that the minimum grade point acceptable was from 2.01 to 3.0. Ten schools desire a 3.0 minimum and eleven require minimum G.P.A.'s in the range of 2.5 to 2.99. Eight schools require grades in the range of 2.01-2.49. Of the remaining eight colleges, five require a 2.0 minimum grade average while one requires a 3.01-3.49 grade average and two require a 3.5-4.0 grade average.

	Required Grade Average	Schools
a.	3.5-4.0	2
b.	3.01-3.49	1
c.	3.0 min.	10
d.	2.5-2.99	11
e.	2.01-2.49	8
f.	2.0 min.	5
g.	1.99 or less	0

[1]Full statistical presentation of the questionnaire is not attempted due to the form of some questions and diversity of the colleges surveyed The survey was conducted in the summer 1968 by the Council staff in cooperation with the Association of Independent California Colleges and Universities. Some 44 replies are tabulated--not all colleges responded to each question.

All colleges and universities reporting (44) stated they employed the same standards of admission for California residents as they do for admission of out-of-state students. Similarly, foreign students are reported as being required to meet comparable standards in all but two colleges reporting.

Foreign students are, as well, generally required to demonstrate an ability to understand and work with the English language.[1]

Advanced Standing Admissions

In considering an applicant for admission to advanced standing, the colleges report placing heavy emphasis on the applicant's grade-point in college work completed (see chart). A majority of schools also consider the high school grade-point average, use personal interviews, test scores, and personal recommendations. These factors are reported as being given approximately equal weight by the schools using them.

Admission Criteria	Employ? Yes	No
a. High School Grade Point Average	25	19
b. College Work Grade Point Average	43	1
c. Personal Interview	26	16
d. Test Scores	28	15
e. Personal Recommendations	34	9
f. High School Awards and Honors	8	28
g. High School Activities	10	26
h. Other	15	14

In determining advanced standing admissions only seven schools require B level, or above, college grade-point averages. Most require C to C+ as the minimum.

Required Grade Average	Schools
3.5-4.0	0
3.01-3.49	0
3.0 min.	7
2.5-2.99	5
2.01-2.49	9
2.0 min.	20
1.99 or less	1

[1]Many schools require passage of an English competency test; others require completion of a course in English for foreign students.

Of the schools which consider an applicant's test scores, most all rely on the S.A.T. test scores with an average score of 930 or better required for admission.

The private colleges and universities indicated that they enrolled 4,431 new undergraduate students with advanced standing in the fall of 1967. The University of Pacific, Stanford, and the University of Southern California accounted for 1,583 of these students, or 36% of the total. The University of Southern California alone accounted for about 1,000 admissions or 23% of the total.

Colleges were asked to estimate the percentage breakdown of the source of their undergraduate transfers, the average of these percentages is shown below.

Source of Transfers	Estimated Average Per Cent from Source
Out-of-State Colleges	30%
Calif. Junior Colleges	44
Calif. State Colleges	7
Univ. of California	5
Other Calif. Independent	14

Forty of forty-two colleges responding said they did not favor or did not give preference in any way to students seeking admission after the completion of two years in a California Junior College over any qualified freshmen applicants. The two schools which do give a preference to Junior College transfers, report they do so only by requiring a lower grade-point average of them.

General Admission Policies

Thirty-nine of the colleges returning the questionnaire indicated that they do not seek to maintain a given ratio between California residents admitted as undergraduates and those from other states or countries. Four colleges said they did maintain such a ratio. Colleges were asked to indicate the percentage of their student bodies who were California residents. The per cent figures ranged from a low of 10% of California residents in the student body to a high of 95%--the average of those reporting was 70%.

California's private colleges make exceptions to their general admissions policies for special cases. Thirty-eight of forty-four responding colleges said they did so. The chart below shows the categories of the kinds of exceptions which are made and the typical ranking of importance based on questionnaire replies.[1]

[1]The question was cast in terms of "percentage" of exceptions made. Rankings were made based on percentages reported.

Exceptions	Typical Ranking of Per Cent Distribution
a. Borderline (academic) Admissions	1
b. Disadvantaged Students	2
c. Persons with Special Talent	3
d. Athletes	4
e. Children of Alumni	5
f. State Scholarship Holders	6
g. Other	7

The colleges report that need for financial aid of the applicant does not enter into the decision of whether or not to admit the student (No - 40; Yes - 4). Of the four schools answering "yes", two said that this need for financial aid could result in a decision by the institution not to admit an otherwise eligible student if it is certain adequate aid could not be provided.

If a student is not admitted, for whatever reason, thirty of forty-two schools replying said they would refer the student to another in-state institution to which he might gain admission. The majority of referrals are made to Junior Colleges.

Colleges were asked when they ceased accepting applications to freshman standing. Dates indicated for the fall term 1968 were from February 1, 1968, to September 16, 1968. The typical cut-off date for all schools reporting was approximately June 1, 1968. The cut-off date for application for admission to advanced standing ranged from March 1, 1968, to September 16, 1968, the bulk were again around June 1, 1968. Graduate application deadlines varied from February 15, 1968, to September 1, 1968, with July 1, 1968, being the norm.

Based upon the individual institution's experience or studies, on the average some 60% of a college's entering freshmen can be expected to receive a degree after four years. Another 10% in the average are reported to receive degrees over a longer time span.

Thirty out of thirty-nine schools said they had changed their admissions policies since 1950. Of that thirty, approximately half said they have changed those policies by (1) increasing cutting scores on examinations, (2) requiring a higher grade-point average from high school, (3) raising standards for Junior College transfers. Some schools noted they required S.A.T. scores 50 to 150 points higher than previously. Some of the colleges said that they now consider test scores as a criterion for admission where they did not before.

Half of the colleges have increased G.P.A. requirements of high school applicants and Junior College transfers. The grade-point cut-off for high school applicants has gone up about one-half grade point; for Junior College applicants about one-quarter grade point. No college indicated that it had plans for admissions based on the applicant's region of origin, ethnic group, or economic background.

The schools were asked to describe how their admissions policies have changed. Some of the responses included: increased emphasis on non-quantitative factors; use of tests; creation of faculty admissions committees; allocation of additional aid to disadvantaged students; more active recruitment of qualified students; overhauling and clarifying admissions policies; seeking to serve a broader community; and recruiting minority group students.

A final question on the survey instrument asked the colleges to indicate what, if any, special problems are being encountered by the institutions. Among other things, the colleges showed the following to be of particular concern: increase in enrollments of minority group students; greater certainty in the selective service area; competition with public institutions for students; need for more financial aid to students and need for more aid for foreign students.

APPENDIX E

Table E-1

NUMBER OF APPLICATIONS AND ACCEPTANCES TO OTHER COLLEGES
ENTERING FRESHMEN, CALIFORNIA HIGHER EDUCATION

FALL 1967

Number of Applications	University of California	California State Colleges	Private Colleges	Junior Colleges	National Norms
	N = 9,618	N = 1,625	N = 3,130	N = 8,322	
None	46.6%	54.8%	21.8%	83.4%	50.1%
One	27.3	27.0	21.3	11.0	19.7
Two	15.0	11.7	25.1	3.6	14.2
Three	6.9	4.6	16.5	1.3	8.5
Four	2.5	1.1	8.2	0.5	4.1
Five	1.0	0.4	4.6	0.1	2.0
Six or More	0.7	0.4	2.6	0.1	1.4
Number of Acceptances	N = 7,953	N = 1,267	N = 2,799	N = 4,559	
None	48.1%	48.4%	21.3%	77.6%	44.4%
One	31.7	34.5	33.0	16.8	28.4
Two	14.2	11.6	28.7	4.3	16.8
Three	4.4	4.0	11.5	1.0	6.9
Four	1.1	1.0	3.8	0.3	2.2
Five	0.3	0.5	1.2	0.0	0.7
Six or More	0.2	0.0	0.5	0.1	0.4

SOURCE: American Council on Education, Office of Research, National Norms based on N of 185,848, weighted to reflect total college population.

Table E-2

HIGH SCHOOL GRADE POINT AVERAGES
ENTERING FRESHMEN, CALIFORNIA HIGHER EDUCATION

FALL 1967

Grade	University of California	California State Colleges	Private Colleges	Junior Colleges	National Norms
	N = 9,638	N = 1,625	N = 3,137	N = 8,376	
A & A+	11.5%	5.3%	10.7%	0.5%	5.2%
A-	27.0	13.1	22.6	1.8	9.2
B+	33.6	28.9	24.2	6.5	16.6
B	22.4	33.5	19.6	17.2	23.1
B-	4.0	15.0	12.4	19.5	15.3
C+	1.1	3.5	7.2	26.9	16.1
C	0.3	0.4	3.4	26.0	13.6
D	0.0	0.1	0.0	1.6	0.8

SOURCE: American Council on Education, Office of Research, National Norms Based on N of 185,848, weighted to reflect total college population.

Table E-3

HIGHEST DEGREE PLANNED
ENTERING FRESHMEN, CALIFORNIA HIGHER EDUCATION

FALL 1967

Objective	University of California N = 9,529	California State Colleges N = 1,627	Private Colleges N = 3,101	Junior Colleges N = 8,246	National Norms
None	1.5%	2.2%	2.7%	10.3%	4.2%
Associate or Equivalent	0.1	0.2	0.8	20.2	7.3
Bachelor's	23.2	37.7	23.0	34.2	37.4
Master's	36.2	40.9	38.8	23.0	32.5
Ph. D. or Ed. D.	24.8	11.5	22.5	5.5	10.4
M.D., D.D.S., D.V.M.	10.2	5.6	6.6	2.7	4.7
LL. B. or J.D.	3.0	1.0	4.1	0.4	1.4
Other	0.9	0.8	1.5	3.6	2.1

SOURCE: American Council on Education, Office of Research, National Norms
Based on N of 185,845, weighted to reflect total college population.

APPENDIX F

California State College General Education Policy

(From Title 5, Section 40405
of California Administrative Code)

1. Each candidate for a bachelor's degree from any State College shall complete a minimum general education-breadth requirement of 40 semester units or 60 quarter units established by the Trustees of the California State Colleges.

2. The minimum general education-breadth requirements shall consist of 40 semester or 60 quarter units to include a minimum of 32 semester or 48 quarter units selected from the areas listed below, with at least 2 semester or quarter courses from each area. The disciplines and courses encompassed by each area shall be determined by the college. Requirements within or among the categories specified below may be satisfied by appropriate interdisciplinary courses:

   A. Natural Sciences
   B. Social Sciences
   C. Humanities
   D. Basic Subjects

   designed to facilitate the acquisition and utilization of knowledge in the Natural Sciences, the Social Sciences, and the Humanities (e.g., oral and written communication, logic, mathematics, statistics).

3. The President of any accredited college, or his officially designated representative, may certify that the minimum general education-breadth requirements have been satisfied in part or in toto through the student's completing course requirements designated as general education in the catalogue of the college. The State Colleges shall accept such verification of completion of all or part of the minimum general education-breadth requirements and shall not require additional courses to satisfy such minimums when a student so certified transfers to a State College.

4. Each California State College, upon action by its faculty and its president, may specify additional general education requirements for the bachelor's degree provided that such requirements apply equally to transfer and non-transfer students. Transfer students shall not be required to take additional general education units (including prerequisites), in excess of the difference between 40 semester units (60 quarter units) and the total general education units required by the college which grants the bachelor's degree.

APPENDIX G-1

University of California
Minimum Breadth Requirements of the Colleges Offering
Non-Professional Majors

	Totals	Engl.	Foreign Lang.	Math	Humani-ties	Nat. Sci.	Soc. Sci.	Add'l. Require-ments
Berkeley (College of L. & S.)	42-57	6	0-12[a]	0-3[b]	12	12	12	0
Davis (College of L.& S.) (Toward A.B.)	42-54	6	0-12[a]	0	12	12	12	0
Davis (College of L. & S.) (Toward B.S.)	42-48	6	8-12	0	15	15	15[est]	0
Irvine (College of Arts, Letters & Science)	45 courses total-to include 12 courses outside major, less than 28 courses in division major and less than 5 courses of electives.							
Los Angeles (College of L. & S.)	37-51	3	4-16[a]	0	8-10	10	12	0
Riverside (College of L.& S.)	32-44	6	0-12[a]	0	12	8	6	0
San Diego (Revelle College)	36-48	See Humani-ties	0-12[a]		Est. of 36 units			
Santa Barbara (College of L.& S.)	54-58	6	8-12[a]	0	15	11	12	2
Santa Cruz (Cowell College)	18-33	See Humani-ties	0-12[a]	0-3[b]	Est. of 18 units			Comprehensive exam end of Senior Year

[a]Can be met by high school courses or test.
[b]Can be met by college course or test.

APPENDIX G-2

Statement of Mutual Acceptability Policies
of the Colleges of Letters and Science
University of California

Following are current policies of the Colleges of Letters and Science and equivalent colleges in the University, regarding acceptability of transfer courses to satisfy breadth requirements.

LOS ANGELES: The following is the policy of the College of Letters and Science at Los Angeles with respect to the General University and College (A-G) requirements, or "breadth" requirements. The policy applies to only two categories of students: (a) students who transfer to Los Angeles from another campus with 27 units or more of advanced standing; (b) students who are admitted to the University of California with 27 units or more of advanced standing and are redirected from their campus of first choice to the Los Angeles campus. The policy applies only to general College requirements, and not to requirements in fields of concentration.

1) Any student in category (a) above who has completed the entire pattern of breadth requirements at the campus from which he transfers, or in (b) above who has credit for courses which would be accepted by his campus of first choice as completing the entire pattern of breadth requirements on that campus, shall be credited with having completed the entire set of General University and College Requirements at Los Angeles.

2) Any student in category (a) above who has not completed the entire pattern of breadth requirements at the campus from which he transfers will be given the option, at the time of admission to the Los Angeles campus, of choosing to meet the Los Angeles requirements in full or to complete the breadth requirements as specified at the campus from which he transfers. Any student in category (b) above who does not have credit for courses which would be accepted by the campus of his first choice as completing the entire breadth requirement at that campus will be given the option, at the time of admission to the Los Angeles campus, of choosing to meet the Los Angeles requirements in full or to complete the breadth requirements as specified at the campus of his first choice.

SAN DIEGO: In general, students wishing to transfer as juniors to the University of California, San Diego, will be held to the freshman-sophomore general education requirements of the college to which they wish to transfer and to the lower division prerequisites for the majors which they wish to elect. The general education requirements, however, will be interpreted rigorously only for those subjects which are directly related to the students' proposed majors. The Provost, in consultation with appropropriate departments, will accordingly evaluate the credentials of transfer students on an individual basis. Transfer without penalty will be authorized upon approval by the Provost and the responsible department.

IRVINE: (The following is printed in the current Irvine catalogue.) Students who upon transfer have met the general breadth requirements of any accredited four-year college of liberal arts and sciences will be considered to have met college requirements at UCI. It is anticipated that many of the students at Irvine will have begun their college work at one of the California Junior Colleges. Course credit received in any accredited institution of higher education or credit for courses marked with the prefix X in any University of California Extension program may be transferred without further validation, provided that the subject field of study is equivalent to one offered in some division of the College of Arts, Letters, and Science at UCI. Knowledge acquired by any other means may be validated for credit examination.

SANTA CRUZ: The Santa Cruz campus will be operated on the basis of full mutual acceptability of instruction completed on other campuses of the University. Breadth requirements completed in or for another college of the University will be accepted in satisfaction of the breadth requirements for Cowell College.

RIVERSIDE: The Riverside College of Letters and Science will accept the full pattern of breadth requirements completed on or for another campus of the University in full satisfaction of their own breadth requirements. The College will also accept course patterns which complete any category of another College's breadth requirements except where such partially fulfilled requirements do not fully meet the laboratory science and foreign language requirements of the Riverside College of Letters and Science.

DAVIS: The current interim policy of the Davis Campus College of Letters and Science is to accept, as having met their own breadth requirements, the completed breadth requirements of any other campus of the University. Where breadth requirements have been only partially satisfied, the remainder of the requirements will be worked out in conference with individual students.

SANTA BARBARA: The policy of the College of Letters and Science at Santa Barbara is essentially the same as the Davis campus policy noted above.

BERKELEY: Mutual acceptability policies are currently being discussed by the executive committee of the College of Letters and Science at Berkeley. These discussions are also considering the question of simplification of the breadth requirements.

APPENDIX H

Academic Probation-Dismissal Policy
University of California

The following regulation establishes minimum provisions on probation-dismissal for the University. The regulation was adopted[1] on May 29, 1964 by the Assembly of the Academic Senate of the University of California and became effective on July 1, 1965:

"1331. (A) The following minimum provisions shall govern the scholastic status of students not subject to the jurisdiction of a graduate division:

> (1) Probation. A student shall be placed on probation if at the end of any term his grade-point average is less than 2.0 (C average), computed on the total of all courses undertaken in the University, including courses graded Incomplete.
>
> (2) Dismissal. A student shall be subject to dismissal from the University (a) if his grade-point average falls below 1.5 for any term, or (b) if after one term on probation he has not achieved a grade-point average of 2.0 (C average), computed on the total of all courses undertaken in the University, including courses graded Incomplete.

(B) A student who fails to meet the minimum scholastic requirements specified in paragraph (A) is subject to such supervision as the Faculty of his college or school may determine. The Faculty or its designated agents may (1) dismiss such a student from the University as provided in paragraph (A) (2); (2) suspend his dismissal, continuing him on probation; or (3) authorize the return on probation of a dismissed student.

(C) In order to transfer from one campus of the University to another, or from one college or school to another on the same campus, a student who has been dismissed or is on probation must obtain the approval of the appropriate Faculty, or its designated agent, to whose jurisdiction transfer is sought. Upon completion of the transfer the student is subject to the supervision provided for in paragraph (B).

(D) Modifications of this regulation must be approved by the Assembly."

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[1] University of California, Academic Senate Record of the Assembly, Vol. 1, No. 3, May 29, 1964, pp. 40-41.

The regulation permits individual campuses of the University to propose minor modifications of the minimum provisions (which become effective only upon approval of the Academic Senate). The following modifications have been approved by the Assembly of the Academic Senate for the Berkeley, Los Angeles and San Francisco Campuses:

Berkeley Campus

The following provisions shall govern the scholastic status of students in the College of Chemistry and in the College of Engineering at Berkeley.

A student shall be subject to dismissal from the University (1) if during any term he fails to attain at least a C average in all courses for which he was enrolled; or (2) if at the end of any term he has failed to attain at least a C average in all courses undertaken in the University. The computation of grade-point average shall include courses graded Incomplete. A student in the College of Chemistry or in the College of Engineering at Berkeley who becomes subject to the provisions of this regulation shall be under the supervision of the Faculty of the College concerned. The Faculty, or member designated by it, shall have the power to dismiss from the University students under its supervision, or to suspend the provisions of this regulation and permit the retention in the University of the students thus subject to dismissal, and the return to the University of students who have been dismissed under this regulation.

Los Angeles Campus

The following provisions shall govern the scholastic status of all undergraduate students at Los Angeles except students in the School of Dentistry and the School of Medicine:

(1) Probation. A student shall be placed on probation if, while in good standing, he fails to maintain at least a grade "C" average for all courses undertaken in a semester.

(2) Dismissal. A student shall be subject to dismissal from the University (a) if his grade-point average falls below 1.5 for any semester or (b) if after two semesters on probation he has not achieved a grade-point average of 2.0 (C average) for all courses undertaken in the University, or (c) if while on probation his grade-point average for work undertaken during any semester falls below 2.0 (C average).

A student who fails to meet the minimum scholarship requirements is subject to such supervision as the Faculty of his college or school may determine. The Faculty or its designated representative may dismiss a student subject to dismissal; may suspend his dismissal, continuing him on probation; or may readmit on probation a dismissed student.

San Francisco Campus

The status of students in the Schools of Dentistry, Medicine, Nursing, and Pharmacy in the San Francisco Division shall be determined by the appropriate Faculty or its designated agent. Students may be placed on probation or made subject to dismissal, not only for scholastic deficiencies but also for deficiencies in other qualifications for these professions. In computing grade-point averages of the students in the above-mentioned Schools, only courses taken as regularly matriculated students in these Schools are to be included in the computation.

Any student who receives notice from the University that he has been dismissed may petition the Dean of his School or College for a hearing.

The University reports that the Council resolution recommending that the University state in its catalogs the basis for removal of a student from probation will be implemented in the University catalogs for 1966-67.

APPENDIX I

Academic Probation-Dismissal Policy
California State Colleges

Minimum standards for probation-dismissal established by executive order of the Chancellor of the California State Colleges became effective on September 1, 1964, and are presented below:

> Individual campuses may adopt local standards provided that they are demonstrably equivalent to those defined hereafter. Campuses which adopt local standards designed to be the equivalent of the standards and procedures outlined above shall consult with the Dean of Institutional Relations and Student Affairs of this staff at an early date in their discussion leading to the adoption of such standards and criteria.

The Standards are as follows:

1. A student shall be placed upon academic probation if either his cumulative grade-point average or his grade-point average at the State College at which he is enrolled falls below a 2.0 (grade of C on 5 point scale). The student shall be advised of probation status promptly and, except in unusual instances, before the end of the first week of instruction of the next consecutive enrollment period.

2. A student shall be removed from the probation list and returned to good standing when he earns a cumulative grade-point average of 2.0 (C) in all academic work attempted, and in all such work attempted at the State College of residence.

3. A student on probation shall be disqualified:

   a. As a lower division student (less than 60 semester hours of college work completed) if he falls 15 or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at the State College at which he is enrolled.

   b. As a junior (60-89 semester hours of college work completed) if he falls 9 or more grade points below a 2.0 (C) average on all units

attempted or in all units attempted at the State College at which he is enrolled.

c. As a senior (90 or more semester hours of college work completed) if he falls 6 or more grade points below a 2.0 (C) average on all units attempted at which he is enrolled.

Colleges on the quarter system will express and apply the above standards in quarter-hour equivalents.

4. Students who are disqualified at the end of an enrollment period shall be notified before the beginning of the next consecutive regular enrollment period, except in cases of students who would be disqualified at mid-year, colleges which are unable to notify those students of such disqualification, before the beginning of the next semester or quarter, need not disqualify them until the conclusion of such next semester or quarter. Students disqualified at the beginning of the summer break shall be notified at least one month before the start of the fall semester or quarter.

5. The appropriate college authority may make exceptions to these provisions whenever such action seems justified on individual application.