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ABSTRACT

Approximately one out of every four California adults age 18 or older participated in the fall of 1974 in some form of postsecondary education. Over two-thirds of them were enrolled part-time. Half were older than 25 years of age. A large number were enrolled for reasons other than occupational advancement. Data indicates interest in continuing education by over twice as many adults as are currently enrolled. Will this current level of interest equal California's need for postsecondary opportunities in the future? And will California meet its needs for postsecondary alternatives if it responds only to this current level of interest in education? Data indicates that the answer to both questions is no. (Author/KE)

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POSTSECONDARY ALTERNATIVES: MEETING CALIFORNIA'S EDUCATIONAL NEEDS

A FEASIBILITY STUDY

FIRST TECHNICAL REPORT

PART ONE

CALIFORNIA'S NEED FOR POSTSECONDARY ALTERNATIVES

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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September 1975

Prepared for
The California Legislature

* 431

This is one in a series of reports from the feasibility study, "Postsecondary Alternatives: Meeting California's Educational Needs."

The study stems from a recommendation in the 1973 report of the Legislature's Joint Committee on the Master Plan for Higher Education, chaired by Assemblyman John Vasconcellos, that the state establish a "fourth segment of California public postsecondary education" to offer educational activities, coordinate existing external and non-traditional programs, assess learning experiences and maintain a credit bank, and award certificates and degrees. Following this recommendation, the Legislature directed the Joint Committee to contract with a private consulting firm to determine the feasibility of implementing an external higher education program in the state, and in the 1974 budget the Legislature and the Governor appropriated funds for "studying and testing the need, design, and feasibility of a university without walls in California." The Joint Committee on Postsecondary Education (successor to the Joint Committee on the Master Plan) contracted with the Educational Testing Service and other independent consultants for this study. With the termination of this second Joint Committee in November, 1974, the Joint Rules Committee assumed legislative responsibility for the study.

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An advisory committee of thirty California citizens; a national panel of educational leaders from other states; and a liaison panel of representatives from the existing segments of postsecondary education in California consulted with the research staff during the study. Russell Y. Garth, on the staff of the Joint Rules Committee, served as legislative liaison for the study.

Available Documents:

Peterson, Hefferlin, et al., POSTSECONDARY ALTERNATIVES TO MEET THE EDUCATIONAL NEEDS OF CALIFORNIA'S ADULTS

First Technical Report Part One: Hefferlin, Peterson, Roelfs, CALIFORNIA'S NEED FOR POSTSECONDARY ALTERNATIVES

First Technical Report Part Two: Peterson, et al., COMMUNITY NEEDS FOR POSTSECONDARY ALTERNATIVES

Second Technical Report: Salner, INVENTORY OF EXISTING POSTSECONDARY ALTERNATIVES

Third Technical Report: Hodgkinson and Shear, NONINSTRUCTIONAL SERVICES AS POSTSECONDARY ALTERNATIVES

Fourth Technical Report: Clark and Rubin, INSTRUCTIONAL TECHNOLOGY AND MEDIA FOR POSTSECONDARY ALTERNATIVES

Fifth Technical Report: Shea, FINANCING FOR POSTSECONDARY ALTERNATIVES

Final report may be obtained from:
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Postsecondary Alternatives: Meeting California's Educational Needs
A Feasibility Study

First Technical Report
Part One

CALIFORNIA'S NEED FOR POSTSECONDARY ALTERNATIVES

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Prepared for the California Legislature
September 1975

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INTRODUCTION

What is the need for postsecondary alternatives in California? The answer to this question will determine whether California requires new or reformed postsecondary education services.

The final report of this feasibility study on postsecondary alternatives is a policy report that sets forth recommendations for consideration by the California Legislature. It required an objective analysis of needs as an essential first step in the development of its recommendations, both because educational programs should ideally be designed to fulfill identified needs and because limited public revenues should be devoted to services based on carefully assessed needs. This is the purpose of the present technical or analytic report.

This report gathers together information from a variety of sources. It includes both state and national trend data on higher education enrollments and other relevant economic and demographic factors. It includes findings from various market studies conducted within California by the University of California, the California State University and Colleges, the former Coordinating Council for Higher Education, and other agencies. It draws heavily on two major nationwide studies undertaken in the past three years: a survey of the learning activities of individuals in a sample of 48,000 households conducted in 1972 by the Bureau of the Census for the National Center for Educational Statistics (NCES) of the U.S. Office of Education; and a survey of learning activities and interests of some 1,900 adults conducted in the same year by Educational

Testing Service for the Commission on Non-Traditional Study (CNS). Finally, especially in its second section on potential learners, it makes extensive use of an interview poll of 1,048 California adults designed by the project staff and carried out by the Field Research Corporation in November 1974. This Postsecondary Alternatives survey (PAS) covered subject matter interests, preferred methods for learning, interest in various educational services, cost considerations, perceived barriers to further learning, and related factors.

This report is half of a two-part whole. Part Two, published separately as "Community Needs for Postsecondary Alternatives," consists of detailed analysis of educational needs and resources in seven selected communities in the state. That series of case studies, by adding concrete examples and illustrations, supplements the largely statistical and often necessarily abstract treatment in this first part of the needs assessment.

California's need for new postsecondary education services can be gauged in at least three ways. By themselves, each is insufficient for policy decisions; but together they cover the scope of needed services. Each of the three major chapters of this report focuses on one of them: demand, interest, and societal requirements.

First, Section One examines the present demand for education beyond the high school by a direct measure of how many adults are now actually engaged in postsecondary education. On this basis, California's future need for postsecondary opportunities can be estimated from the number of its citizens who currently take advantage of these opportunities.

- Second, Section Two assesses current interest in postsecondary education by examining Californians' wishes, desires, and hopes for further education. Here, the extent of the state's need is not restricted to those citizens presently able to achieve their hopes of education. It includes as well those who would like to continue their education but for one reason or another cannot now do so.

- Third and finally, Section Three seeks to envision, on the basis of trends within California and the nation, the future social need for new approaches to lifelong learning. Here, estimates of the state's need for educational opportunities are not limited either to present demand or to expressed interest. Instead, they are based on judgments of what California society is likely to be like in the future, and what competencies and values its citizens will need in order to live effectively in that society.

In summary, the following pages sketch the need for postsecondary alternatives in California by moving from the present to the next few years and then to the distant future; by progressing from the present educational activities of Californians to their short-term hopes and then their long-term requirements; and by starting with the needs of individuals and ending with those of California's citizenry in a future society. On these bases, informed deliberation about new strategies for postsecondary education should be possible.

* * *

We wish to acknowledge the able assistance of several individuals, including Arthur Faibisch of the Field Research Corporation, for coordi-

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September 1975

I. PRESENT DEMAND

Last year, over 3.5 million California adults--about one out of every four aged 18 or older--enrolled for further learning. Around 1 million--one out of every 14--were full-time students; but over twice as many--one out of every six--were enrolled part-time.

These enrollments illustrate the extensive demand already existing for postsecondary education among Californians: a demand unlikely to decline in the future.

Most estimates of the demand for postsecondary education focus on high school graduates between the ages of 18 to 25 and on the colleges and universities that offer full-time degree programs for them. Such a focus is inadequate for California and its educational planning. In California, the need for postsecondary opportunities extends across all age groups--from late adolescent to retired adult--and involves not only colleges and universities but all institutions and organizations within the state that educate these groups, from adult schools in each school district to proprietary technical institutes, occupational training centers, and even skills classes offered by local park and recreation departments. Effective educational planning in California must be based on this total demand for learning and supply of learning opportunities.

Who are the millions of Californians who seek further education? Individually, besides traditional full-time college students, they include a mother on welfare in Oakland who is enrolled in nurses' training in hopes of becoming a nurse practitioner; a television newscaster in Bakersfield

who wants to take university-level courses on the weekend; a reservations clerk for a Los Angeles motel chain who is learning court reporting; a Native American secretary in Hoopa who tries to get to class in Eureka two nights a week; a master mechanic in electronics at a Bay Area corporation who works a rotating shift and who has difficulty rotating his education on the same schedule; and a housewife in Northridge who would welcome evening college courses at the local high school where she takes adult school classes.

But statistically, who needs postsecondary education badly enough to be engaged in it at the present time? The answer varies with one's definition:

- Considering only collegiate institutions (as does the California Postsecondary Education Commission), some 1.8 million of the state's adults--about 13 percent--were enrolled in degree-credit, non-credit, and extension courses during the autumn of 1974 (Knoell, 1975, p. 6).

- At least 2.8 million--about 20 percent--were probably engaged in "organized instruction at any educational level," based on a national survey in 1972 by the Bureau of the Census for the National Center for Educational Statistics (NCES) of the U.S. Office of Education (referred to hereafter as the "NCES" survey).

- As many as 3.3 million were taking post-high school courses last year and up to 4.8 million may have been receiving instruction of any kind, if data from a second national study in 1972--that by the Educational Testing Service for the Commission on Non-Traditional Study (Carp, et

al, 1974; referred to later as the "CNS" study) are applied to California.

And California's public and private schools and colleges reported enrollments of some 3.7 million (counting double enrollments where people are taking courses at more than one institution)--including over a million students in local adult schools and another million in community colleges, but not including any Cooperative Extension participants (Salner, 1975).

These enrollments of nearly 4 million indicate that at least one-fourth of California's adults are continuing their studies through schools and colleges. Adding to them the uncounted thousands engaged in on-the-job training, recreational classes, private lessons, community courses, and independent study as well as Cooperative Extension--results in the likelihood that Californians' demand for postsecondary opportunities is unrivalled in the United States.

Characteristics of Learners

To learn the characteristics of these Californians who are engaged in postsecondary education, the Field Research Corporation on behalf of the Postsecondary Alternatives Study in November 1974 asked a systematic probability sample of 1,048 adults throughout the state 12 questions about their educational interests and activities (See Appendix).

This poll involved face-to-face interviews in households at 120 sampling points throughout the state plus statistical weightings of the resulting data to make them correspond as closely as possible to the age and sex distribution of California adults at large. These data must be

TABLE 1

Demographic Characteristics of California's Adult Population and Sample of Full-Time and Part-Time Learners

		Adult Population, 1970	Full-Time Learners, 1974	Part-Time Learners, 1974
Total		13,317,000	8%	13%
			(1,100,000)	(1,800,000)
Sex	Male	48%	60%	41%
	Female	52	40	59
Age	18-29	29	83	34
	30-39	18	12	27
	40-49	18	5	20
	50-59	15	*	14
	60 and older	19	*	5
Race	White	75	84	85
	Spanish surname	13	8	7
	Black	7	6	4
	Asian/Oriental+	3	1	1
	Other+	2	1	1
Educational Attainment				
Less than high school diploma		34	*	5
High school graduate		34	9	17
Up to 3 years of college		19	63	39
Four-year college graduate		7	20	24
Graduate degree holder		6	8	15
Occupational Category				
Laborer		19	*	1
Service		12	24	5
Skilled craftsman		13	9	24
Sales/Clerical		28	20	21
Professional/Managerial		28	47	49
Annual Income				
Under $7,000		27	41	10
$7,000 - $9,999		18	13	13
$10,000 - $14,999		28	10	31
$15,000 and over		27	35	46

* Less than .5 percent.
\+ Numbers in sample too small for reliable generalization. Not reported in subsequent tables.

Source: 1970 population figure and percentages from 1970 census, with percentage in occupational categories based on labor force 18 years of age and older. 1974 estimates of full-time and part-time learners and percentages based on Postsecondary Alternatives survey reproduced in the Appendix and an estimated adult population of 14 million.

considered suggestive of this total adult population rather than conclusive because of the numerical limitations of sample surveys; but they represent the best data yet available on the state's present and potential learners.

Table 1 compares the characteristics of California adults at large as indicated by the 1970 census with those among this 1974 sample who responded that they were presently engaged in some kind of education beyond high school. Table 2 contrasts the characteristics of the full-time learners, part-time learners, and non-students within this sample.

Only 21 percent of the sample reported participating in education "beyond high school," although others may have been involved in further learning of some sort that they did not consider as formal education. Most important, these 21 percent are not a random cross-section of California adults at large: instead, certain groups are better represented among them than in the general population. As might be expected, learners tend to be younger than non-learners, and full-time learners are generally younger than part-time learners. But in addition, this sample indicates that among Californians--as among American at large, according to national studies--learners are better off than non-learners. They represent a disproportionate number of the already well-educated compared to the less-educated, of white-collar workers compared to blue-collar, and of economically well-to-do compared to the poor. In other words, the present demand for postsecondary alternatives is not uniform throughout the citizenry of California. It is based not simply on disproportionate <u>interest</u> in postsecondary education but also on disproportionate <u>ability</u> to enroll and attend.

Looking at the demographic characteristics of learners, certain major distinctions stand out:

TABLE 2

Percent of Sample Responding to Question 1, "Are you in fact engaged at the present time in any kind of education beyond high school?"

	N	Yes, Full-Time Student	Yes, Part-Time Student	No, Not Now A Student
Total	1048	8%	13%	79%
Sex Male	430	10	14	76
Female	618	6	12	82
Age 18-29	287	20	15	65
30-39	232	6	13	80
40-49	154	4	16	80
50-59	149	*	17	82
60 and older	221	*	3	97
Race White	892	6	13	80
Spanish surname	69	7	13	80
Black	67	6	9	85
Educational Attainment				
Less than high school diploma	217	*	3	96
High school graduate	288	2	8	90
Up to 3 years of college	335	12	16	71
Four-year college graduate	134	10	24	66
Graduate degree holder	74	7	28	64
Occupational Category				
Laborer	27	0	4	96
Service	83	13	7	80
Skilled craftsman	254	2	12	85
Sales/Clerical	153	7	17	76
Professional/ Managerial	325	7	19	74
Annual Income				
Under $7,000	254	13	5	82
$7,000 - $9,999	126	8	14	78
$10,000 - $14,999	218	4	18	78
$15,000 and over	388	7	15	77

* Less than .5 percent.

Source: Postsecondary Alternatives survey.

• Men are better represented among the learners--and particularly among full-time learners--than women. One out of every four men interviewed for the Postsecondary Alternatives Study reported that he was engaged in some form of education beyond high school at the time of the survey, compared to less than one out of five women. Table 2 shows that both sexes participate about equally in part-time study, but while 10 percent of the men are full-time students, only 6 percent of the women are.

Data from the national NCES survey indicate that this pattern is true nationally as well: among women who continue their education, more do so on a part-time basis than men. The reasons--detailed later in this report--include such barriers to full-time study for women as costs, home and family responsibilities, and child care.*

• In terms of age, full-time study is far more common among young adults in California and in the nation at large than among older adults. For example, as Table 1 shows, 83 percent of the state's full-time students are under the age of 30, and all but 5 percent are under 40. In contrast, nearly 40 percent of part-time students are over the age of 40, and 5 percent of them are over 60.

Many older people want to become involved in education again when they retire or their children leave home; but despite the fact that aging does not in itself affect mental ability as such (Carnegie Commission, 1973),

* Table 1 gives the impression that 59 percent of California's part-time students are women, compared to 41 percent men, but the impression is misleading. As Table 2 indicates, the proportions of men and women engaged in part-time study are approximately equal. A disproportionate number of women were selected in the sample of 1,048, leading to their overweighting in Table 1.

the fear of being too old to take a course or to learn a skill proves a psychological barrier to them (Carp et al, 1974; Hunter, 1974). This may account for the fact that although one out of every five adults in California is aged 60 or older, only one in every 20 of the state's learners is this age. Despite this low representation of older adults among California's learners, a somewhat larger proportion of older Californians continue their education throughout their lives than do older adults in the rest of the country.

On the basis of race, roughly 85 percent of both full-time and part-time learners in California are white, compared to only about 75 percent of the state's adult population. In other words, ethnic minorities are underrepresented among learners.

Because Blacks, Mexican-Americans, and Native Americans have been inadequately served in the past by traditional schools and colleges, they might be expected to be overrepresented among participants in adult education. But this is not the case. As Table 2 shows, the proportion of minorities engaged in adult education in California is no higher than that of whites. Nationally, their proportion is even lower than that of whites.

Past experiences with formal schooling clearly discourage many minority group members from participating in postsecondary education. In the national CNS survey, twice as many Blacks as whites mentioned such barriers as "low grades in the past," "not confident of my ability," and "don't meet requirements to begin program" as obstacles to further education (Carp et al, 1974). In California, barriers for Mexican-Americans are probably even greater than for Blacks because of language problems.

• In terms of previous schooling, California's adult learners are similar to those nationally: they are already well-educated. The large majority of them--over three-fourths--have had at least some college experience, compared to only 32 percent of adult Californians at large, and fully 40 percent of them are college graduates.

California has a better educated population than the United States as a whole. Only 20 percent of adults nationally have completed at least one year of college; and twice as many Californians have completed at least one year of graduate school as have Americans in general (6 percent, compared to 3 percent). This may explain why only 5 percent of California's part-time learners have never completed high school, compared to 13 percent of the national NCES sample and 16 percent of the CNS sample. But at the same time, the disproportionate number of college-trained Californians among its adult learners may reflect the overservicing of this segment of the state's population to the detriment of the less-schooled.

• Turning to occupational backgrounds, professional and managerial workers are particularly well represented among learners. One in four of these workers are enrolled, compared to less than 4 percent of laborers who work at unskilled jobs in California agriculture and industry.

Other studies have indicated that the participation of blue-collar workers in continuing education is generally much lower than that of white-collar workers throughout the nation (Botsman, 1975). But this lower level of demand does not necessarily mean little interest or need: as later pages will show, interest in further learning among laborers is at least half as common as among professional and managerial workers, while their participation in further learning is only one-sixth as common.

• Finally, in terms of family income, according to the Bureau of the Census, the median annual income in California in 1970 was $10,730. But over three-fourths of the part-time learners surveyed in 1974 had family incomes in excess of $10,000, and 46 percent of them received income of over $15,000. In contrast, over half of the full-time students had incomes of under $10,000, indicating that at least some of these students, despite their low income, consider themselves as self-supporting and independent of their families.

That participants in postsecondary and adult education are relatively well-off financially is a nationwide pattern. For example, among some 12,000 adults surveyed by the National Opinion Research Corporation in 1961-62, the median family income of adult education participants was higher than that of non-participants (Johnstone and Rivera, 1965); and in 1972, one out of every four part-time students had a family income of more than $15,000, compared to one out of every seven non-students (NCES survey). Here, as with other characteristics, these differences in demand do not represent equal differences in interest or need.

All in all, the characteristics of Californians who are engaged in further education are comparable to those of adult learners nationally as determined by other surveys. Among those <u>not</u> enrolled proportionally to their numbers are older adults, minorities, the less educated, the unskilled, and the poor, as well as (among full-time learners) women. Instead, the demand for postsecondary opportunities occurs more commonly among those with the wherewithal to demand them.

Locations for Learning

Turning from the demand for further learning to its supply, probably no more than half of the postsecondary opportunities available to Californians occur in educational institutions. Unless California is far different from other states in this regard, an equal number of its adult learners participate in non-academic education as in schools and colleges -- for example, at work, in community and social organizations, through occupational and professional associations, and in studio classes and private tutorial.

Thus among the 15,734 part-time learners surveyed nationally in 1972 by the Bureau of the Census for the NCES study, only about half were enrolled in school or college courses; and among the 1,900 people polled by the Commission on Non-Traditional Study that same year, even fewer of the learners--36 percent--attended school or college.

Among learners studying at these educational institutions, however, Table 3 shows the proportions nationally and in California who are enrolled in public schools, private specialty schools, community colleges, and other colleges and universities.

As it indicates, the national NCES survey of 1972 found a greater proportion enrolled in programs sponsored by four-year colleges or universities than by the other three types of institution, while the national NCS survey and current enrollment data in California show larger enrollments in public school programs. Some 40 percent of the part-time learners in California attending any educational institution are enrolled in the public schools, followed by 30 percent in community colleges, nearly 20

percent in four-year colleges and universities, and only 10 percent in private specialty schools such as business schools, technical institutes, flight schools, and cooking schools. Compared to the proportions nationally, these enrollments in California's four-year colleges and universities are disproportionately small, while those in its community colleges and public schools are correspondingly high.

Occupational and vocational subjects account for more students nationally than either general education or avocational and recreational pursuits; and although figures for California comparable to the national data shown in Table 4 do not exist, evidence from the learning interests of Californians indicates likely similarities.

TABLE 3

Educational Institutions Used by Part-Time Learners

Institution	United States 1972 (NCES Survey)	United States 1972 (CNS Survey)	California Enrollments 1974
Public school	23%	35%	41%
Private specialty school (business, technical, etc.)	15	12	10
Community college	27	23	30
Four-year college or university	35	31	19
	100%	101%	100%

Source: California enrollment data from Salner, 1975.

Between a third (CNS) and a half (NCES) of American learners are engaged in work-related training--whether technical, professional, or managerial, as Table 4 shows. Approximately a fourth are involved in general education, with the three most frequently reported subjects being psychology, English (including grammar), and mathematics--each studied by at least 5 percent of part-time learners. And although the national data vary, from one-fourth to two-fifths of all learning activities of part-time adult students are in avocational fields such as hobbies, sports and recreation, safety, home and family living, personal development, religion, and public affairs.

According to these national studies, only a third of the adults studying occupational subjects use public schools or colleges and universities for this training: the majority instead use private specialty schools, on-the-job programs, and other resources. Very few of them seek college degrees for this training, compared to skill certificates or licenses; and the majority of them are interested in using this learning to advance in their current jobs rather than to prepare for new jobs.

In contrast, Americans engaged in general education subjects overwhelmingly are enrolled in educational institutions: 84 percent of them in colleges and universities, 11 percent in public schools, and only the remaining 5 percent in programs sponsored by non-educational institutions. Three-fourths of these adults seek college credit toward two-year, four-year, or graduate degrees--three times the proportion of part-time learners generally; and many of them enrolled in high schools seek high school diplomas or GEDs.

TABLE 4

Subjects Studied by Part-Time Learners, United States, 1972

Subject Area	NCES Survey	CNS Survey
Occupational Training	(46%)*	(35%)*
Technical/vocational skills	22	18
Managerial skills	7	10
Professional skills	19	9
General Education	(26)	(25)
Adult basic education	4	4
High school or college courses	22	
High school courses		7
College courses		11
Graduate courses		5
Avocational Subjects		
Personal development	10	11
Hobbies and crafts	9	25
Religion and philosophy	5	14
Sports and recreation	4	13
Home and family living	4	13
Safety	3	10
Civics and public affairs	2	4
Other Subjects	3	7

* Percentages within each area total more than area percentage because some participants studied more than one subject within an area. Overall percentages total more than 100 for the same reason.

No more than a third of those engaged in avocational or recreational courses are studying in schools or colleges. The rest use a variety of agencies and instructors, the most frequent being local community organizations. While the large majority of Americans engaged in occupational training are wage-earners, these avocational subjects tend to be chosen by adults currently not in the labor force, such as housewives. And these courses, in comparison to those in general education, are more popular among older Americans and those without some college experience. By and large, the participants in avocational activities want no credit for their learning: only in safety courses, such as first aid, civil emergency training, and driver education, are as many as a fourth of them working toward skill certificates or licenses. In no other area do more than one-twelfth of them seek certification.

Across all subjects, however, certification appears to have become more important in recent years. In 1962, only one-sixth of the courses taken by part-time learners nationally was for some type of credit (Johnstone and Rivera, 1965). In 1972, the courses of two out of every five learners were being offered for credit (NCES survey). According to the NCES poll, half of these learners who seek credit want high school or college credit--particularly the latter. The other half seek other types of credentials, such as certificates of accomplishment and occupational licenses.

In sum, the supply of postsecondary opportunities for part-time learners nationally and in California appears to be as extensive outside of educational institutions as within them. Among educational institutions, the supply is as extensive among public schools and private specialty

schools as among colleges and universities; and within California, the supply is particularly extensive among its public schools and community colleges. Although more Americans are interested in vocational subjects than in general education or recreational courses, their vocational interests are far more often met by other agencies than schools and colleges. Schools and colleges do supply the bulk of postsecondary opportunities for credit and in general education subjects; but overall, both nationally and in California, the majority of postsecondary opportunities are not supplied by strictly postsecondary institutions. In short, while colleges and universities meet the bulk of demand for full-time postsecondary education, this is not true for part-time learning.

The Trend of Demand

Recent trends in full-time and part-time enrollments within colleges and universities can help in predicting the future of these demands. From them, it seems likely that in coming years higher education institutions will be offering far more opportunities to part-time learners.

Increases in enrollments both in California and in the nation at large are currently occurring mostly among part-time students. For example, the number of full-time students in California's colleges and universities increased dramatically in the past decade--from 320,000 in 1963 to 688,000 in 1973, in good part because the number of 18 to 24 year olds grew so rapidly. The percentage increase of these full-time students almost equalled that for part-time students--115 percent, compared to 122. But between 1970 and 1973, the 46 percent increase of part-time students far outstripped the comparable 7 percent increase in full-time enrollees.

Large increases in part-time enrollments are taking place nationally as well: a 50 percent growth in degree-credit enrollments between 1970 and 1974, compared to only a 10 percent increase in comparable full-time enrollments. Data in Table 5, recently released by the Bureau of the Census and based on its annual surveys of 48,000 households, show these changes among 18 to 34 year olds: part-time enrollments have increased five times as fast in the past four years as have full-time enrollments. And with respect to adults over 35--most of whom can attend college only on a part-time basis if at all, the October 1974 survey indicates that as many as 1,025,000 Americans were enrolled: a figure up 30 percent from 1973.

Degree-credit enrollments on a part-time basis seem to be growing faster than non-degree enrollments either in non-credit college courses

TABLE 5

Part-Time and Full-Time Enrollments of 18 to 34 Year Olds in Degree Programs Nationally

Year	Part-time	Full-time
1970	1,650,000	5,763,000
1972	1,999,000	6,309,000
1974	2,476,000	6,345,000
Percent of Increase		
1970-1972 (Two years)	21%	9%
1972-1974 (Two years)	24	1
1970-1974 (Four years)	50	10

Source: U.S. Bureau of the Census annual survey of 48,000 households.

or in non-degree schools. The 50 percent increase over four years in these degree-credit students is more than double that among students in all types of programs over the three years from 1969 to 1972, as measured by the Bureau of the Census for NCES. Table 6 shows the locations used by all part-time learners in these two years. With the exception of proprietary schools, the use of all locations increased during this period; but the largest identifiable increase--65 percent--occurred among two-year colleges, followed by such non-academic organizations as community groups and associations.

TABLE 6

Part-Time Enrollments Nationally by Instructional Source, 1969 and 1972

Source	1969 Participants	1972 Participants	Percent Change
Public Grade School or High School	1,970,000	2,200,000	+11.6
Private Vocational, Trade, or Business School	1,504,000	1,393,000	-7.3
2-year College or Technical Institute	1,550,000	2,561,000	+65.2
4-year College or University	2,831,000	3,367,000	+18.9
Employer	2,274,000	2,613,000	+14.9
Community Organization	1,554,000	1,996,000	+28.4
Other (labor unions, professional associations, hospitals, tutors)	2,552,000	3,360,000	+31.6
Not Reported	54,000	98,000	+81.4
Total (unduplicated count)	13,041,000	15,734,000	+20.6

Source: 1969 and 1972 NCES surveys, reported in Financing Part-Time Students (Washington: American Council on Education, 1974).

In California, part-time enrollments in community colleges have similarly increased more rapidly than in any other type of college or university, as Table 7 indicates. It shows the numbers of part-time students enrolled in four types of California colleges and universities in 1963, 1970, and 1973. The 127 percent increase among community college part-time students over this decade (including a 48 percent increase from 1970 to 1973 alone) accounts for 80 percent of the total gain in part-time enrollments among all four types of college and university. And except for the University of California, all four types have not only doubled their part-time enrollments during the decade, but increased them at an increasing rate. Overall, California's

TABLE 7

Part-Time Enrollments in California Colleges and Universities, 1963-73

	Community Colleges	Private Institutions	California State University & Colleges	University of California	Total
Year					
1963	239,787	19,049	52,920	4,431	315,187
1970	369,397	29,751	75,683	5,840	479,671
1973	545,241	39,537	107,590	6,741	699,109
Percent of Increase					
1963-1970 (Seven years)	54%	56%	41%	32%	52%
1970-1973 (Three years)	48	33	44	15	46
1963-1973 (Ten years)	127	108	103	52	122

Source: Total and Full-Time Enrollments, California Institutions of Higher Education, (Sacramento: State Department of Finance). In all instances, figures are the differences between "total" and "full-time" enrollments reported each fall by the institutions to the California Postsecondary Education Commission (formerly the Coordinating Council on Higher Education).

colleges and universities have expanded their part-time enrollments 122 percent over the ten years and in the three years between 1970 and 1973 alone have increased them 46 percent.

What has caused this more than doubling of part-time enrollments in California in ten years, when the adult population of the state aged 21 and over increased only 31 percent between 1960 and 1973? Among the reasons are undoubtedly increased affluence, the availability of educational opportunities, and the rising level of education among adults. But from the results of two national surveys conducted a decade apart--that in 1962 by Johnstone and Rivera and that in 1972 by the Commission on Non-Traditional Study--several additional observations can be made.

First, a marked increase has occurred nationally in the proportion of adults studying avocational or non-occupational subjects. In 1962, for example, an estimated 24 percent were pursuing hobby and recreational topics, compared to 42 percent in 1972; and the study of general academic subjects increased somewhat as well--from an estimated 15 percent to 25 percent. On the other hand, proportional decreases occurred among vocational subjects.

Second, as mentioned earlier, earning credit for these learning activities has become more prevalent. Approximately one in three part-time learners received credit in 1972, compared to one in six ten years earlier.

Third, the most frequently cited reason for learning in both surveys was that of becoming better informed; but this reason was mentioned much more often in 1972 than in the earlier survey (by 55 percent, compared to 37 percent). In contrast, job-related reasons were reported less often in 1972. For example, a new job was mentioned by only half as many respondents as in 1962 (18 percent, compared to 36 percent). At the same time, getting

away from daily routines was noted about twice as often in 1972 than in 1962 (19 percent, compared to 10 percent).

In short, the demand for continuing education apparently is becoming less job-oriented and more cultural and avocational. It is extending beyond occupational requirements to personal fulfillment and effectiveness. It has increased over the past decade faster than the growth in population. It has affected the plans and programs of all postsecondary institutions--particularly, among California's colleges and universities, the community colleges. It now involves fully one-fourth of all California adults, although as pointed out earlier, it is not uniform across all socioeconomic groups. Most widespread among the well-educated and well-off, it is least common among the elderly, the less educated, and the poor. And it shows no sign of decreasing in future years.

Legislators and others may disagree about whether some of this demand is justified--whether, for example, all the adults who are presently engaged in study actually need this education. They most likely will also disagree about the extent of California's responsibility as a state to meet this demand with public support. And certainly they will have different opinions about the numbers of Californians who may really need further education beyond these who are already actually engaged in it. But no one can deny that the millions of Californians now participating in it believe that they need postsecondary education--that they desire it and seek to benefit from it.

"I'm interested in courses for advancement on salary step schedule and for personal interest and development if I feel I can afford them," says an elementary school teacher in the Lamont School District about her studies.

"Planning to take some in-service nursing specialties through the hospital," reports a registered nurse at Peralta Hospital; "interested in music appreciation and many general interest courses as time and energy allow."

"I feel I want to continue in school for personal fulfillment as well as advantages in job opportunities," states the administrative assistant in a Santa Cruz community service program. And the manager of a utility company plant on the north coast says, "It will always be necessary to keep up with new developments in the 'science' of management. I accomplish this task, for the most part, by an extensive personal reading program; however, I may take classroom or formal course training as I encounter special areas of interest (i.e., organizational behavior, decision science, etc.) My immediate educational goals are more cultural enrichment: an interest developed during an extensive and intensive course of study I just completed."

At the very least, these and the hundreds of thousands of other Californians who are engaged in continued learning demonstrate a level of demand for education that most people would agree is the minimum definition of California's need for postsecondary alternatives in the future.

II. POTENTIAL INTEREST

While nearly 4 million Californians are currently enrolled either full-time or part-time in postsecondary education, somewhere between 7.6 and 9 million are interested in participating in it, according to the Postsecondary Alternatives survey conducted in November 1974. Three out of every five of the survey respondents indicated that they would like to engage in some form of further learning beyond high school within the next two years.

Thus interest in postsecondary alternatives in California is twice as high as current enrollments.

Who Are the Potential Learners?

These potential learners include both those currently enrolled in courses who hope to continue their studies and also those who for some reason--constraints of time, energy, money, or geography, for example--are not now participating. They include housewives previously experienced in business who would like to update their office skills, college teachers who seek further study to upgrade their teaching, unemployed library assistants who find local university fees prohibitively expensive; and farmers and ranchers who need more field courses from agricultural extension.

Table 8 shows the proportion of these potential learners among various socioeconomic groups along with the proportion of these same groups already enrolled in further learning. As it indicates, while 21 percent of those interviewed in the survey are <u>now</u> enrolled, 59 percent <u>want</u> to be enrolled during the next two years. All categories of respondents show at least a near majority interested in further learning with the exception of only three:

TABLE 8

Demographic Characteristics of California's Potential Learners and Current Participants in Further Education

Category		N	Potential Learners	Current Participants
Total		1048	59%	21%
Sex	Male	430	61	24
	Female	618	58	18
Age	18-29	287	83	35
	30-39	232	69	20
	40-49	154	60	20
	50-59	149	48	18
	60 and older	221	20	3
Race	White	892	58	20
	Spanish surname	69	65	15
	Black	67	64	20
Educational Attainment				
Less than high school diploma		217	35	4
High school graduate		288	53	10
Up to 3 years of college		335	72	29
Four-year college graduate		134	73	44
Graduate degree holder		74	77	46
Occupational Category				
Laborer		27	41	4
Service		83	70	20
Skilled craftsman		254	57	15
Sales/Clerical		153	67	24
Professional/Managerial		325	72	26
Annual Income				
Under $7,000		254	57	18
$7,000 - $9,999		126	50	22
$10,000 - $14,999		218	64	22
$15,000 and over		388	66	23

Source: Postsecondary Alternatives survey, Questions 2 and 1.

older adults, high school dropouts, and agricultural and industrial laborers, where only 20 percent, 35 percent, and 41 percent respectively express interest.

Numerically, the gap between actual participation and desired participation is particularly wide among two groups, Mexican-Americans and service workers, where 50 percent more of each group seek further learning than are now enrolled. But based on current rates of participation, proportionally the gap is widest among the groups with least participants. Thus six times as many Californians over 60 years old would like to enroll as the 3 percent of them who are now enrolled; nearly nine times as many high school dropouts want to participate as their 4 percent of current participants; and fully ten times as many laborers seek further education as their current 4 percent. In short, current enrollments are not necessarily accurate guides to present interests.

Examining the several groups of potential learners, these characteristics stand out:

- In terms of men and women, Californians interested in further education are, like those currently enrolled part-time, almost equally divided between the sexes.

- In terms of age, more young adults between 18 and 29 years old--five out of six of them--are interested in education than those in any other category in Table 8. With each decade, interest declines sharply, until only one out of five Californians over age 60 retains an interest. This decline, however, may not be due simply to loss of interest during aging; as noted earlier, people who have had more schooling generally seek still more, and younger Californians have by and large had more schooling than older.

- According to ethnic background, although California's ethnic minorities are enrolled no more frequently than whites, they are more commonly interested in enrolling--with the gap between interest and present participation particularly high for Mexican-Americans.

- According to educational attainment, interest in education is not as disproportionately distributed as current participation: Only twice as many college-trained Californians want further learning as do those who never graduated from high school while over seven times as many actually participate. Some of this difference, as noted above, may stem from the concurrent influence of age; but clearly education itself tends to whet the educational appetite.

- Among occupational groups, the greatest interest exists among professional and managerial workers; but the greatest gap between participation and interest occurs among service workers.

- In terms of income groups, the only notable difference occurs in the two lowest income categories. More Californians in the lower of the two seek further education than in the higher, although fewer of them currently participate--both facts due, perhaps, to their economic needs.

These data on potential learners within California have close similarity to those gathered on Americans in general three years ago by the Commission on Non-Traditional Study (Carp et al, 1974);* and they are con-

* The difference between the 59 percent of Californians who express an interest in further education and the 77 percent of the national CNS study who expressed a similar interest probably results more from a difference between the two questions than between people themselves. The Commission on Non-Traditional Study asked "is there anything in particular that you'd like to know more about, or would like to learn how to do better?" while the Postsecondary Alternatives survey in California asked specifically "Within the next two years, would you like to engage in some form of further learning beyond high school?"

firmed by more limited studies among California adults. For example, in a survey of the adult population of Los Angeles County, the University of California found that 64 percent of the high-school graduates replied affirmatively to the question, "If in the near future, you could go to college on a part-time basis without giving up your work or your other full-time activities, would you like to do it?" (University of California, 1974, p. 9). Through its Extended University, the University of California could serve only 17 percent of these Los Angelenos, but even this percentage came to an estimated 811,000 individuals.

Similarly, as part of a series of studies of identified target populations for the California State University and Colleges, researchers have found extensive interest in further study toward degrees and certificates among employees of various state agencies; for example, among 67 percent of 4,442 employees of the Department of Mental Hygiene, among 80 percent of 1,187 staff members of the California Youth Authority as well as 4,447 employees of the Department of Human Resources, and among 83 percent of 2,442 members of the California Highway Patrol (Godolphin; Holmgren; Kramer, n.d.). In contrast, considerably less interest in college courses has been found by the California Coordinating Council on Higher Education among residents of the state's largely rural northeastern counties. There only 35 percent of those interviewed in a 1972 survey of 1,628 households were interested themselves in two- or four-year college study or knew someone in their home was interested (California Coordinating Council, 1972).

All such statements of interest must be discounted in predicting demand, of course, since many people interested in further education don't carry out their interests. Thus Kelly Black (1972, p. 15) has estimated that up to 50 percent of the people in the Shasta College area who claim

an interest in some day earning a college degree or credential are unlikely to follow through; and by a series of screening devices, Frank Siroky has been able to discount statements of interest in programs of the California State University and Colleges and thereby develop valid estimates of potential enrollments (1974). Elsewhere in the nation, educational planners may screen out as many as 90 percent of interest responses in predicting enrollments (Ross, Brown, and Hassel, 1972; Flinn, 1973; State University of Nebraska, 1973); and California planners must also discount some.

But nonetheless, the wish for postsecondary opportunities in California is widespread among the adult population, and is over twice as frequent as participation. Although most common among the well-off, in comparison with present participants it is proportionally strong among the less privileged. In every community and in all walks of life--from Indian Center members in central Los Angeles to Rotary Club members in Eureka, from Head Start workers in Auburn to nutrition aides in Bakersfield, from drug abuse counselors in Santa Cruz to the ladies in a quilting class in Northridge--literally millions of Californians seek postsecondary alternatives.

Reasons for Further Education

Why do Californians want further education? Overwhelmingly to improve their lives by becoming more knowledgeable, effective and happy, by increasing their income, and being better informed.

For example, those interviewed for the Postsecondary Alternatives survey on the average noted four reasons out of a list of ten. A clear majority chose two of them--"to be better informed; gain new knowledge, cultural enrichment, etc." and "for personal satisfaction and personal happiness." Even the least frequently noted--"to be a better parent, husband, or wife"--is a goal for one out of every five.

Table 9 shows the proportion of Californians agreeing with these ten reasons, listed in descending order of selection. As can be seen, the two most common--better information and knowledge, and personal satisfaction and happiness--are consistently the most important across all groups, whether categorized by sex, age, or educational attainment, except in two cases. In these--among minorities and laborers at unskilled jobs--improved income and job preparation are equally or more commonly important.

- By sex, more men and women want further education for occupational reasons. In contrast, women more often than men seek education to meet new people and to get away from daily routines, and to become a better parent or spouse.

- By age, job preparation and improved income generally decline as reasons during the decades, as do interest in earning a degree and in becoming a better spouse or parent. For senior citizens, information and personal satisfaction dominate all the others.

- Among minorities, increasing one's income is equal to, or more important than any other reason. Other utilitarian goals are also somewhat more common than among whites.

- In terms of educational attainment, the only major trend is for those with more schooling to agree about the importance of information, knowledge, and cultural enrichment.

- Among laborers and service workers, as among low-income respondents, improved income is mentioned at least as frequently as better information or personal satisfaction.

TABLE 9

Percent of Potential Learners Responding to Question 4,
"For which of the reasons listed on this card are you interested in further learning?
Tell me all the reasons you would consider important in your decision to pursue further education."

		Sex		Age					Race			Educational Attainment					Occupational Caterory *					Annual Income			
	Total Sample	Men	Women	18-29	30-39	40-49	50-59	60+	Whi.	Mex. Am.	Blk.	11th Gde.	H.S. Grad.	3 Yrs. Col.	Col. Grad.	Post Grad.	Labor	Service	Skld. Work	Cler. Sales	Prof. Mana.	Under $7000	$7000 -$9999	$10000 -$14999	Over $15000
To be better informed: gain new knowledge, cultural enrichment, etc.	69	63	74	70	63	69	73	72	71	53	63	67	58	68	83	72	45	66	58	73	74	63	78	85	72
For personal satisfaction, personal happiness	68	62	70	71	63	63	60	61	70	42	51	52	71	67	67	68	45	53	63	75	68	74	52	60	70
To improve my income	44	48	40	51	47	41	38	6	41	56	63	51	42	49	40	28	55	55	48	49	39	53	62	45	17
To prepare for a job (or a new job)	42	42	42	56	35	41	23	12	40	51	53	42	43	45	38	28	45	57	43	43	40	58	40	35	39
To deal more effectively with personal situations and problems	36	35	38	40	32	34	33	26	36	36	44	33	38	38	34	21	9	36	44	44	30	42	42	38	31
For a job requirement, to perform the job better, to obtain promotion	35	44	30	43	36	41	20	2	31	36	47	37	35	36	34	21	18	43	38	33	28	40	40	39	31
Meet new people, get away from daily routines, get involved in something new	34	29	39	38	29	27	31	45	35	27	30	42	39	32	35	26	9	31	30	35	33	40	37	29	31
To work toward a degree (to resume college work that was interrupted, for example)	28	30	26	45	24	16	4	3	26	24	30	11	21	42	19	19	9	43	26	27	24	37	30	27	23
To learn more about how to solve community problems or to bring about change in the community	27	27	27	35	18	27	19	26	24	36	35	27	23	27	30	28	9	26	26	25	24	35	36	24	22
To be a better parent, husband, or wife	22	17	28	29	22	21	13	5	24	40	33	23	25	28	19	18	27	22	36	23	23	22	41	22	19
Other	*	*	0	*	0	0	0	0	0	0	0	*	1	0	0	0	0	0	0	0	0	0	0	1	0
Don't know/No answer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* Less than .5 percent

Overall, Californians share similar goals about continued learning with Americans at large. Thus, with a few exceptions, their goals agree with the rankings of 21 reasons that the Commission on Non-Traditional Study found were checked as "very important" in its 1972 national study (Carp et al, 1974):

Become better informed, personal enjoyment and enrichment	56%
Become a happier person	37
Curiosity, learn for the sake of learning	35
Be a better parent, husband, or wife	30
Work towards certification or licensing	27
Become a more effective citizen	26
Help get a new job	25
Meet the requirements of my employer, profession or someone in authority	24
Work towards a degree	21
Feel a sense of belonging	20
Get away from the routine of daily living	19
Meet new people	19
Improve my spiritual well-being	19
Help to advance in present job	17
Better understand community problems	17
Works towards solution of problems such as discrimination and pollution	16
Learn more about my own background and culture	14
Meet requirements for getting into an educational program	13
Be better able to serve my church	11
Get away from personal problems	11
Other, No response	18

Of the goals common to both studies, Californians rank becoming a better parent or spouse considerably lower than the national CNS sample—perhaps because of the larger than usual proportion of older and single adults in California. Otherwise, their aims are similar and chiefly those of understanding and personal fulfillment.

Interests in Learning

In California, adult educational interests are extraordinarily varied: from accounting, agriculture, astronomy, and aviation through coronary care,

drill press operation, Latin, and law enforcement to pipe fitting, welding, writing, and zoology.

California adults are interested almost equally in work-related learning and general education. For example, of the ten subjects of greatest interest to potential learners, five of them are definitely vocational: business, law, nursing, accounting, and computer science. On the other hand, the other five may be as commonly avocational as occupational: art, psychology, English, Spanish, and history.*

Table 10 lists all 167 subjects mentioned by these respondents in order of their frequency and alphabetically within frequencies. Extrapolated to the adult population of California at large, it would indicate that as many as 700,000 Californians are likely to be interested in studying art or business, while as few as 8400 may be interested in such specialties as optics, pathology, pharmacy, psychiatry, radiology, respirator therapy, or veterinary medicine.

Among the generalizations warranted from this list are at least three:

First, the topics are by and large serious rather than frivolous. They indicate areas of long-term interest and commitment, and they should demonstrate that the educational concerns of adults are not limited to square dancing, wine tasting, and macrame.

Second, they are sophisticated in scope and specialized in depth. They extend beyond introductory generalizations and elemental survey courses into postdoctoral and professional specialties.

* Of the 42 respondents who named the most commonly desired subject of all --art--probably most are interested in art for enjoyment, but four of them are specifically interested in commerical art for vocational reasons.

TABLE 10

Number of Respondents Identifying a Topic in Response to Question 3, "What is the one subject, topic, or skill that you would like to study or learn more about?"

Subject	N
Art (including commercial and graphic art)	42
Business (including business administration, management, law, and education)	33
Psychology	26
English (including business English, learning to speak English and improving my English)	20
Law (including legal aid)	20
Nursing (including licensed visiting home nursing and nurses' aide)	19
Spanish (including Spanish writers)	16
Accounting (including tax accounting and CPA)	15
Computers (including computer science, programming, and data processing)	14
History (including world and California history)	13
Languages (no specific one)	11
Mathematics	11
Auto Repair or mechanics	10
Medicine (including medical physics)	10
Real Estate	10
Sociology	[illegible]
Child Study (including child development, growth, health, care, and psychology)	8
Electronics	7
Music	7
Office Work, Skills, or Practice	7
Sewing	7
Teaching (including teaching techniques, kindergarten, secondary school, advanced teaching, and teacher's aide)	7
Typing	7
Welding	7
Education (including elementary education)	6
French	6
Biology (including marine biology)	5
Creative Writing	5
Counseling (including adolescent, college, and psychological)	5
Interior Decoration or Design	5
Law Enforcement	5
Management	5
Drama, Acting or Theater	4
Engineering (including architectural or electrical)	4
Horticulture (including gardening)	4
Marketing	4
Political Science	4
Animal Science or Husbandry	4
Broadcasting	4
Carpentry	3
Handicapped (including working with retarded)	3
Human Behavior	3
Literature (including English and Modern American)	3
Philosophy	3
Upholstery	3
Woodworking	3
Administration of Justice	2
Agriculture	2
Astronomy	2
Chemistry (including chemistry of plants and foods)	2
Citizenship Instruction	2
Communications	2
Coronary Care or Cardiology	2
Contracting	2
Cosmetology or Beautician	2
Criminology	2
Dentistry	2
Fire Fighting or Fire Science	2
Geology	2
Handicrafts	2
Key Punching	2
Medical Assistant or Receptionist	2
Navigation	2
Nutrition	2
Painting	2
Physiology	2
Piano	2

(continued)

Table 10 (continued)

Subject	N	Subject	N
Reading	2	Jewish History	1
Radio-Television	2	Kinesiology	1
Science	2	Landscaping	1
Shorthand	2	Latin	1
Sign Language	2	Librarian	1
Social Service or Welfare	2	Lip Reading	1
TV or Radio Repair or Mechanits	2	Livestock	1
Theology	2	Locksmith	1
Truck Driving (including diesel)	2	Metric Measurement	1
Zoology	2	Mind Improvement	1
Administration	1	Natural Childbirth Teaching	1
American Civilization	1	Natural Living	1
Aviation	1	Naturalist	1
Baking	1	Nuclear Energy	1
Banking and Finance	1	Optics	1
Bartending	1	Parents' Education	1
Bible Study	1	Pathology	1
Boiler Technician	1	Pattern Design	1
Building Maintenance	1	Pharmaceutical	1
Cake Decorating	1	Physical Science	1
Cartooning	1	Pilot a Boat	1
Clerical	1	Pipe Fitting	1
Creative	1	Photography	1
Dope	1	Physical Education	1
Drill Press, Advanced	1	Politics	1
Drawing	1	Pottery	1
Earth Science	1	Psychiatry	1
Electrical	1	Printing	1
Electrolysis	1	Public Administration	1
Entomology	1	Public Health	1
Environmental Planning	1	Public Relations	1
Farm Machinery	1	Radiology	1
Fashion Design	1	Refrigeration	1
Financial Management	1	Religion	1
Food	1	Respirator Therapy	1
Forestry	1	Secretarial Work	1
Furniture Finishing	1	Sailing	1
Geography	1	Singing	1
Glass	1	Special Education	1
Golf	1	Spiritualism and ESP	1
Greek	1	Stained Glass	1
Health and Diet	1	Statistics	1
Heavy Equipment Operating	1	Stock Keeping	1
High School Diploma	1	Supervision	1
Home Economics	1	Tailoring	1
Home Making	1	Taxes	1
Hula Dancing	1	A Trade	1
Houseplants	1	Veterinary Medicine	1
Humanities	1	Voice	1
Italian	1	Writing	1

courses into postdoctoral and professional specialties.

Third, they are overwhelmingly and conventionally rational--despite California's reputation for the occult, the arcane, and the sensory. Only a few of them would not have credibility within existing academic or occupational training circles: The bulk of them either are or could be subjects of instruction in some school, college, university, or job training program somewhere.

Part of the reason for the level of these interests lies in the fact that Californians are better educated than their counterparts elsewhere in the nation. This difference in educational attainment may account for some of the differences in Table 11 between their educational interests and those of Americans surveyed by the Commission on Non-Traditional Study. While the extent of their vocational interests (47 percent) and their recreational interests (13 percent) correspond with the national percentages, it seems highly significant that Californians are twice as frequently interested in general education as the national sample (27 to 13 percent). For example, 7 percent of them are interested in foreign languages, compared to only 2 percent nationally; and 5 percent want to study the social sciences and the physical sciences each, compared to 1 percent or less of the national sample.

Thus the major subject-matter difference between California's potential learners and those in the nation at large occurs over the central academic subjects of colleges and universities: the humanities and sciences.

Table 12 analyzes differences among Californians themselves on their subject-matter interests, with the subjects categorized into eight major

TABLE 11

First-Choice Learning Interest of Californians and National CNS Sample

Subject	Calif. 1974	Nation 1972
Vocational Subjects	47%	46%
Agriculture	1	3
Architecture	0	1
Business Skills	9	9
Commercial Art	1	2
Computer Science	3	2
Cosmetology	*	1
Education	4	1
Engineering	1	2
Industrial Trades	6	4
Law	3	2
Management Skills	4	3
Medical Technology	1	2
Medicine	2	1
Nursing	3	4
Salesmanship	2	1
Technical Skills	6	5
General Education	27	13
Basic Education	1	4
Biological Sciences	2	1
Creative Writing	1	1
English Language	2	1
Humanities	4	2
Languages	7	2
Physical Sciences	5	0
Social Sciences	5	1
Hobbies and Recreation	13	13%
Crafts	3	3
Fine and Visual Arts	7	2
Flight Training	*	2
Performing Arts	2	2
Sports and Games	1	2
Travel	0	2
Home and Family Living	6	12
Child development	2	4
Gardening	1	2
Home Repairs	1	2
Sewing, Cooking	2	4
Personal Development	4	7
Investment	*	4
Occult Sciences	*	0
Personal Psychology	3	2
Physical Fitness	1	1
Religion	1	3
Public Affairs	1	5
Citizenship	*	1
Community Problems	*	1
Consumer Education	*	1
Environmental Studies	*	1
Other Topic	1	1

* Less than .5 percent

Source: National data from Carp et al, 1974; California data from Post-secondary Alternatives survey, Question 3.

areas of study. Here major interest in vocational or job-related topics is clearly apparent, with the arts and humanities in second and third place, and the remaining five areas selected by fewer than one in ten respondents.* Examining these subject matter interests across the several groups, these patterns stand out:

- Among men and women, differences are not great. Men are only slightly more commonly interested in job-related topics while women are somewhat more interested in arts and crafts. The main difference between the sexes lies in the fact that three times more women than men express interest in personal development and topics related to family life--11 percent, in contrast to 4 percent.

- Across age groups, vocational skills are the most commonly demanded until retirement, when at last arts and crafts dominate--with one out of three Californians over sixty interested in them.

- Among ethnic groups, Mexican-American respondents are somewhat more often interested in job-related subjects and less interested in avocational fields than either whites or Blacks.

- In terms of prior education, the less schooled express the most occupational interest: 51 percent of high school dropouts want to study a job-related topic, compared to only 25 percent of those with graduate degrees.

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* Among Californians in the state's northeastern counties, the California Coordinating Council in 1972 also found extensive vocational interests. The most requests for degree programs involved business administration (32 percent), agriculture (20 percent), and education (18 percent), followed by psychology and sociology (16 percent), and then art (14 percent). Elsewhere in the nation, as the result of three separate market surveys, the University of Mid-America (headquartered at the State University of Nebraska) chose accounting and psychology this past year to inaugurate its television offerings because of the common interest in these two fields.

TABLE 12

Percent of Potential Learners Responding to Question 3, "What is the one subject, topic, or skill that you would like to study or learn more about?"

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Hex. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 3 Yrs. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skld. Work	Occupational Category: Cler. Sales	Occupational Category: Prof. Mana.	[illegible]: Under $7000	[illegible]: $7000 -$9,999	[illegible]: $ -$	[illegible]: $15,000 over
Directly job related	40	44	37	44	44	37	35	15	40	47	38	51	47	39	31	26	45	57	51	42	33	39	36	47	-
Arts and crafts	17	14	19	12	22	15	18	33	18	4	14	14	20	15	19	23	0	9	13	20	22	25	14	17	31
Humanities	13	14	13	11	12	11	24	20	13	18	12	16	9	12	18	16	27	12	12	11	11	14	13	*	14
Psychology, personal development, family living	8	4	11	7	7	14	1	10	8	9	12	1	7	9	9	14	0	5	6	10	10	6	10	8	6
Social sciences, public affairs, community problems	7	8	6	10	5	2	6	4	5	7	7	6	4	9	6	2	0	9	4	5	5	17	5	1	5
Natural sciences	5	7	3	9	1	6	2	2	6	2	7	*	8	7	7	9	9	2	5	4	7	4	6	6	5
Basic skills	2	1	4	3	2	3	0	0	2	7	7	7	1	3	2	0	18	2	4	1	3	2	7	1	2
Consumership, money management	2	3	1	1	3	1	3	0	1	2	2	0	1	2	2	2	0	0	1	4	1	*	1	*	3
Other	3	2	3	1	3	7	1	9	3	2	0	3	3	2	2	2	0	3	1	0	3	1	4	3	3
No Answer	4	4	4	2	2	6	10	7	4	2	2	2	4	4	2	7	0	2	3	5	4	3	2	7	3

* Less than .5 percent

By occupational category, the differences are not unexpected: the workers at unskilled jobs most often want English, vocational skills, and basic education, while professional and managerial workers indicate slightly more interest in the arts and crafts than other occupational categories.

The range and depth of these learning interests pose a major logistical problem for California. Were the interests of its adults limited to a relatively narrow range of subjects--for example, to current events for the layman, travelogues for the armchair traveler, and archeology for the armchair archeologist--the state could more easily meet them with a fairly conventional program of adult and continuing education. But the general sophistication of its adults calls for an extraordinary range of subject matter alternatives: a range undoubtedly as great as that of any other state in the nation. Clearly California cannot bring specialized study in the administration of justice and astrophysics to veterinary medicine and zoology directly to the armchair of everyone interested in them. The major policy question posed by these data is how to bring this knowledge and these citizens closer together.

Ways and Means of Learning

How and where do Californians want to continue their learning? Given a choice of 12 different ways to learn, the potential learners on the average identify at least three that are appropriate for them in terms of their family, job commitments, and life style--and, by default, indicate those which aren't appropriate for them.

TABLE 13

Percent of Potential Learners Responding to Question 5, "As you know, there are a number of ways people can study or learn. In view of your work and family commitments, life style, and so forth, which of the ways listed on this card are appropriate for you?"

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Mex. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 3 Yrs. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skld. Work	Occupational Category: Cler. Sales	Occupational Category: Prof. Tech.	Annual Income: Under $7000	Annual Income: $7000-$9999	Annual Income: $10000-$14999	Annual Income: Over $15,000
Conventional classes, during the evening, at the nearest college campus offering the courses you want	43	51	35	47	45	44	26	37	47	42	37	30	36	48	49	60	45	43	46	53	46	39	40	46	46
On-the-job training--employer sponsored	38	44	32	45	41	39	28	2	38	44	30	34	40	40	33	25	55	50	42	40	32	44	41	45	32
Conventional classes, during the day, at the nearest college campus offering the courses you want	36	33	40	45	34	32	23	22	35	29	35	15	34	40	39	33	9	47	25	31	36	44	32	34	36
Evening classes at a location within five miles of your home	34	34	34	35	36	37	26	26	37	44	35	26	38	39	37	33	36	38	42	46	36	30	50	36	30
Independent study and/or projects, in consultation with an instructor at a convenient time and place	32	34	30	37	31	33	21	23	32	24	33	17	27	28	49	46	27	24	26	27	37	39	40	27	28
Learning that combines work experience with meetings with an instructor and other students	29	31	27	35	27	20	29	12	28	24	28	25	30	29	31	25	18	45	30	21	25	33	41	32	24
Day classes at a location within five miles of your home	25	24	26	26	23	24	22	31	24	24	28	19	28	25	28	18	0	28	20	22	25	31	19	23	23
Courses using television, either at your home or at a location within five miles of your home, with periodic meetings with an instructor	18	13	22	14	21	19	17	28	19	11	19	13	18	20	16	23	0	9	22	14	21	20	17	20	15
Sessions held on weekends (at a convenient location)	16	16	16	16	18	16	11	16	16	18	16	8	13	15	20	33	0	7	12	19	22	10	22	20	22
Private lessons	15	14	15	16	14	11	12	20	12	11	7	13	12	13	13	16	0	17	10	9	14	23	17	12	12
Correspondence study at home	13	15	12	11	19	8	15	11	13	13	19	12	19	14	7	18	0	12	19	10	12	13	24	12	11
On-the-job training--union sponsored	13	16	10	17	7	14	15	0	10	11	14	23	17	10	1	4	9	17	18	8	4	19	5	22	5
Other	2	2	2	2	2	5	0	0	2	2	0	0	*	3	1	5	0	0	1	1	3	*	2	2	3
Don't know/No answer	1	2	1	1	0	4	0	0	1	0	5	2	1	0	1	0	0	3	1	0	0	1	1	1	2

* Less than .5 percent

More of them favor evening classes, either at a nearby college or at other locations near their homes, than any other way (Table 13), with daytime classes at these same locations in second place. Next most popular is on-the-job training, followed by independent study in consultation with an instructor and learning that combines work experience and meetings with an instructor. Among the least appropriate are correspondence study in bottom place, with private lessons, weekend programs, and courses using television each somewhat more accepted in that order.

In other words, relatively familiar and conventional approaches to learning are acceptable to more of these adults than unfamiliar, new, and seemingly impersonal means. Their conception of education continues to involve a classroom, a teacher, and other students like themselves.

These rankings in Table 13 virtually duplicate national data, where, among 11 options ranging from conventional lecturers and classes to conferences, independent study, television, and correspondence study, fully a fourth prefer lectures and classes, with on-the-job training next most popular, and with television, video cassettes, records, and audio cassettes least preferred (Carp, et al, 1974):

Lectures, classes	28%	Correspondence courses	3%
On-the-job training	21	Group action project	3
Conferences, workshops	13	Travel study program	2
Individual lessons	8	TV, video cassettes	1
Discussion groups	8	Records, audio cassettes	1
Study on own	7	Other, No response	4

Only two reversals occur. More of the national sample prefer individual lessons and correspondence courses than televised instruction, but among the California sample, television ranks ahead of both private lessons and correspondence study.

Californians and the national sample agree in their ranking of evening, weekday, and weekend courses. Nationally, 49 percent prefer evening study, 28 percent prefer weekdays, and only 2 percent prefer weekend programs--with the remaining 31 percent either favoring other types of programs or having no response. And other California studies, such as that in northeastern California in 1972 by the California Coordinating Council confirm this pattern. For example, among representatives of six professional groups, Insel, Hoggard, and Robinson (1972) found that evening meetings were preferred to weekend meetings and that lectures, demonstrations, and on-the-job experiences were preferred far more than correspondence study, television, programmed instruction, and slide presentations. Similarly, for the California State University and Colleges Siroky has found that respondents accept evening classes most commonly, followed by one or two weekend seminars a month and then by independent study. But his respondents, overwhelmingly well-educated and professionally-oriented, more frequently would accept courses by correspondence and television than conventional daytime classes--possibly because of their self confidence with learning by themselves.

What differences exist among Californians on these several methods, as indicated by our own survey?

- First, as might be expected, men more commonly favor evening courses and on-the-job training, while women more often identify daytime courses as appropriate for them.

- Age groups are generally uniform about appropriate means: even the 60-year olds and older mention evening classes at a nearby college more often than other means--including daytime classes.

- Uniformity also exists among ethnic groups. But a significant difference occurs on the basis of education: the proportion willing to attend weekend sessions and college courses or to undertake independent study in consultation with an instructor increases consistently from adults with the least schooling to those with the most. Only one in every 12 high-school dropouts would participate in weekend sessions, for instance, compared to one in four of those with three or more years of college and to one in three of those with graduate degrees.

- In terms of occupation, a majority of workers at unskilled and service jobs consider on-the-job training appropriate, while evening classes are the first choice of professional and managerial, sales and clerical, and skilled workers. Only the professional-managerial and service workers commonly find daytime classes appropriate, possibly because of being able to take time off from work during the day.

- In terms of income, those with less money similarly can more often study during the day, while higher income groups somewhat more often mention evening courses.

Turning from acceptable ways of learning to preferred sites for learning, California's collegiate institutions rank as highly popular: Nearly half of the respondents want to study at a two-year or four-year college or university. The state colleges and community colleges are

TABLE 14

Percent of Potential Learners Responding to Question 6, "There are many places people can go to study or learn. Where would you most prefer to engage in a program of learning? Assume that all the locations listed on the card are fully creditable toward a college degree or for satisfying whatever reasons you have for pursuing further learning. Please indicate the one institution or location you would most prefer."

		Sex		Age					Race			Educational Attainment					Occupational Category					Annual Income			
	Total Sample	Men	Women	18-29	30-39	40-49	50-59	60+	Whi.	Hsp. Am.	Blk.	11th Gde.	H.S. Grad.	3 Yrs. Col.	Col. Grad.	Post Grad.	Labor	Service	Skld. Work	Cler. Sales	Prof. Mana.	Under $7000	$7000-$9999	$10000-$14999	Over $15000
At a State University or College campus	18	20	16	24	17	16	7	10	16	9	16	6	8	19	22	30	0	16	10	18	20	20	8	14	21
At a community or junior college	18	17	18	21	14	18	17	9	18	16	21	9	26	21	6	7	27	16	22	26	15	13	12	24	17
At an adult learning center that would be located within five miles of your home	13	9	17	5	14	15	22	35	15	16	14	30	14	10	14	7	36	9	16	17	12	17	10	13	11
At an "open college," "university without walls," or "free university" (for which fees generally are charged and where degrees may be obtained)	9	12	6	10	10	4	11	0	7	11	12	3	11	9	9	7	0	9	5	8	8	10	5	8	8
At a University of California campus	8	6	10	8	9	8	6	11	9	11	2	3	1	10	16	21	0	5	3	8	14	8	8	11	8
At your place of work	8	7	9	7	7	13	10	0	8	13	2	15	8	8	6	5	18	16	9	10	5	7	17	10	5
At home, through televised or correspondence courses	7	7	7	6	10	8	6	8	6	4	9	6	13	6	2	4	0	5	13	3	4	8	10	8	6
At a private college or university	4	6	3	6	4	4	4	0	6	0	2	0	2	6	10	7	0	9	3	4	6	5	8	1	6
At a private vocational trade, or business school	4	5	4	6	2	2	5	3	4	4	7	12	6	2	1	0	9	5	8	2	2	2	7	5	4
With a private tutor	3	4	2	1	7	2	4	5	3	0	2	1	2	3	5	4	0	2	2	2	5	2	6	3	3
At a high school	2	1	3	1	2	*	5	6	3	13	2	6	3	3	1	0	9	9	5	1	2	4	3	1	1
At a library, museum, YMCA, church, or other community agency	2	1	3	1	1	2	3	10	2	0	2	6	3	1	1	2	0	0	1	0	3	3	2	1	2
Other	1	1	1	1	0	2	0	0	0	0	2	0	1	0	1	2	0	0	1	0	1	0	2	1	1
Don't know/No answer	3	4	2	2	3	7	1	2	3	0	5	1	2	3	4	5	0	2	2	2	5	1	3	3	4

* Less than .5 percent

equally and more frequently preferred than any others, with adult learning centers, free universities, University of California campuses, and work sites next in descending order. As Table 14 indicates, only 2 percent prefer high school, and less than 2 percent prefer a community agency, such as library, museum, YMCA, or church.

Among Californians these patterns are apparent:

- The older Californians get, the more non-academic or non-collegiate sites appeal to them. Adult learning centers, for instance, jump from ninth place and 5 percent interest among 18-29 year olds to first place and 35 percent interest among the 60 year olds and older. Similarly, libraries, museums, and other community agencies jump from last to third place and from 1 to 10 percent in preference, as age increases.

- Among the races, while 50 percent of whites and Blacks prefer a collegiate site, only 38 percent of the Mexican-American respondents do so.

- As is true nationally, Californians with less schooling prefer non-collegiate sites, while those with more schooling consistently prefer academic collegiate instruction and tutoring. Interestingly enough, 4 percent of the high-school dropouts would prefer to study at a campus of the University of California--despite the obstacles to their admission.

- Workers at unskilled tasks prefer three learning sites above all others: adult learning centers (36 percent), community colleges (27 percent), and their place of work (18 percent). At the other extreme, only among professional and managerial workers do campuses of the University of California score among the top three preferences--chosen by 14 percent, after community colleges (15 percent) and state colleges (20 percent).

Turning to the reasons Californians give for their choice of location, two count for more than half of the six possible answers--"Programs are offered that I want," and "Convenience"--each mentioned by one in every four respondents. One in every seven agrees with the reason of being more comfortable with the instructors and other students; one in ten notes general enjoyment; and only one in 14 cites the cost. Even a smaller proportion indicates institutional prestige as a factor.

Convenience is particularly important for women, compared to program offerings for men. Being comfortable with the instructors and other students is important for one in four of the 60-year-olds and older. And costs are significant primarily for low-income respondents: 17 percent of those making under $7,000 a year cite it as the chief reason--over twice as many as those in other income groups.

In summary, combining this information on acceptable learning methods, site preferences, and reasons for these preferences, a significant proportion of California adults--probably over 2.7 million--are interested first in evening courses and then in daytime courses at state colleges and community colleges and then at adult learning centers both because of their convenience and their program offerings. While others look to a variety of additional resources--from on-the-job training at their place of employment to home study through correspondence or television--nearly half the potential learners look to collegiate institutions to serve their needs. The major policy question confronting the state, on the basis of this information, is whether these institutions are sufficiently oriented toward these adult needs, compared to those of younger full-time degree-credit students. What responsibility do the state

and its public institutions of higher education have for providing further opportunities for these adults?

Credits and Degrees

Over 60 percent of California's potential adult learners would like to earn credit toward a degree or certificate for their studies. As Table 15 indicates, 37 percent of them have no interest in earning credit, compared to 31 percent of the potential earners surveyed in northeastern California in 1972 (California Coordinating Council, 1972, p. 41) and to 32 percent of the 1972 national CNS sample (Carp, et al, 1974).

The chief differences between Californians interested in credit and those who are uninterested occur between these groups:

- Fifty-eight percent of California women want some form of credit, compared to 67 percent of the men. (In contrast, men and women nationally are almost equal in wanting some form of academic recognition.)

- Four out of five respondents between 18 and 29 desire credit, compared to only one in ten among those in their sixties and seventies.

- Nearly three-fourths of the minority respondents are interested in some form of credit, compared to only 59 percent of whites. A similar difference occurs nationally.

- Finally, graduates of high school or college are not as interested in earning more credit as those who have attended but not graduated from

TABLE 15

Percent of Potential Learners Responding to Question 8, "Would you want to earn credit toward a degree or certificate for the study you are interested in doing? (If "Yes":) What kind of degree or certificate are you interested in?"

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Wht.	Race: Nat. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 1-3 yrs Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skilled	Occupational Category: Clet. Sales	Occupational Category: Prof. Mana.	Annual Income: under $7000	Annual Income: $7000-$9999	Annual Income: $10000-$14999	Annual Income: $15000 over
Not interested in credit, degree, or certificate	37	33	42	20	38	44	59	91	41	27	26	38	46	30	36	56	45	24	35	37	41	37	21	25	18
B.A., bachelor's, four-year college degree	14	17	12	23	13	9	3	0	12	18	14	3	5	27	4	0	0	24	7	14	15	20	6	12	16
A statement of satisfactory completion of the course or program, e.g., for possible use in job advancement	12	14	10	10	14	15	15	3	9	29	7	34	15	5	2	2	45	7	19	8	6	9	24	16	8
M.A., master's degree	9	8	9	12	10	6	2	0	10	4	12	0	3	8	31	12	0	7	6	13	12	8	13	7	8
Certificate or license needed for other specific occupation (beautician, electrician, real estate salesperson, etc.)	8	10	6	6	6	11	13	2	9	11	7	11	11	9	6	5	9	14	13	10	6	5	8	10	6
Graduate or professional degree (Ph.D., M.D., law degree, etc.)	7	8	6	9	6	11	0	1	7	7	12	0	5	5	13	21	0	7	4	5	9	9	10	7	5
A.A., associate of arts, community college degree	5	6	5	9	6	1	1	0	4	0	9	4	7	6	0	0	0	10	5	6	3	3	3	6	7
A public school credential (teaching, counseling, special education, etc.)	4	2	6	6	2	3	3	3	4	2	0	4	4	4	5	2	0	2	6	4	3	5	6	7	1
	*	*	1	1	0	1	0	0	1	0	0	1	1	0	0	2	0	0	1	0	0	*	5	0	0
	3	2	4	2	5	1	3	0	3	2	14	4	3	6	3	0	0	5	5	4	4	4	2	4	1

* Less than .5 percent

school or college. Having achieved recognition clearly reduces interest in further recognition.

Table 15 also indicates the types of credit or degree most preferred by Californians. The majority of respondents who want some form of recognition desire academic degree credit, such as an associate, bachelor's, master's, or graduate or professional degree--compared to non-degree recognition, such as a statement of satisfactory completion of the course or an occupational certificate. In contrast, over twice as many potential learners nationally want non-academic credit as academic degree credit (46 percent, compared to 17 percent).

- Among men and women who desire credit, both men and women seek bachelor's degree credit more frequently than any other type, followed by a statement of satisfactory completion of the course.

- Interest in academic degrees declines with each decade of age, while interest in other types of credit remains high until retirement. For example, the bachelor's degree is desired by 23 percent of the respondents in their twenties, by 13 percent in their thirties, 9 percent in their forties, 3 percent in their fifties, and none in their sixties or seventies, while desire for a statement of satisfactory completion slowly rises with each decade from 10 percent during the twenties to 15 during the fifties before dropping to 2 percent after age sixty.

- Mexican-Americans who are interested in credit far more commonly seek a statement of satisfactory completion than Blacks or whites, and somewhat more often want an occupational certificate or license than an academic degree.

• Like Americans in general, Californians with some experience at postsecondary education are more interested in earning an academic degree than those with high-school backgrounds only. Yet nearly 10 percent of those with only a high school diploma would like a bachelor's or master's degree and nearly 5 percent a graduate or professional degree.

• Among occupational groups, the only major difference is not unexpected: Skilled workers and workers at unskilled jobs seek a statement of satisfactory completion considerably more frequently than do others: 19 and 45 percent respectively, compared to no more than 8 percent for other categories of workers.

A question unanswered by these data is the proportion of California adults who not only want degree credit for their studies but actively seek to complete a degree program. For example, 36 percent of the potential learners want academic credit toward one or another degree, but only 28 percent reported (Question 4, Table 9) that obtaining the degree is one one of their reasons for further study. Just as the 1972 survey of residents in northeastern California found more interest in taking courses than complete degree programs (California Coordinating Council, 1972), these data tend to confirm that the desire for credit is more widespread than the desire for a degree.

But if California moves towards more postsecondary alternatives for its adult citizens, it can expect a large number of citizens to want credit for their work--according to these data, somewhere between 950,000 and 1,250,000 being interested in bachelor's degree credit alone. Among the policy questions raised by these figures are these: Do California

adults already have adequate opportunities to earn these credits? Are certificates of achievement besides academic credit and degrees adequately available? And are adults discriminated against, in favor of full-time students, as they seek to earn either credits, degrees, or other credentials?

Investing Time and Money

Half of the potential learners report that they would be willing to devote ten or more hours a week, including class time, homework, travel, and so forth, to their studies; and a fourth would devote 20 or more hours a week to them. Here Californians are similar to Americans at large, where somewhat more adults nationally would prefer meeting at least twice a week to only once (Carp, et al, 1974).

- As Table 16 indicates, few differences occur between men and women or among ethnic groups on this question of time commitment, but considerable differences appear among age groups: older people are not able to devote as much time to education as younger adults. The percentage of respondents who are unable to spend ten or more hours a week on their subject of interest tends to match the age of the respondents: 30 percent of those up to 30; 42 percent of those up to 40; 50 percent of those up to 50; 59 percent of those up to 60; and 66 percent of those over 60.

- Generally, the less school one has completed, the less time one believes is available to devote to learning: 61 percent of the high-school dropouts report they can devote no more than nine hours a week to their studies, compared to 45 percent of the college graduates.

While most occupational groups can devote only 20 hours or less a week to studies, among service workers 10 percent are willing to devote full

TABLE 16

Percent of Potential Learners Responding to Question 10, "About how many hours per week altogether would you want to devote to your studies, including class time, homework, travel, and so forth?"

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Mex. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 3 Yrs. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skld. Work	Occupational Category: Cler. Sales	Occupational Category: Prof. Mana.	Annual Income: Under $7000	Annual Income: $7000-$9999	Annual Income: $10000-$14999	Annual Income: $15000 & over
Five hours or less per week	18	13	18	10	18	15	23	36	17	27	12	29	17	14	16	18	18	16	19	25	14	17	16	13	16
Six to nine hours	26	26	26	19	24	36	36	31	27	16	30	32	25	22	29	40	45	10	23	26	38	19	26	30	24
Ten to 19 hours	27	29	25	27	32	33	19	11	30	20	21	19	29	32	32	21	9	28	34	25	32	24	26	28	29
Twenty to 29 hours	14	14	13	18	17	9	8	4	11	20	12	8	15	13	9	7	18	17	10	10	10	12	4	17	17
Thirty to 39 hours	4	4	4	8	2	0	0	1	5	7	5	0	5	8	2	2	0	9	5	7	2	4	7	4	3
Forty hours or more	8	9	6	12	6	6	1	2	6	7	12	1	5	8	10	9	0	10	5	6	7	13	10	4	6
Not sure how many hours	*																								
No answer	6	5	7	5	2	1	14	17	4	4	9	11	5	4	2	4	9	10	4	1	3	12	5	2	1

* Less than .5 percent

time to their studies.

Similarly, among the lowest income group, 13 percent can spend full time on studies, while fewer at the higher income levels can do so.

When asked, "What is the highest amount of money you would be willing to pay for a course you want that meets three hours per week for a semester, or for some other educational activity that provides three units credit?" nearly one fifth of the potential learners could not give, or were unwilling to give, an estimate, as Table 17 shows. Classifying the responses of the rest of the group into eight categories, only one in ten reports an inability to pay anything for a course. One in five would want to pay less than $15. Over 40 percent of the respondents who name a figure are willing to pay up to $45, and three-eights of those who name a sum are willing to pay $75 or more.

Unless all the non-respondents on this question are unable to pay anything for further education, Californians are more willing to pay at least something for their continued learning than Americans at large. Nationally, according to the CNS survey, one in every four are unwilling to pay for more learning (Carp, et al, 1974), compared to at the most one in ten among Californians.

- By and large, men are somewhat more willing to pay--and pay more--than women, as are younger adults compared to older. One in five of the 60 year olds and older say they can't afford to pay anything, compared to one in 12 of the 18 to 29 year olds.

- Twice as many Blacks and Mexican Americans as whites say they can't afford to pay anything for a course.

TABLE 17

Percent of Potential Learners Responding to Question 11, "What is the highest amount of money you would be willing to pay for a course you want that meets three hours per week for a semester, or for some other educational activity that provides three units credit?"

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Mex. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 3 Yrs. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skld. Work	Occupational Category: Cler. Sales	Occupational Category: Prof. Mana.	Annual Income: Under $7000	Annual Income: $7000 -$9999	Annual Income: $10000 -$14999	Annual Income: Over $15000
Can't afford to pay anything	8	6	11	8	10	4	6	22	8	16	16	26	10	8	2	0	18	24	8	7	4	17	8	9	2
Less than $45 ($1 - $44)	36	13	39	40	31	37	34	34	34	40	37	38	37	38	28	26	64	26	42	40	32	31	34	37	36
About $60 ($45 - $74)	14	13	16	19	11	10	17	6	17	9	12	7	13	15	22	26	0	12	13	15	21	11	8	16	18
About $90 ($75 - $104)	10	12	8	7	18	16	4	3	9	7	9	1	6	9	14	18	0	12	5	11	11	12	6	4	
About $120 ($105 - $134)	1	1	1	2	1	1	0	0	2	0	0	0	1	1	5	2	0	2	1	1	2	1	1	2	1
About $150 ($135 - $164)	2	2	3	3	1	3	*	5	3	2	5	1	1	3	5	4	0	0	1	3	5	3	2	4	2
$165 and more	8	10	6	10	7	5	8	3	7	7	5	4	7	6	10	7	9	2	5	7	9	8	15	8	7
Not sure what I can pay or No answer	20	23	17	12	22	24	31	27	19	20	16	22	25	19	13	18	9	22	26	17	18	18	25	19	19

* Less than .5 percent

- Willingness to pay relates closely to the amount of previous education. Those with more schooling almost without exception are willing to pay more--or expect to pay more--than those with less. The same is true for high socioeconomic status occupations in comparison with low.

- And although the willingness to pay is less common among the poor than among the affluent, no direct relation exists between the amount of acceptable fees as such and level of income. Even among those earning under $7000 a year, four out of five who give an answer are willing to pay at least something for their studies.

In short, California adults by and large accept the necessity to pay at least part of the costs of their education. But as many as one in ten of those who would like to continue their education does not feel able to pay for it--and the proportion is highest among older, minority, and low income adults.

The importance of costs as a barrier to education is clear from Table 18. Costs are more frequently a barrier for California's potential learners than any other factor, despite the fact that they are mentioned somewhat less frequently as a barrier by Californians than by would-be learners nationally (by 43 percent, compared to 53 percent).

After costs, the most frequently mentioned barriers are home responsibilities in second place, followed by job responsibilities, course schedule problems, child care problems, lack of nearby college offering desired courses, impracticality of available courses, transportation problems, and the uninteresting nature of available courses. Less difference exists between Californians and Americans at large on the

TABLE 18

Percent of Potential Learners Responding to Question 12, "Which of these are likely to be important reasons why you might not enroll in some kind of study in the next two years? Please indicate any factors that might prevent you from pursuing further education for yourself."

	Total Sample	Sex: Men	Sex: Women	Age: 18-24	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Mex. Am.	Race: Blk.	Educational Attainment: 11th Gde.	Educational Attainment: H.S. Grad.	Educational Attainment: 3 Yrs. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Labor	Occupational Category: Service	Occupational Category: Skld. Work	Occupational Category: Cler. Sales	Occupational Category: Prof. Mana.	Income: Under $5000	Income: $5000-$9999	Income:	Income:
Cost, (fees, books, transportation and so forth)	43	35	48	58	42	28	26	27	42	49	44	52	41	46	31	39	9	59	36	48	37	55	49	51	27
Home responsibilities	36	25	44	34	41	45	29	15	35	44	40	35	45	30	37	37	55	40	35	36	39	30	40	36	
Job responsibilities	27	36	21	27	35	28	19	7	27	31	26	16	25	29	30	33	36	34	33	30	25	25	34	22	
Courses I want are not scheduled when I can attend	25	23	27	28	28	23	18	20	26	22	16	10	22	29	26	37	9	19	28	22	30	17	22	26	32
Child care problems	19	5	28	25	25	10	4	2	18	24	9	26	21	18	13	14	27	24	22	17	19	17	28	19	
No college close by offering the courses I want	15	16	15	14	20	15	15	7	16	18	9	10	15	17	15	16	9	17	15	16	15	9	7	21	15
Courses available generally don't seem useful or practical	12	14	10	15	10	11	8	7	13	9	7	5	9	13	14	18	0	17	10	12	14	7	4	17	14
Transportation problems	11	6	15	13	11	10	10	10	11	13	12	18	17	9	5	7	0	16	10	12	10	17	15	12	
Courses available are not interesting to me	11	12	10	10	9	16	10	10	12	7	2	8	7	11	15	14	0	9	10	5	15	7	7	11	14
Not enough energy or stamina	9	6	12	8	7	10	12	17	8	7	14	15	12	6	5	12	9	5	12	6	7	13	7	9	
Am simply no longer interested in any more formal schooling	5	6	4	4	3	5	7	12	5	10	2	3	5	1	10	12	0	2	6	4	5	2	4	2	7
A feeling that I am too old to go back to school	5	4	6	2	2	7	11	24	5	9	2	10	7	6	2	0	9	7	5	5	3	6	7	7	3
A feeling that I probably could not do the work	3	1	4	3	2	2	1	7	3	2	2	4	1	4	1	0	9	3	1	1	3	2	1	3	
Teachers would not understand my culture and my learning needs and problems	3	3	2	5	1	1	1	2	2	11	7	4	3	3	1	0	0	0	6	2	1	0	1		
Don't know how to get enrolled, how to get information, and so forth	2	1	3	2	3	1	3	2	2	9	2	7	1	3	0	0	0	2	3	1	2	5	1	1	1
No reason or incentive for further education; further learning would not help me at all	1	2	0	1	1	0	0	2	1	0	0	1	0	0	1	5	0	0	0	0	2	1	3	1	
Other reason	1	2	1	1	1	2	3	2	1	0	5	0	3	1	2	0	0	0	3	4	0	2	1	1	2
Nothing would prevent me No answer	9	14	6	9	7	10	16	5	9	7	14	5	5	12	11	11	0	9	12	9	8	9	5	8	11

importance of other barriers than costs: Table 19 lists the barriers that appear on both the 1972 CNS survey and the California Postsecondary Alternatives survey and the percentage of response to each of them. Comparing these reasons, some barriers clearly are less of a problem to Californians than to Americans at large. For example, only 2 percent of Californians report difficulty over "Don't know how to get enrolled, how to get information, and so forth," whereas 16 percent nationally checked "No information about places or people offering what I want" as a problem. In addition, potential learners in California don't feel too old to enroll, compared to Americans in general. Nationally, 17 percent of would-be learners checked "Afraid I'd be too old to begin" as a reason that might keep them from their learning compared to only 5 percent of Californians who checked "A feeling that I am too old to go back to school." In other words, California adults already accept the idea of lifelong learning more than Americans at large.

TABLE 19

Barriers to Learning Common to National and California Surveys

Barrier	California 1974	National 1972
Cost	43%	53%
Home responsibilities	36	32
Job responsibilities	27	28
Scheduling of courses	25	16
Too old	5	17
Child care	19	11
Energy	9	9
Transportation	11	8
Lack of courses	12	12
No information	2	16

Source: California data from Postsecondary Alternatives survey, Question 12. National data from Carp, et al, 1974, from a list of 42 reasons "important in keeping you from learning what you want to learn."

• Turning to the impact of these problems on different groups of Californians, here as in the country at large they affect men and women differently. The top five problems for women are costs, home responsibilities, child care problems, scheduling of courses, and job responsibilities. Major barriers for men, on the other hand, are job responsibilities, cost, home responsibilities, scheduling of courses, and lack of nearby institutions offering desired courses. Women sense the pressures of home considerably more than men (44 percent compared to 25 percent), the difficulty of transportation (15 percent to 6 percent), a lack of energy or stamina (12 percent to 6 percent), and the need for child care (28 percent to 5 percent, or five times as many). Conversely, men more frequently find job responsibilities a barrier (36 percent to 21 percent); but fully 14 percent of them indicate that nothing would prevent them from continuing their schooling, compared to only 6 percent of the women.

• In terms of age groups, home responsibilities pose the primary barrier to middle-aged Californians, while costs are more critical for both younger and older groups. Among barriers that grow larger with age are a lack of energy, a lack of interest, and a feeling of being too old.

• Fear that teachers will not understand their culture and learning needs is more commonly mentioned by Mexican-American respondents than by whites or Blacks. Two other barriers--not knowing how to get enrolled, and child care--are also more commonly mentioned by this ethnic group.

• Californians with more schooling consistently have less problem than those with limited schooling over transportation, child care, the feeling

of being too old, and the fear that teachers will not understand their background. At the same time, the more schooling, the more one's work poses barriers for learning: 33 percent of graduate-degree holders mention job responsibilities as a barrier, but the percentage declines consistently to 16 percent for high-school dropouts.

- People employed in professional and managerial work are not commonly hampered by job responsibilities--probably because they have more autonomy and freedom in their schedules to take the courses they desire. But 30 percent of them report that courses are not scheduled when they can attend them, compared to only 9 percent of workers at unskilled jobs.

- Costs naturally loom large to the poor. They and transportation are the two barriers that stand in the way of low income respondents consistently more than of the wealthy.

In summary, California's potential learners tend not to regard personal characteristics as barriers to their further education. For instance, energy, age, information, and feelings of inadequacy rank only tenth, twelfth, thirteenth, and fifteenth out of all sixteen issues listed. External constraints seem far more common: costs, family and job responsibilities, and child care rank first, second, third, and fifth. In between are two institutional limitations in fourth and sixth place: scheduling of courses, and location of institutions.

Statistically, as many as from 1.9 million to 3 million Californians probably find costs to be a barrier in continuing their education, according to this survey. Over a million may have difficulties with course schedules; and at least 425,000 have the belief that no nearby college offers the

courses they desire. The policy questions confronting California about these barriers focus on the three issues of costs, scheduling, and campus location. Should it not seek to lower these three barriers that restrict postsecondary opportunities for its adult learners?

Future Postsecondary Alternatives

Finally, the range of postsecondary opportunities that might be available to Californians in the future can be seen in Table 20. It shows first how many potential learners and then how many Californians at large would be interested in one or another educational service in the future and--most interestingly--the proportion who might seek educational services beyond the mere taking of courses.

According to these responses, up to 4 million Californians might avail themselves of a comprehensive adult learning program to take courses, if the location were convenient and the fees low. Between 2.6 million and 3 million would like to assess their personal competencies--their skills, abilities, and potential for a more productive life. From 2.2 million to 3.2 million might want to take tests to gauge their strengths and weaknesses in various subjects or skills. From 1.6 million to 2.5 million would use the program for other resources--to obtain information about available educational opportunities, for example, or to gain personal counseling, discuss educational and career plans, or evaluate non-college experiences. And between 920,000 and 1.6 million would like training in basic skills of reading, writing, and arithmetic.

Among potential learners, 15 percent would not be interested in using such a comprehensive adult education program (apparently planning on other sources for their learning); and among the total sample of adults--both

potential learners and non-learners--nearly 40 percent indicate no interest in such a program. But overall, some 8 million of California's 14 million adults might avail themselves of one or another of these services--approximately the same number as the potential learners who would like to engage in some form of learning within the next two years and twice the number who are now enrolled.

What services would different groups of Californians use?

- Almost as many women would be interested in having their personal competencies assessed as in taking a course. Men would be considerably less interested in personal assessment; but they would be twice as commonly interested as women in evaluating their non-college achievements, such as military or work experience.

- Four out of five 18-to-29-year olds would avail themselves of the services, compared to only one in four of those over 60. But among this oldest group, over one-third of those interested in it would use it to assess their competencies--as many as would use it to take a course.

- Racially, Mexican-Americans would have particular interest in the services--80 percent of them, compared to 63 percent for Blacks and 59 percent for whites; more often for training in basic skills and to obtain information about educational opportunities.

- High-school dropouts would use the services for basic skills improvement twice as often as those with more schooling, as would workers in unskilled jobs, compared to those in other job categories.

TABLE 20

Percent of Potential Learners and Total Sample Responding to Question 11, "Listed on this card are various services that could be provided by a comprehensive adult education program. Which of these services do you think you would be interested in using if the location were convenient and the fees low?"

Potential Learners

	Total Sample	Sex: Men	Sex: Women	Age: 18-29	Age: 30-39	Age: 40-49	Age: 50-59	Age: 60+	Race: Whi.	Race: Neg. Am.	Race: Mex.	Educ.: 8th Gr. or Less	Educ.: H.S. Grad.	Educ.: 1-3 Yrs. Coll.	Educ.: Coll. Grad.	Educ.: Post Grad.	Occup.: Labor	Occup.: Service	Occup.: Skill Work	Occup.: Cler. Sales	Occup.: Prof. Mana.	Income: Under $7000	Income: $7000-$9999	Income: $10000-$14999	Income: Over $15000
Take a course or other program of learning	44	38	42	38	43	39	45	39	43	33	28	29	42	39	46	31	18	28	37	47	43	34	45	43	41
Assessment of personal competencies—personal growth, potential for living a more productive life	31	23	36	35	23	27	37	32	32	24	26	32	38	30	30	30	45	34	28	25	31	39	33	28	27
Testing of strengths and weaknesses in various subjects or skills	28?	28?	28?	34	18	29	27	28	33	29?	[illegible]	30	31	30	19	[illegible]	45	26	33	23	24	31	33	29	24
Obtain information about educational opportunities in the region—where to find courses, how to use libraries, museums, etc.; where to take equivalency exams, and so forth	23	22	21	26	28	24	16	7	21	32?	21	21?	26	25	13	23	9	17	[illegible]	23	21	26	15	26	19
Personal counseling	20	[illegible]	[illegible]	26	16	18	18?	12	20	18	16	16	18	23	19	14	9	29	23	17	17	20	27	18	19
Testing to obtain advanced standing in a program of studies	18	[illegible]	16?	19?	[illegible]	20	21	10?	19	7	12	10	21	18	22	14	0	17	21	23	15	20	19	21	16
Discuss educational and/or career plans with staff member	17?	[illegible]	19	21	14	17	14	12	18	18	12	14	18	17	21	12	[illegible]	16	43	20	18	23	28	15	13
Putting together and maintaining a record (transcript) of all my educational work (from all schools I have attended) [illegible]	18	[illegible]	16?	18	12	21	12	17	16	13	26	20	15	22	14	11	9	14	15	15	15	20	16	19	13
[illegible] place to study	20?	[illegible]	[illegible]	16	16	11	13	2	14	18?	9	10	12	18	14	11	18	17	13	18	13	15	15	15	13
Evaluation of educational experiences [illegible] military [illegible] degree	18?	[illegible]	[illegible]	19	11	11	12	8	14	13	14	7?	15	17	14	5	0	17	17	17	11	18	13	13	12
[illegible]	22	[illegible]	[illegible]	14	11	8	15	12	18	[illegible]	14	30	15	10	2	11	55	14	17	9	8	17	16	16	7
[illegible]	19?	16?	12?	12	16?	[illegible]	11	27	16	2?	19	18	11	13	19	25	0	17	13	16	18	13	4	13	18
[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	[illegible]	0	[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total Sample

	Total Sample	Sex: Men	Sex: Women	Age: 18-24	Age: 25-39	Age: 40-49	Age: 50-59	Age: 60+	Marital Status: Mar.	Marital Status: Sep./Div.	Marital Status: Single	Educational Attainment: 11th Grade or less	Educational Attainment: H.S. Grad.	Educational Attainment: 1 Yr. Col.	Educational Attainment: Col. Grad.	Educational Attainment: Post Grad.	Occupational Category: Prof.	Occupational Category: Mgr.	Occupational Category: Skld.	Occupational Category: Cler.	Occupational Category: Sales	Occupational Category: Hsewife	Annual Income: Under $7,000	Annual Income: $7,000-$14,999	Annual Income: $15,000-$24,999	Annual Income: Over $25,000
Take a course or other program of learning	26	25	27	34	32	24	24	10	27	22	24	12	24	30	37	43	7	23	26	34	32	20	22	31	29
Assessment of personal competencies--personal growth, potential for living a more productive life, etc.	20	15	25	30	24	18	21	10	22	17	18	14	20	24	25	24	22	25	20	22	25	21	24	22	20
Testing of strengths and weaknesses in various subjects or skills	20	20	20	38	23	17	12	4	18	22	21	14	18	24	17	14	26	19	22	20	20	22	24	21	19
Obtain information about educational opportunities in the region--where to find courses, how to use libraries, museums, etc.	15	16	13	23	13	19	11	4	13	22	15	5	14	19	12	20	7	12	13	18	16	17	12	19	14
Personal counseling	13	14	13	21	10	12	14	5	13	14	12	8	11	17	15	11	7	22	15	12	13	12	17	13	15
Testing to obtain advanced standing in a program of studies	11	14	9	17	15	10	7	3	12	4	9	4	11	14	18	11	0	12	13	18	11	11	12	11	13
Discuss educational and/or career plans with a staff member	11	9	13	18	11	8	9	2	11	12	7	5	10	13	17	11	4	11	13	14	14	14	16	10	9
Putting together and maintaining a record (like a transcript) of all my educational work, etc.	11	12	11	16	8	15	9	6	10	12	18	6	8	16	13	9	4	11	11	11	12	14	8	13	10
Use the location as a place to study	10	11	8	14	12	9	7	2	9	12	7	5	7	13	11	8	11	12	9	12	10	8	10	11	11
Evaluation of non-college experiences--on the job or in the military, e.g., for possible credit toward a degree	9	12	6	18	10	5	5	2	9	9	9	3	8	13	12	4	0	13	11	13	8	12	6	10	10
Receive training in basic skills--reading, writing, & basic arithmetic	9	7	11	10	9	13	8	6	6	28	10	18	9	8	1	8	30	13	14	8	6	12	11	12	6
Would not be interested in using any of these services	39	38	40	20	28	40	44	73	41	20	37	54	44	30	31	34	44	34	37	28	33	41	36	37	36
No answer	1	1	1	*	2	1	0	1	0	3	1	1	1	0	1	1	0	0	1	1	0	2	0	*	*

* Less than .5 percent

In short, Californians at every age level, and in every educational, occupational, and income category, would use the services to some extent. Least interested are older citizens, those without a high-school diploma, and those working at unskilled jobs; and these characteristics are mutually related. Older Californians, less able in their youth to complete high school and attend college, and now living on low incomes, are unaccustomed to postsecondary alternatives for themselves. While they might find that they enjoyed participating, they cannot envision themselves doing so. On the other hand, younger Californians can: Already familiar with the educational system, they look forward to the possibility of continually enriching their lives with more skill and knowledge; and they would make much use of such services if California makes them available.

"I'm interested in all kinds of technical things but don't find them readily available to me," commented an aide at a pharmaceutical company in Santa Cruz as part of this study, "--diesel mechanics, carpentry, electronics, brick masonry. I don't want to necessarily spend one to four years learning each and every one of these, but I'd like to take a class every now and then, and still be able to get a job." Over four million Californians like this man want to participate in postsecondary learning but are not now engaged in it. They constitute a reservoir of interest in further education at least as large as the number currently enrolled. How California responds to the educational interests of these millions of adult citizens will determine whether educational opportunity is opened to all who are interested or limited to the half now willing and able to attend.

III. FUTURE SOCIETAL REQUIREMENTS

Our purpose in this concluding section is to offer an analysis of postsecondary education needs in California in the foreseeable future. The discussion is in three parts. First is an overview of a number of on-going social and economic trends in an attempt to forecast the need for various educational services in the short run. This is followed by a review of several systematic endeavors in longer-range futures forecasting. Then, assuming a dual role of social analyst and critic, we set forth our thinking about aspects of the best possible social order that can reasonably be expected--one that might begin taking shape in California by about the year 2000.*

California in the Short-Run

That the state, nation, and much of the world are undergoing vast social changes is indeed a truism. Many of these trends have been widely recognized and need little further documentation. While most of the changes are occurring nationwide, many are exaggerated--accelerated--in California. The pace of social change, in short, appears to be faster--now as in the past--in California than elsewhere.

Some six general dimensions of change that have implications for new approaches to postsecondary education are particularly worthy of note.

* These three approaches approximate the three general types of forecasting methods identified by Popper (1971): (1) exploratory types--trend extrapolation, simulations, etc.; (2) intuitive types--variations on the "wise old man" procedure (Delphi, cross-impact matrices, scenarios); and (3) normative types--which start with conceptions of a future and then work backward to identify the strategies needed to get there.

An Aging Population. Children of the post-World War II baby-boom are now for the most part young adults. The national birth rate has fallen from roughly 3.6 (births per woman) in the early 1960's to approximately 2.1 in 1974, and is probably now below the replacement rate (2.1, i.e., zero population growth). Between 1975 and the year 2000, the Bureau of the Census forecasts the following increases in absolute numbers nationally:

Children and teen-agers	8%
Young adults, 20-34	9
Younger middle-aged, 35-49	76
Older middle-aged, 50-64	23
People 65 and older	30

Four-fifths of all the nation's population growth in the next quarter century will take place among people 35 and older. This trend is attributable both to medical progress and to fertility patterns. American life expectancy, according to the World Health Organization, will be 80 by the year 2000. In California, for a variety of reasons--relative affluence, benign climate, in-migration of older people--the trend toward an older population is likely to be even more pronounced than in the nation as a whole. It is clear that the market for adult and continuing education services--the absolute number of "potential learners"--in California will be expanding. Most of these older adults will have been taxpayers and productive workers in California for two, three, or more decades.

Flexible Retirement. Many observers have called attention to the trend in America toward earlier retirement from the work force. Equally important is the trend toward flexible retirement plans, by which employees may cease full-time work earlier or later, at their option or by mutual agreement with their employer. Or they may gradually retire by working part-time for some number of years prior to termination, with the amount

of leisure time--and time for educational activities--increased accordingly. Finally, there is also a trend to use early retirement to change occupations, which may often require some degree of new training.

While it is hazardous to generalize about the learning interests of older citizens, it may be expected that they will increasingly challenge postsecondary education to help them make the best possible use of their retirement or semi-retirement.

Higher Levels of Education. According to the 1970 Census, the proportion of Californians aged 25 and older having some college education was 30 percent, an increase from 23 percent in 1960. The corresponding national figures were 21 percent and 16 percent. Our own 1974 survey of Californians age 18 and over indicates that 51 percent have completed one or more years of college. This relatively high level of educational attainment reflects the well-developed higher education system that has long existed in the state and also the influx of highly trained manpower during and since World War II.

A consistent finding from studies of adult learners, as noted in section I, is that they tend to be already well educated--one more reason for expecting a relatively large market for continuing education in California.

A related reason for anticipating strong demand for further education lies in the presumed motivation of many college dropouts to complete a baccalaureate program begun some years earlier. One expert (Houle, 1973) believes this to be perhaps the major reason for participation in continuing education. In 1970, 1.8 million Californians had completed one to three years of college (up, remarkably, from 1.2 million in 1960). Granted,

many of these individuals never did and still do not aspire to a BA; nonetheless the figures suggest a sizeable number of students interested in the BA. All this is not to say that there is not also the need for major adult education efforts at the secondary level. The same 1970 census showed that 37 percent of Californians aged 25 and older never finished high school. The need for the state to offer further opportunities to them seems clear.

The Changing Nature of Work. There are several interrelated trends in the nature of work under way that seem bound to lead to new demands for postsecondary services.

Perhaps the trend most often cited is the shift in the occupational structure in America from a preponderance of industrial jobs to a preponderance of white-collar and service jobs. This shifting in the economy from the production of goods to the provision of services--by a burgeoning class of professionals, technologists and managers--is the hallmark of what Daniel Bell and others have labeled the "post-industrial society." The key requisite in most of the service occupations is professional or technical skill. While this general expansion in service occupations is nationwide, California has been in the vanguard. White-collar workers outnumbered their blue-collar counterparts in California in 1950, but not until about 1956 in the nation as a whole (La Porte and Abrams, 1974). In 1970, 69 percent of all employees in California were in the tertiary or service sector (compared with 61 percent nationwide); 4 percent were in the primary sector (mining, agriculture), and 27 percent fell into the secondary sector (manufacturing) (U.S. Bureau of the Census).

The role played by the state's higher education system in this economic transition has, of course, been significant. However, not all the new

workers in the service sector can be expected to be young graduates of conventional training programs. Indeed the declining numbers of young people entering the labor force combined with both technological displacement and attitudinal disenchantment of workers in the industrial sector suggest an expanding need for training programs for service and white collar occupations designed for individuals in their middle ages. In short, the shift to a service economy augurs a tremendous potential for employee mobility and for the new training necessary for entry into the new occupations.

Closely related is the fact that work in America, and especially in California, is increasingly knowledge-based or knowledge-intensive. Ted Bradshaw (1975) has shown that even in the manufacturing sector, California, with its concentration, for example, of electronic and aerospace industries, is unique among the states. Seventeen percent of the state's manufacturing employees are professionals (engineers, accountants, scientists, technicians, etc.), compared to the national figure of 10 percent (Bradshaw, 1975).

Bradshaw goes on to point out that in California there are disproportionate concentrations of professional expertise in some but not all service occupations; a wide variety of business services, specialized communications, air transport, and, most distinctively, research and development (as a "knowledge service" to the California economy), are examples.

Declining and flexible workweeks are additional trends with implications for continuing education. In a thorough analysis, Glickman and Brown (1974) describe the spread of four-day and "flexi-time" workweeks in both the United States and Europe, and note that the flexible arrangements make for larger chunks of non-work time and thus for more options to individuals for the use of that time. They indicate that during the decade of the

1960's, workers gained an average of 49 hours of free time as a result of reductions in the workweek and increases in vacation and holiday time. They cite Delphi studies that forecast substantial increases in time off for professional and personal activities; and a decline in the full-time workweek to 35 hours by 1985, and to 32 hours soon thereafter.

The report of the Special HEW Task Force on Work in America (O'Toole, et al., 1973) points to widespread dissatisfaction of American workers (and managers) with their work lives. While there are numerous instances of corporate attempts to humanize work, many individuals will be opting for shorter hours (and less pay) in return for more leisure time and the option of additional education. Others, in search of greater meaning in their work, will seek a new occupation and the required new training.

In the foreseeable future we can expect a variety of work/life patterns. For many, work will continue to be the defining factor in their lives, and their expectations for meaning in their work are likely to continually increase. For some--the highly creative artist or professional--the line between work and non-work will continue to blur. Others will choose to change careers one or more times during their lives. Still others, and there are signs that their numbers will increase, will opt for life styles where regular work becomes subordinate to other activities. All of these patterns pose challenges for a comprehensive system of continuing education.

In a time of high unemployment in the nation and state, the general tenor of these remarks about work may sound unreasonably optimistic. While full employment may be a worthy governmental goal, it may be unrealistic in an economy characterized by technological change and automation. Thus

chronic unemployment at fairly high levels may be a reasonable assumption about the future, and programs of training and retraining on a massive scale may well be the appropriate public policy. Drawing on the experiences of France, Denmark, and West Germany, Herbert Striner (1972) argues eloquently for a basic change in philosophy about unemployment insurance:

> The only true form of unemployment insurance in a technological, industrial society is a program of education and training which provides people with the skills needed in that society. It is just as simple as that." (p. 57). We must now move from an unemployment insurance fund to a National Economic Security Fund (NESF). The basic premise of such a fund is that an individual is entitled to the means for retraining or taking further training in or to achieve his highest level of personal and national usefulness (p. 64).

Technological Change. A fundamental fact of modern societies is the vast and rapid technological change all are experiencing. In California, technological innovation and diffusion have progressed further than in any state in the country, leading Todd La Porte, Ted Bradshaw, and their colleagues at Berkeley's Institute of Governmental Studies to characterize California as the prototypical "advanced industrial society." Supported by a continuing exponential growth in the total stock of human knowledge, technological development--in manufacturing and distribution processes, communication and word processing, transportation, biology and medicine, even home appliances, as examples--is destined to have an increasingly profound impact on both the lives of individuals and the quality of the culture. As many have observed, technological advance could bode either good or evil for the culture in the long run, depending in large measure, we are told, on the capacity of social and political institutions to keep pace with the technological changes.

In the short run, the facts of technological innovation and knowledge expansion have several important consequences for postsecondary education. Professionals--doctors, engineers, teachers, for example--must continually update their professional skills. In an increasing number of professional and technical specialities, such upgrading of competence is being made mandatory through periodic relicensure based on demonstrated acquisition of new knowledge or skill. In California, 43 occupations now require such relicensure (Insel, et al, 1972), and it is likely that there will be a good many more in the near future.

Somewhat the same condition of "technological obsolescense" will increasingly confront many unskilled, skilled, and lower white-collar employees as well. They will need readily available programs for periodic upgrading of their skills (in California, particularly the abilities to operate new types of electronic production control, data processing, and communications mechanisms). In the face of rapid technological change, it is simply unrealistic to think that training acquired early in life, prior to entering the work force (as in an apprenticeship), can serve individuals well for more than a few years; such educational "provisions," in Striner's (1972) analogy, are increasingly "of a perishable quality."

Changing Life Styles. Beyond changes in the character of work, there are other important changes in the manner in which many Americans are living their personal and interpersonal lives.

Women in droves are forsaking traditional roles. Many are entering the work force and require new training or upgrading of rusty skills. Employed women, armed with a new sense of their worth, seek job advancement for which further training may be necessary. Others wish to embark on a

program of learning, or return to complete an interrupted program, for any number of reasons--the new learning for its own sake, for the sense of accomplishment derived, or as a measure of insurance against a future need to join the work force.

The nuclear family in America is undergoing redefinition, and what the result will be is difficult to predict. Pundits speak of the "disintegration of the American family." The national divorce rate, of course, is soaring, with California leading the way. For the woman, divorce often dictates entry into the work force and the necessity for job training. For the man, there is the prospect of additional time for new kinds of learning activities. On the other hand, there are signs of new concern for the worth and stability of the family as traditionally defined. Marital counseling, both in pairs and in groups, appears to be growing in popularity (e.g., the Catholics' "marriage encounter"), as does interest in "parent effectiveness training." Perhaps rather than one, there will be many definitions of the family in the years ahead.

As we said earlier, regular work at a job is likely to take up less of peoples' lives in the future. At the same time, per capita wealth will continue to increase (though probably at a declining rate in the short run). Per capita personal income in California in 1965, 1970 and 1972 was $3,196, $4,444 and $5,002 respectively; nationally the figures were $2,724, $3,933 and $4,478 (U.S. Bureau of the Census). And, at least in some segments of the population, there appear to be both rising expectations about the general quality of life--personal, cultural, occupational--a feeling that somehow life ought to be better, more interesting, more meaningful, and also a rising confidence among people in their ability to do something about the quality of their lives. Finally, related to the last obser-

vation, there is an unmistakable psycho-cultural "movement" spreading particularly through the more affluent and leisured classes that attaches high value to "personal development," to full development of the individual's "human potential." These emerging attitudes give rise to the prospect that continuous education can reduce people's sense that they are victims of their early history, and that learning can be viewed as a key to unlocking a continuously interesting life.

In summary, it seems clear that the trends described--rising educational level of the populace, rising expectations for quality in life, shifting to skill- and knowledge-based work, larger amounts of available non-work time--will combine to create a large and expanding demand for educational services throughout the life cycle.

Future Forecasts

Several recent studies which offer systematic predictions of changes or innovations in California, the nation, and in higher education are pertinent to a consideration of new postsecondary education services for the state. All the studies use the Delphi technique, a forecasting method invented in the early 1950's at the Rand Corporation, which develops consensus estimates within a group of experts usually about when various events or developments are most likely to occur. The value of Delphi ratings is debated; certainly, in the short run, their validity cannot be established, and no matter what the level of rater expertise, futures forecasts are inevitably colored by the values of the forecasters. Nonetheless, they are interesting as expressions of opinion of well-informed people; and as a middle ground between the fairly dispassionate extrapolation of demographic and economic trends above and the frankly normative

conceptions that will follow, they can serve as a transition between our two more essential approaches to contemplating future needs for post-secondary alternatives in California.

The 15 Delphi forecasts immediately below are from a just-completed study conducted for the California Department of Transportation (Caltrans) by the USC Center for Futures Research (Gray and Helmer, 1974). The panel of raters were 46 government and business officials, educators, scholars and scientists selected jointly by Caltrans and the USC Center. The items--events, trends--below were selected (from 263 rated) as the most relevant to the purposes at hand.

Trend	1985	1995	2005
The percentage of married women who either earn an income or go to school for continuing education.	60	72	78
The amount of time per capita devoted to recreational and intellectual pursuits, using an index value of 100 for 1974.	120	130	140
The percentage of persons of working age who voluntarily work less than full time.	15	20	20
The degree to which child-rearing responsibility is shifted from the family to groups and institutions (0 to 100 scale; present, 10).	15	25	35
The size of the service sector of the national economy, as a percentage of the GNP.	50	55	60
The size of the "knowledge industry" (using an index value of 100 for 1974).	120	145	200
The standard of living in California (1974, 100).	110	130	140
The percentage of employed persons who have substantial control over their work schedules (which hours and days).	18	28	37
The percentage of the labor force working a four-day or shorter work week.	22	36	50

Trend	1985	1995	2005
The amount of leisure time available to the average Californian (1974, 100).	115	125	140
The degree to which lifelong education has become the rule rather than the exception (measured in terms of the percentage of persons who spend at least one semester in school after age 40).	32	50	65
The degree of flexibility in education with respect to both time schedules and content (1974, 50).	60	70	80
The degree to which communications technology is used in education (1974, 25).	32	47	55
The amount of decentralization of higher education through technology or other means (1974, 100).	115	127	145
The amount of individualization of educational instruction (1974, 25).	32	40	55

Event	Most probable year of occurence
Passage of legislation establishing both pre-school and post-high school education as rights of every American.	1980
The institution of "open universities" based on the British model.	1980

A combination Delphi and time budget analysis carried out by the Institute for the Future, using a national panel of judges, came up with similar estimates about the decline in working hours and, as a consequence, with the conclusion, "the portion of the time budget devoted to education will increase strongly for all groups" (Enzer, Little, and Lazat, 1972, p. 10).

A third study, entitled On the Future State of the Union (Helmer, 1972), sponsored by the Russell Sage Foundation, came to most of the same general

conclusions as the first two. Several of its specific items, however, are of interest.

Trend	Estimated Trend Level in 1971	1981	1991	2001
There is evidence of a diversification of life styles, manifested in a multiplicity of family forms, new patterns of child rearing (day-care centers, etc.), and much enhanced geographical, marital, and occupational mobility.				
Estimate of the degree of unconventionality, on a 0 to 100 scale.	25	35	38	42
Percentage of the working population engaged...in arts and crafts and in personal-service activities (100 as the index of the 1971 percentage).	100	120	130	150
Estimate of the percentage of college teaching that will be provided in the form of computer-aided instruction.	2	10	20	20

The last study was concerned only with possible changes in postsecondary education. Conducted by the National Center for Higher Education Management Systems at WICHE, it involved a national panel of 389 individuals selected from a broad range of constituent groups associated with higher education (Huckfeldt, 1972). From a total of 118 "change statements" used in the survey, the following 15 were judged to be the most germane to the purposes at hand, and are ranked according to percent responding "should occur." Only one other item in the survey had a higher absolute likelihood value; it read: "Scrutiny by funding sources as to how well resources are being utilized will increase." And the first two were the only statements out of all 118 that received 99 percent "should occur" endorsement.

Change statement	Likelihood	Impact	Expected date of change	Percent responding "should occur"
The number of students involved in continuing education throughout their lifetime will increase (caused by retraining, dropping in and out, etc.).	very high	very high	1978	99
Increasing opportunities and responsibilities will be available for all regardless of sex, race, etc.	moderate	low	1978	99
Postsecondary education facilities will be used more hours in a day and more days in the year.	very high	moderate	1977	98
The ease of transferability of credit from one institution to another will increase.	high	moderate	1979	98
Institutions will increasingly share resources.	high	moderate	1979	98
Student progress will be measured by competency and not time.	moderate	very high	1981	97
The use of TV, computers, and new technologies...will increase.	very high	high	1979	97
Postsecondary education will be more readily accessible.	high	very high	1978	97
Use of individualized instruction will increase.	moderate	very high	1979	96
The proportion of part-time students will increase.	high	moderate	1977	94
The campus and nonacademic community will increasingly share resources (campus without walls).	moderate	high	1980	94
Certification of student competencies will be increasingly possible other than through formal academic programs.	high	high	1980	93
The use of home study programs will increase.	moderate	low	1980	88

Change statement (continued)	Likelihood	Impact	Expected date of change	Percent responding "should occur"
Student experience (work, service) in the nonacademic community will be increasingly accepted for academic credit.	moderate	low	1979	83
A larger proportion of the faculty will be recruited from nonacademic sources.	low	moderate	1982	75

The Future California Society

Considering Alternatives. Even the long-range future of the state, of course, is already in the making--at least in part. As fast as anywhere in the country and perhaps the world (with West Germany possibly the closest competitor), California is moving into an advanced stage of post-industrialism, with seemingly little prospect for reversing the general directions of the movement. To be expected, then, are: an occupational structure comprised heavily of knowledge-based professional, technical and managerial positions; technological innovations that will eliminate much physically hard and mentally boring work and make for more efficient delivery of services--but which will render impersonal much of what is now personal;* occupational obsolescence the result of technological change; frequent voluntary retraining;** shorter work hours and work lives, with correspondingly greater leisure time.

* Automated postal service, banking, and grocery shopping are distinct possibilities.

** In Stanley Moses' words, "(In) a society where knowledge and skills change so rapidly...continuing education (is) neither a luxury nor an indulgence--but a necessity" (Moses, 1971, p. 13).

So far this is a mostly optimistic scenario. It would be foolhardy, however, to ignore other--possibly less propitious--futures. While most analysts of post-industrial development seem to share a general optimism, there is, of course, a vivid literature of anti-utopianism (Brave New World, 1984) and technological enslavement. And while ecological and other kinds of doomsaying are somewhat out of fashion just now, at least one scholar, the economist and social philosopher Robert Heilbroner, has argued very recently that mankind will not have sufficient will to cope with the fatal triad of population growth; the spread of nuclear weapons, and environmental rending occasioned by economic growth (1974).

Closer to home (California), Todd La Porte and C. J. Abrams (1974) raise the negative prospect of an "unstable post-industria" which involves the following: planners have faulty knowledge about public wants and the dynamics of social systems ("conditions outrun the capacities of experts"); there are frequent failures of the state to solve problems or deliver services; the public loses confidence in government; a sense of uncertainty about both the social order and people's personal futures sets in; people turn to political dissent and "deviant" forms of personal meaning.

This is a scenario to be reckoned with. Indeed, there are numerous indications that we have gotten already to some point in this "unstable" state. We think, however, that the present condition of low confidence is temporary, brought on in large part by the bewildering combination of inflation and recession of the past several years. Our assumption is that the economy will get "straightened out," and with it public confidence in the capacity of the government to serve effectively.

To return to the more positive account of the future, there are

other less familiar cultural and economic patterns that can be expected in the new society. Various antidotes to impersonality will be invented--arrangements for semi-autonomous work groups in work places, and relatively intimate neighborhood communities, for example. There will be vast changes in transportation and communication systems. Certain of the huge profit-making industries and utilities will be nationalized, and there will be a more just distribution of wealth; at the same time there will be a rise in the general level of affluence in the state that will engender a variety of new leisure, cultural and value patterns. People will be more mobile, both occupationally and geographically; varied kinds of work during the life span will be facilitated by portable pensions and opportunities for free re-training. Large, complex organizations and institutions will be interdependent in the sense that the acts of each affect all the others; consequently, there will be planning and coordination at the highest levels; planning will be knowledge-centered, based insofar as possible on good intelligence about public wants. While there will be some loss of personal freedom (e.g., in order to preserve the physical environment), there will be a general public confidence in the planned society--in its capacity to solve problems, deliver services and otherwise meet human needs.

The Learning Society. We find ourselves generally hopeful about the future social order, which, to continue the conjecturing, will have many of the atttibutes of a learning society. The key principle will be lifelong learning, that is, learning throughout the life cycle rather than only during childhood and youth. Lifelong learning will be explicitly recognized as being in the interests of both individuals, and the commu-

nity and the state. There will be wholesale changes in public attitudes about the uses of learning, new structural or organizational arrangements to facilitate lifelong learning, and new governmental incentives, notably financial ones, for individuals to engage in periodic or continuous learning throughout their lives.

For reasons such as those outlined earlier in this section, people will come to accept the practical value of continuous learning; the personal and social significance of their vocational lives will depend on it. People will also come to accept the value--indeed the need--for continued learning for the sake of meaning in their non-work lives. Continued personal growth, in short, will be seen as the key to a satisfying existence throughout life.

Beyond these personal advantages, there will be public recognition of the necessity for citizens to comprehend in some depth the workings of the economy and the government at all levels. To say, after (1) Watergate and (2) national efforts to reduce inflation/recession, that there are "major problems" in our political life and that economic policy is "complex" is to traffic in banalities. Yet there are issues, problems, and complexities, and also at the present time, widespread apathy and alienation. The future political order, by contrast, will--must--depend on citizen support and participation; and for all this to be realized a large measure of "civic literacy" among the populace will be essential.*

Next, there will be wide attitudinal support for what has been called "interdependent training" (Buchan, 1974) at all educational levels, through

* "Civic literacy," broadly conceived, is the central concern of the Future of Adult Education and Learning Project, a highly provocative study presently underway at the Syracuse Educational Policy Research Center.

which individuals can learn skills for effective functioning in groups and small communities.

Finally, there will be new public understandings about how and where education is to take place. Compared to the present, learning will be less formal, less lecture-room bound; less structured, sequenced, bureaucratized; and much more self-guided.*

What about the shape of the educational "system" in the learning society? We can sketch only some of the general outlines, not the details. It is basic, as Hesburgh, Miller and Wharton (1974) have said, that "educational policy should begin with a comprehensive framework that addresses the needs of the entire population, from infancy through adulthood." Instead, in short, of an education system focused almost exclusively on youth, educational opportunities will be available to people of all ages. Instead of laws mandating periods of compulsory schooling, people of all ages will have the opportunity to avail themselves of various learning opportunities as they see fit, chiefly on the assumption that they will learn more readily when they see a clear need to do so.

Structurally, regarding public education, most likely a single unified educational authority will be responsible for providing an array of services for people of all ages.** Planning and coordination will occur chiefly at a regional (e.g., metropolitan region) level. There will not be such

* Emery et al. (1974, p. 7) forecast the use of "learning groups...small self-regulated group(s) of peers (that) will have as their group task the education of themselves, making such use of the resources of expertise etc., that are available to them."

** There is a growing body of as yet mostly theoretical literature about developmental ages (and stages) in adults. Conceivably a lifelong education program could be designed that explicitly recognizes such stages in the life cycle (cf. Chickering, 1975).

familiar structures as grade level schools (e.g., K-6, 7-9, etc.) or "segments" of higher education. There will be no lock-step arrangements, and people will seldom attend continuously for more than a few years. A variety of alternative learning methods will be universally available--notably new methods arising from technological innovation--and learning for most people will be essentially individualized and self-guided. Though self-guided, much learning will at the same time occur in the context of small groups--miniature learning communities. Many learning activities will take place at neighborhood learning centers. In general there will be a substantial integration of formal education and life experience.

Consistent with the expectation for a more or less planned society, regional educational authorities will closely coordinate their activities with the operations of other government and corporate institutions. An important outcome will be the facilitation of working and learning throughout the life cycle--both through alternating periods of working and learning, and by combining the two domains in part-time fashion. The future society, not surprisingly, will be a meritocratic one; occupational certification, however, will be the responsibility of governmental agencies rather than educational institutions (and such certification will be based on demonstrated competency rather than time spent in schooling).

Government at all levels will have recognized the significance of lifelong learning for the well-being of the state. Continuous development of the abilities of individuals will come to be viewed as a capital investment (after Striner, 1972), and there will accordingly be massive

government funding.* While a number of financing strategies are conceivable,** what is likely is some form of "entitlement" by which all adults are supported, say, for one year off for education in every ten years.

What about the content, the "curriculum," of publicly-supported education? In general it will be planned to meet the needs and interests of individuals in the region. Early education, however, in addition to mastery of basic skills of communication, will be focused to some major degree on learning-to-learn and development of intellectual curiosity. Techniques and environments for inculcating the skills and values of the "autonomous learner" will have been invented. We spoke of the need for "interdependent" or "living-in-a-small-community" training, as well as education in "civic literacy" as keys to living satisfying lives in a highly rationalized society. To this learning "core" could be added some form of "global awareness" or "world order" education.***

Yet, all these concepts, as stated, seem abstract and vaguely theoretical. Let us argue, to get quickly to the point, that it is legitimate for the content "core" of public education to reflect and nourish the ideals of the state and society. What, then, will these ideals be?

* By the year 2000, if for no other reason than that there will be so many of them (voting), the state will have reached an intelligent accommodation with its older citizens. Educational services, together with other services, will be available to older people at little or no personal cost.

** Several approaches have already proved successful in Europe.

*** "World order education...is citizenship education which transcends the nationalistic and pre-ecological orientation of the old citizenship education. It is global in outlook, human-value centered, problem solving and futurist" (Boyer, 1975).

The Good Society. What to say? The idea is sizable. We are not professional philosophers, not even amateur ones. We find it difficult to think beyond political, philosophical and religious traditions with which we are familiar. And our thinking is further colored, deeply, by the grotesque moral lapses that the nation and world have witnessed in just the past four decades, the past decade, and even the last three years.

As individuals interested in education, we are committed to a view of education as an instrument for the emancipation and self-actualization of individuals, and indirectly, to the actualization of the society. As dabblers in social analysis and social futures, we are impressed by the march of technology and are concerned about what its impact on the lives of individuals might be. As informed citizens of a nation and state, we worry for the survival of the civilization in the face of population growth and depletion of natural resources. And as moralists, we assert that there are principles of right conduct that must govern both institutional and individual behavior.

We offer the following social ethics as a beginning conceptualization of some of the ideals we think will--indeed, must--undergird the new society, and inform the heart of its education:

An ethics of integrity--honesty, openness, fair-dealing;

An ethics of self-actualization--a commitment to full realization of one's own potential, respect for individual potential and for the chance for its realization by everyone;

An ethics of commitment to community--to work for a balancing of individual freedom and social interdependence in small communities in the context of an otherwise impersonal, technocratic society.

An ethics of service--rather than profiteering, acquisitiveness, and exploitation.

An ethics of participation--active involvement in the political life of the community and state;

An ethics of conservation--parsimony rather than prodigality, recycling on behalf of ecological balance;

An ethics of respect for the worth of all people--an acceptance of the pluralistic planet with all its implications;

An ethics of compassion--the good society as the humane society.

In the meantime, the good society--the humane, learning society--needless to say, is some years down the road. No matter how bright the vision, it will not soon be reached. Social change in America is evolutionary, gradual, fumbling. We will grope our way. If it is assumed, however, that education, lifelong, is a means to the good society, there are implications for the content of education in the meantime to be drawn from the line of thinking set down in the preceeding pages.

A rudimentary value system, as a set of social ethics, was posited. Arguably, an individual's values and moral stances are acquired from the totality of his culture (including deliberate school experiences). On the other hand, acquisition of competencies, as skills, may well take place chiefly in more or less formal educational settings.

Listed below is a minimum set of competencies that are judged to be necessary for effective living in the future California society. Several have been touched on already.

A knowing-how-to-learn competency--skill in using available learning resources, an attitude about continuous learning, the concept of the "autonomous learner";

An interpersonal competency--ability to function effectively in groups and small communities, sensitivity to individual differences;

A vocational competency--continuously employable, developing or changing as the person sees fit;

A communications competency--a basic capacity to use the language effectively;

A political competency--civic literacy, global awareness, disposition to participate in governmental affairs at some level;

An ecological competency--an understanding of the basic issues of ecological balance and survival, a disposition to conserve;

A technological competency--a basic understanding of how things, especially electrically-powered things, work;

An aesthetic competency--authentic appreciation in one or more of the arts.

While earlier, some very general notions about the future education system were advanced, it is beyond the scope of this report to try to specify in detail how learning should be structured in order for the above competencies to be instilled. What is suggested is that it is worth beginning soon to consider what competencies will be needed, and how they may be imparted, if we wish the future social order to be something in the nature of a humane learning society.

CONCLUSIONS

From the evidence presented in the first section of this report, it appears that about one out of every four California adults aged 18 or older was participating last fall in some form of postsecondary education, either on a part-time or full-time basis, in degree-credit or non-credit courses, at an adult school, college, or university. Over a million of these nearly 4 million adults were enrolled in adult programs of local school districts; another million were studying at community colleges; and the remainder were attending either the State University and Colleges, the University of California, or private specialty schools, colleges, or universities. Rather than being typified by full-time attendance, over two-thirds of them were enrolled part-time. Rather than being typically "college-age," at least half of them were older than 25. Many of them sought occupational advancement, but an equal if not larger number were enrolled for other reasons--to be better informed, to deal more effectively with personal problems, to gain greater satisfaction and happiness from their lives.

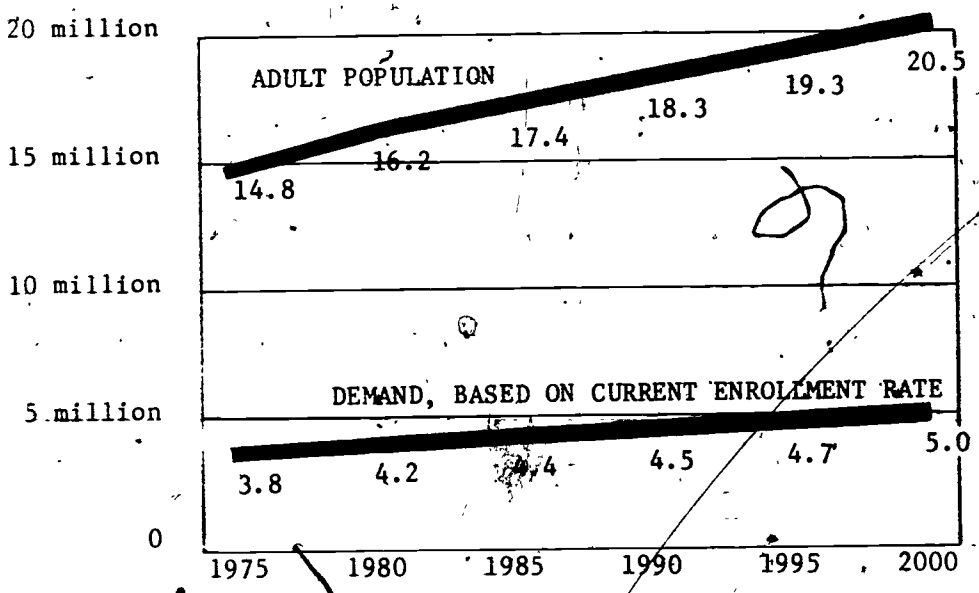
These adults, who do not include in their numbers the uncounted thousands engaged in on-the-job training or informal education through community agencies, churches, associations, agricultural extension, and other organizations, define the present demand for postsecondary opportunities in California's educational institutions. With the adult population of the state expected to increase from 14 million this year to 20 million by the year 2000, some 5 million of the state's adult citizens will be enrolled in school or college programs 25 years from now, based on the present level of demand. Educational planners can consider the numbers

in Figure 1 as the most minimal demand likely for postsecondary enrollments in the future and as the minimum definition of California's need for future postsecondary educational opportunities.

FIGURE 1

Minimal Demand for Postsecondary Opportunities, 1975-2000

(in millions)



Source: Population projections of California adults aged 18 and older from the Population Research Unit, Budget Division, California State Department of Finance. Educational demand based on 1974 enrollment rate from section I as calculated for each age group in section II and applied against the projected population in each age cohort.

Clearly, however, this rate of demand does not equal the need for postsecondary opportunities in California. As noted in the first section, adults who participate in education are largely the well-educated, well-employed, and well-off. They are not representative of the population at

large nor even of all adults who would like to participate in further education. Three-fifths of the full-time students, for example, are men, while only two-fifths are women. Only 4 percent of California's agricultural and industrial laborers who were surveyed for this report were engaged in any form of education beyond the high school, compared to 25 percent of the professional and managerial employees. And infrequently represented amont the learners are the older adults, the less educated, and the poor.

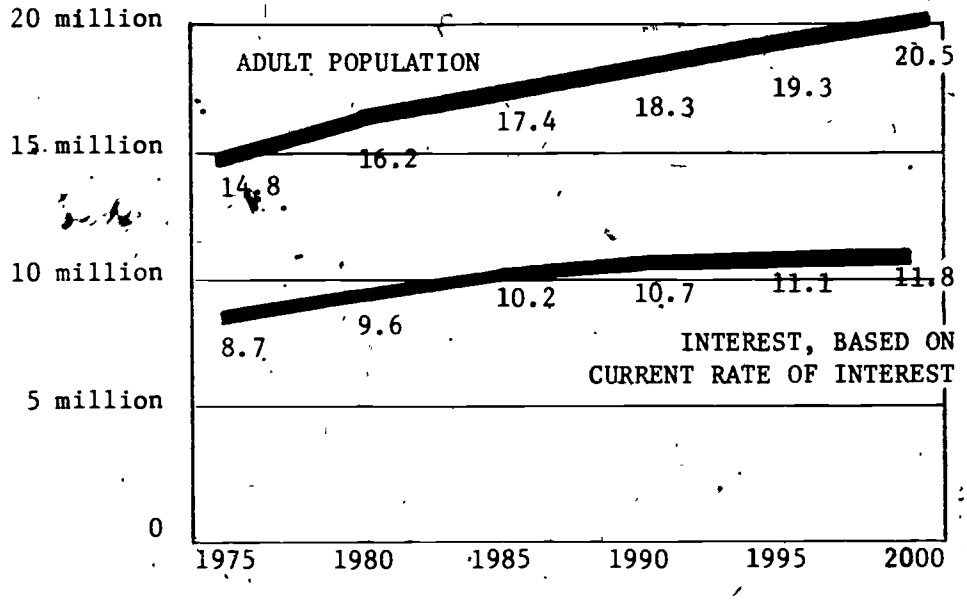
Moreover, as the survey data in the second section indicated, interest in continued education is expressed by over twice as many adults as are currently enrolled. Six times as many Californians in their sixties and seventies would like to participate as the 3 percent now involved. Ten times as many laborers are interested in further education as the 4 percent enrolled. Fully 50 percent of Californians of Mexican or Spanish descent want to participate but are not now doing so, compared to 15 percent now continuing their studies. And one out of every 10 persons interested in more education feels unable to pay anything for their studies--with the proportion highest among the poor, the racial minorities, and the elderly. In all, presently between 4 and 5 million California adults would like to continue their education beyond high school but for one reason or another are not now actually enrolled.

Counting both those who are enrolled and these who are only interested, some 8.4 million of California's 14 million adults--three out of every five--wish to engage in further education of some kind during the next two years. Even if this rate of interest in education does not grow over the next quarter century, as Figure 2 shows, by the end of the century some 11.8 million are likely to be similarly interested.

FIGURE 2

Minimal Interest in Postsecondary Opportunities, 1975-2000

(in millions)



Source: Population projections from Population Research Unit, Budget Division, California State Department of Finance. Educational interest based on 1974 rates of interest for each age group in Section II and applied against the projected population in each age cohort.

But will this current level of interest equal Californians' need for postsecondary opportunities in the future? And will California meet its needs for postsecondary alternatives if it responds only to this current level of interest in education? The evidence from Sections II and III of this report suggest not to both questions. Four reasons stand out:

- First, Californians' interest in education beyond the high school will continue to grow. Both California data and national studies indicate that education itself is a stimulus for more education. Thus, because of their present level of schooling, today's young adults are more likely to want further educational opportunities 20 and 30 years from now than their predecessors of 20 and 30 years ago seek today. In addition, as Section III

indicates, the desire for greater job mobility, the possibilities of increased leisure time, and the opportunities of worker's sabbaticals and early retirement are likely to lead to greater educational participation. More women will probably return to class; adults in general will seek to improve their skills and competencies; and older citizens will look to learning both for social and intellectual stimulation. All in all, interest in education for personal fulfillment will expand throughout the life cycle.

- Second, the need for greater competence and thus continued education will grow. California's post-industrial economy will continue to become more advanced and technological, requiring more occupational training and retraining. As it becomes even more service oriented, it will require longer career preparation, stricter certification, and periodic relicensure of professionals. And as social change continues, effective citizenship will require recurrent opportunities for further adult education rather than just the completion of schooling during late adolescence. In short, California's economy and society will demand more advanced job skills and personal competence.

- Third, although adults interested in education are more representative of the general public than those who are currently enrolled, they too represent a disproportionate number of the successful and affluent rather than a cross-section of citizens. Besides the barriers of cost, other obstacles for some adults include their home and work responsibilities, course schedule limitations, child care problems, transportation difficulties, and personal feelings of inadequacy and inability; and these

problems limit some groups more than others from participating. In other words, the conditions and wherewithal to fulfill their educational interests are unequally distributed throughout the adult population.

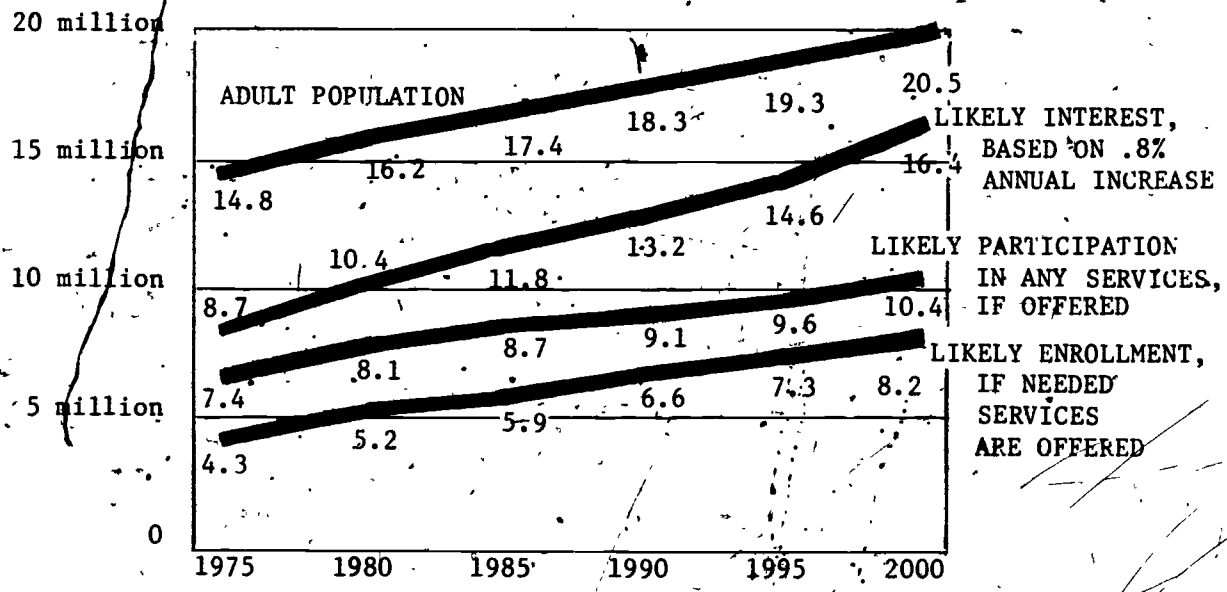
Fourth, and most important, evidence points to extensive interest in various educational services beyond simply that of instruction--such as educational guidance, personal counseling, evaluation, certification, and referral. At least one in every three Californians, according to the Post-secondary Alternatives survey, would use these non-instructional resources today if they were available to assess their personal growth and potential, test their strengths and weaknesses in various subjects and skills, obtain information about educational opportunities, or receive recognition for their non-academic educational attainments. And because most people are unlikely to express great interest in services with which they have had no experience, all indications are that the very creation of such services will create an increasing demand for them, just as the creation of an educational institution in a community creates its own unanticipated clientele.

In sum, California's natural growth of interest in education will be augmented in the future by the necessity for recurrent education, for more egalitarian opportunities, and a wider range of educational services; and the supply of these opportunities and services will in turn stimulate further interest. As a result, it does not appear unreasonable to assume that throughout the remainder of this century interest in further learning will grow at a rate of .8 percent a year, or 8 percent each decade, for a total of 20 percent over the quarter century. If so, by the year 2000, as Figure 3 indicates, some 16.4 million Californians--80 percent of the total--will express <u>interest</u> in further education.

FIGURE 3

Likely Need for Postsecondary Opportunities, 1975-2000

(in millions)



Source: Education interest calculated as rising .8 percent a year from the 1974 rate of interest. Likely participation rate based on one-half the total population, and likely enrollment rate based on one-half the amount of interest.

If even half of these adults who are likely to be interested enroll for at least one course during the year, the demand for postsecondary opportunities by the turn of the century will be over twice the current rate. Some 8.2 million Californians would be participating in courses, compared to the less than 4 million now. Rather than a fourth of California's adults being enrolled, as at present, up to 40 percent may be.

Counting as well the other adults who will need non-instructional services such as counseling, testing, and career planning without enrolling in courses, California should be prepared to serve fully 50 percent of the state's adults in some way through its postsecondary system at least once every year in the

future. By the year 2000, the state should expect that most every adult would enroll in some educational program, workshop, or course at least once in every two or three years. And one out of every ten adults might take advantage each year of educational information, assessment, and certification services.

California's educational challenge for the foreseeable future is to narrow the gap between its likely supply of opportunities and this extent of need by increasing the postsecondary alternatives available to its citizens.

Where is the gap the largest? Where will the need be greatest?

- In terms of groups of citizens, the largest discrepancy between participation and unfulfilled interest may continue to occur among the elderly and the disadvantaged--in particular, among the less skilled occupationally, among high-school dropouts, and among Californians of Mexican and Spanish descent. It is not as great for the advantaged--for example, among college graduates--even though interest is highest among these groups.

- In terms of educational offerings, the need is not only for degree programs but also for non-degree courses, for evening courses, and for non-instructional services that will help Californians make better use of existing programs. Now, at least half of the state's potential learners are not interested in working toward a degree or earning credits but instead in taking occasional courses and non-degree programs. Yet existing collegiate programs are oriented largely to the other half. And while many potential learners seek educational services within the state to assess their occupational and personal abilities and competencies and obtain information and coun-

sel about educational opportunities in their area, these services have so far largely been limited to students already enrolled in institutions--not to citizens at large.

- In terms of subject-matter offerings, the need appears greatest for specialized instruction. Many Californians have sophisticated educational interests of a technical and professional nature beyond those met by undergraduate courses. While the state's educational institutions offer an extensive array of elementary and introductory courses, new methods are needed to serve these high-level interests--and to serve them in other ways than through campus-based programs scheduled during the day. Presently, the most frequently mentioned barriers to continued learning about which the state can take direct action are those of costs, the scheduling of courses, and the location of learning centers. Current policies have favored on-campus, full-time, degree credit enrollments beyond the high school. The evidence from this report suggests the need for more equity, flexibility, and geographic diversity in the state's postsecondary system.

Commentators about America have noted that the genius of our society and of our educational system can be summarized in one word: emancipation --emancipation from ignorance, emancipation from limitations, emancipation from the chance restrictions of environment and fortune. In many ways, California as a state has exemplified this goal. Its development of its system of University, State University and College, community college, and adult school resources has been the envy of the nation if not the world. It ranks among the leading states in educating its youth and young adults.

Now, to reduce the gap between educational participation and interest for more citizens than just those of traditional college age, it needs to expand its postsecondary alternatives for all adults. They, as well as youth, seek the emancipation of education.

Twenty-eight years ago in 1947--before half of today's Californians were born--the President's Commission on Higher Education, seeking to meet the post-war needs of American society, called on colleges and universities to "elevate adult education to a position of equal importance with any of their functions." It argued:

> Adult education in the past has been too inflexible, much too bound by traditional notions of proper educational procedures. Extension activities for years have been stultified by the idea that adult education consists merely of the transmission to mature people of campus courses developed to meet the needs of adolescents (1947, pp. 97, 98).

Twenty-eight years later, at the end of another period of conflict, is it not time to rectify this continuing problem in responding to Californians' hopes for lifelong learning?

APPENDIX: POSTSECONDARY ALTERNATIVES SURVEY METHODOLOGY AND QUESTIONS

The following series of questions were asked for the Postsecondary Alternatives survey as part of the regular "Fieldscope" survey of California adults by the Field Research Corporation between November 6 and 16, 1974. The sample of 1,048 was selected from the survey universe of California adults aged 18 or over who reside in residential dwelling units. Not included in the population are persons residing in hotels or other transient quarters, migrant workers, inmates of institutions, or military personnel residing in government quarters.

The Fieldscope sample is based on a probability design consisting of 120 primary sampling points with probability of selection in proportion to population and with two clusters per sampling point. Specific cluster locations are determined by random selection of key addresses, using current telephone directories as the sampling frame. Non-telephone homes are drawn into the sample by the clustering procedure and sample design weights are applied to the results to correct for the telephone density bias of this frame.

Households are selected using a systematic counting interval to assure that the interviewer exerts no influence on the selection of households to be included. Within households, a controlled selection procedure is used to yield a proper distribution of age and sex ratios.

Interviews are conducted face-to-face in the homes of respondents. Interviewers make up to three personal attempts, on different days and at different times, to complete an interview at each designated household. All interviewing is done in the late afternoon, evenings, and weekends to increase the chances of finding working people at home.

A second weighting procedure is applied to bring the sample into conformity with census-established population parameters of sex and age within the various statistical areas of the state. Percentages included in this report are calculated on this weighted base for all categories of respondents except for race, educational attainment, and occupational category.

The next series of questions has to do with your possible interest in <u>further education</u> for yourself -- education that could help you in your job or in other ways help make your life more satisfying or productive.

1. First, are you in fact engaged at the present time in any kind of education beyond high school?

YES, AS A FULL-TIME STUDENT 1
YES, AS A PART-TIME STUDENT (AT LEAST ONE COURSE) 2
NO, NOT NOW A STUDENT 3

2. Within the next two years, would you like to engage in some form of further learning beyond high school — for example, take a course or begin a program of learning, either for credit or not for credit?

YES, WOULD LIKE TO ENGAGE IN FURTHER LEARNING . . . . . 1 (CONTINUE WITH Q.3)

NO, NOT INTERESTED IN ENGAGING IN FURTHER LEARNING . . . . . 2 (SKIP TO QUES.11)

3. What is the one subject, topic or skill that you would like to study or learn more about?

SUBJECT, TOPIC OR SKILL WOULD LIKE TO LEARN MORE ABOUT: _____

_____

4. (SHOW CARD E) For which of the reasons listed on this card are you interested in further learning. Tell me all the reasons you would consider important in your decision to pursue further education? (RECORD AS MANY AS RESPONDENT MENTIONS)

A. Meet new people, get away from daily routines, get involved in something new 1

B. To work toward a degree (to resume college work that was interrupted, for example) 2

C. To be better informed: gain new knowledge, cultural enrichment, etc., . 3

D. For personal satisfaction, personal happiness 4

E. To be a better parent, husband or wife 5

F. To deal more effectively with personal situations and problems 6

G. To learn more about how to solve community problems or to bring about change in the community 7

H. To improve my income 8

I. To prepare for a job (or a new job) 9

J. For a job requirement, to perform the job better, to obtain a promotion 0

Other: _____ (specify)

5. As you know, there are a number of ways people can study or learn. (SHOW CARD F) In view of your work and family commitments, life style and so forth, which of the ways listed on this card are appropriate for you? (RECORD ALL THAT RESPONDENT MENTIONS)

A. On-the-job training - employer sponsored 1

B. On-the-job training - union sponsored 2

C. Learning that combines work experience with meetings with an instructor and other students 3

D. Conventional classes, during the day, at the nearest college campus offering the courses you want 4

E. Conventional classes, during the evening, at the nearest college campus offering the courses you want 5

F. Day classes at a location within five miles of your home 6

G. Evening classes at a location within five miles of your home 7

H. Sessions held on weekends (at a convenient location) 8

I. Courses using television, either at your home or at a location within five miles of your home, with periodic meetings with an instructor 9

J. Independent study and/or projects, in consultation with an instructor at a convenient time and place 0

K. Correspondence study at home 1

L. Private lessons 2

M. Other: _____ 3
(specify)

6. There are many places people can go to study or learn. (SHOW CARD G) Where would you most prefer to engage in a program of learning? Assume that all the locations listed on the card are fully creditable toward a college degree or for satisfying whatever reasons you have for pursuing further learning. Please indicate the one institution or location you would most prefer. (RECORD ONLY ONE ANSWER)

A. At home, through televised or correspondence courses 1

B. At your place of work 2

C. With a private tutor 3

D. At an "open college", "university without walls", or "free university" (for which fees generally are charged and where degrees may be obtained) . . . 4

E. At a library, museum, YMCA, church, or other community agency 5

F. At an adult learning center that would be located within five miles of your home 6

G. At a high school 7

H. At a private vocational, trade or business school 8

I. At a community or junior college campus 9

J. At a private college or university 0

K. At a State University or College campus 1

L. At a University or California campus 2

M. Other: _____ 3
(specify)

7. (SHOW CARD H) Which of these is the chief reason for your choosing (ANSWER GIVEN IN QUESTION 6) as a location for further study? (RECORD ONLY ONE ANSWER)

A. Convenience 1

B. Programs are offered that I want 2

C. Prestige of the institution 3

D. Cost 4

E. Will be most comfortable with the people — instructors, students — there 5

F. Will generally enjoy studying there the most 6

G. Other: _____ 7
(specify)

8. Would you want to earn credit toward a degree or certificate for the study you are interested in doing? (IF YES, ASK) What kind of degree or certificate are you interested in? (SHOW CARD I) (RECORD ONLY ONE ANSWER)

Not interested in any form of academic credit (i.e., degree or certificate) 1

Interested in:

A. A statement of satisfactory completion of the course or program, e.g., for possible use in job advancement 2

B. A public school credential (teaching, counseling, special education, etc.) 3

C. Certificate or license needed for other specific occupation (beautician, electrician, real estate salesperson, etc.) 4

D. AA, Associate of Arts, community college degree 5

E. BA, Bachelors, four-year college degree 6

F. MA, Masters degree 7

G. Graduate or professional degree (Ph.D. MD, law degree, etc.) 8

H. Other degree or certificate: _____ 9
(specify)

9. What is the highest amount of money you would be willing to pay for a course you want that meets three hours per week for a semester (roughly four months), or for some other educational activity that provides three units credit? (DO NOT READ LIST) (RECORD THE ONE CLOSEST AMOUNT)

Can't afford to pay anything for further education 1

Less than $15 2
$15 - $44 . . . ($30) 3
$45 - $74 . . . ($60) 4
$75 - $104 . . . ($90) 5
$105 - $134 . . ($120) 6
$135 - $164 . . ($150) 7
$165 or more 8
Not sure what I can pay 9

10. About how many hours per week altogether would you want to devote to your studies including class time, homework, travel, and so forth?

5 hours or less per week 1
6 - 9 hours 2
10 - 19 hours 3
20 - 29 hours 4
30 - 39 hours 5
40 hours or more 6
Not sure how many hours 7

ASK EVERYONE:

11. (SHOW CARD J) Listed on this card are various services that could be provided by a comprehensive adult education program. Which of these services do you think you would be interested in using if the location were convenient and the fees low? (RECORD AS MANY AS RESPONDENT MENTIONS)

A.	Take a course or other program of learning	1
B.	Receive training in basic skills -- reading, writing, basic arithmetic	2
C.	Use the location as a place to study	3
D.	Discuss educational and/or career plans with a staff member	4
E.	Personal counseling	5
F.	Obtain information about educational opportunities in the region -- where to find courses; how to use libraries, museums, etc.; where to take equivalency exams; and so forth	6
G.	Evaluation of non-college experiences -- on the job or in the military, for example -- for possible credit toward a degree	7
H.	Testing to obtain advanced standing in a program of studies	8
I.	Testing of strengths and weaknesses in various subjects or skills	9
J.	Assessment of personal competencies -- personal growth, potential for living a more productive life, and so forth	0
K.	Putting together and maintaining a record (like a transcript) of all my educational work (from all schools I have attended) and perhaps all my job experiences	1
L.	Would not be interested in using any of these services	2

12. (SHOW CARD K) Which of these are likely to be important reasons why you might not enroll in some kind of study in the next two years? Please indicate any factors that might prevent you from pursuing further education for yourself? (RECORD AS MANY AS RESPONDENT MENTIONS)

A.	Cost (fees, books, transportation, and so forth)	1
B.	No college close by offering the courses I want	2
C.	Courses available generally don't seem useful or practical	3
D.	Courses available are not interesting to me	4
E.	Courses I want are not scheduled when I can attend	5
F.	Home responsibilities	6
G.	Job responsibilities	7
H.	Transportation problems	8
I.	Child care problems	9
J.	Don't know how to get enrolled, how to get information, and so forth	0
K.	Teachers would not understand my culture and my learning needs and problems.	1
L.	No reason or incentive for further education; further learning would not help me at all	2
M.	Not enough energy or stamina	3
N.	A feeling that I probably could not do the work	4
O.	A feeling that I am too old to go back to school	5
P.	Am simply no longer interested in any more formal schooling	6
Q.	Other reason: _____ (specify)	7

SEX: MALE 1

FEMALE 2

May I ask your age, please?

18 - 20 YEARS	1
21 - 24 YEARS	2
25 - 29 YEARS	3
30 - 34 YEARS	4
35 - 39 YEARS	5
40 - 44 YEARS	6
45 - 49 YEARS	7
50 - 54 YEARS	8
55 - 59 YEARS	9
60 - 64 YEARS	0
65 - 69 YEARS	X
70 OR OVER	Y

INTERVIEWER: CLASSIFY RESPONDENT BY APPEARANCE AND ACCENT IF POSSIBLE. IF IN DOUBT, ASK.

WHITE/CAUCASIAN/ANGLO	1
NEGRO/BLACK	2
ORIENTAL	3
MEXICAN/LATIN AMERICAN (includes Cuban and Puerto Rican)	4
OTHER_____ (specify)	5

What was the last grade you completed in school?

8TH GRADE OR LESS	1
9 - 11TH	2
12TH (HIGH SCHOOL COMPLETED)	3
1-2 YRS. COLLEGE, BUSINESS OR TECHNICAL SCHOOL	4
3 YEARS COLLEGE	5
COMPLETED COLLEGE	6
COLLEGE ADVANCED DEGREE	7

What kind of work does the chief earner do?

_____ (type of work)

_____ (industry)

Now, we don't care to know your exact income, but would you look at this card and tell me into which of these groups your total family income falls? (HAND CARD U)

A. UNDER $3,000	1
B. $3,000 - $4,999	2
C. $5,000 - $6,999	3
D. $7,000 - $9,999	4
E. $10,000 - $14,999	5
F. $15,000 - $19,999	6
G. $20,000 AND OVER	7

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