DOCUMENT RESUME

ED 375 701 HE 027 785

AUTHOR Pace, C. Robert
TITLE The Undergraduates: A Report of Their Activities and Progress in College in the 1980's.
INSTITUTION California Univ., Los Angeles. Center for the Study of Evaluation.
PUB DATE 90
NOTE 164p.
PUB TYPE Books (010) -- Tests/Evaluation Instruments (160) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Academic Achievement; *Educational Experience; Higher Education; Institutional Characteristics; National Surveys; Reading Habits; *Student Attitudes; Student Behavior; *Student Characteristics; Study Habits; *Undergraduate Students; *Undergraduate Study
IDENTIFIERS *College Student Experiences Questionnaire

ABSTRACT

This book reports the findings of a national survey of college student experiences in the 1980s, particularly focusing on what students do and what they perceive to have gained from their college experience. Data for this book are from the responses of 24,427 undergraduates from 74 colleges and universities to the "College Student Experiences Questionnaire" (CSEQ). The first two chapters introduce issues and describe the study. Twelve chapters analyze and discuss the data on: (1) types of colleges and their similarities and differences; (2) activities common to diverse types of colleges; (3) different experiences at different colleges; (4) student perceptions of their progress; (5) campus and curriculum characteristics; (6) student experiences year by year during their college tenure; (7) influence of age, gender, and ethnicity; (8) time spent on reading, writing, and study; (9) characteristics of the one third of students who are disengaged; (10) relationships between student effort and attainment; (11) student diversity and student development; and (12) current criticism of higher education. Major conclusions of the study are that the selective liberal arts colleges are uniquely powerful environments for student learning and development and that, for other types of institutions, there are few differences in student activities or outcomes that can be attributed to institution type. Contains a copy of the CSEQ. (JB)

THE UNDERGRADUATES

C. ROBERT PACE

THE

UNDERGRADUATES

A Report of Their Activities and Progress in College in the 1980's

C. Robert Pace

Published by

Center for the Study of Evaluation
University of California, Los Angeles

THE UNDERGRADUATES

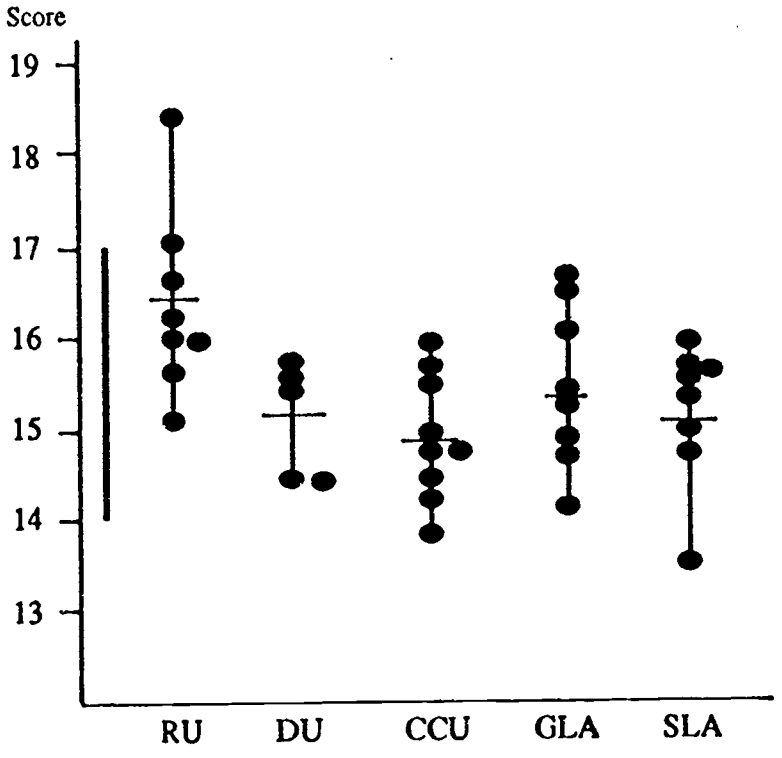
NUMERICAL CORRECTIONS

The activity scale titled Science/Technology consists of 12 activities. However, the last four activities, related to the use of computers, did not fit well with the first eight items, related to science principles and procedures. In most of the tables in the book the Sci/Tech score is based only on the first 8 items in the scale. In two instances, however, the 12 item scale results were reported. These should be corrected as follows:

Page 87: Average score on the Science/Technology scale are:

White	Black	Hispanic	Asian
16	15	16	18

Page 131: The QE Sci/Tech chart should read as follows:



Other corrections:

Page 51:

Activity Scales	Maximum Difference
Dormitory or Fraternity/Sorority	3
Science	2

Page 141: line 14 change 50 hours to 40 hours

Page 174: line 15 change "20 hours a week" to "less than 20 hours a week".

CONTENTS

CHAPTER 1

COLLEGES AND CRITICS

In the decade of the 1980's there were, each year, about six million undergraduate students attending one of the four-year colleges and universities that offer a bachelors degree. This book is an account of what they do when they are there. Other young people and adults are enrolled in other college programs—four and a half million in the 2-year community and junior colleges, and another half million in various specialized schools; but this book is not about them. The undergraduates whose activities and impressions are described in this book are, for the most part, ones for whom going to college means going away to college. They do not live at home, they live on or near the campus, and they attend fulltime. For them, college is a place, a physical setting, an environment, a habitat where one lives with other students engaged in the common activities of attending classes, reading and studying, taking exams, exploring relationships with others, perhaps participating in various clubs and organizations, and expanding one's knowledge, intellectual skills, and personal and social competence. For these students it is appropriate to think about "the college experience," for college is a special place, a special range of activities, at a special time in one's life. Whatever impact, or influence, or impression college may have on its students should be clearest and most conclusive on those who have been most fully engaged in the experience.

Undergraduates in the baccalaureate degree granting institutions are the hard-core of American higher education. It is about them and the institutions they attend that most of the recent critical analyses of higher

education have been written. We begin our report, then, with some impressions about who they are, where they are, and what is being said about the quality of their education.

The Carnegie Foundation classifies the 4-year institutions in three broad groups—liberal arts colleges, comprehensive colleges and universities, and doctoral granting universities. In their report published in 1987, they listed 1378 institutions.

Liberal arts colleges number 564. They are small colleges, often located in small towns; and nearly all of them are private rather than public. Many are affiliated with a religious denomination; many others are non-sectarian. All of their students are undergraduates. Although the liberal arts colleges are two-fifths of all the institutions, they enroll one-tenth of all the undergraduates—about 600,000 of the 6,000,000. Both the Carnegie Foundation and our own analyses further subdivide the colleges into two groups based on the academic selectivity of the student body. One group, which we call the highly selective liberal arts colleges (SLA), typically admit most of their students from the top ten-percent in high school grades and college entrance test scores. They are high prestige places with many more applicants than they have room to admit. There are 125 of these colleges and they account for about 3% of all undergraduates. The second group consists of what I call the general liberal arts colleges (GLA). It includes all the remaining 439 colleges and accounts for 7% of all undergraduate enrollments.

The second major group, and the largest both in the number of institutions and the number of undergraduates attending them, are the comprehensive colleges and universities (CCU). There are 601 of them and they account for about 2,800,000 undergraduates. This is 44% of all the baccalaureate institutions and 47% of all the undergraduate students.

These institutions are bigger than liberal arts colleges, and they offer master's degrees in various subjects. Some are not much bigger, perhaps only 3,000 or so students compared with the typical enrollment of fewer than 2,000 in most liberal arts colleges, and they may offer a master's degree in only a few fields, perhaps education, business, engineering. Other comprehensive institutions have very large enrollments, 30,000 or so in some of the California State Colleges and Universities, and offer master's degrees and first professional degrees in many fields. None of these institutions offer a doctorate degree or any advanced professional degree such as an MD.

The third group consists of the institutions that offer a doctorate degree, PhD, and advanced professional degrees in many fields. The most famous, and the biggest, universities are in this group—the Ivy League universities such as Harvard and Yale, the big State universities such as Michigan, Minnesota, Berkeley, and UCLA. All of the states have a state university. Other highly selective private universities, such as Chicago and Stanford, also fall in this group. There are 213 universities that award a doctoral degree; and they have about 2,600,000 undergraduate students. That accounts for 15% of the institutions and 43% of the undergraduate students. The Carnegie Foundation sub-divides these institutions into two categories based on the extent of their involvement in research. One category, called research universities (RU) has 103 institutions that receive annually at least 12 1/2 million dollars in federal support for research and development. The other category, called doctorate-granting universities (DU) consists of 110 institutions.

The types of institutions, as described above, are as follows:

Abbreviation	Types of Institutions	Number of Institutions	Percent of Total
RU	Research Universities	103	7
DU	Doctorate granting Universities	110	8
CCU	Comprehensive Colleges & Universities	601	44
GLA	General Liberal Arts Colleges	439	32
SLA	Selective Liberal Arts Colleges	125	9
		1,378	100

The approximate number of undergraduate students at each type of institution are summarized here:

Abbreviation	Types of Institutions	Number of Undergraduates	Percent of Total
RU	Research Universities	1,648,000	28
DU	Doctorate granting Universities	920,000	15
CCU	Comprehensive Colleges & Universities	2,810,000	47
GLA	General Liberal Arts Colleges	391,000	7
SLA	Selective Liberal Arts Colleges	191,000	3
		5,960,000	100

The enrollment numbers reported by the Carnegie Foundation are total enrollments. This includes graduate students as well as undergraduates. Arbitrarily we have estimated that about one-fourth of the students in the research universities and the doctoral universities are graduate students, and about one-fifth of the students at the comprehensive colleges and universities are graduate students. We have then reduced the total enrollment figure listed by the Carnegie Foundation by these percentages to get estimates of their undergraduate enrollment.

It is surely evident from this variety of institutions that the undergraduate experience might be very different at different places. The experience could be at a small southern Baptist college in Texas, a state university in Montana or Mississippi, a former teachers college now expanded to a comprehensive institution in up-state New York, a massive Big Ten university, or an academically very selective private college in the east such as Swarthmore or Amherst. All this diversity makes generalizations about undergraduate education difficult and potentially misleading.

It is perhaps for this reason that most of the recent criticisms of higher education have not really faced up to the diversity of student bodies across the country. On the one hand, critics say that diversity is a strength which should be preserved; but on the other hand, critics see diversity as a lack of common purpose, a loss of a sense of mission, a system in disarray. There are, of course, many perspectives from which one might view higher education; but all of them confront diversity—diversity of courses and curricula, diversity of institutions, diversity of students, diversity of purposes. Moreover, the obvious fact of diversity persuades many critics to argue that there should be less diversity, more agreement about purposes, more structure in the curriculum. Two of the critical reports in the 1980's focused on the content of undergraduate education. One focused on goals for student learning. And one dealt broadly with the institution as an organization.

The report from the National Endowment for the Humanities, written by William Bennett (1984), argues that the emphasis in undergraduate education should be on the crucial and central importance of history, philosophy, languages, and literature for understanding the heritage of western civilization. It is this heritage that is the source of the most powerful and pervasive influences on American society. Bennett believes

that knowledge in the humanities is essential to a college education. This includes:

- Origins and development of western civilization—major trends in society, religion, art, literature, politics, as well as basic chronology.
- Careful reading of several master works of English, American, and European literature.
- Understanding of the most significant ideas and debates in the history of philosophy.
- Demonstrable proficiency in a foreign language (modern or classical) and the ability to view the language as an avenue into another culture.
- Familiarity with at least one non-western culture or civilization.
- The history of science and technology.

Regardless of the career interests of students, and the many fields of specialization found in college catalogues, there should be a common concern for the knowledge and understanding advocated in this report from the National Endowment for the Humanities. The important issue for higher education is not in the diversity of students going to college; rather it is in the lack of coherence and conviction about what is essential for all student to learn.

An analysis published by the Association of American Colleges, *Integrity in the College Curriculum* (1985), also deals mainly with the curriculum rather than with the diversity of students enrolled in the colleges. It recommends that all colleges provide, and all students should have, certain essential types of experiences, aimed at understanding how knowledge is created, and the methods and processes and modes of inquiry. This is not a list of "subject-matter." It is, as the report states, a list of essential experiences. These are:

- Inquiry, abstract logical thinking, critical analysis.

- Literacy: writing, reading, speaking, listening.
- Understanding numerical data.
- Historical consciousness.
- Science—its nature, methods, reliability, and limitations.
- Values.
- Appreciation and experience of the fine and performing arts.
- International and multicultural experiences.
- Study in depth.

The key players in efforts to improve the education of undergraduates are the professors—their preparation for teaching, their dedication to the importance of teaching undergraduates, and their concern for the undergraduate curriculum.

The attention of the National Institute of Education (NIE) Report of the Study Group on the Conditions of Excellence in American Higher Education, *Involvement in Learning*, (1984), is on the undergraduate students. They have become excessively vocational; and so has the college curriculum. All students should have at least two full years of liberal education. The best preparation for the future is not narrow training for a specific job, but rather an education that will enable students to adapt to a changing world. This requires the abilities:

- to think critically;
- to synthesize large quantities of new information;
- to master the language skills (critical reading, effective composition, clear speech, careful listening);
- to draw on history and on the experiences of other nations;
- to apply the theories and methods of empirical investigation;
- to partake of and contribute to the richness of culture and citizenship of the nation;

- to pursue knowledge throughout one's life.

The most effective education is one which most fully involves the student in the learning process and the opportunities for enriching experiences in the college setting. The quality of education can be improved by three critical conditions: student involvement, high expectations, and assessment and feedback. Excellence in undergraduate education should be measured by student outcomes—by the knowledge, capacities, skills, and attitudes of students and by gains in these desired outcomes between entrance and graduation. This emphasis on the measurement, evaluation, and assessment of student learning and development is the distinguishing feature of the report. It does not say what should be taught; but it does say that all programs should demand college-level learning. It then says that the responsibility for defining specific standards of content, student performance and college-level learning falls on all academic institutions themselves. Each college should clarify its purpose and programs, the clientele it is prepared to serve, and the achievements it expects of the students it admits.

A fourth critique is a book, *College*, by Ernest Boyer (1987), president of the Carnegie Foundation for the Advancement of Teaching. Each of the other three reports had a special or major focus—the importance of the humanities in Bennett's report; the importance of methods of inquiry and essential types of student experiences in the AAC report; and, in the NIE report, the importance of student involvement, high expectations, and feedback as the conditions for effective learning, along with the importance of measuring the outcomes of undergraduate education. Boyer's book, in contrast, is a general picture of undergraduate education, drawing on history as well as current observations, and considering such aspects as administration, governance, faculty roles, admissions policy,

etc., as well as goals, curriculum, and student learning. The data come from extended college visitations at 29 institutions, interviews and observations, questionnaire responses from students, faculty, administrators, and others. Eight problems are examined:

- the transition from school to college;
- college goals and the curriculum;
- faculty priorities;
- the conditions of teaching and learning;
- the quality of campus life;
- governing the college;
- assessing the outcomes of college;
- the connection between the campus and the larger world.

With respect to each of these topics or problems there are recommendations for improved practice. Although the sub-title of Boyer's book is *The Undergraduate Experience in America*, the information it presents about undergraduates as obtained from the undergraduates themselves consists mainly of their attitudes and opinions—about courses, requirements, teaching, advising, etc., about their aspirations, values, and satisfactions, and about social-political-economic issues of national import. There are also, of course, questions about the students' status in college—major field, number of courses taken, year in school, campus residence. But there are only a half-dozen or so questions about students' activities.

The positive aim of these four reports is to encourage changes the authors believe would improve the quality of undergraduate education, but the argument that changes are needed emphasizes what is wrong, or inadequate, and thus creates a negative impression about the current state of undergraduate education. The catalogue of what is wrong includes the curriculum, the courses, exams, requirements, teaching, governance,

administration. Little is said about what's wrong with the students, other than poor writing and narrow vocational aims. And very little is said about what may be good in what students do and achieve, mainly because the authors of the reports didn't ask.

So, despite these and other critiques of higher education that were published in the decade of the 1980's, there may be a place for one more—a report which focuses almost entirely on what students do and what they get out of their efforts as seen by them. The base for the present report is not the curriculum, or the faculty, or the administration. The base is the students and their reported experiences and progress at different types of colleges and universities. None of the earlier reports have been explicitly diagnostic or differentiated with respect to institutional differences or to individual differences. Where the student reports in the present study come from and what they consist of are the subject of the next chapter.

Then, in the subsequent chapters, the characteristics of the college experience, as revealed by the students themselves, are explored in four sets of analyses. First, differences in student activities and outcomes related to the broad institutional setting are identified—research universities, doctoral universities, comprehensive colleges and universities, general liberal arts colleges, and selective liberal arts colleges. What difference does it make in what students do and what they gain depending on the types of institution they attend? And how big or how small are the differences between institutional types? Second, differences in experience within the institution are explored—differences in where they live, what they study, and how long they have been there. To what extent are activities and outcomes related to campus residence, major field, and year in school? Third, differences related to characteristics of the students are

indicated—specifically differences in activities and outcomes between older and younger students, between men and women, and between students who identify themselves as black, white, Hispanic, and Asian. And fourth, we look at the nature of the students investment in the educational process. How much time do they spend on academic activities? To what extent are they really engaged? To what extent is the amount, scope, and quality of their investment related to what they get out of college and to their satisfaction with the college experience? At the end of the book we offer some suggestions to the critics for a more balanced judgment, and to the colleges for a more effective student experience.

CHAPTER 2

QUESTIONS AND RESPONDENTS

The student reports that are the base for this book come from the responses to a questionnaire about their activities, impressions, and progress. Altogether there are 25,427 undergraduates from 74 colleges and universities whose responses, obtained during the years 1983–1986, are analyzed. In most of the 74 institutions, the questionnaire, titled *College Student Experiences Questionnaire (CSEQ)*, was distributed to a cross-section of undergraduates—freshmen, sophomores, juniors, and seniors. There were more than 200 colleges that had used the questionnaire from the time of its initial publication in 1979 to the end of 1986. We limited our analyses to the users in 1983–86, and to places where the composite results for each type of institution were fairly stable. Using the questionnaire was a voluntary act by the institution; responding to it was a voluntary act by the students who received it. This is not a random sample of institutions or of the undergraduates enrolled in them. It is a composite picture of the activities, impressions, and progress of students who voluntarily answered the questionnaire, and whose college experiences, collectively, span the decade of the 1980's. Seniors who responded to the questionnaire in the spring of 1983 would have been freshmen at the beginning of the decade; and freshmen who responded to the questionnaire in the spring of 1986 will presumably graduate at the end of the decade.

College Student Experiences Questionnaire (CSEQ)
Sample of Respondents: 1983 to 1986

Type of Institution	Number of institutions	Number of students
Research Universities (RU)	12	8370
Doctoral Universities (DU)	13	4934
Comprehensive Colleges & Universities (CCU)	18	6409
General Liberal Arts Colleges (GLA)	22	3410
Selective Liberal Arts Colleges (SLA)	9	2304
	74	25,427

Although this is not a random sample of students or of institutions, it is nonetheless, as far as we can tell, a fairly representative collection. As responses from additional colleges and students have accumulated, the overall results have not changed in any significant way.

The largest part of the *College Student Experiences Questionnaire* is a list of activities—of students' behavior that would contribute to their learning and development in college. There are 142 of these activities. With rare exceptions, all of the activities are directly observable, and all are voluntary rather than specifically required. The instructions are as follows: "In your experience at this college **during the current school year**, about how often have you done each of the following?" The student responds by indicating "never," "occasionally," "often," or "very often."

There are, of course, many college activities that are required—attending classes, taking exams, writing reports, reading texts, laboratory experiments or field work in certain courses, problem solving assignments in math or engineering, etc. There are also many college activities that do not contribute positively to students learning and development—cheating on a test, sleeping in class, drinking beer, smoking marijuana, etc. The

activities in the questionnaire are limited to ones that are viewed as desirable, as potentially making positive contributions to students' learning and development toward the goals of the college, as involving choices and initiative by the student, and to ones that are openly observable.

Many of the events and experiences in colleges occur in educational facilities that are fairly common—classrooms, libraries, science facilities, cultural facilities, athletic and recreational facilities, student unions, residence units. Other events and experiences are not associated with a particular physical facility but are also of major importance in college life—contacts with faculty members, experiences in writing, involvement in clubs and organizations, experiences related to self-understanding, acquaintances with other students, topics of conversation among students and the general level of those conversations. These fourteen topics, or aspects of college experience, (seven facilities, and seven other opportunities which the college makes possible) provide the structure for organizing the 142 activities in the questionnaire. Within each topic the activities reflect a range of effort or quality—some activities require more effort than others, and have a higher quality (greater potential for influencing learning or personal growth) than others. For most topics there are ten activities. Overall, the set of activities provides an inventory of the amount, scope, and quality of effort students put into using the campus facilities and opportunities. This is illustrated more fully by the following descriptions of the questionnaire content and the underlying "quality" dimensions in each topic.

COLLEGE ACTIVITIES

Use of College Facilities

Course Learning (Classroom) (10 activities)

From: relatively simple cognitive activities—such as taking notes, underlining, etc.
To: higher level cognitive activities—such as efforts to explain and organize

Library (10 activities)

From: routine, moderately exploratory use—using the card catalogue
To: increased amount of independent exploration and focused activity—as in browsing in the stacks, asked the librarian for help in finding material on some topic

Activities Related to Science/Technology (12 activities)

From: memorizing, watching, reading
To: efforts to explain, experiment, and develop skills

Cultural Facilities (Art, Music, Theater) (12 activities)

From: talking about and attending
To: efforts toward greater understanding (seeking the views of experts and critics) and personal involvement

Student Union (10 activities)

From: casual and informal use—had snacks, met friends, etc.
To: programmatic use—attended events, held meetings, etc.

Athletic and Recreation Facilities (10 activities)

From: generally informal use
To: greater efforts toward improvement and skilled performance

Dormitory or Fraternity/Sorority (10 activities)

From: general socializing, informal interpersonal activities
To: more organized activities, planned group activities

Use of Opportunities for Personal Experiences and Group Associations

Experiences with Faculty (10 activities)

From:	routine and casual
To:	more serious contacts—such as discussing careers, inviting criticisms, seeking counsel

Experiences in Writing (10 activities)

From:	general concern about the mechanics of writing
To:	greater concern with clarity and style, and the improvement of writing through revisions and criticisms

Clubs and Organizations (10 activities)

From:	awareness of events and organizations
To:	participation in organization activities

Personal Experiences (10 activities)

From:	general curiosity about understanding oneself and others
To:	more focused and expertly informed sources of self-understanding—as in reading, taking a test, talking with a counselor

Student Acquaintances (10 activities)

From:	making friends with different kinds of people—breadth
To:	serious conversations with people who differ from you—depth

Topics of Conversation (12 activities)

From:	personal and interpersonal topics of immediate experience—jobs, movies, parties, boyfriends/girlfriends
To:	intellectual and cultural topics concerning values and social issues

Information in Conversations (6 activities)

From:	conversations in which information about the topic is relatively casual and infrequently introduced
To:	conversations that typically have expertise, knowledge, and persuasiveness brought to bear on the topic

The activities in each of these fourteen topics or aspects of college life can be regarded as forming a short test or scale. The responses can be

scored, producing a measure that reflects both frequency and quality. Frequency is indicated by giving four points for the response "very often," three points for "often," two for "occasionally," and one for "never." If there are 10 activities in the scale, the student's score could range from 10 to 40. Quality is inferred from the score because there is an underlying quality dimension in each set of activities; a dimension that indicates how fully one is capitalizing on the potential for learning and development inherent in the nature of the facility or category of experience. The activities that reflect greater effort are ones that are more likely to have a greater influence on students learning and development.

The complete questionnaire has several other sections. There are the usual questions about who the students are (age, sex, race, etc.) and where they are in school (year, major, residence, grades, etc.). There are a couple of questions about how much required and voluntary reading and writing they have done; and a couple about how well satisfied they are with college. Then there is a set of characterizations of the college environment—the emphasis students feel is given to various qualities of student development (intellectual, artistic, practical, etc.) and the general supportiveness of interpersonal relations on the campus (among students, between students and faculty, and with administrative personnel). Finally, there is a section labeled Estimate of Gains which consists of 21 statements of desired outcomes or goals, with students rating how much progress/gain they feel they have made toward their attainment (very little, some, quite a bit, very much).

Before presenting the results, some comments about the credibility of student self-reports need to be made. Whenever one presents the results of a questionnaire survey, there is always someone who says, "But those are only opinions." If the results come from a survey of students, the

skeptics say, "But those are only students' opinions," as if, coming from students, the results are even less believable. In higher education, and in education generally, questionnaires are quite common. There has also accumulated over a period of many years, a body or research on the credibility of student self-reports. All the data about the college experience of students presented in this book comes from the students' answers to a questionnaire. Do we have any assurance that their responses are accurate and honest? Yes. Here, briefly are five lines of evidence: 1) comparisons of scores on the activity scales from comparable samples, even though a year apart, are comparable, revealing no significant differences; 2) students' reports of gains on goals related to a major field or specific subject matter—such as fine arts, literature, writing, science and technology, quantitative thinking, computers—are totally congruent with what we know from achievement test scores and from the relationship between credit hours or amount of study and measured achievement; 3) similar but not identical questions in different parts of the questionnaire produce similar answers; 4) relationships between behavior and progress which should be found are in fact found—for example, students who report "very much" progress toward developing good health habits and physical fitness are also the ones who most frequently report that they set goals for their performance, follow a regular schedule of exercise, and keep a record of their progress; and 5) many students have said that they found the questionnaire content interesting, relevant to their experience, important, that they enjoyed filling it out, and that the process of recalling and reflecting on their experience was personally useful to them—in other words that their responses were thoughtful.

In the following chapters we will report what we have learned from the students' responses to the CSEQ. In doing so, we will note the

extent to which the college experience differs at the different types of colleges and universities. Beyond that we will note the extent to which the experience may be unique, by reporting results at specific institutions. There are also, however, as we shall see, some activities and some outcomes that characterize the experience of nearly all students wherever they are. As we report these differences and similarities we may find that many conditions other than the type of institution attended—campus residence, the student's major field of study—have a special influence on student activities, impressions, and achievement.

CHAPTER 3

TYPES OF COLLEGES: AN OVERVIEW OF SIMILARITIES AND DIFFERENCES

The characteristics of colleges and universities that the Carnegie Foundation has used to define the five institutional types—research universities, doctoral universities, comprehensive colleges and universities, general liberal arts colleges, and selective liberal arts colleges—have previously been described. Given those differences, are there large differences in the characteristics of students who attend? Are there large differences in where they live and what they study? Do they characterize the college environment and their satisfaction with college differently? Do the students report progress toward similar goals, despite differences in the types of colleges they attend?

The *College Student Experiences Questionnaire* provides some answers to all these questions. Detailed answers will be reported later. For the present we present an overview in a series of charts.

The first chart shows differences in some of the characteristics of students. Consider the selective liberal arts colleges (SLA). Nearly all of their students who filled out the questionnaire are young (95%), single (99%), have not attended any other college (92%), and most of them come from families where one or both parents are college graduates (76%) and are paying more than half of the college costs (64%). One might suppose that liberal arts colleges would be generally similar to one another, except for their selectivity; but this is not so. The two types of liberal arts colleges are very different. In fact, in the student characteristics shown on the

chart, it is the big research universities (RU) that are most like the selective liberal arts colleges. It is also evident from the chart that the doctoral universities (DU) and the comprehensive colleges and universities (CCU) are quite similar to each other on most of these student characteristics. Also, perhaps surprisingly, the general liberal arts colleges (GLA) are more like these larger places (CCU and DU) in student characteristics than they are to other liberal arts colleges (SLA).

The second chart shows some information about students after they get to college. Here again the distinctiveness of the selective liberal arts colleges is evident. Nearly all of their students live on or near the campus (93%), and more than four out of five of them are majoring in liberal arts subjects (83%) and expect to continue for more advanced education after they graduate (82%). Moreover, they spend more time on their academic work (54% spend 40 or more hours a week) and less time working on a job (only 10% spend 20 hours a week or more on a job), than do the students at any of the other types of institutions. The biggest contrasts are with the comprehensives and the doctoral universities. Those places (CCU and DU) have the fewest resident students, the fewest planning further education, the fewest spending 40 or more hours a week on their academic work, the fewest majoring in liberal arts fields, and the most who are majoring in vocational subjects and who work on a job 20 hours a week or more. In classifying college majors, we grouped physical sciences, biological sciences, social sciences, humanities, and arts into the "liberal arts" category. The vocational majors are business, education, engineering, and health-related fields. Again, in this chart we see how

Chart 1
Who Goes? Characteristics and Background of Students

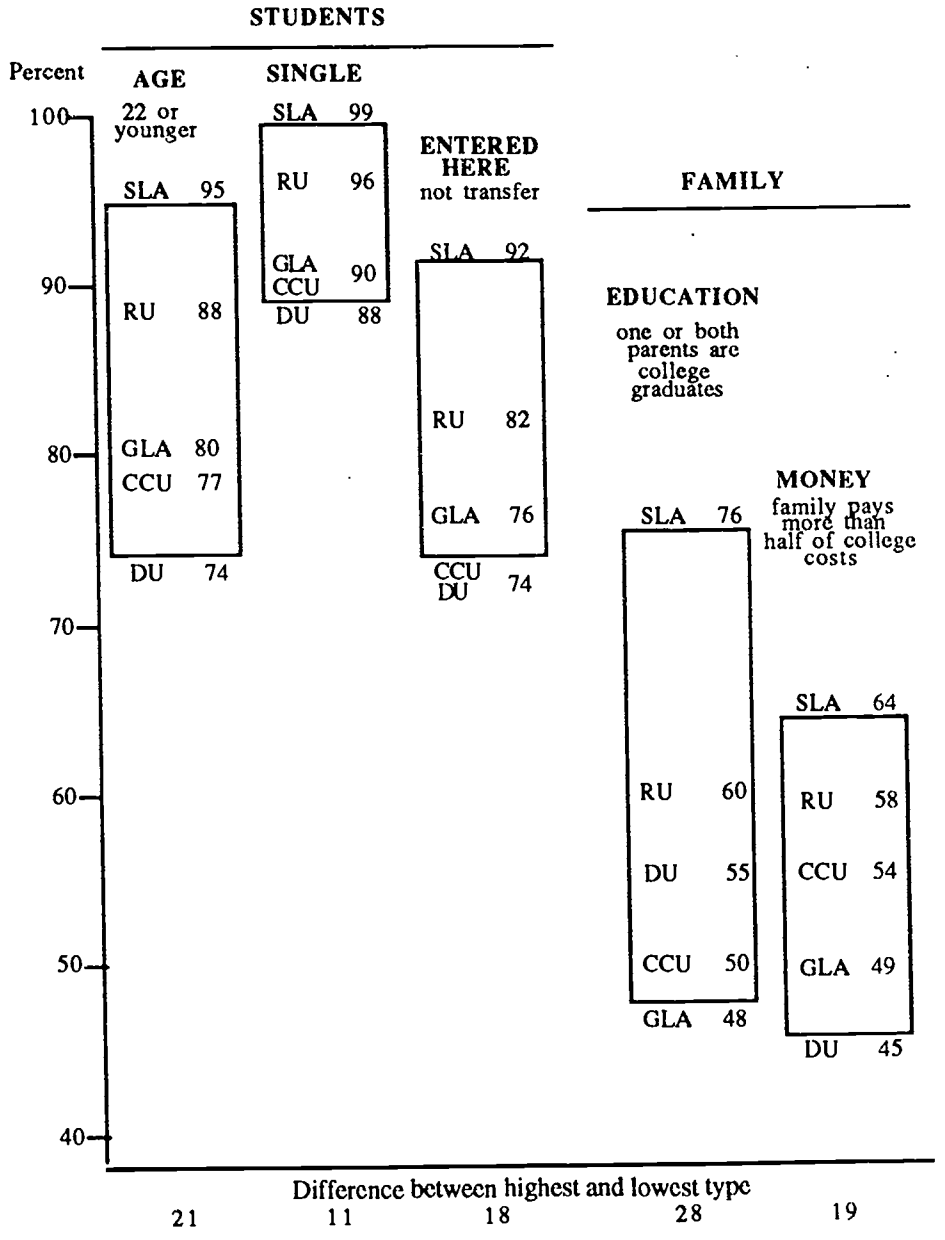
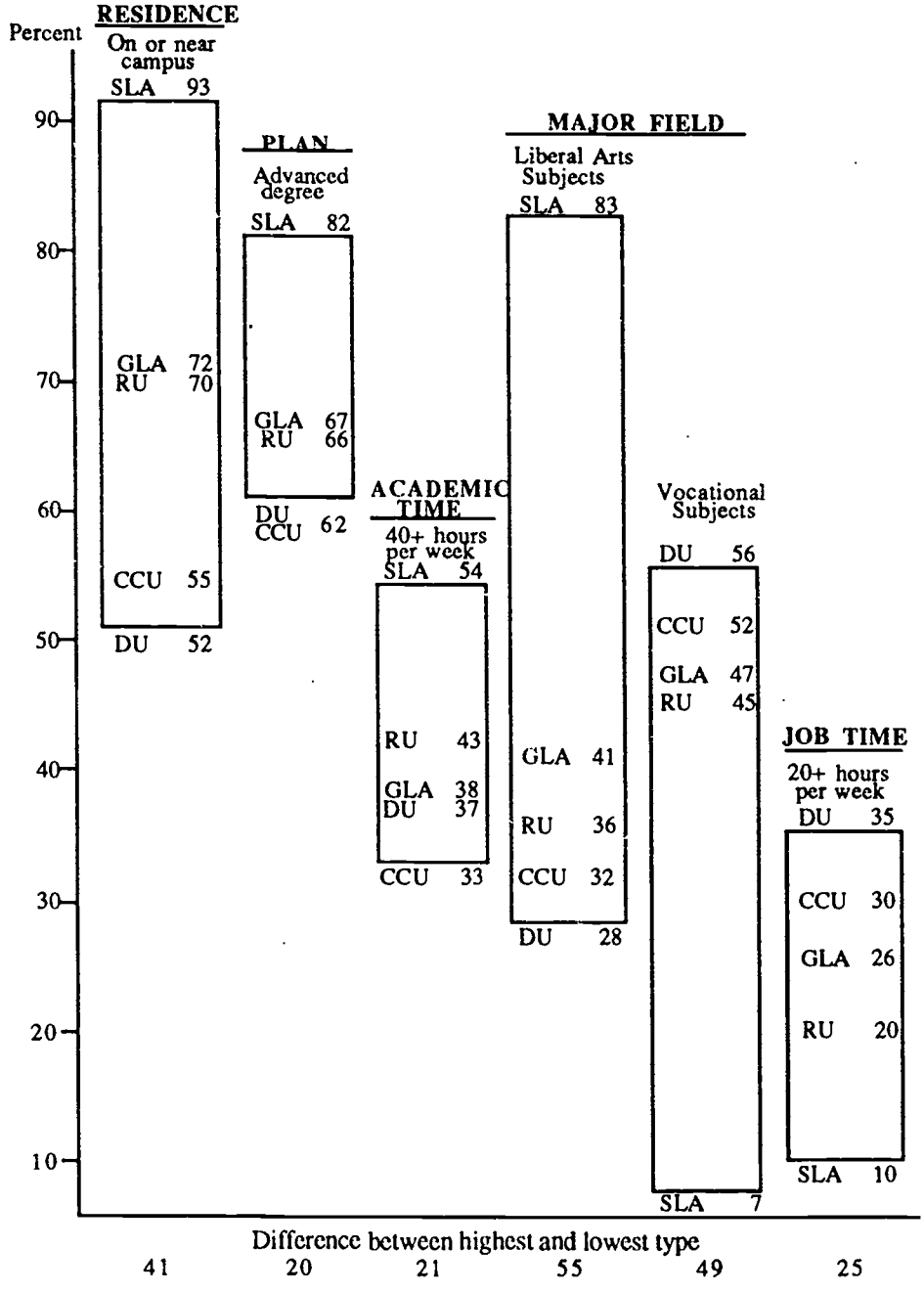


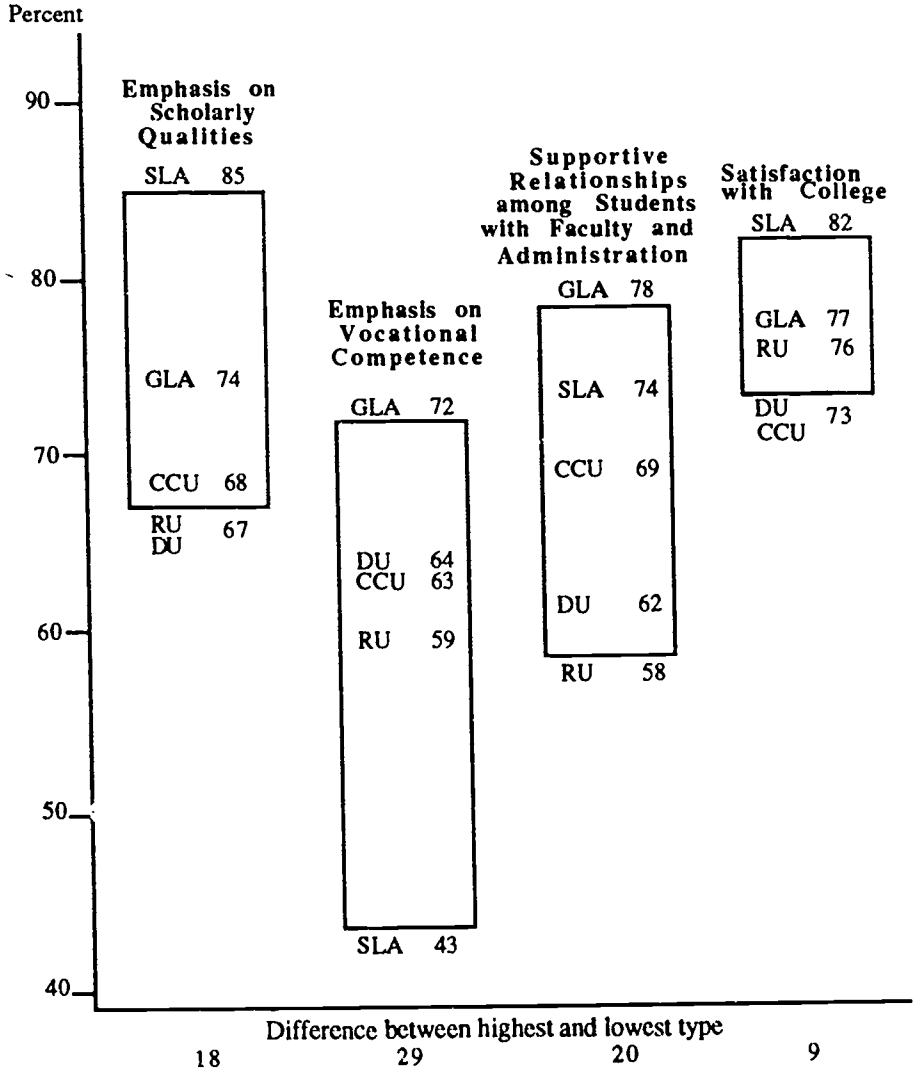
Chart 2
Students' Status and Position in College



different the general liberal arts colleges (GLA) are from the selective liberal arts colleges (SLA), especially in the choice of major fields. In that respect one might describe the GLA's as small sized vocational schools.

Students impressions about the college environment are shown in the third chart. Do they feel there is a strong emphasis on developing the

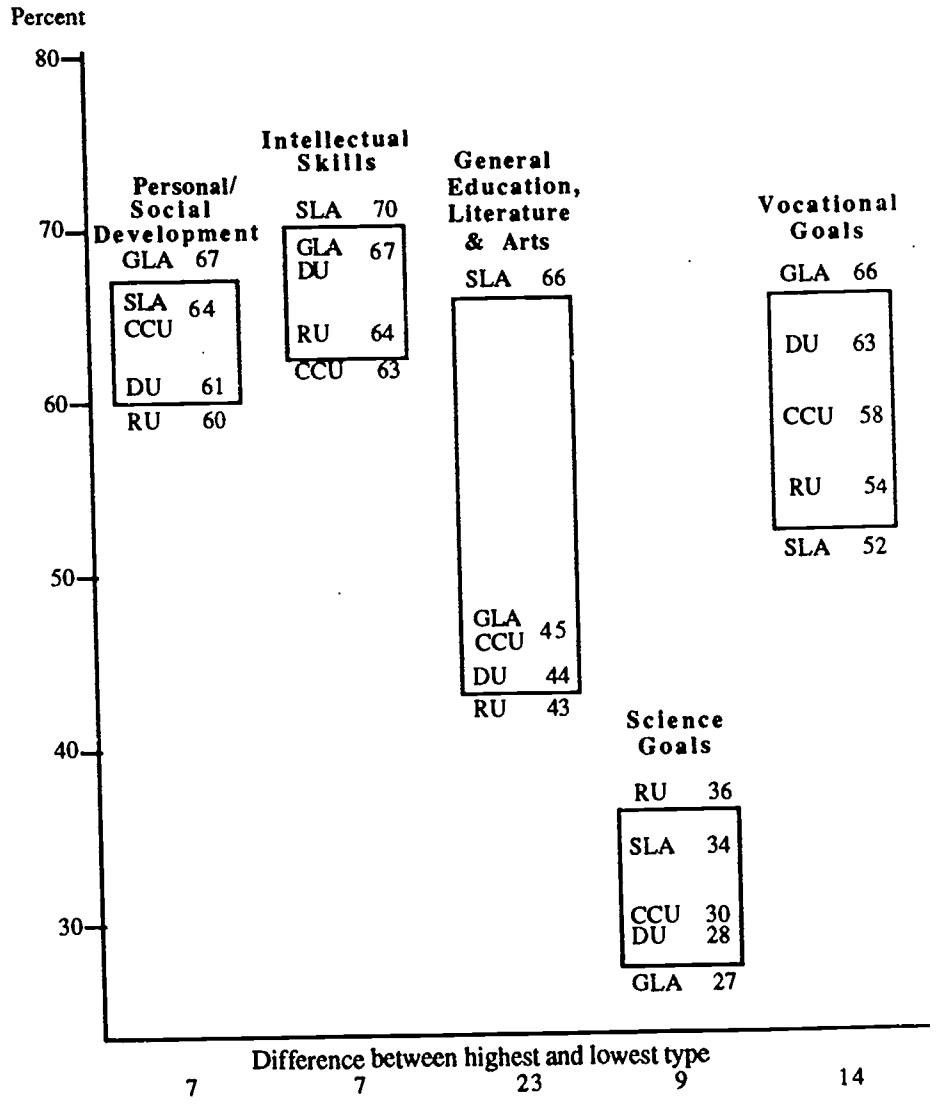
Chart 3
Student Impressions of the Environment



intellectual, scholarly, analytical qualities of students? What about the emphasis given to developing vocational competencies among the students? In interpersonal relationships among the students, between students and faculty, and with the administration do they characterize those relationships as generally supportive, friendly, helpful, and considerate, or do they feel a sense of alienation, discouragement, and impersonality? How well do they like college? If they could start over again, would they go to the same college? If they say they like it and would probably go to the same place again, we consider them to be generally satisfied with college. From the chart it is evident that a very large majority of students (from about three-fourths to more that four-fifths) are satisfied with college; and the differences between one type of institution and another are quite small. With respect to the interpersonal relationships on the campus, it is in the small colleges that the highest percent of students describe them as friendly, helpful, and supportive. The scholarly emphasis is clearly strongest at the selective liberal arts colleges; and the vocational emphasis is clearly weakest at the selective liberal arts colleges.

The fourth and last chart in this overview shows the percentages of students who believe they have made substantial progress/gain toward various goals of college education. What strikes the eye at once is how small the differences are between the types of schools. Only in the goals described as general education, literature and arts does any one type of college stand out from the others; and even here there are almost no differences between the other four types. The personal/social development category of goals is a composite of goals more specifically defined as self-understanding, understanding others, developing values, ability to function as a team member, and good health habits. The intellectual skills

Chart 4
Students Reporting Substantial Progress Toward Types of Goals/Outcomes



category of goals is a composite of analysis and logic, synthesis, quantitative thinking, and independent inquiry. A large majority of students (from 60% to 70%) believe they have gained substantially in these respects. The students include all undergraduates, freshmen as well as seniors. If only

seniors were polled, the percentages would be higher, as we will report in subsequent analyses. Goals that are most closely tied to specific parts of the college curriculum—science and humanities—have the smallest percent of students in general reporting substantial progress because progress is highly related to the courses they take.

In these judgments of progress, as in other personal ratings, we do not know whether substantial progress at selective liberal arts colleges means the same level of achievement as it means at other types of institutions. It probably does not mean a comparable level or the same absolute amount of knowledge, understanding, skill, competence, etc. We know, for example, that the selective liberal arts colleges, by definition, enroll high achieving students with high test scores, and that their students live on or near the campus, take most of their courses in the basic academic disciplines, spend more time than students at other colleges on their academic work, and characterize the college environment as having a strong emphasis on the development of scholarly qualities. Owing to these factors we know that the absolute level of knowledge and skill is not the same at all types of colleges even though, relatively, and within their own experience, about the same percent of students everywhere believe they have made substantial progress toward the common goals of personal and intellectual development. Perhaps what this means is that all colleges push students in certain commonly valued directions and are generally successful in promoting student progress in those directions.

CHAPTER 4

COMMON EXPERIENCES IN A DIVERSITY OF COLLEGES

The 142 specific activities that are grouped under the 14 measures or scales in the questionnaire can be grouped more broadly into four categories as follows:

1. Scholarly, Intellectual Activities (40 activities)
    - Library Experiences
    - Experiences with Faculty
    - Course Learning
    - Experience in Writing

2. Informal, Interpersonal Activities (50 activities)
    - Art, Music, Theater
    - Personal Experiences (self-understanding)
    - Student Acquaintances (understand other people)
    - Topics of Conversation (among students)
    - Information in Conversations

3. Activities in Group Facilities (40 activities)
    - Student Union
    - Athletic and Recreation Facilities
    - Clubs and Organizations
    - Dormitory or Fraternity/Sorority

4. Activities Related to Science (12 activities)
    - Science/Technology

Science activities are, of course, also scholarly and intellectual; but they are treated separately here because they apparently deal more with things and laboratories than with people and libraries. Overall, the three

big categories are about equal in the number of activities—40, 50, and 40. The activities related to Art, Music, Theater could be classified under group facilities nearly as well as under informal, interpersonal activities for they involve attending and participating, but they also involve talking about these topics with other students and discussing the views of critics.

To these 142 activities, the question is "In your experience at this college **during the current school year**, about how often have you done each of the following?" And the answers are "never," "occasionally," "often," or "very often." In reporting the answers from students at each of the five types of institutions, the responses of freshmen, sophomores, juniors, and seniors at all of the colleges in each type are combined to form a single percentage. In subsequent chapters we will separate the responses into smaller groups; but for the present we offer an overview of the results.

When students go to college, there are some things they all do regardless of the type of college they attend. Additionally, however, some activities are common among students at a particular type of college but not at all the other types. The following lists identify those activities. Our use of the words "everybody" or "all" is more accurately stated as "nearly everybody," or "nearly all." We define "all" as 90% or more of the students. Also, by engagement we mean that students do so at least occasionally during the school year. In a subsequent list we will identify activities that a majority of students engage in frequently.

Everybody Does These Things at Least Occasionally at All Five Types of Institutions

Scholarly, Intellectual Activities

Talked with a faculty member.

Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.).

Scholarly, Intellectual Activities (cont.)
Took detailed notes in class.

Listened attentively in class meetings.

Underlined major points in the readings.

Tried to see how different facts and ideas fit together.

Thought about practical applications of the material.

Summarized major points and information in your readings or notes.

Tried to explain the material to another student or friend.

Used a dictionary or thesaurus to look up the proper meaning of words.

Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing.

Wrote a rough draft of a paper or essay and then revised it yourself before handing it in.

Informal, Interpersonal Activities
Told a friend why you reacted to another person the way you did.

Made friends with students whose academic major field was very different from yours.

Made friends with students whose interests were very different from yours.

Made friends with students whose family background (economic and social) was very different from yours.

In conversations with other students, talked about job prospects, money, careers.

In conversations with other students, talked about movies and popular music.

In conversations with other students, talked about social events, parties.

In conversations with other students, talked about current events in the news.

In conversations with other students, referred to knowledge you had acquired in your reading.

In conversations with other students, explored different ways of thinking about the topic.

In conversations with other students, referred to something a professor said about the topic.

Activities in Group Facilities

Offered to help another student (with course work, errands, favors, advice, etc.) who needed some assistance (in the residence unit).

Asked others for assistance in something you were doing (in the residence unit).

There are in the above list 25 activities characteristic of all students at all five types of institutions. Twelve of these activities are classified as scholarly, intellectual ones—ones that reflect efforts to learn and understand what is being taught in classes, and to express ideas in writing with clarity and accuracy. Eleven of the common activities are described as informal, interpersonal ones, all of them related to interactions with different kinds of students and to conversations among students about various topics. The other two activities in this common list are ones occurring in the residence unit (dormitory or fraternity/sorority) and that reflect a friendly supportiveness between students.

The next list shows activities that are common at some but not all types of institutions. These activities are one way of identifying the diversity between institutional types.

Everybody Does These Things at Least Occasionally at One or More, but Not All Five Types of Institutions

Scholarly, Intellectual Activities	RU	DU	CCU	GLA	SLA
Used the card catalogue to find what materials there were on some topic.	—	—	—	X	X
Visited informally and briefly with an instructor after class.	—	—	—	X	X
Made an appointment to meet with a faculty member in his/her office.	—	—	—	—	X
Discussed ideas for a term paper or other class project with a faculty member.	—	—	—	—	X

Scholarly, Intellectual Activities (cont.)	RU	DU	CCU	GLA	SLA
Worked on a paper or project where you had to integrate ideas from various sources.	—	X	X	X	X
Spent at least five hours or more writing a paper (not counting time spent in reading or at the library).	—	—	—	X	X
Asked other people to read something you wrote to see if it was clear to them.	—	—	X	X	—

Informal, Interpersonal Activities	RU	DU	CCU	GLA	SLA
Talked about music (classical, popular, musicians, etc.) with other students at the college.	—	—	—	—	X
Discussed with other students why some groups get along smoothly , and other groups don't.	—	—	—	—	X
Sought out a friend to help you with a personal problem.	—	—	—	—	X
Identified with a character in a book or movie and wondered what you might have done under similar circumstances.	—	—	—	—	X
Made friends with students whose age was very different from yours.	X	X	X	X	—
Made friends with students whose race was different from yours.	X	—	X	X	X
Made friends with students from another country.	—	—	—	—	X
In conversations with other students, talked about boyfriends, girlfriends.	X	—	X	X	X
In conversations with other students, talked about major social problems such as peace, human rights, equality, justice.	—	—	—	—	X
In conversations with other students, talked about different life styles and customs.	—	—	—	—	X
In conversations with other students, talked about social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, military use.	—	—	—	—	X

Informal, Interpersonal Activities (cont.)	RU	DU	CCU	GLA	SLA
In conversations with other students, changed your opinion as a result of the knowledge or arguments presented by others.	—	X	X	X	X
In conversations with other students, persuaded others to change their minds as a result of the knowledge or arguments you cited.	X	X	—	X	X

Activities in Group Facilities	RU	DU	CCU	GLA	SLA
Had meals, snacks, etc. at the student union or student center.	—	—	—	—	X
Looked at the bulletin board for notices about campus events.	—	—	X	X	X
Met friends at the student union or student center.	—	—	—	—	X
Sat around in the union or center talking with other students about your classes and other college activities.	—	—	—	—	X
Looked in the student newspaper for notices about campus events and student organizations.	—	—	—	—	X
Attended a social event in the student union or center.	—	—	—	—	X
Read or asked about a club, organization, or student government group.	—	—	—	—	X
Had lively conversations about various topics during dinner in the dining room or cafeteria.	X	—	—	X	X
Gone out with other students for late night snacks.	X	—	—	X	X
Participated in bull sessions that lasted late into the night.	—	—	—	—	X
Borrowed things (clothes, records, posters, books, etc.) from others in the residence unit.	—	—	—	—	X
Attended social events put on by the residence unit.	—	—	—	—	X

Activities Related to Science	RU	DU	CCU	GLA	SLA
Memorized formulas, definitions, technical terms.	X	—	—	—	—

In most cases, these additional common activities are ones involving informal, interpersonal associations—student acquaintances and conversation topics. At the selective liberal arts colleges there are a dozen additional activities involving the use of group facilities—the student union and the residence unit. The number of these additional common activities is greatest in the selective liberal arts colleges where there are 30 of them. This contrasts with the much lower number of common activities at doctoral universities (4), research universities (7), comprehensive colleges and universities (7), and general liberal arts colleges (13).

If we now add up all the common activities at each of the five institutional types—ones in which 90% or more of the students engage in at least occasionally during the school year—and classify their content we get the following results:

At the research universities there are 12 scholarly, intellectual activities, 15 informal, interpersonal activities, 4 activities related to the use of group facilities, and one activity related to science, for a total of 32.

At the doctoral universities there are 13 scholarly, intellectual activities, 14 informal, interpersonal activities, and 2 related to the use of group facilities, for a total of 29.

At the comprehensive colleges and universities there are 14 scholarly, intellectual activities, 15 informal, interpersonal activities, and 3 related to the use of group facilities, for a total of 32.

At the general liberal arts colleges there are 17 scholarly, intellectual activities, 16 informal, interpersonal activities, and 5 related to group facilities, for a total of 38.

At the selective liberal arts colleges there are 18 scholarly, intellectual activities, 23 informal, interpersonal activities, and 14 activities in the use of group facilities, for a total of 55.

Clearly from those numbers, the selective liberal arts colleges emerge as places where many students do many things in common. They are, in this sense, the most homogeneous student environments. Almost 40% of all the activities in the questionnaire are ones that almost all (90% or more) of their students engage in at least occasionally during the school year. In this sense, too, the selective liberal arts colleges emerge as the most distinctive institutions.

For another view of student activities we look at ones that a majority of students engage in frequently. For convenience, we use the word frequently to mean activities engaged in "often" or "very often." Most of these activities checked by a majority of students (50% or more) at each of the five types of institutions also appeared in the previous list of things done at least occasionally by nearly everybody (90% or more at the five types of institutions). This new list, however, identifies behavior that is more likely to be evident to an observer (because more students are doing it frequently).

A Majority of the Students (50% or More) Engage Frequently in these Activities at Each of the Five Types of Institutions

Scholarly, Intellectual Activities	% Frequently				
	RU	DU	CCU	GLA	SLA
Talked with a faculty member.	50	55	65	73	77
Took detailed notes in class.	94	93	93	90	92
Listened attentively in class meetings.	96	96	94	89	97
Underlined major points in the readings.	74	78	79	82	77
Tried to see how different facts and ideas fit together.	82	82	76	80	89

Scholarly, Intellectual Activities (cont.)	% Frequently				
	RU	DU	CCU	GLA	SLA
Thought about practical applications of the material.	74	78	69	77	78
Worked on a paper or project where you had to integrate ideas from various sources.	53	57	62	69	75
Summarized major points and information in your readings or notes.	61	61	67	66	62
Tried to explain the material to another student or friend.	62	62	64	68	66
Used a dictionary or thesaurus to look up the proper meaning of words.	76	73	77	74	89
Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing.	81	80	80	78	85
Wrote a rough draft of a paper or essay and then revised it yourself before handing it in.	80	81	83	82	85
Spent at least five hours or more writing a paper (not counting time spent in reading or at the library).	65	65	64	69	81
Asked other people to read something you wrote to see if it was clear to them.	54	54	60	62	50

Informal, Interpersonal Activities	% Frequently				
	RU	DU	CCU	GLA	SLA
Told a friend why you reacted to another person the way you did.	66	62	65	69	74
Sought out a friend to help you with a personal problem.	54	50	53	60	61
Made friends with students whose academic major field was very different from yours.	56	51	59	64	68
Made friends with students whose interests were very different from yours.	56	51	59	64	68
Made friends with students whose family background (economic and social) was very different from yours.	62	57	62	70	76

Informal, Interpersonal Activities	% Frequently				
	RU	DU	CCU	GLA	SLA
Talked with other students about job prospects, money, careers.	78	78	76	75	72
Talked with other students about movies, and popular music.	73	67	76	75	72
Talked with other students about social events, parties.	64	61	65	64	64
Talked with other students about boyfriends, girlfriends.	67	62	66	68	66
In conversations with other students, referred to knowledge you had acquired in your reading.	61	58	56	57	70

Activities in Group Facilities	% Frequently				
	RU	DU	CCU	GLA	SLA
Had lively conversations about various topics during dinner in the dining room or cafeteria	77	73	71	82	87
Gone out with other students for late night snacks.	62	60	62	66	63
Offered to help another student (with course work, errands, favors, advice, etc.) who needed some assistance.	71	69	68	74	70
Participated in bull sessions that lasted late into the night.	60	62	59	65	60

Activities Related to Science	% Frequently				
	RU	DU	CCU	GLA	SLA
Memorized formulas, definitions, technical terms.	70	61	63	56	54

The next list, showing additional frequent activities at each of the institutional types, suggests elements of distinctiveness—things seen at one type of place but not at others.

**A Majority of the Students (50% or More)
Engage Frequently in these Activities
at One or More but Not All Five Types of Institutions**

Scholarly, Intellectual Activities	% Frequently				
	RU	DU	CCU	GLA	SLA
Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.).	(42)	(45)	**54**	**58**	**58**
Referred to a book or manual about style of writing, grammar, etc.	(39)	(38)	**50**	(48)	(31)

Informal, Interpersonal Activities	% Frequently				
	RU	DU	CCU	GLA	SLA
Talked about music (classical, popular, musicians, etc.) with other students at the college.	**50**	(39)	(41)	(47)	**59**
Discussed with other students why some groups get along smoothly, and other groups don't.	(47)	(42)	(46)	**52**	**57**
Identified with a character in a book or movie and wondered what you might have done under similar circumstances.	(47)	(43)	(45)	(49)	**55**
Made friends with students whose age was very different from yours.	**51**	**51**	**61**	**61**	(49)
Made friends with students whose race was different from yours.	(49)	(36)	**51**	(49)	**54**
Had serious discussions with students whose philosophy of life or personal values were very different from yours.	(42)	(36)	(42)	(46)	**58**
Had serious discussions with students whose religious beliefs were very different from yours.	(38)	(30)	(36)	(36)	**52**
Had serious discussions with students whose political opinions were very different from yours.	(33)	(30)	(32)	(30)	**51**
In conversations with other students, talked about current events in the news.	**58**	**51**	**50**	(48)	**58**
In conversations with other students, talked about major social problems such as peace, human rights, equality, justice.	(36)	(30)	(35)	(36)	**51**

Informal, Interpersonal Activities (cont.)	% Frequently				
	RU	DU	CCU	GLA	SLA
In conversations with other students, explored different ways of thinking about the topic.	(45)	(43)	(44)	(46)	**58**
In conversations with other students, referred to something a professor said about the topic.	(47)	**51**	**51**	**56**	**55**

Activities in Group Facilities	% Frequently				
	RU	DU	CCU	GLA	SLA
Had meals snacks, etc., at the students union or student center.	(45)	(43)	(42)	**51**	**56**
Looked at the bulletin board for notices about campus events.	(40)	(42)	**52**	**66**	**69**
Met your friends at the student union or student center.	(38)	(40)	(44)	**51**	**64**
Looked in the student newspaper for notices about campus events and student organizations.	**57**	**52**	**51**	(49)	**69**
Attended a program or event put on by a student group.	(29)	(28)	(33)	(40)	**55**
Voted in a student election.	(26)	(29)	(28)	**50**	(48)
Asked others (in dormitory or fraternity/sorority) for assistance in something you were doing.	**54**	**52**	**53**	**56**	(47)
Attended social events put on by the residence unit.	(44)	(44)	(37)	(48)	**50**
Studied with other students in the residence unit.	(48)	(45)	(44)	**51**	(37)

Activities Related to Science	% Frequently				
	RU	DU	CCU	GLA	SLA
Tried to express a set of relationship in mathematical terms.	**52**	(42)	(42)	(35)	(43)

Most of the activities that a majority of students at all five types of institutions engage in frequently are scholarly, intellectual activities related

to learning in their courses and to the clarity of their writing. There are 14 of these scholarly intellectual activities. The informal interpersonal activities, 10 of them, have to do with understanding other people, and with common topics of conversation. The four activities related to the use of group facilities are ones in the living centers (dormitory or fraternity/sorority). One activity was related to course work in science. Many of these majority/frequent activities (18 of the 29) were also among the previous list of activities described as done at least occasionally. This helps to define more clearly what might be called the common core of student experiences.

Beyond this common core of frequent activities among a majority of students at all five institutional types, there are other frequent activities at one or more but not all five types. This extension further defines the ways student experiences may differ depending on the type of college attended. Again, we see that the additional activities come most often from the informal, interpersonal category. In the liberal arts colleges, selective and general, other activities are centered in the student union and in the residence units.

Adding all the frequent activities for each type of college, the following pattern emerges:

At research universities there are 14 scholarly, intellectual activities, 13 informal, interpersonal activities, 6 activities related to the use of group facilities, and 2 science activities, for a total of 35.

At the doctoral universities there are 14 scholarly, intellectual activities, 13 informal, interpersonal activities, and 6 in the use of group facilities, and one in science, for a total of 34.

At the comprehensive colleges and universities there are 16 scholarly, intellectual activities, 14 informal, interpersonal activities, 7 activities in the use of group facilities, and one in science, for a total of 38.

At the general liberal arts colleges, 15 activities are in the scholarly, intellectual category, 13 are informal, interpersonal, 10 involve the use of group facilities, and one is in science, for a total of 39.

At the selective liberal arts colleges, 15 of the frequent activities are scholarly, intellectual ones, 21 are informal, interpersonal activities, 10 involve the use of group facilities, and one is in science, for a total of 47.

The fact that nearly all of the frequent activities beyond the ones common to all five types of institutions are of the informal, interpersonal sort and ones that involve the use of group faciiities suggests that the distinctiveness of colleges is seen more clearly in "campus life" than in the classroom.

CHAPTER 5

DIFFERENT EXPERIENCES AT DIFFERENT COLLEGES

In the previous chapter, when we examined the common experiences—activities everybody does at least occasionally and activities a majority of students do frequently—we found that there were 25 in the occasional list and 29 in the frequent list at all five types of colleges. Beyond that, when we noted the additional activities (occasional and frequent) at each type of institution separately we found that the occasional list was expanded by 7 more at the research universities, by 4 more at the doctoral universities, 7 at the comprehensive colleges and universities, 13 more at the general liberal arts colleges, and 30 more at the selective liberal arts colleges; and that the list of frequent activities was expanded by 6 more at the RU's, by 5 at the DU's, 9 at the CCU's, 10 at the GLA's and 18 at the SLA's. These are the activities one is most likely to see.

In the present chapter we examine what is different rather than what is common in the frequency of student activities in the different types of colleges. We will note in each of the five types of colleges, the percentage of students who engage "frequently" in an activity and then note whether the percentage at any one type of college is noticeably different from the percentage at some other type of college. Because the percentages are based on a large number of student respondents—more than 2000 at the selective liberal arts colleges and more than 8000 at the research universities, for example—very small differences between two percentages would be "statistically" significant. In fact, any difference of 3 points or greater would be a statistically significant difference. Such a small differ-

ence, however, is quite insignificant from a broader perspective because the behavior it stands for could probably not be seen or sensed. If one visited a campus where 31 percent of the students said they frequently made an appointment to talk with a faculty member in his/her office, and another campus where the frequency was 34 percent, would one really be aware of the difference? Probably not. If the behavior was frequent among a third of the students at one college, and was frequent among half of the students at another college, would an observer notice the difference? Probably yes. So, in presenting this part of the results I have chosen to use a concept I call a "noticeable difference." There is no mathematical or statistical definition of a noticeable difference because the phenomenon is a matter of perception. It is a psychological phenomenon not a statistical one. Arbitrarily then, I have taken a difference of 15 percentage points as being big enough to be noticeable. One could probably sense a difference if an activity was frequent among one out of ten students at one place and frequent among one out of four at another place, or, for example, a difference between half and two thirds, or between three-fourths and nine-tenths. My guess is that a difference of this sort or greater would be noticeable.

In the following list of activities, all differences of 15 percentage points or greater between any two types of colleges are identified, together with the percent of students who engaged in the activity frequently at the highest and the lowest types of college.

Major Differences in Frequent Student Activities Between the Five Types of Institutions

Scholarly, Intellectual Activities	Percentage points difference between types	Percent frequent activity at the: Highest type	Lowest type
Used the card catalogue to find what materials there were on some topic.	20	43 GLA	23 RU
Read something in the reserve book room or reference section.	22	42 SLA	20 RU, DU
Used indexes (such as the Reader's Guide to Periodical Literature) to journal articles.	20	38 GLA	18 RU
Developed a bibliography or set of references for use in a term paper or other report.	21	44 GLA	23 RU
Talked with a faculty member.	27	77 SLA	50 RU
Made an appointment to meet with a faculty member in his/her office.	21	43 SLA	22 RU
Discussed ideas for a term paper or other class project with a faculty member.	20	41 SLA	21 RU
Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.).	16	58 SLA/GLA	42 RU
Visited informally and briefly with an instructor after class.	19	46 SLA	27 RU
Asked your instructor for comments and criticisms about your work.	16	30 GLA	14 RU
Worked on a paper or project where you had to integrate ideas from various sources.	22	75 SLA	53 RU
Used a dictionary or thesaurus to look up the proper meaning of words.	16	89 SLA	73 DU
Spent at least five hours or more writing a paper (not counting time spent in reading or at the library.)	17	81 SLA	64 CCU

Scholarly, Intellectual Activities (cont.)	Percentage points difference between types	Percent frequent activity at the: Highest type	Lowest type
Referred to a book or manual about style of writing, grammar, etc.	19	50 CCU	31 SLA
Informal, Interpersonal Activities			
Talked about music (classical, popular, musicians, etc.) with other students at the college.	20	59 SLA	39 DU
Attended a concert or other music event at the college.	25	45 SLA	20 DU
Participated in some music activity (orchestra, chorus, etc.).	15	23 SLA	8 RU, DU
Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college.	15	30 SLA	15 DU
Gone to an art gallery or art exhibit on the campus.	16	25 SLA	9 DU
Talked about the theater (plays, musicals, dance, etc.) with other students at the college.	15	30 SLA	15 DU
Seen a play, ballet, or other theater performance at the college.	22	34 SLA	12 RU, DU
Discussed with other students why some groups get along smoothly, and other groups don't.	15	57 SLA	42 DU
Made friends with students whose academic major field was very different from yours.	22	86 SLA	64 DU
Made friends with students whose interests were very different from yours.	17	68 SLA	51 DU
Made friends with students whose family background (economic and social) was very different from yours.	19	76 SLA	57 DU
Made friends with students whose race was different from yours.	18	54 SLA	36 DU

Informal, Interpersonal Activities (cont.)	Percentage points difference between types	Percent frequent activity at the: Highest type	Lowest type
Made friends with students from another country.	16	44 SLA	28 DU
Had serious discussions with students from a country different from yours.	15	35 SLA	20 RU
Had serious discussions with students whose philosophy of life or personal values were very different from yours.	22	58 SLA	36 DU
Had serious discussions with students whose religious beliefs were very different from yours.	22	52 SLA	30 DU
Had serious discussions with students whose political opinions were very different from yours.	21	51 SLA	30 DU
In conversations with other students, talked about major social problems such as peace, human rights, equality, justice.	21	51 SLA	30 DU
In conversations with other students, talked about the ideas and views of other people such as writers, philosophers, historians.	20	37 SLA	17 DU
In conversations with other students, talked about different life styles and customs.	16	49 SLA	33 DU
In conversations with other students,talked about social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, military use.	19	44 SLA	25 CCU
Activities in the Use of Group Facilities			
Looked at the bulletin board for notices about campus events.	29	69 SLA	40 RU
Met your friends at the student union or student center.	26	64 SLA	38 RU

Activities in the Use of Group Facilities (cont.)	Percentage points difference between types	Percent frequent activity at the: Highest type	Lowest type
Sat around in the union or center talking with other students about your classes and other college activities.	27	56 SLA	29 RU
Seen a film or other event at the student union or center.	27	43 SLA	16 DU
Attended a social event in the student union or center.	33	44 SLA	11 RU
Heard a speaker at the student union or center.	15	22 SLA	7 RU
Followed a regular schedule of exercise, or practice in some sport, on campus.	17	50 SLA	33 RU
Used facilities in the gym for individual activities (exercise, swimming, etc.)	16	44 SLA	28 RU
Played in any varsity sport or athletic event.	18	24 SLA	6 RU
Looked in the student newspaper for notices about campus events and student organizations.	18	69 SLA	51 CCU
Read or asked about a club, organization, or student government group.	16	43 SLA	27 RU, DU
Attended a program or event put on by a student group.	27	55 SLA	28 DU
Voted in a student election.	24	50 SLA	26 RU
Discussed policies and issues related to campus activities and student government.	23	44 SLA	21 RU, CCU
Had lively conversations about various topics during dinner in the dining room or cafeteria.	16	87 SLA	71 CCU

Activities Related to Science	Percentage points difference between types	Percent frequent activity at the: Highest type	Lowest type
Worked on a paper or project where you used a computer.	15	42 SLA	27 DU

Altogether, in the above list, there are 51 activities where there is a noticeable difference between institutions. This is 36% of all the activities in the questionnaire. Put another way, one can say that on nearly two-thirds of all the activities in the questionnaire, there are no noticeable differences in the frequency of student activity between one type of college and another. The location of the noticeable differences can be summarized as follows: 14 of the 40 scholarly, intellectual activities in the questionnaire; 21 of the 50 informal, interpersonal activities; 15 of the 40 activities in the use of group facilities; and one of the 12 science activities.

The most striking aspect of the list of noticeably different activities is the fact that in nearly all cases (90%) it is the selective liberal arts colleges with the highest percent of frequent participants; and it is the research and doctoral universities with the lowest percent of frequent participants. In one respect this may reflect a difference between big school—small school, liberal arts colleges versus research and doctoral universities at each end, with the comprehensive colleges and universities in the middle. There is a greater heterogeneity of students, courses, curricula, purposes, and programs at the large universities than at the small selective liberal arts colleges; and this internal diversity at the large institutions apparently makes it unlikely to find many things that everyone does. In any case the research and doctoral universities are consistently the lowest types in the percent of their students who are frequent participants.

Nationally, the selective liberal arts colleges enroll the smallest number of students—roughly 3% of all undergraduates. So, even though

they are clearly different from other types of colleges and universities, as judged by the activities of their students, their distinctiveness is but a small part of the nationwide undergraduate experience. Most students are in the big universities and in the comprehensive colleges and universities. Are there any noticeable differences in student activity in these larger segments of higher education?

Between research universities and doctoral universities there are no noticeable differences on any of the activities in the questionnaire. Between doctoral universities and the comprehensive colleges and universities, there is only one activity in which there is a difference as large at 15 percentage points. Between the comprehensives and the general liberal arts colleges there are no noticeable differences in the percentages of students engaging frequently in any of the activities.

Despite the absence of noticeable differences on specific items, there may be some smaller differences which cumulatively might be important. For example, on the ten items comprising the Experiences with Faculty scale, the percentages at the GLA's are always higher than the percentages at the CCU's.

Here are some other examples of small differences that may be important because they are consistently in the same direction. On the 40 activities classified as scholarly, intellectual, the comprehensives are higher than the doctoral universities in 32 instances. On the 50 activities classified as informal, interpersonal, the research universities are higher than the doctoral universities in 41 instances. On the 40 activities related to the use of group facilities, the general liberal arts colleges are higher than the comprehensives in 38 instances. And, on the 8 activities related to science, the research universities are always higher than the doctoral universities, and the doctoral universities are always higher than the comprehensives.

These and other differences are reflected in the average scores on the various scales or topics. The score is a cumulative indicator based on how often a student engages in all of the activities that comprise the scale. The average score will indicate whether such differences are significant statistically and one can judge whether they may also be significant educationally. These average scores are shown in the following table.

Average Scores on the Activity Scales at Each of the Five Types of Institutions

	RU	DU	CCU	GLA	SLA	Maximum Difference
Scholarly Intellectual Activities						
Library	19	19	20	21	21	2
Faculty	19	19	20	22	22	3
Course	29	29	29	30	30	1
Writing	25	25	26	26	26	1
Informal, Interpersonal Activities						
Arts	19	19	19	21	23	4
Personal Experiences	22	21	22	24	23	3
Student Acquaintances	25	24	25	26	28	4
Conversation Topics	29	29	29	29	31	2
Information in Conversations	14	14	15	15	15	1
Use of Group Facilities						
Union	19	20	20	23	24	5
Athletic and Recreation	18	18	18	19	21	3
Clubs and Organizations	19	19	19	22	23	4
Dormitory or Fraternity/Sorority	26	25	25	27	24	2
Science Activities						
Science	17	15	16	15	15	1

Even a brief look at these average scores clearly shows that the highest scores are usually found at the selective liberal arts colleges. Because the samples of students are so large, even a very small difference

between two averages is statistically significant. But how big a difference might be a noticeable difference? Roughly comparable to the previous use of 15 percentage points, we estimate that a difference in average scores of 3.0 or more can be regarded as a noticeable difference on most of the topics. On the topics of Library, Course Learning, and Writing, there are no noticeable differences between the institutional types. On the Faculty scale, the SLA's and GLA's are both higher than the RU's, and DU's. In the category described as informal, interpersonal experiences, there are no differences in the average scores between types on the scales titled Conversation Topics and Information in Conversations. With respect to Student Acquaintances, the selective liberal arts colleges are noticeable higher than the doctoral universities, research universities, and comprehensives; and with respect to Art, Music, Theater, the SLA's are also noticeably higher than the RU's, DU's, and CCU's. With respect to the Personal Experiences scale, the GLA's are noticeably higher than the DU's. In the use of group facilities there are three noticeable differences. On the Student Union scale, the selective liberal arts colleges and the general liberal arts colleges both have noticeably higher average scores than research universities, doctoral universities, and comprehensives. Also on the topic of Clubs and Organizations, the selective liberal arts colleges and the general liberal arts colleges are noticeably higher than the research universities, the doctoral universities, and the comprehensives. With respect to the use of Athletic and Recreational Facilities, the SLA's are noticeably higher than the RU's, DU's, and CCU's.

Reflecting on the comparisons presented in this chapter, one might consider several interpretations. When one sets aside the selective liberal arts colleges, because their student activities are frequently and noticeably different from the student activities at other places, one is left with the

thought that the rest of higher education is pretty much alike in student experiences. If one looks only at the types where most students are enrolled—the RU's, DU's and CCU's—there are no noticeable differences in their average scores on any of the 14 topics. What case is there for the claim that diversity is one of the main features of American higher education? If diversity is not obvious in student activities, perhaps it is found in student attainments. In the next chapter we shall see what diversity there is in student outcomes.

CHAPTER 6

FROM PROCESS TO PROGRESS

One would suppose that what students gain from their college experience would reflect the activities they put into it. In this chapter we shall see that this is true. Just as we previously found that there were some activities that nearly all students engaged in at least occasionally, and at all types of institutions, so we shall now see that there are some outcomes or goals toward which nearly all students believe they have made at least some progress, and at all types of institutions. Just as we previously found that there were certain activities a majority or more of the students engaged in frequently, and at all types of institutions, so we shall now see that there are some goals toward which a majority of students report substantial progress, and at all types of institutions. And, just as we previously found that the scope and quality of student activities was highest at the selective liberal arts colleges, so we shall now see that it is at the selective liberal arts colleges where the most students report the most progress toward most of the goals listed in the questionnaire.

There are twenty one statements of goals or outcomes listed in the questionnaire. They include many of the most commonly stated objectives of undergraduate education — knowledge and understanding in science, literature, and arts, effective writing, intellectual skills such as logic and critical thinking, awareness of different philosophies and cultures, self-understanding, etc. Students are asked to indicate the extent to which they feel they have gained or made progress toward each of the goals, with progress characterized as "very little," "some," "quite a bit," or "very

much." Reading what some critics of higher education have said, one would suppose that most students today make very little progress toward these important goals. However the truth is exactly the opposite. At each of the five types of colleges, and towards each of the twenty one goals, a majority of students believe they have made at least "some" (more than "very little") progress. This result includes students at the end of their freshman year as well as end-of-year sophomores, juniors, and seniors.

Toward some of the goals, nearly all students (90% or more) report at least some progress. This information is shown in the following list:

Everybody (90%+)
Reports at Least "Some" Progress Towards These Goals at Each of the Five Types of Institutions

Intellectual Skills
Ability to think analytically and logically.

Ability to put ideas together, to see relationships, similarities, and differences between ideas.

Ability to learn on your own, pursue ideas, and find information you need,

General Education, Literature, and Arts
Gaining a broad general education about different fields of knowledge.

Personal/Social Development
Developing your own values and ethical standards.

Understanding yourself — your abilities, interests, and personality.

Understanding other people and the ability to get along with different kinds of people.

Vocational Preparation
Acquiring background and specialization for further education in some professional scientific, or scholarly field.

Gaining a range of information that may be relevant to a career

Everybody (90%+)
Reports at Least "Some" Progress Towards These Goals
at One or More but Not All Five Types of Institutions

	% Reporting "Some" Progress				
	RU	DU	CCU	GLA	SLA
General Education, Literature, and Arts					
Writing clearly and effectively.	(88)	90	93	93	95
Becoming aware of different philosophies, cultures, and ways of life.	(87)	(86)	(86)	90	97
Personal/Social Development					
Ability to function as a team member.	(87)	(88)	90	93	(88)
Vocational Preparation					
Vocational training—acquiring knowledge and skills applicable to a specific job or type of work.	(81)	(88)	(86)	92	(69)

With a few exceptions, exactly the same goals appear in the next list where a majority of students (50%+) report substantial progress (quite a bit or very much). Clearly from this list, as well as from the previous one, progress toward basic intellectual skills is evident, and progress toward important aspects of personal/social development such as values, self-understanding and understanding others. Beyond these two categories, breadth of knowledge, and knowledge relevant to a vocation are also indicated as common and substantial outcomes of the undergraduate experience. Throughout the history of higher education in the U.S. one finds an acknowledgement of these three types of concerns — with intellect, with character, and with occupation. Among todays students it is toward these same three types of outcomes that progress or gains are acknowledged by all students to some extent and by a majority of students to a substantial extent.

A Majority of Students (50%+) Report "Substantial Progress" Toward These Goals at Each of the Five Types of Institutions

	% Reporting "Substantial" Progress				
	RU	DU	CCU	GLA	SLA
Intellectual Skills					
Ability to think analytically and logically.	64	63	59	62	72
Ability to put ideas together, to see relationships, similarities, and differences between ideas.	68	70	68	71	80
Ability to learn on your own, pursue ideas, and find information you need,	77	78	79	81	83
General Education, Literature, and Arts					
Gaining a broad general education about different fields of knowledge.	63	66	66	68	86
Writing clearly and effectively.	51	55	56	67	70
Personal/Social Development					
Developing your own values and ethical standards.	62	63	62	69	74
Understanding yourself—your abilities, interests, and personality.	75	75	75	78	81
Understanding other people and the ability to get along with different kinds of people.	75	74	77	81	81
Vocational Preparation					
Acquiring background and specialization for further education in professional scientific, or scholarly field.	58	63	57	62	70
Gaining a range of information that may be relevant to a career.	64	72	69	75	63

**A Majority of Students (50%+)
Report "Substantial Progress" Toward These Goals
at One or More but Not All Five Types of Institutions**

	% Reporting "Substantial" Progress				
	RU	DU	CCU	GLA	SLA
General Education, Literature, and Arts					
Broadening your acquaintance and enjoyment of literature.	(26)	(29)	(32)	(34)	**55**
Becoming aware of different philosophies, cultures, and ways of life.	(49)	(46)	(44)	**54**	**72**
Personal/Social Development					
Ability to function as a team member.	**52**	**56**	**60**	**63**	(48)
Vocational Preparation					
Vocational training—acquiring knowledge and skills applicable to a specific job or type of work.	(42)	**54**	(48)	**60**	(24)

We next examine differences in gains across the five types of institutions. To what extent are there gains cited by more students at one type of school than at another? When we reported differences in activities we introduced the criterion of a "noticeable difference" as more appropriate than the criterion of a "statistically significant" difference because the very small differences that would be statistically significant would not be readily observable in the campus behavior of students. Arbitrarily we set a difference of 15 percentage points or more as indicative of a noticeable difference in behavior. At this point, however, we are not dealing with activities or observable behavior, we are dealing with feelings and interpretations. These are subjective phenomena whose exact meaning is known only by the individual. The student is asked, "To what extent do you feel you have gained or made progress . . .?" And the student answers by indicating "very little," "some," "quite a bit," or "very much." The judgment reported by the student cannot be translated into directly observable behavior. Our focus in this report is on large groups of students, not on an in-

dividual student or even on a single college; and our purpose is to see how much diversity in outcomes there is between the five major types of colleges and universities. How big a difference is a major difference or an educationally important difference or one that might justify the conclusion, for example, that progress toward "gaining a broad general education" is really more frequent at the selective liberal arts colleges than at other types of places? Arbitrarily we have used a difference of 12 percentage points or greater to define a major difference, or one that would be educationally significant.

Using this criterion of a major difference, the following results were obtained:

Major Differences (12 Percentage Points or More) in Substantial Student Progress Between the Five Types of Institutions

	Percentage points difference between types	Percent substantial progresss at the: Highest type	Lowest type
Intellectual Skills			
Ability to think analytically and logically.	13	72 SLA	59 CCU
Ability to put ideas together, to see relationships, similarities, and differences between ideas.	12	80 SLA	68 RU, CCU
General Education, Literature, and Arts			
Gaining a broad general education about different fields of knowledge.	23	86 SLA	63 RU
Developing an understanding and enjoyment of art, music, and drama.	21	45 SLA	24 RU
Broadening your acquaintance and enjoyment of literature.	29	55 SLA	26 RU
Writing clearly and effectively.	19	70 SLA	51 RU

	Percentage points difference between types	Percent substantial progress at the: Highest type	Lowest type
General Education, Literature, and Arts			
Becoming aware of different philosophies, cultures, and ways of life.	28	72 SLA	44 CCU
Science			
Understanding the nature of science and experimentation.	12	40 RU	28 GLA
Personal/Social Development			
Developing your own values and ethical standards.	12	74 SLA	62 RU, CCU
Ability to function as a team member.	15	63 GLA	48 SLA
Vocational Preparation			
Vocational training—acquiring knowledge and skills applicable to a specific job or type of work.	36	60 GLA	24 SLA
Acquiring background and specialization for further education in some professional, scientific, or scholarly field.	13	70 SLA	57 CCU
Gaining a range of information that may be relevant to a career.	12	75 GLA	63 SLA

Several conclusions and interpretations seem fairly obvious. First, in most of the comparisons it is the selective liberal arts colleges that have the best results. This is most evident with respect to the goals classified under the heading of general education, literature, and arts. In an earlier chapter we reported that the proportion of students majoring in humanities, arts, and social sciences at the selective liberal arts colleges was two to three times greater than at any of the other types of colleges and universities. It is not surprising to find that students who have studied the most in these areas have also gained the most. Students at the selective liberal arts colleges are also best with respect to the intellectual skills outcomes of analysis and synthesis. Again this should not be surprising since those colleges have on the average the best students to begin with in abstract in-

tellectual skills. Second, it is at the research universities where one finds the highest percent of students reporting substantial progress toward the goal of understanding the nature of science and experimentation, and at the general liberal arts colleges where the percent is lowest. This corresponds to the fact that the highest percent of science majors are found in the research universities and the lowest percent at the general liberal arts colleges. Third, whereas many of the differences in student activities between institutions were related to "campus life," most of the differences in reported student progress are related to the curriculum—to science, literature, and arts, to philosophies, and to writing. Fourth, there are important differences with respect to goals of vocational preparation. And fifth, the research universities, more frequently than other types, have the lowest percent of students claiming substantial progress. With respect to the frequency of student activities, we previously noted that the research universities and the doctoral universities were consistently lowest of the five types of institutions; and here, with respect to student progress, it is again the research universities, now joined by the comprehensive colleges and universities, that are consistently lowest.

Since it is usually results from the selective liberal arts colleges that contribute most to the differences between types, what differences are there among the other types? Except for a difference of 18 percentage points between research universities and general liberal arts colleges in preparation for a specific job, and a difference of 12 percentage points between those two types in understanding science, there are no other major differences among the other four types of colleges and universities. Between research universities and doctoral universities the only major difference in outcomes, 12 percentage points, is with respect to specific job preparation. There are no major differences between the doctoral universi-

ties and the comprehensives. Except for specific job preparation there are no major differences between the comprehensives and the general liberal arts colleges.

We are faced again with the apparent fact that differences between types of institutions in self-reported student outcomes as well as in self-reported activities are few and far between when the selective liberal arts colleges are removed from the comparisons. The meaning of facts, however, is not self-evident. Many, many aspects of the college experience are not measured or identified in the *College Student Experiences Questionnaire*. There is nothing about clinical or subjective personal experiences—about homesickness, about the trials and errors stemming from greater independence, or difficult relationships with others, or blows to one's self-esteem, or frustrations and failures as well as rewards and recognitions, or satisfactions felt in new discoveries and understanding. There is nothing about the physical setting—the landscape, the architecture, the sense of being in a special place. There is a question about how many books students have read during the year, but there is no information about what the books were, or what the professors expected students to understand from reading them. Also, there may well be clear and important differences in students' experience between one specific college and another college, but not between the averages at one type of college and another type of college. In a later chapter we shall report examples of these differences between specific colleges. Meanwhile, from the data we have presented about students activities and sense of progress we have seen much similarity between the institutional types, except for the selective liberal arts colleges. This does not necessarily mean that there are few important differences in students experiences; it may simply mean that the institutional typology used by the Carnegie Foundation and other survey-

ors of the higher education scene, is not very useful for revealing the diversity in student activities and outcomes that exists among the colleges and universities of the country.

In the previous chapter we found that many of the differences in student activities between institutional types were related to "campus life;" and in the present chapter we found that many of the differences in outcomes or gains were related to "the curriculum." We turn next to exploring these elements. Surely a major determinant of campus life is whether one lives on or near the campus; and surely the influence of the curriculum on student outcomes is best revealed by the students major field of study. What differences in activities and outcomes are associated with campus residence and with major field of study, irrespective of institutional type?

CHAPTER 7

CAMPUS AND CURRICULUM

Webster defines campus as "the grounds and buildings of a university, college, or school." A major part of the *College Student Experiences Questionnaire* consists of students' reports of their activities on the campus. It is those buildings and those grounds that the college possesses, and surely the amount, scope, and quality of effort students can put into using the resources and opportunities of the campus depends on how much time they spend there. Although students at the selective liberal arts colleges were more actively involved in campus activities than were students at other places, it was also true that nearly all SLA students lived on the campus. Perhaps residence was more influential than the type of college. To examine the influence of campus residence on student activities and student gains, we divided the entire sample of 25,427 undergraduates into four groups: 1) students who lived in campus housing (dormitory, fraternity/ sorority, or other college housing), 2) students who lived in an apartment or room within walking distance of the campus, 3) students who lived in a house, apartment, etc. away from the campus, and 4) students who lived with their parents or relatives. Of all the undergraduates who lived on or near the campus, 34% were at the research universities, 15% at the doctoral universities, 24% at the comprehensives, 14% at the general liberal arts colleges, and 13% at the selective liberal arts colleges. From this distribution, one can see that no one type of institution dominates the comparisons to be made of differences in campus residence.

To what extent are there important differences in students activities and progress when campus residence is the basis for comparison? There

are thirteen categories or aspects of college experience on which students activities can be compared. Students involvement in these activities is summarized by a score. The highest possible score would indicate that a student participates "very often" in all of the activities in the topic; and the lowest possible score would indicate that a student had "never" engaged in any of the activities. In the following table we show, in round numbers, the average scores for each group. We previously established a difference of three points as being large enough to be educationally as well as statistically significant. In the table we have classified the topics to show most clearly where the educationally important differences are located.

Average Scores on the Activity Scales Comparing Students in Different Housing Locations

	Lives on Campus	Lives near Campus	Lives away from Campus	Lives at Home	Maximum Difference
Academic, Scholarly Activities					
Library	19	20	20	19	1
Faculty	20	20	20	19	1
Course Learning	29	30	30	29	1
Writing	26	25	25	25	1
Science	16	16	15	16	1
Informal, Interpersonal Activities					
Art, Music, Theater	21	20	18	18	3
Personal Experiences	23	22	21	20	3
Student Acquaintances	27	25	23	23	4
Conversation Topics	30	30	28	28	2
Conversation Information	15	15	15	14	1
Group Facilities Activities					
Student Union	22	20	19	20	3
Athletic Facilities	20	19	16	15	5
Clubs and Organizations	22	20	17	17	5

With respect to the quality of effort or involvement in academic, scholarly activities, there are no important differences related to where students live. Students who live on or near the campus are no more and no less engaged in academic, scholarly activities than are students who live away from the campus or at home. Student personnel administrators and directors of campus housing have often worked to bring about a better academic and scholarly atmosphere in the dormitories, and no doubt some of those efforts at some colleges have been successful. But overall, living (college housing) and learning (academic scholarship) are two different domains. One does not need to live in a dormitory or within walking distance of the campus to read a book, write a report, study for a course, or talk with a faculty member. With respect to other activities, however, living on or near the campus makes a great deal of difference.

Except for the two scales related to student conversations, all the other informal, interpersonal activities, and the activities involving the use of group facilities show important differences in students involvement or quality of effort between different residence conditions. In general, the highest level of activity is among those who live on campus; the next highest level of activity is among those who live within walking distance of the campus, and the lowest scores are made by those who live away from the campus, or who live at home. Living on or near the campus surely does make it easier for student to attend various cultural events, use the athletic and recreational facilities, the student union, get into clubs and organizations, and get better acquainted with a variety of students.

This same differentiation between academic and non-academic topics is also evident in students progress toward important objectives as shown in the next table. With respect to progress in the development of intellectual skills, understanding science, and gains in general education,

literature, and arts there are no differences of 12 percentage points or greater between any of the residence groups in the number of students who believe they have made substantial progress toward those goals. With respect to the personal and social development goals, however, there are major differences between the residence groups on all five of the goals. In every instance, substantial progress is claimed by a higher percent of students living on or near the campus than by those living away or at home. Those who do more gain more. Doing more is related to being where the action is—on campus 24 hours a day; and that, in turn, is related to more progress toward outcomes that involve the most interaction with other students and the most insight about oneself.

Percent of Students in Different Housing Locations Reporting Substantial Gain Toward Important Educational Goals

	Lives on Campus	Lives near Campus	Lives away from Campus	Lives at Home	Maximum Difference
Intellectual Skills					
Analysis	62	69	65	62	7
Quantitative	44	51	48	48	7
Synthesis	69	75	70	67	8
Inquiry	79	84	80	76	8
Science					
Science	33	40	36	35	7
Technology	28	35	32	30	7
Consequences	30	38	34	31	8
General Education, Literature, & Arts					
Breadth	69	69	66	64	5
Arts	31	33	25	23	10
Literature	33	33	33	29	4
Writing	56	56	56	55	1
Philosophies	52	53	48	42	11

	Lives on Campus	Lives near Campus	Lives away from Campus	Lives at Home	Maximum Difference
Personal and Social Development					
Values	68	70	58	55	15
Self	79	81	71	67	14
Others	83	80	68	66	14
Team	59	61	51	45	16
Health	45	46	36	33	12
Vocational Preparation					
Job Training	42	55	54	46	13
Specialization	58	66	65	57	9
Career Relevance	67	73	72	65	8

We have seen that the amount, scope, and quality of effort students invest in and gain from "campus life" is enhanced by the amount of time they spend on the campus—full time living on the campus in college housing, convenient and close as in living within walking distance of the campus, or still less time or convenience as in commuting from a location away from the campus. Campus life, as we have used the term, refers to the personal, interpersonal aspect of college experience, not to the more abstract, intellectual, scholarly aspects. To be sure, college is a scholarly environment as well as a social environment. This impersonal, intellectual character of the college experience, and the particular emphasis its scholarship exhibits, will be found, most probably, in the curriculum and the particular emphases in the courses students take.

All or nearly all students have some courses, or some types of courses, that are required. This is usually expressed as a "breadth" or "distribution" requirement; and some minimum number of courses of various types may be required for graduation, such as English, languages, science, math, social sciences, etc. At the same time, graduation require-

ments also include a focus in one's course work—usually called an area of concentration, a specialization, or a major field. In many cases, this major field may have a definite occupational or vocational relevance—such as nursing, education, business, or engineering. In many other cases the major field is an academic discipline within the liberal arts or the college of arts and sciences. Such majors may also have vocational relevance, but less emphasis on training in specific skills for jobs.

In the *College Student Experience Questionnaire* students were asked to indicate their major field of study or their expected major. For some freshmen the answer may be quite tentative. Students may change their major field. In any event, neither freshmen nor sophomores have had much work in what is or will be their major. Nevertheless, even the tentative choice of a major indicates an area of interest by the student. Sorting the students into major field defines the subject matter that is or will be studied most thoroughly. In many cases courses in the major, or closely related to the major, will constitute more than half of the students total curriculum. It is fair to say that the major field defines the emphasis in most of the subject matter studied by the student. What is studied (major field) may have a greater bearing on students activities and outcomes than where it is studied (type of college) or where one lives while studying it (campus residence).

In the analyses which follow, students are grouped into eight different major fields. These groupings account for 80 to 90% of the students—the others are undecided or indicate a major not listed in the questionnaire, or one that did not have enough cases to merit a major grouping. Four of the major fields are within the traditional domain of the liberal arts: Humanities and Arts (literature, languages, history, philosophy, religion, art, music, theater, etc.); Social Sciences (economics, political science,

psychology, sociology, etc.); Biological Sciences (biology, biochemistry, botany, zoology, etc.); and Physical Sciences (physics, chemistry, mathematics, astronomy, earth sciences, etc.). The other four fields, characterized as vocational majors, were listed as follows in the questionnaire: Business, Engineering, Education (including physical education and recreation), and Health related fields (nursing, physical therapy, health technology, etc.). Across the total sample of 25,427 students, the major groups were constituted as follows: 15% social sciences, 12% humanities and arts, 6% biological sciences, and 5% physical sciences, for a total of 38% in the traditional liberal arts fields; then 23% in business, 9% in engineering, and 7% each in education and health, for a total of 46% in the vocational fields. This leaves 16% unclassified or undecided. The major fields are distributed very unevenly among the five types of institutions. For example, the selective liberal arts colleges have none or very few majors in any of the vocational fields. The general liberal arts colleges have majors in all the vocational fields except engineering. The universities and the comprehensive colleges have majors in all fields. The most frequent major in the selective liberal arts colleges is Humanities/Arts. The most frequent major in each of the other institutional types is Business. Engineering majors are mainly in the research universities. Our analyses, at this point, are focused on the differences in students activities and gains associated with what they study wherever they happen to be while studying it.

In the next table, the average scores on the activity measures are shown. Using, as we have in other cases, a difference of three points or greater between average scores as indicating an educationally significant difference, we can find in the table that differences of this magnitude or greater occur between major fields on 9 of the 14 topics. On all aspects of

Average Scores on the Activity Scales of Students in Different Major Fields

	Liberal Arts Majors				Vocational Majors				Maximum
	H/A	SS	BIO	PHYS	HLTH	EDUC	BUS	ENGR	Difference
Library	21	21	20	19	20	20	19	17	4
Faculty	22	21	20	19	21	20	19	18	4
Course Learning	30	30	30	29	31	30	29	28	3
Writing	27	26	25	24	26	26	25	23	4
Science	12	14	22	21	18	14	14	21	10
Art, Music, Theater	25	20	20	20	18	19	18	18	7
Personal Experiences	23	24	22	21	23	23	21	19	5
Student Acquaintances	27	26	26	26	25	25	24	24	3
Conversation Topics	30	30	30	30	29	28	28	29	2
Conversation Information	15	15	15	14	15	14	14	14	1
Student Union	21	22	21	21	20	20	20	19	3
Athletic & Recreation	18	18	19	20	18	18	19	19	2
Clubs &Organizations	21	21	20	20	19	19	19	19	2
Residence	26	26	26	25	25	25	26	25	1

H/A	Humanities/Arts	HLTH	Health related fields
SS	Social sciences	EDUC	Education
BIO	Biological sciences	BUS	Business
PHYS	Physical sciences	ENGR	Engineering

college experience that we classify as academic, scholarly in their content—use of the library, contacts with faculty members course learning activities, experiences in writing, and activities related to science, there are substantial differences between some of the major fields. The differences clearly reflect what we know about major fields of study. For example, the highest levels of activity related to science are obtained by majors in the

biological and physical sciences and engineering. The highest score on the writing scale is obtained by humanities/arts majors, a group that includes English majors. The highest scores on the library scale are made by the majors in humanities/arts or social sciences, where library use is especially frequent. In general, in these academic, scholarly aspects of college, the involvement of liberal arts majors is greater than the involvement of vocational majors. This direction of difference is also evident in the other aspects of college activity where the differences between major fields occur—in activities related to the arts, to personal experiences, student acquaintances, and use of the student union. The highest scores are found typically among the liberal arts majors, not among the vocational majors. Where the differences between major fields are most obvious it is usually a contrast between two fields, usually between engineering and humanities—as in Library, Faculty, Writing, Arts, Student Acquaintances. When these two major fields are removed, there are usually no noticeable differences between any other majors. Moreover, on five of the 14 scales, there are no noticeable differences between the average scores of any of the major fields.

Looking next at the differences between major fields in self-estimated outcomes or gains, we see that there are large differences on all but two of the goals in the percent of students reporting substantial gains. With respect to some outcomes, the results are almost polar opposites between certain major fields. This is most dramatic in science-related outcomes where generally two-thirds to more than three-fourths of the majors in Biological and Physical sciences report substantial gain in contrast to fewer than one-seventh of the majors in Humanities/Arts. The poles are opposite in goals related to literature or arts where substantial progress is

Percent of Students in Different Major Fields Reporting Substantial Gain Toward Important Educational Goals

	Liberal Arts Majors				Vocational Majors				Maximum
	H/A	SS	BIO	PHYS	HLTH	EDUC	BUS	ENGR	Difference
Intellectual Skills									
Analysis	57	65	75	79	64	54	60	78	25
Quantitative	24	41	60	68	44	36	52	68	44
Synthesis	73	76	73	74	71	67	66	71	10
Inquiry	83	83	80	78	83	81	77	76	7
Science									
Science	14	27	84	74	61	21	15	70	70
Technology	11	18	72	64	50	15	15	63	61
Consequences	19	28	66	56	51	19	19	52	47
General Education, Literature, & Arts									
Breadth	74	77	68	71	61	64	67	49	28
Arts	61	28	24	26	18	31	19	15	46
Literature	64	40	28	29	22	35	22	13	51
Writing	70	65	51	51	53	58	53	40	30
Philosophies	63	63	48	53	45	46	42	38	25
Personal and Social Development									
Values	72	72	65	63	67	69	59	52	20
Self	80	80	79	75	80	81	72	68	13
Others	78	79	79	75	82	82	76	69	13
Team	48	55	51	49	66	61	59	52	18
Health	36	40	43	41	54	49	42	34	20
Vocational Preparation									
Job Training	37	34	36	43	63	63	49	52	29
Specialization	59	64	75	74	74	60	50	67	25
Career relevance	63	66	65	69	77	77	68	69	14
Computers	16	22	21	44	12	19	40	62	50

reported by more than 60% of the Humanities/Arts majors in contrast to generally one-fourth or fewer in science, engineering, and business majors.

With respect to all of the goals related to general education, literature, and arts, the lowest percentages of students reporting substantial progress are the engineering majors. This same low position of engineering majors is also seen in the personal and social development goals concerned with values, self-understanding, and understanding others. The number of courses and credits one needs for an engineering major, and thus the demand on the student's time, may be greater than the demands of other major fields. This is reflected by the fact that the proportion of engineering majors who report substantial progress toward gaining a broad general education about different fields of knowledge is noticeably lower than in every other major field. Although the differences in outcomes between major fields are generally larger and more numerous than the differences in activities, there are nevertheless, many outcomes where the differences between majors are small.

Two other observations about the percentages in the table may be of broad relevance in understanding the differences between major fields. First, if one takes a composite of all four major fields classified as liberal arts, and compares it with a composite of the four vocational fields, one finds significantly higher percentages of liberal arts students reporting substantial progress toward the goals listed as analysis, breadth, arts, literature, and philosophies, and a significantly higher percent of vocational majors reporting substantial progress toward the single goal of job training. Second, if one compares a composite consisting of humanities, social sciences, and education with a composite composed of biological science, physical science, and engineering, one finds that the science oriented ma-

jors report significantly greater progress toward the goals listed as analysis, quantitative, science, technology, consequences, career relevance, and computers, and the other group is higher on the goals of arts and literature.

The above findings all point to the importance of the major fields on the extent and direction of students progress in college. The major field and courses closely related to it are the largest part of the students academic experience. In the academic part of the college experiences, students learn what they study, and the more they study, the more they learn. The negative consequence of this, in some cases, is that substantial progress in the major may result in very little progress in fields that have very little overlap in content with the major—as science vs. humanities. All these results seem to indicate that what counts most in students academic outcomes is not the type of college they attend (except for the selective liberal arts college), or where they live during college, but what they study while they are there.

CHAPTER 8

YEAR BY YEAR

As students move through college from the freshman to the senior year, there are, presumably, some changes in the pattern of their activities and in their estimates of progress toward important goals of higher education. We do not have responses from the same students at the end of each of their four years in college; but we can compare the responses of end–of–year freshman with the responses of end–of–year sophomores, juniors, and seniors. The interpretation of these cross-sectional comparisons as proof of gains is not strictly speaking, correct, and for two reasons. First, many students may drop out of college. In that case the differences between freshmen and seniors may be accounted for by selective attrition and survival. Second, many students, especially among the juniors and seniors, may be transfer students, having started their college experience at some other institution. In that case, we would not know the possible influence on student development from spending four years at the same place.

In this chapter we report differences in activities and gains at each college year. Some of the external influences on cross-sectional comparison have been eliminated. First, all transfer students were removed from the sample. This reduced the population base from 25,427 down to 19,420. Thus, all seniors are one who had spent their entire college program at the same school. Second, we have discovered from previous studies that freshmen who expect to drop-out or transfer to another college are very unlikely to answer the *College Student Experiences*

Questionnaire. In effect, they say, "I won't be here next year so why should I answer this questionnaire!" Thus, most of the freshmen who respond to the questionnaire are ones who plan to continue at the college. This influence on who is likely to respond to the questionnaire means that selective attrition may not be as important an explanation in our data as it would be if the freshman responses were more representative. As a consequence of the two characteristics just described, our "cross-sectional" comparisons are probably not much different from what would be found in a longitudinal study. Nevertheless, there is undoubtedly some selective retention; and differences between freshmen and seniors cannot explicitly be attributed to growth resulting from the college experience.

We begin our analysis of differences in activities and outcomes with a table showing the percent of students at each year who indicate they have made substantial progress toward each of the goals listed in the questionnaire. Using the same definition of an educationally important difference that we have used previously (12 percentage points or more), there are important differences between the reported gains of freshmen versus seniors in all of the goals related to intellectual skills, all of the goals related to science, all of the goals related to vocational preparation, two of the goals related to personal/social development, one of the general education goals, and on the goal of becoming familiar with computers. The magnitude of the freshman-senior difference is greatest with respect to the goals of vocational preparation. Second in magnitude are the differences with respect to intellectual skills, followed by science goals. In each of these categories (intellectual skills, vocational preparation, and science) the percent of students reporting substantial progress is greater with each year in school. This same consistent upward progression with each succeeding

Percent of Freshmen, Sophomores, Juniors and Seniors Reporting Substantial Gain Toward Important Educational Goals

	Freshmen	Sophomores	Juniors	Seniors	Diff. in % between Fr. & Srs.	Diff. as a % of poss. Difference
Intellectual Skills						
Analysis	52	62	69	75	23	48
Quantitative	36	45	52	56	20	32
Synthesis	59	70	76	80	21	51
Inquiry	71	78	83	87	16	55
Science						
Science	27	35	40	42	15	21
Technology	21	28	35	37	16	20
Consequences	23	30	36	40	17	22
General Education						
Breadth	62	71	69	73	11	28
Arts	27	31	30	32	5	7
Literature	30	34	33	36	6	9
Writing	55	52	57	62	7	16
Philosophies	44	52	53	56	12	22
Personal/Social						
Values	58	66	68	72	14	33
Self	71	77	79	82	11	40
Others	75	80	80	83	8	32
Team	46	54	61	67	21	40
Health	41	42	43	43	2	3
Vocational Preparation						
Job	27	41	56	62	35	48
Specialization	43	61	68	74	31	54
Career	56	68	73	77	21	48
Computers	23	31	36	40	17	22

year is also found with respect to the goals defined as becoming aware of different philosophies and cultures,developing one's values and ethical standards, self-understanding, ability to function as a team member, and acquiring familiarity with the use of computers.

There are only four of the twenty-one goals where the differences in percentages by year in school are negligible and inconsistent—good health habits, enjoyment of arts and of literature,and writing effectively. With respect to health, concern for physical fitness is about the same each year. The goals related to arts and literature are ones toward which few freshmen (27% and 30%) claim substantial progress; and the percentages are not much higher among the seniors (32% and 36%). This may reflect relatively little exposure to those subjects during the college years. Progress toward effective writing declines a little in the sophomore year, then moves up a few percentage points. In many colleges a lot of emphasis is given to good writing in the freshman year, but the emphasis in subsequent years probably varies, dependent on the students' major field.

The last column in the table of progress toward goals is labeled "Difference as a % of possible difference". The relative magnitude of a difference between freshmen and seniors depends on the starting point. For example, the freshman-senior difference in the goal described as "inquiry" is 16 percentage points, from a starting percent of 71% to an ending percent of 87%. If one starts at 71%, the maximum possible increase is from 71% to 100%, or 29 percentage points. The obtained difference of 16 points is therefore 55% of the possible difference. Toward the goal of understanding new developments in technology, the difference between freshman and seniors is also 16 points; but this is only 20% of the possible difference. My own view is that these relative differences are a better indicator of change. Using this concept of percent of possible dif-

ference, the goals related to vocational preparation and to intellectual skills again emerge at the head of the list. But now, four of the five goals related to personal/social development show a high degree of relative change. Also two of the general education goals, breadth and philosophies, show greater relative change than the goals related to science.

To the colleges, these freshman-senior differences, whatever may account for them, have some importance. What they show is obvious: this is what our students say after they have been with us for one year; this is what they say after they have been with us for four years; and the direction of the differences is in line with our intentions.

In contrast to the many large differences in outcomes, there are very few differences in students average scores on the quality of effort scales between one class and another. Using a difference of three points in the average scores as large enough to be educationally important, one finds in the next table only two topics where the differences between freshmen and seniors are that large—namely, on the topics of experiences with faculty, and clubs and organizations. On both these aspects of undergraduate activities, the level and quality of involvement by seniors is higher than the involvement of freshmen. In two other topics there are differences of two points between freshmen and seniors; and both of those topics are scholarly activities—Library, and Course Learning, with seniors having the higher scores. On the remaining ten aspects of undergraduate experience there are no differences of more than one point between any two classes.

By reporting average scores as whole numbers, without decimal points, we make it easier to see the larger differences but we also make it impossible to examine smaller differences that may have some educational relevance because of their consistency. Examining the average

Average Scores on the Activity Scales Comparing Freshmen, Sophomores, Juniors, and Seniors

	Freshmen	Sophomores	Juniors	Seniors	Diff. in scores between Fr. & Srs.
Academic Scholarly Activities					
Library	19	19	20	21	+2
Faculty	19	19	20	22	+3
Course Learning	28	29	30	30	+2
Writing	26	25	25	25	-1
Science	16	16	16	16	0
Informal, Interpersonal Activities					
Art, Music, Theater	19	20	20	20	+1
Personal Experiences	22	23	22	22	0
Student Acquaintances	26	26	26	25	-1
Conversation Topics	29	30	30	30	+1
Conversation Information	14	14	15	15	+1
Group Facilities Activities					
Student Union	21	21	21	21	0
Athletic and Recreation	19	19	19	19	0
Clubs and Organizations	19	21	22	22	+3
Residence	26	26	26	26	0

scores carried out to two decimal places produces the following findings. First, there are six topics, or aspects of college experiences, about which the average score is consistently higher each year from freshman to senior level. Five of these topics have some relationship to the intellectual aspects of college—use of the library, contacts with faculty members, course learning, the cultural level of student conversations, and the

intellectual content of student conversations. The sixth topic was involvement in clubs and organizations.

On two of the scales, the highest average score was made by the end-of-year freshmen—Athletic and Recreation Facilities, and Experience in Writing. The fact that the activity score for Writing goes down somewhat after the freshman year is consistent with our previous finding that the reported gains in writing ability are higher for freshmen than for sophomores, although the reported gains go up slightly for juniors and seniors.

On four of the scales it is the sophomores who show the highest average score. Three of those topics are clearly ones that involve the interpersonal and social aspects of college—living in a dormitory or other college housing, getting acquainted with other students, and learning more about oneself. The fourth topic with the highest score for sophomores was the scale labeled Art, Music, Theater—and to some extent this also involves interpersonal and social contacts.

Although the quality of effort scores are generally similar from one year to the next, there is nevertheless a rather clear pattern within the differences that do occur. On most of the topics having a clear intellectual or scholarly content, the quality of student effort is greater with each year in college. On most of the topics having a clear focus on the social aspects of college life, the quality of student effort reported by sophomores is the highest of the four classes.

CHAPTER 9

GENDER, AGE & ETHNICITY

The emphasis in this report up to now has mainly been on student activities and gains at different types of institutions and in different conditions within institutions that might be related to activities and gains such as residence, major field, and year in school. We turn next to different views of the college experience that may be related to age, gender, or ethnic identification. The typical age of college students who continue their education following high school graduation is from 17 to 22. In the selective liberal arts colleges, 95% of the students in our survey are in this age group. In the other types of institutions, from 12% to 26% are older than this, with generally about 5% to 10% being 28 or older. With respect to gender our interest is seeing whether there are any differences in the frequency of activities and the progress toward goals between men and women. Differences between ethnic groups are confounded by the fact that they come from different parts of the country. The Hispanic and Asian groups are found mostly in the west and southwest. Also, the Asian students are mainly in the research universities and the selective liberal arts colleges. Moreover, since 80% to 90% of the respondents are white, the total number of responses from minorities is quite small—about 3 to 6% black, about 2 to 4% Hispanic, and about 1 to 7% Asian in the different types of institutions.

Overall, among the 25,429 students who filled out the College Student Experiences Questionnaire, 85% were white, 5% black, 4% Asian, 3% Hispanic, and 3% unidentified. In round numbers for minority

groups we are dealing with about 1140 black students, about 960 Asian students, and about 630 Hispanic students.

In the three minority groups we can analyze—black, Hispanic, and Asian—there are a number of fairly large differences between them which may to some extent have a bearing on quality of effort and on gains. For example, 60% of the black students in the sample live in college housing, compared with 40% of the Hispanic students. In college grades about 38% of the white and the Asian students reported that their grades were B+ or better; but 17% of the Hispanic and 13% of the black groups reported B+ or better grades. A majority of the white and Asian students come from families in which one or both parents were college graduates, compared with about a third of the Hispanic and black students. Asian students also spend more time on their school work than any of the other groups—56% spending about 40 hours a week or more, compared to 40% of the white students, 39%of the Hispanic students, and 33% of the black students.

The following table shows the average scores of the ethnic groups on each of the activity (quality of effort) scales. What is immediately apparent is that there are no major differences between any of the groups on the scholarly, intellectual activities or on the informal, interpersonal activities. On the activities related to science and technology, the average score of Asian students is higher than the average score of other groups, and higher by 3 points over the black student group. In contrast, it is the Asian students who have the lowest quality of effort score in the use of athletic and recreation facilities and involvement in clubs and organizations. Black students have the highest average score for use of the student union, and for participation in clubs and organizations.

Average Scores on the Activity Scales for Different Ethnic Groups

	White	Black	Hispanic	Asian	Maximum Difference
Scholarly, Intellectual Activities					
Library Experiences	19	20	20	20	1
Experiences with Faculty	20	20	20	18	2
Course Learning	29	29	30	29	1
Experience in Writing	25	26	26	25	1
Informal, Interpersonal Activities					
Art, Music, Theater	20	20	20	19	1
Personal Experiences	22	23	22	21	2
Student Acquaintances	25	27	27	26	2
Topics of Conversation	29	30	30	29	1
Information in Conversations	14	15	15	15	1
Activities in Group Facilities					
Student Union	20	23	22	21	3
Athletic & Recreation Facilities	19	18	18	17	2
Clubs & Organizations	20	21	20	18	3
Dormitory or Fraternity/Sorority	26	24	25	23	3
Activities Related to Science					
Science/Technology	23	22	23	25	3

When we look at these average scores more closely, carried out to one decimal place, some general trends become evident even though the magnitude of single differences is not educationally significant. In other words, the accumulation of small differences may have some significance. In this perspective, the white students have the highest scores on the use of Athletic and Recreation facilities, and on involvement in the Residence Facilities. Their scores are lowest on Library, Student Union, Student Acquaintances, and on Information in Conversations. The black students

have the highest scores on the scales concerned with Library, Faculty, Arts, Student Union, Clubs and Organizations, Personal Experiences, and Student Acquaintances. Their scores are lowest on activities related to Science/Technology. Hispanic students show the highest quality of effort in Course Learning, Writing, and Topics of Conversation. They are not the lowest group on any topic. Asian students are highest in Science activities; but they show the least quality of effort on the topics of Faculty, Course Learning, Arts, Athletic and Recreation facilities, Clubs and Organizations, Personal Experiences, and Residence facilities.

To see more specifically the activities on which the ethnic groups differ, we have identified, for each of the topics with a difference of 3 points in the average score, the items that account for the difference. With respect to the activities in the Science/Technology scale, the percentage indicating frequent activity is highest for the Asian students on all the items. Using a difference of 15 percentage points as defining a "noticeable" difference, 78% of the Asian students said they frequently "memorized formulas, definitions, technical terms" compared to a little less than two-thirds of the other groups. And 62% of the Asian students said they frequently"tried to express a set of relationships in mathematical terms," compared to 44% in the other groups. The fact that Asian students, to a greater extent than others, choose physical sciences, engineering, and computer science as their major field of study would probably explain the ethnic differences.

Involvement in clubs and organizations was another topic showing a noticeable difference in average scores. In this case it is the Asian students with the lowest involvement and black students with the highest on nearly all items. For example 25% of the Asian students reported that they frequently attended a program or event put on by a student group,

compared to 45% of the black students. Also, slightly less than one-fourth of the Asian students frequently read or asked about a club, organization, or student government activity, or frequently voted in a student election, but a little more than one-third of the black students frequently engaged in those activities.

In uses of the Student Union, only one specific activity had a difference of 15 points or more between ethnic groups—with 61% of the black students indicating that they frequently looked at the bulletin board for notices about campus events, compared with 45% of the Asian students. In all of the activities in this scale, either the black or the Hispanic students have the most involvement. For example, Hispanic students most frequently said they often had meals, snacks, etc., at the union, met friends there, sat around talking with other students about classes and other college activities, used a lounge to relax or study by yourself, saw a film or other event at the union. Black students most frequently said they attended a social event at the union, heard a speaker at the union, played games, and used the lounge for meetings. In all those activities, the difference in percentages between the most and least active group was 11 points.

Among the students who live in a campus residence, the Asians are the least active on all of the items comprising that scale. The largest differences (15 percentage points or more) show that the Asian students are least likely to engage in lively conversation about various topics during the dinner hour, least likely to go out with other students for late night snacks, or to engage in discussions that last late into the night, or to borrow things from others in the residence unit, or to attend social events put on by the residence unit. In all of these activities the white students are the most frequent participants.

From these data the Asian students emerge as the least involved in the social and interpersonal aspects of the college experience.

With respect to outcomes, or progress toward various goals of college education, the differences between ethnic groups that are most noticeable are on goals most clearly related to the curriculum. In the following table there are no large differences between ethnic groups in gains related to intellectual skills, or to vocational preparation. In gains related to personal/social development, where one might expect less progress from the Asian students because of their lower involvement in social activities, the Asian students are significantly below the other ethnic groups only on progress toward the ability to function as a team member. On that outcome substantial progress is indicated by 49% of the Asian group compared to 62%of the black students. Science, technology, literature, and writing are outcomes most clearly related to the curriculum. A noticeably higher percent of Asian students report substantial progress in understanding the nature of science and experimentation, and in understanding new scientific and technical developments. And, a noticeably lower percent of Asian students report substantial progress toward broadening one's acquaintance and enjoyment of literature, and toward writing clearly and effectively. These contrasts correspond to the fact that Asian students are most likely to major in the sciences and least likely to major in the humanities.

In ten of the fourteen activity topics there are no noticeable differences in quality of effort between any of the ethnic groups. And in fifteen of the twenty-one statements of goals there are no noticeable differences between any of the ethnic groups in the percent who believe they have made substantial progress. Where there are noticeable differences it is the Asian students who invest the most effort and report the most progress in

Estimates of Gain for Different Ethnic Groups

	Percent Substantial Gain				Maximum
	White	Black	Hispanic	Asian	Difference
Intellectual Skills					
Analysis	63	63	65	64	2
Quantitative	45	45	49	54	9
Synthesis	70	69	72	66	6
Inquiry	79	79	79	75	4
General Education, Literature & Arts					
Breadth	68	61	66	64	7
Arts	28	29	27	24	5
Literature	32	31	35	22	13
Writing	56	61	58	45	16
Philosophies	49	52	58	51	9
Personal/Social Development					
Values	64	67	68	59	9
Self	76	79	76	72	7
Others	77	80	77	73	7
Team	55	62	55	49	13
Health	41	44	43	37	7
Science and Technology					
Science	34	30	38	49	17
Technology	29	26	32	44	18
Consequences of Sci/Tech	31	30	36	40	10
Vocational Preparation					
Job Training	47	40	43	38	9
Specialization	61	54	59	62	8
Career Relevance	68	65	67	60	8

topics related to science. But it is also the Asian students who invest the least quality of effort in using some of the group facilities at the college—involvement in clubs and organizations and in the residence facilities. In other outcomes, progress in literature and writing is claimed by higher percentages of black and Hispanic students than by Asian students, and the ability to function as a team member is claimed by black students more than by students in other groups.

Turning next to comparisons of activities and outcomes for different age groups, the location of older students needs to be kept in mind. The most selective institutions have the fewest students beyond the traditional college age of 22 and younger. Among the students in our sample from the selective liberal arts colleges, only 1% are age 28 or older, and in the research universities there are only 4% at this older age. In the other three institutional types there are 10% who are age 28 or older, and altogether from 20% to 26% above the traditional college age of 22 or younger.

Average scores on the activity scales are shown in the next table. Despite the fact that the older students are a higher proportion of the student body in the less selective institutions, there are no differences of any noticeable magnitude between older and younger students on any of the scholarly, intellectual activities, or the activities related to science. On all of the informal, interpersonal activities, and on all of the activities in the use of group facilities, the young traditional college age students have the highest quality of effort, and the quality of effort scores decline with each older group. On all four of the activities in group facilities these differences are large and noticeable. And on four of the five informal, interpersonal activities the differences between the youngest and the oldest age group are also large and noticeable.

Average Scores on the Activity Scales for Different Age Groups

	22 or younger	Between 23 & 27	28 or older	Maximum Difference
Scholarly, Intellectual Activities				
Library experiences	19	20	20	1
Experiences with Faculty	20	21	20	1
Course Learning	29	30	31	2
Experience in Writing	25	25	25	0
Informal, Interpersonal Activities				
Art, Music, Theater	20	19	17	3
Personal Experiences	22	21	19	3
Student Acquaintances	26	24	22	4
Topics of Conversation	30	28	25	5
Information in Conversations	15	15	14	1
Activities in Group Facilities				
Student Union	21	19	17	4
Athletic and Recreation Facilities	19	17	13	6
Clubs & Organizations	21	18	15	7
Residence Unit	26	21	15	11
Activities Related to Science				
Science/Technology	16	16	15	1

For the older students the social aspects of college life hold little interest. The student union, for example, is not a social center for the older students. About one-fifth to not more than one-third frequently have meals or snacks at the union, look for notices about events, meet friends, use the lounge. Among the younger students frequent use in these ways characterizes 40% to 50% of them. A fourth of the younger students, in contrast to 5% of the older students frequently attend social or other events

in the union. In using the athletic and recreation facilities, from 5% to 22% of the older students are frequent users, compared with 23% to 47% of the younger students. Clubs and organizations hold little interest for most older students with typically only about 10% attending meetings, working in the organization, voting in student elections,or even reading about student organizations. Among the younger students roughly one-third to one-fourth are active participants in clubs and other student groups. So few older students live in college housing and they are so different from the younger students that almost none of them participated in any dormitory activities.

With respect to the arts, differences between age groups in most of the activities are quite small. The big differences are related to music. Talking about music with other students at the college is a frequent activity among 50% of the younger students, but only among 14% of the older students. Attending a concert or other musical event at the college is a frequent activity of 28% of the younger students, but of only 10% of the older ones. Some of the activities under the heading of Personal Experiences are ones intended to promote better self-understanding—telling a friend why you reacted to another person the way you did, discussing why some groups get along smoothly and others don't, asking a friend to help you with a personal problem, identifying with a character in a book or movie and wondering what you might have done under similar circumstances, asking a friend to tell you what he/she really thought about you. In some of these activities frequent participation by younger students is indicated by more that half of them, compared to fewer than one-fourth of the older students. In the breadth and depth of one's acquaintance with different kinds of students—different majors, different interests, different backgrounds, different values, and different religious beliefs—two-thirds

of the younger students report developing friendships frequently, compared to one-third of the older students. And with respect to serious discussions about values and religion, 39% to 45% of the younger students say they are frequent compared with 20% to 25% of the older students. Differences in the frequency of conversation topics are not significant for any of the more cultural and intellectual subjects, but for the typical college age concerns about jobs, money, and careers, about movies and music, social events and parties, and relations between the sexes, three-fourths of the younger students talk about such things frequently, but, except for careers, one-fourth or fewer older students frequently discuss these collegiate life topics.

Many of the differences in activities between younger and older students are paralleled by the differences in outcomes shown in the next table. On all of the outcomes classified as personal/social development, the percent of younger students claiming substantial progress is noticeably greater than the percent of older students claiming substantial progress. Gains regarding vocational preparation, however, were cited by a higher percentage of older students than by younger ones, particularly specific job training.

The age differences presented here indicate that all groups are about equally involved in the academic aspects of college and report similar progress toward the acquisition of intellectual skills, general education, and science and technology. The fact that older students were more likely to report progress toward the goal of specific job training suggests that their motivations may be more strongly vocational. In all the collegiate or social aspects of college, the older students are minimally involved. That part of the college experience belongs to the younger students.

Estimates of Gain for Different Age Groups

	Percent Reporting Substantial Gain			
	22 or younger	Between 23 & 27	28 or older	Maximum Difference
Intellectual Skills				
Analysis	63	69	61	8
Quantitative	46	53	44	9
Synthesis	70	73	66	7
Inquiry	79	82	78	4
General Education, Literature & Arts				
Breadth	68	67	64	4
Arts	29	28	22	7
Literature	32	32	33	1
Writing	56	58	57	2
Philosophies	50	50	46	4
Personal/Social Development				
Values	66	63	50	16
Self	77	74	63	14
Others	80	69	57	23
Team	57	55	44	13
Health	43	40	25	18
Science & Technology				
Science	34	41	35	7
Technology	28	38	31	10
Consequences of Sci/Tech	31	40	32	9
Vocational Preparation				
Job Training	44	57	56	13
Specialization	59	67	68	9
Career Relevance	67	73	72	6

Turning finally to differences in experience and progress between men and women, the results in the following table showing the average scores on the quality of effort measures indicate clearly that on nearly all aspects of college experience there are no major differences between the quality of effort invested by men and by women. There are only two topics showing a difference in average score by as much as three points.

Average Scores on the Activity Scales for Men and Women

	Men	Women	Maximum Difference
Scholarly, Intellectual Activities			
Library Experiences	19	20	1
Experiences with Faculty	20	20	0
Course Learning	28	30	2
Experience in Writing	24	26	2
Informal, Interpersonal Activities			
Art, Music, Theater	19	20	1
Personal Experiences	20	23	3
Student Acquaintances	25	26	1
Topics of Conversation	29	29	0
Information in Conversations	15	15	0
Activities in Group Facilities			
Student Union	20	21	1
Athletic & Recreation Facilities	20	17	3
Clubs & Organizations	19	20	1
Dormitory or Fraternity/Sorority	25	26	1
Activities Related to Science			
Science/Technology	17	15	2

Men more than women are involved in the use of athletic and recreation facilities. Women more than men are more involved in activities related to self-understanding. Also, there are only two topics where the average score of men is higher than the average score of women—athletic and recreational facilities, and activities related to science and technology. There are nine topics where the average score of women is higher than the average score of men; and three topics where there are no differences in quality of effort between men and women.

There is a similar absence of major differences between men and women in their reported progress toward various goals, shown in the next table. Using the same criterion of 12 points difference between percentages we have previously used to identify a noticeable difference, only two outcomes meet this criterion. Men more frequently cite progress in "quantitative thinking;" and men more frequently cite progress in understanding new scientific and technical developments. Some of the differences of lesser magnitude should be noted. A higher percentage of men than women cite progress toward all goals related to science and technology. A higher percentage of women than men cite progress toward all goals related to general education and toward four of the five goals classified as personal/social development. Overall, some of the differences in activities and outcomes between men and women may be as much influenced by the choice of major field as by gender. Men are more likely to major in engineering and physical sciences; women are more likely to major in humanities and arts.

Estimates of Gain for Men and Women

	Percent Reporting Substantial Gain		Maximum Difference
	Men	Women	
Intellectual Skills			
Analysis	68	60	8
Quantitative	53	41	12
Synthesis	69	71	2
Inquiry	76	81	5
General Education, Literature & Arts			
Breadth	66	69	3
Arts	25	30	5
Literature	27	35	8
Writing	52	59	7
Philosophies	49	51	2
Personal/Social Development			
Values	59	69	10
Self	70	80	10
Others	71	82	11
Team	54	57	3
Health	41	41	0
Science and Technology			
Science	41	30	11
Technology	37	24	13
Consequences of Sci/Tech	37	28	9
Vocational Preparation			
Job Training	46	46	0
Specialization	61	60	1
Career Relevance	67	68	1

CHAPTER 10

TIME FOR READING, WRITING, AND STUDY

In the previous chapters we have seen that most students at all types of colleges do frequently many of the things we would expect them to do that contribute to their learning. They pay attention in class; they take detailed notes; they think about how ideas fit together and about the practical applications of what they are learning; they underline points in their readings and periodically summarize their notes; they try to explain points to one another; they ask other people to read something they have written to see if it is clear to them; they write and rewrite and spend many hours on their written work; and, of course, they use the dictionary and think systematically about what they are writing. Moreover, and no doubt related to these academic pursuits, most students everywhere report that they have made substantial progress in critical thinking, independent inquiry, breadth of knowledge, and effective writing, as well as specialized knowledge from their major field of study. It is probably fair to say that reading, writing, and study are common elements in school work from kindergarten through graduate school. In this chapter we report what undergraduates say about how much reading and writing they do, and how much time they spend on their academic activities. We shall also see how this differs depending on where they are and what they are studying.

For most students, school work is a full-time job. Most full-time workers in the U.S. have a 35 to 40 hour work schedule—seven or eight hours a day for five days a week. The number of hours a week students usually spend on activities related to their school work is about the same as

the number of hours a week a full-time employee spends on a job. While 35 to 40 hours is typical, some students spend about 50 hours a week or more, and others spend about 20 hours a week or less. By school work we mean time spent in class plus time spent studying. We did not ask students to separate class time and study time. In general, a student's course work involves about 12 to 18 hours a week. If 15 hours a week is typical, then clearly a few students are devoting very little time to study (about five hours a week) while others are devoting a great deal of time to study (more than 30 hours a week). These differences are evident in the following table.

Time Spent on School Work

Number of Hours	Percentages at each of 5 types of institutions				
	RU	DU	CCU	GLA	SLA
About 50 hours or more a week	15	12	10	12	21
About 40 hours a week	28	25	23	26	33
About 30 hours a week	37	38	39	37	31
About 20 hours a week	14	16	19	17	11
Less than 20 hours a week	6	8	8	8	3

In the doctoral universities and the comprehensive colleges and universities a fourth of their students report spending about 20 hours a week or less on their academic work. These are the types of institutions that account for the largest enrollments nationally. Clearly, then, a lot of undergraduates are not spending much time studying yet are nonetheless able to pass their courses. However, at these same institutions one-third of the students spend 40 hours a week or more in their academic work. Similar percentages are true of the traditional liberal arts colleges. At the research universities, and most especially at the selective liberal arts col-

leges, the students' commitment of time to academic work is substantially greater.

The nature of this academic commitment is further revealed by the number of books (texts or other assigned books) read and the number of term papers or other reports written during the year. This information is shown in the next two tables.

Reading of Texts or Assigned Books

Number of Texts/Books	Percentages at each of 5 types of institutions				
	RU	DU	CCU	GLA	SLA
More than 20	11	10	7	11	40
Between 10 and 20	34	34	29	34	38
Between 5 and 10	39	39	42	39	18
Less than 5	15	18	22	16	4

Writing Term Papers or Other Reports

Number of Papers/Reports	Percentages at each of 5 types of institutions				
	RU	DU	CCU	GLA	SLA
More than 20	4	6	4	8	12
Between 10 and 20	15	20	13	18	34
Between 5 and 10	28	29	31	31	32
Less than 5	43	39	45	38	22
None	10	6	7	4	1

In most places about ten percent of the students say they have read more than 20 books during the year; but at the selective liberal arts colleges 40% have read more than 20 books. Also, at most places about a fourth or a fifth of the students say they have written ten or more term papers or

other reports; but at the selective liberal arts colleges nearly half of the students have written ten or more papers during the year.

In the next table we show contrasts in academic commitment: strong commitment being defined as spending 40 hours a week or more on academic activities, reading 10 or more books and writing 10 or more term papers during the year; and weak commitment defined as spending 20 hours a week or less on academic work, reading fewer than five books and writing fewer than five papers.

Contrasts in Academic Commitment

	Percentages at each of 5 types of institutions				
	RU	DU	CCU	GLA	SLA
TIME					
Strong commitment: 40 hours or more	43	37	33	38	54
Weak commitment: 20 hours or less	20	24	27	25	14
READ					
Strong commitment: 10 or more books	45	44	36	44	78
Weak commitment: fewer than 5 books	15	18	22	16	4
WRITE					
Strong commitment: 10 or more papers	19	26	17	26	46
Weak commitment: fewer than 5 papers	53	45	52	42	23

At all five types of institutions the proportion of students making a strong commitment to academic matters—time spent and books read—far exceeds the proportion making a weak commitment. With respect to writing activities it is only at the selective liberal arts colleges that the proportion writing 10 or more papers exceeds the proportion writing fewer than five papers during the year.

Time spent is partly determined by student initiative, aptitude, and dedication to learning and also partly determined by faculty require-

ments and expectations. The amount of assigned reading and writing is determined by the faculty but it is also partly determined by the curriculum. For example, books are a significant source of knowledge in the social sciences and the humanities, but are perhaps less central in laboratory sciences, engineering and math. Also, writing is more common in the humanities than in the sciences.

To see the differences between major fields in the amount of reading and writing required of the students we tallied the responses of upperclassmen. It is in the last two years of college that students academic work is most heavily defined by courses in their major field; and consequently differences in reading and writing activities of upperclassmen would best reflect these major field differences. The results show clear differences. In the humanities and social sciences, for example, a little over 60 percent of the majors reported reading ten or more texts or other assigned books during the year. In most other major fields the corresponding percentages are a little over 40 percent; and among engineering majors it is 32 percent. Reading ten or more non-assigned books was reported by 27 percent of the humanities majors, by 14 to 18 percent of majors in most other fields, and by 10 and 11 percent of majors in engineering and in business. As to writing activities, roughly a third of the humanities and social science majors had ten or more essay exams in their courses. This number of essay exams was indicated by a fourth to a fifth of the majors in biological sciences, education, and business; by 14 to 15 percent of the majors in physical sciences and health related fields; and by only seven percent of the engineering majors. Contrasts between major fields in the number of term papers or other written reports are in the same direction although not of the same magnitude, with a fourth to a third of the humanities and social

science majors writing ten or more such papers; and about a fourth to a fifth of the students in other fields.

The curriculum does, indeed, have a noticeable bearing on these reading and writing activities, with the humanities and social sciences making the greatest demands, with engineering and business making the least demands, and with the sciences and other fields more or less in the middle.

In the sciences there is a different kind of demand that can be attributed to the curriculum: this is the requirement of laboratory work. In some fields the time spent in laboratory work is as great or greater than the time spent in the typical classroom for lectures and discussion. Thus, in the major fields where laboratory work is most extensive—engineering, health related fields, biological sciences, and physical sciences—the total time devoted to academic activities is greater than in other fields. For example, 64 percent of engineering majors report spending 40 or more hours a week on academic work; and the corresponding percentages are 58% among majors in health related fields, 55% in biological sciences, 54% in physical sciences. In contrast, spending 40 hours a week or more on academic work was reported by 44% of humanities majors, 41% of education majors, 35% of social science majors, and 29% of business majors.

In general, the proportion of seniors spending 40 or more hours a week in academic activities is greater than the corresponding proportion of freshmen, although the differences are small. Among the five types of institutions, differences between freshman and seniors are also quite small with respect to essay exams, papers, assigned and non-assigned books, with none of the differences, save one, as great as 15 percentage points. The exception is in the selective liberal arts colleges where 57% of the

freshmen reported doing 10 or more term papers or other written reports and 40% of the seniors so reported.

Does all this time spent on academic work pay off in good grades? It most certainly does. Among students who said their grades were "mostly A," 57% spent 40 hours or more a week on academic activities. Among students who said their grades were "mostly C,C-, or lower" only 23% spent 40 hours or more a week on academic activities. These relationships are summarized in the following table.

Academic Time and Grades

	Among Students Whose Grades are Mostly:				
Time Spent per week	A	A-, B+	B	B-,C+	C, C- or lower
40 hours or more	57	49	40	40	23
About 30 hours	27	23	39	41	38
About 20 hours or less	16	17	21	28	38

Turning this information around, among students who said they spent 40 or more hours a week on their academic work, 46% said their grades were B+ or higher, and 26% said their grades were B- or lower. Among students who said they spent about 20 hours or less on their academic work, the percentages noted above are reversed, with 26% reporting grades of B+ or higher, compared to 46% reporting grades of B- or lower.

CHAPTER 11

DISENGAGED STUDENTS

In the last chapter we noted that a rather sizable minority of students in some types of colleges spent rather little time on their academic work, some spending even less than 20 hours a week including time in class. Among the undergraduates who responded to the *College Student Experiences Questionnaire*, nearly all (95%) indicated that they were enrolled as "full-time" students. Part-time students would of course be having fewer classes and spending less time on academic matters. For the picture of disengaged students drawn in this chapter, all part-time students have been removed from the sample.

What constitutes a full-load of course work varies somewhat at different places. At UCLA, for example, students might take three or four courses per quarter, with each course typically involving four hours of class time. This comes to 12 to 16 hours per week, and is more for students enrolled in science courses that have laboratory work. A student taking fewer than three courses would not be classified as a full-time student. At most colleges class time would consume about 12 to 18 hours a week.

If 15 hours a week spent in class is fairly typical, then students who say they spend about 20 hours a week on "activities that are related to your school work" are spending about five hours a week studying. In contrast, students who say they spend about 40 hours or more a week would be spending 25 hours a week, or more, studying. These two groups, the 20 hours or less and the 40 hours or more are now compared.

To make the comparison as equitable as possible, no one in either group was spending more than 10 hours a week on a job. Both groups, consequently, have equal opportunity to determine how they spend their time.

The college experience includes both academic and non-academic aspects. The content of the questionnaire reflects both of these aspects. It is possible that students who are spending a minimum amount of time on academic activities may be spending a more than average amount of time on the non-academic activities of college life, such as involvement in clubs, using the student union, the athletic and recreation facilities, participation in residence hall activities, becoming acquainted with a variety of students, etc. And, students who spend 40 hours a week or more on academic activities may be less involved in non-academic activities.

These contrasting groups are further identified as follows:

Background Differences Between Academically Engaged and Disengaged Students

	Academically Disengaged	Academically Engaged
Number of students	2604	7093
Percent male students	51%	41%
Academic majors		
Business	29%	15%
Social Sciences	17%	12%
Sciences related fields		
Engineering	6%	15%
Physical Sciences	4%	7%
Biological Sciences	5%	9%
Health	4%	9%

110

	Academically Disengaged	Academically Engaged
Plan to get advanced degree	55%	72%
Parents pay all or nearly all expenses	51%	42%
Grades are mostly B- or lower	52%	25%

From the above, the academically disengaged students, compared with the academically engaged students, are more likely to be males, to major in business or social sciences, are less likely to major in any science-related field, are less likely to aspire to an advanced degree, and are more likely to have relatively poor grades. The disengaged students also appear to be relatively more affluent. There are no differences between the groups in the educational level of their parents, or with respect to living in college housing. Their low grades are not attributable to a disadvantaged family background, but seem rather to be attributable to low motivation for academic achievement and academic goals.

On the activity scales in the questionnaire measuring the amount and quality of effort students put into various aspects of the college experience, the disengaged students have a significantly and noticeably lower score on the scales measuring Course Learning activities and activities related to Science. They also have lower scores, although not as much lower, on all other scales related to the academic part of college life—Library, Faculty, and Writing. In contrast there are no large or noticeable differences between the groups in the level of their activity on any of the non-academic aspects of college. In fact, on many of those topics, the scores of the two groups are very close together—use of the Student Union, the Athletic and Recreation facilities, and the Residence facilities, and also the activities labeled Personal Experiences and Student Acquaintances. Nevertheless, even though the academically disengaged

students have much more time available to participate in non-academic activities, the level of their participation is not any higher than that of the students who have much less time for those out-of-class activities. The academically disengaged group might be described as students who are coasting through college.

If one is coasting, the only way one can go is downhill. In progress toward every one of the goals listed in the questionnaire, the percent of academically disengaged students who feel they have made substantial progress is lower than the percent for the academically engaged group. Toward some goals, the differences between the groups are especially large. For example, on all of the goals related to understanding science and technology, and all of the goals related to the development of intellectual skills, the gap between engaged and disengaged students ranges from 15 to 24 percentage points. Also, on all of the goals related to vocational preparation, the progress reported by the disengaged group is substantially lower than the progress of the engaged group. Where the two groups come closest together is on gains related to personal/social development, and, although not quite so close together, on gains related to general education, literature, and arts.

Differences in Gains Between Academically Engaged and Disengaged Students

	Percent Reporting Substantial Gain		Maximum Difference
	Disengaged	Engaged	
Intellectual Skills			
Analysis	52	71	19
Quantitative	35	53	18
Synthesis	60	75	15
Inquiry	69	84	15

	Percent Reporting Substantial Gain		Maximum
	Disengaged	Engaged	Difference
Science and Technology			
Science	22	46	24
Technology	19	39	20
Consequences of Sci/Tech	23	39	16
General Education, Literature & Arts			
Breadth	63	70	7
Arts	28	32	4
Literature	27	34	7
Writing	50	58	8
Philosophies	46	52	6
Personal/Social Development			
Values	61	68	7
Self	74	79	5
Others	77	80	3
Team	54	57	3
Health	41	43	2
Vocational Preparation			
Job Training	35	49	14
Specialization	45	69	24
Career Relevance	59	71	12

It would not be fair to conclude that these disengaged students are getting little out of their college experiences. With respect to out-of-class activities involving interactions with other students and using various non-academic campus facilities, they are not much different from the more fully engaged students; and their self-estimated progress toward goals related to personal/social development is about the same as the other group. However, the fact that they have much more time available for out-of-class activities, yet do not put more effort into them or get more out of them than

do students who have far less time for such activities seems to merit our description of them as coasting through college. Most people would claim, properly, that one of the most important goal of higher education for undergraduates is to develop in them the capacity for critical thinking and inquiry. And it is surely obvious that the group we have labeled academically disengaged is making much less progress toward this basic goal.

It is not that they are making no progress toward these intellectual skills, for more than half of them believe they have made substantial progress with respect to the skills of analysis, synthesis, and inquiry, and nearly all of them believe they have made at least "some" progress in those skills. If grades are an indication of how much they are learning, compared to others in their courses, then the fact that more than half of them are making grades of B-, C+, C, C-, or lower suggests that they are learning less than the more fully engaged students. Nevertheless, 22% of them report that their grades are mostly A, A-, B+. Moreover, these disengaged students are found in all of the five types of institutions. It is apparently possible to coast in the selective liberal arts colleges as well as in the larger and perhaps more impersonal places, to make passing grades, to gain many of the personal/social benefits of college life, and to enjoy the ride. When asked "How well do you like college?" 34% said "I am enthusiastic about it." That is almost as many as in our total national sample where 38% said they were enthusiastic.

CHAPTER 12

EXPLORING THE SCOPE OF EFFORT AND ATTAINMENT

The academically engaged students discussed in the last chapter outnumbered the academically disengaged students by nearly three to one. But both groups account for less than half of the undergraduates. Who are all the other students? What is their level of involvement in the college experience? If we now explore the activities of all the undergraduates, what varieties or patterns of effort might be revealed? It is possible for a student to reveal a high quality of effort in capitalizing on all 14 aspects of college experience. It is also possible for a student to reveal a low quality of effort in all 14 aspects of experience.

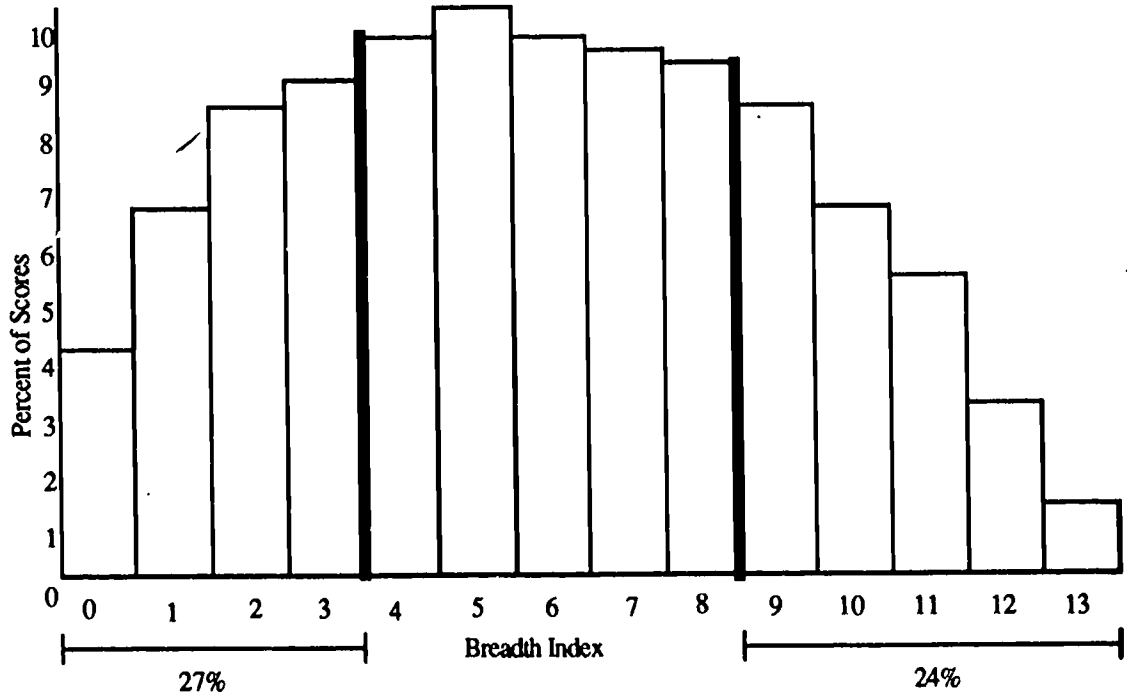
The number of topics, or areas of college experience, in which a student's quality of effort is above some agreed upon standard, is an indication of the scope or breadth of involvement. We have called this a "Breadth Index." There are numerous ways one might define breadth: for example, the number of topics in which a students' score is simply above average, or significantly above average, with average based on students from all schools, or based on the students at one type of institution, or students at one specific college. These variations in definitions, and the conclusions one reaches under different definitions, have been examined in detail in a study that was initiated several years ago. That study was based on the responses of 10,739 students from 33 colleges and universities, obtained in 1983-85. For the present chapter we have chosen a breadth index based on the distribution of scores for that total sample of 10,739. The number of topics, or areas of college experiences, that students' qual-

ity of effort score is above average defines its breadth index, or the scope of one's involvement in the college experience. Since not all students live in a campus residence facility, that particular aspect of college life cannot be used in the breadth index. There are, then, 13 topics to which all students can respond. A student's breadth score can therefore range from zero to 13—meaning above average on nothing to above average on everything.

The distribution of breadth scores is shown in the following chart. A few students, 4%, have quality of effort scores that are not above average on any topic—i.e., a breadth index of zero. At the other extreme, slightly more than 4% have quality of effort scores that are above average on all, or all but one, of the topics—i.e., a breadth index of 12 or 13. We might reasonably regard a breadth index of three or lower as a low group; and a breadth index of nine or higher as a high group. Each group contains about one-fourth of the students.

In this chapter we will suggest that the breadth index may be a very good overall indication of the quality of students' experience at a college. A college where many students are investing a high quality of effort with respect to many aspects of college life—both academic and non-academic—is probably a lively and effective environment for learning and development. A college where many students are investing a relatively low quality of effort in using the resources and opportunities college provides for their learning and development would be a less lively and probably a less effective college environment. In this sense, the breadth index may capture the spirit of the place better than any other single indicator might do.

Distribution of Breadth Index: Total Sample



First some explanation of how one gets a high or low breadth index will help to clarify its meaning. Theoretically, a student's quality of effort could be just barely above average on many aspects of the college experience, resulting in a high breadth score; and, another student's quality of effort could be just barely below average on many aspects of the college experience, resulting in a low breadth score. In this case, the difference between high and low breadth would be slight, insignificant, and of little educational meaning. While this can happen theoretically, it does not in fact happen in the real world. No one actually gets a high breadth score by being just barely above average on many topics; and no one gets a low breadth score by being just barely below average on many topics. What happens is this: the higher the breadth score, the more topics there are in which the student's quality of effort level is in the top third or higher, not just in the top half. Conversely, students who get a low breadth score have many quality of effort scores that are in the bottom third or lower of the distribution of scores. In other words, a student with a high breadth index has, typically, invested a genuinely high level of effort in many aspects of the college experience; and a student with a low breadth index is really low on many topics.

There is another way in which the same breadth score might have two quite different meanings. Some of the quality of effort topics are clearly academic in content—use of the library, contacts with faculty members, writing, course learning activities, and activities related to science. Other topics are clearly related to non-academic or out-of-class experiences—use of the student union, activities in clubs and organizations, personal experiences in self-understanding, breadth and depth of student acquaintances, and use of athletic and recreational facilities. Activities related to art, music, and theater could be classified either way, but probably are

more out-of-class than academic in nature. Conversation Topics and Information in Conversations are both academic and non-academic so we have listed them separately in the analysis which follows. Theoretically, one student could have above average quality of effort only on the five academic topics; and another student could have above average quality of effort only on five of the six non-academic topics. Both would have a breadth score of five, but the score would have a very different meaning. Again, what could happen theoretically does not in fact happen in the real world. The pattern of students involvement in college is not neatly divided between academic and non-academic elements.

From the very lowest breadth score and at each higher level of breadth score, the composition of the score is more or less equally divided between academic and non-academic activities. As the breadth score increases, it signifies not only a higher but also balanced scope of participation in the undergraduate experience.

We suggested that the breadth index may be a very good indicator of the quality of undergraduate experience. The following table shows the relationship between breadth of high quality of effort and progress toward important goals. Toward every one of the goals, the percent of low breadth students who believe they have made substantial progress is generally low; the percent of medium breadth students reporting substantial progress is higher; and the percent of high breadth students reporting substantial progress is still higher. Moreover, the difference in reported progress between high and low breadth students is very evident and of educational significance.

The general value of the breadth index as an indication of quality is demonstrated not only by its overall relationship to gains but also by the

Relationship Between Breadth of Effort and Progress Toward Important Goals

	Percent Reporting Substantial Gain			
	Score 0–3 Low Breadth	Score 4–8 Medium Breadth	Score 9–13 High Breadth	Maximum Difference
Intellectual Skills				
Analysis	48	67	81	33
Quantitative	34	47	59	25
Synthesis	50	74	88	38
Inquiry	61	81	92	31
Science & Technology				
Science	25	36	46	21
Technology	21	31	41	20
Consequences of Sci/Tech	19	32	45	26
General Education, Literature & Arts				
Breadth	57	69	83	26
Arts	16	30	46	30
Literature	17	35	54	37
Writing	38	57	73	35
Philosophies	31	52	71	40
Personal/Social Development				
Values	45	66	83	38
Self	58	78	89	31
Others	58	78	90	32
Team	34	53	69	35
Vocational Preparation				
Job Training	39	45	49	10
Specialization	49	63	76	27
Career Relevance	56	68	77	21

120

consistent way it reflects differences in experiences and progress that have been described in previous chapters. For example, students in the high group on the breadth index are:

a. more likely to be found at selective liberal arts colleges than at other types of institution;

b. more likely to live on or near the campus rather than farther away or at home;

c. more likely to be seniors than to be freshmen;

d. more likely to be traditional college age students than older students;

e. more likely to be found among majors in humanities, biological sciences or social sciences, and less likely to be found among majors in business, engineering, or computer science;

f. more likely to plan on additional education in graduate or professional school;

g. and, more likely to spend 40 or more hours a week on their academic activities.

We have seen that the more students put into their college experience, the more they get out of it. It is also true that the more they put into it, the better they like it. On the questionnaire, their opinions about college were assessed by answers to the following questions:

How well do you like college?

I am enthusiastic about it.
I like it.
I am more or less neutral about it.
I don't like it.

If you could start over again, would you go to the same college you are now attending?

Yes, definitely.
Probably yes.
Probably no.
No, definitely.

121

If to each question we give four points to the most positive response, three to the next most positive, then two, and one point for the most negative response, and then add the numbers for the two questions, we get a score ranging from eight to two which we can call a satisfaction index. The meaning of high and low scores is obvious. A score of eight means I am enthusiastic about it, and I definitely would go to the same place again. A score of two means I don't like it and I definitely would not go to this school again. For our analysis we regard a score of seven or eight as meaning "very satisfied;" a score of six which typically means I like it and would probably go here again, can be described as "generally satisfied;" and any score of five or lower means that one or more responses is neutral or negative.

For the total sample of students in our survey, the distribution of satisfaction scores is shown below:

Satisfaction Score	% Obtaining the Score	
8	22	} very satisfied (47%)
7	25	}
6	28	— generally satisfied (28%)
		POSITIVE (75%)
		NEUTRAL TO NEGATIVE (25%)
5	14	} somewhat dissatisfied (21%)
4	7	}
3	3	} very dissatisfied (4%)
2	1	}

The contrast between satisfied and dissatisfied students is extraordinarily vast. In the entire sample of undergraduates only 1% said "I don't like it" and "No, definitely" I would not go to the same college again. In contrast, 22% said "I am enthusiastic about it" and "Yes, definitely" I would go to the same college again. Defining a score or eight or seven as

"very satisfied" and a score of two or three as "very dissatisfied," the contrast between the satisfied and dissatisfied group is 47% to 4%.

To compare satisfaction with breath, we have divided the satisfaction data into three segments: students whose level of satisfaction with college is "very positive," 47%; "positive," 28%; and "neutral to negative," 25%. Each of these satisfaction levels is compared with scores on the breadth index in the following table.

The relationship between the breadth of high quality of effort students put into their educational experience and their satisfaction with the college experience is strong and striking. Every increase in the breadth index is paralleled by an increase in satisfaction with college.

Relationship Between Breadth of Effort and Satisfaction with College

Breadth Index	Percent Neutral to Negative	Percent Generally Positive	Percent Very Positive
13	9	23	68
12	13	20	67
11	16	21	63
10	16	23	61
9	21	24	55
8	20	27	53
7	22	30	48
6	23	29	48
5	25	29	46
4	28	30	42
3	29	33	37
2	35	30	35
1	35	37	28
0	48	29	24

CHAPTER 13

RE-VIEWING DIVERSITY AND DEVELOPMENT

At the outset of this report we expressed the opinion that none of the major critiques of higher education published in the 1980's were based on any systematically obtained knowledge about what students do in college or what they think they have achieved. It is, after all, the students themselves who are engaged in the process of higher education and who surely have some awareness and knowledge of what they are gaining from the experience. So, the *College Student Experiences Questionnaire* was constructed to provide data that would fill this incredible gap by asking the students what they do and what they believe they have gained.

For each of the 142 activities in the questionnaire, students were asked to recall whether they had engaged in the activity during the current school year, and if so,about how often. Most of the activities were quite explicit so that students could indeed recall their own behavior. Whether they had engaged in the activity occasionally, often, or very often is of course a personal judgment. In any case, all students know that very often is more than often, and that often is more than occasionally. From a variety of comparisons with other observations, and with checks on the reliability of student responses, evidence has accumulated to support the belief that the students answers are highly—if not perfectly—accurate, broadly reliable, and therefore credible.

There were also 21 statements of goals or achievements in the questionnaire. We asked students to reflect on their experiences in college and to rate their own progress or gain as very little, some, quite a bit, or

very much. All of the goals are relevant within the students' experiences and, for each of them, students have some basis for recalling and judging whether they have gained from their college experience. Moreover, their responses are congruent with what one would expect from their activities, and with what one knows from other sources of information. In a broad sense what they say they have gained is also credible and valid.

We began our account of students' replies by listing all the activities that all the students (90% or more) at each of five types of colleges said they did at least occasionally during the current school year. Then we added the activities that everyone did at some but not all five types of colleges. We followed the same pattern in listing all the activities that a majority or more (50% +) of the students did frequently (quite a bit & very much) at each of the five types of colleges, and then at some but not all five types. We found that the common and frequent activities were about equally divided between ones classified as academic and scholarly in content such as reading, writing, studying, and discussing their schoolwork, and ones classified as out of class activities such as getting acquainted with a broad range of students, informal interpersonal associations and conversations about college life. The additional common or frequent activities at some but not all types of colleges were relatively few in number at the research and doctoral universities and the comprehensive colleges and universities, and were mainly out-of-class activities. At the liberal arts college there were a few more intellectual scholarly activities common to all their students. The largest number of additional common and frequent activities were found at the selective liberal arts colleges, and these were predominantly ones involving informal, interpersonal associations and the use of non-academic campus facilities such as the student union, the residence facilities, and clubs and organizations. The basic core of common and fre-

quent academic activities was about the same at all the five types of institutions.

We next turned to identifying all the activities which were noticeably more frequent at some types of colleges than at others. There were 51 activities in this list—fifteen of them were academic, scholarly activities , and 36 were informal, interpersonal or related to the use of group facilities. The remarkable feature of this list, however, was not the number of differentiating activities but, the fact that in 46 out of the 51 it was the selective liberal arts colleges with the highest percentage of frequent participation. When we removed the selective liberal arts colleges from the comparisons, we found almost no differences in the frequency of activities between any of the other types of institutions. Diversity is an often-cited characteristic of American higher education. But if frequency of student activities is about the same at the types of institutions enrolling the most students, so that it apparently makes little difference in what students do whether they go to a research university, a doctoral university, or a comprehensive college and university, where is the diversity? Perhaps diversity would be found in student outcomes, if not in student activities.

There were 21 statements of goals or outcomes listed in the questionnaire. For each one, students indicated the extent to which they felt they had gained or made progress toward its attainment. At all five types of institutions a majority of students believed they had made at least "some" progress toward all of the goals. Toward ten of the goals, a majority of students at all five types of institutions felt that they have made substantial progress. Those ten goals were ones that have been at the heart of higher education for several centuries: the development of intellectual skills and breadth of knowledge; the development of values and standards, and understanding oneself and others; and preparation for a vocation. At

the selective liberal arts college there were two additional outcomes cited by a majority of the students—broadened acquaintance with literature, and an awareness of different philosophies, cultures, and ways of life. When differences between the institutional types were examined, there were 13 of the 21 goals where there was a noticeable difference in students' reports of substantial gain, but in 9 of the 13 instances of a noticeable difference it was the selective liberal arts college students with the highest percent indicating substantial progress. There were no major differences in outcomes between doctoral universities and comprehensives, only one difference between comprehensives and liberal arts colleges, one between research and doctoral universities, and two between research universities and general liberal arts colleges.

Given the similarity in students' activities and students' progress between the types of institutions that most students attend, is it fair to conclude that the undergraduate experience is pretty much the same everywhere? No. So what, then, has happened to diversity? There are two answers. First, diversity is the victim of a cover-up whenever averages instead of individual cases are reported. Differences between averages may be small, but there may be large differences between the institutions that are added together to produce the averages. Second, the well known typology of institutions developed by the Carnegie Foundation, and employed with minor variations by other researchers studying higher education, is apparently not useful for the purpose of studying student activities and progress in college. The typology may be useful for other purposes, but it is not useful for revealing the diversity of undergraduate experience.

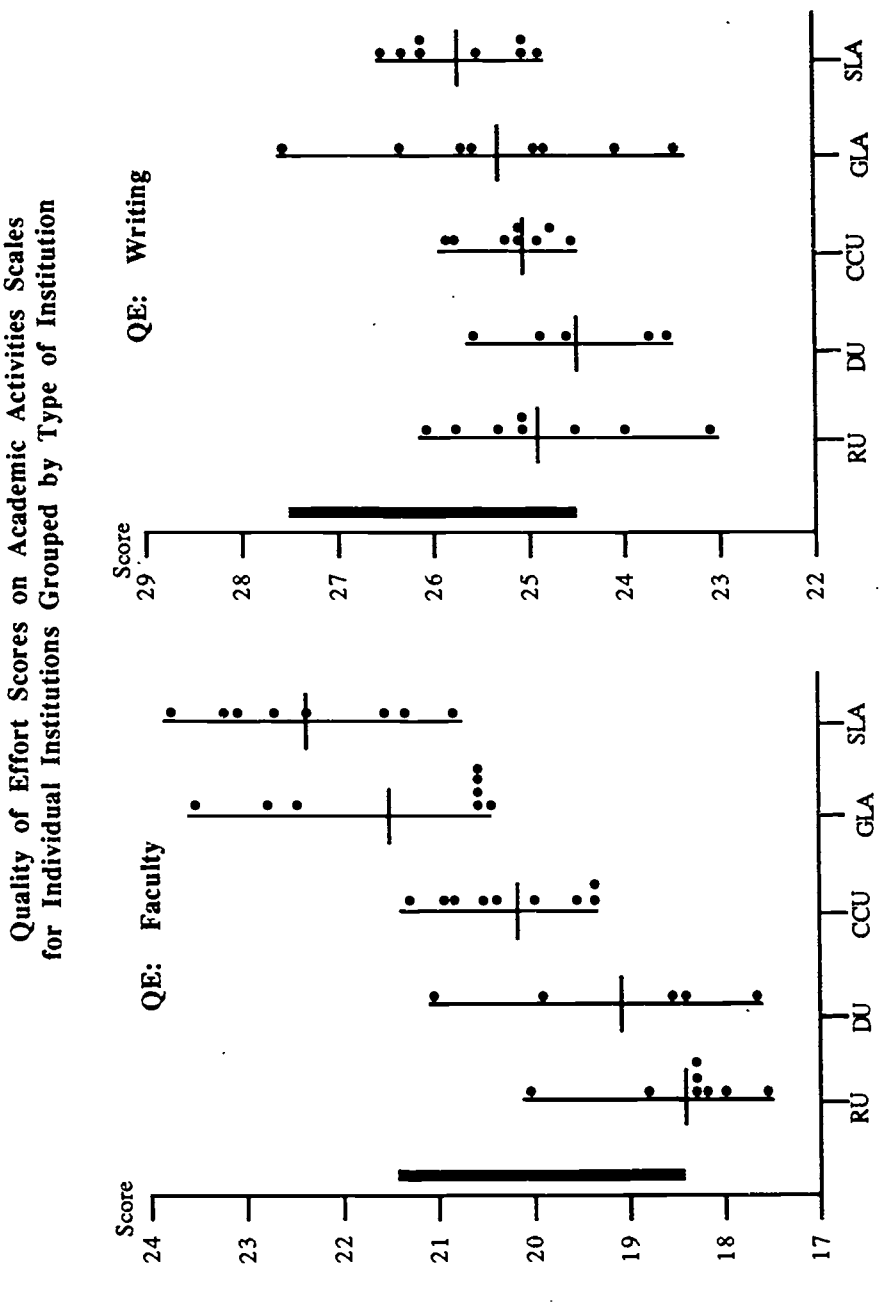
When one looks at the responses from individual institutions rather than the average responses for types of institutions, the diversity of student experiences and outcomes is very evident. For this perspective we

selected 38 college and universities that had the most representative cross-section of students responding to the questionnaire, and then plotted their position in a series of charts. Each institution is represented by a dot. We selected six activity or quality of effort topics, and six outcome or gains topics. For these examples we picked both academic and non-academic topics to reflect the variety of content in the questionnaire.

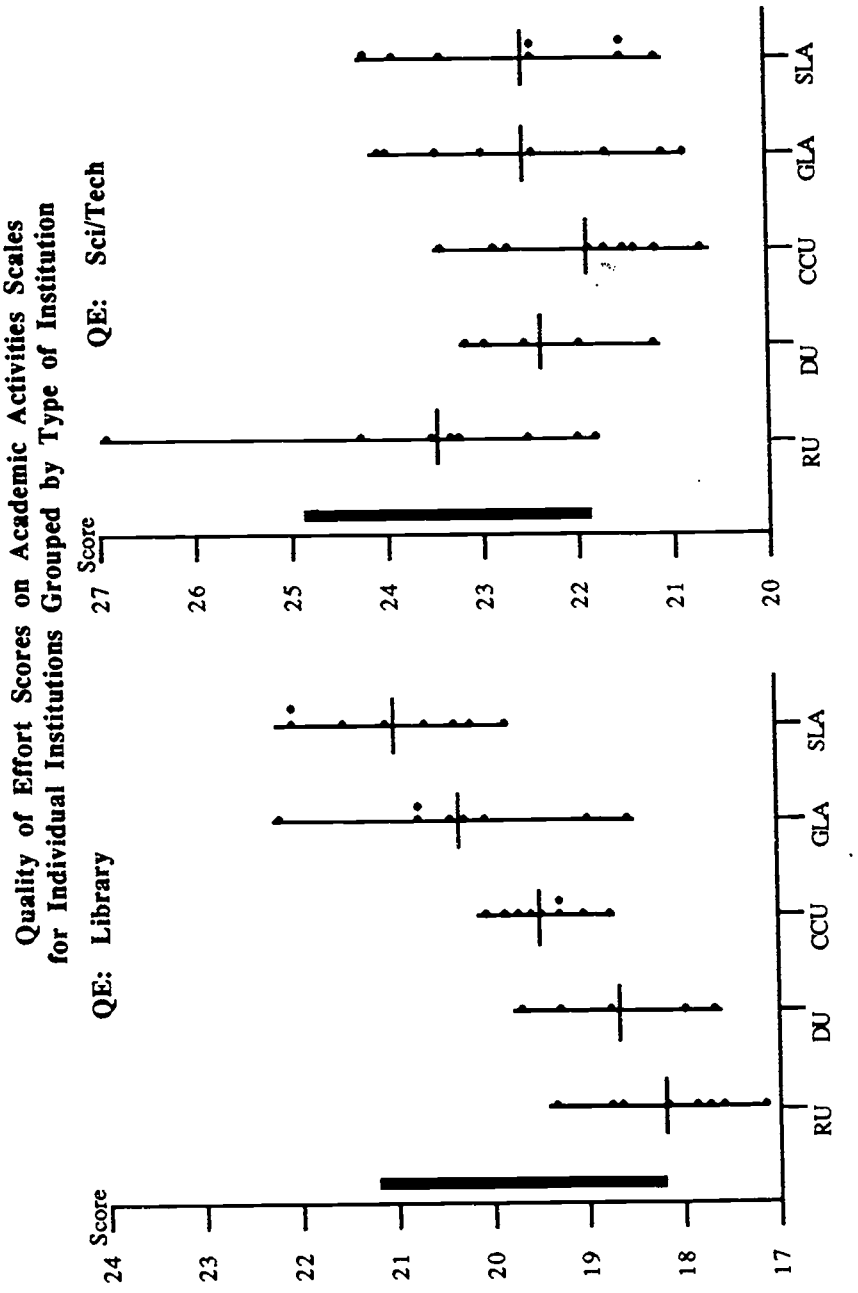
On the quality of effort topics, a difference between average scores of three points or greater has, in previous analyses, been regarded as an educationally important difference. This magnitude is illustrated by the heavy bar at the left of each chart. Using this standard it is obvious from the first set of charts that the differences between the highest scoring and the lowest scoring institutions are always much larger than three points and that on many of the topics the differences between the highest and lowest average score of institutions within the same type are also greater than three points.

For example, on the scale labeled QE: Faculty, the difference between the averages of the five types of institutions is 3.6 points, but the maximum difference between single institutions is 6.3 points. Moreover, all of the selective liberal arts colleges and all of the general liberal arts colleges have a higher score than all of the research universities and all but one of the doctoral universities. Obviously, institutional diversity is much greater than the diversity between types of institutions.

On the Writing activity scale (QE:Writing), there are no differences of any importance between the institutional types; but the maximum difference between single institutions is 4.4 points. On the Library scale (QE: Library), the type differences are less than three points, but the maximum institutional difference is six points. And, on the Science/Tech-



nology scale (QE: Sci/Tech) there is a great deal of overlap between institutions across each type, and no differences in average scores between



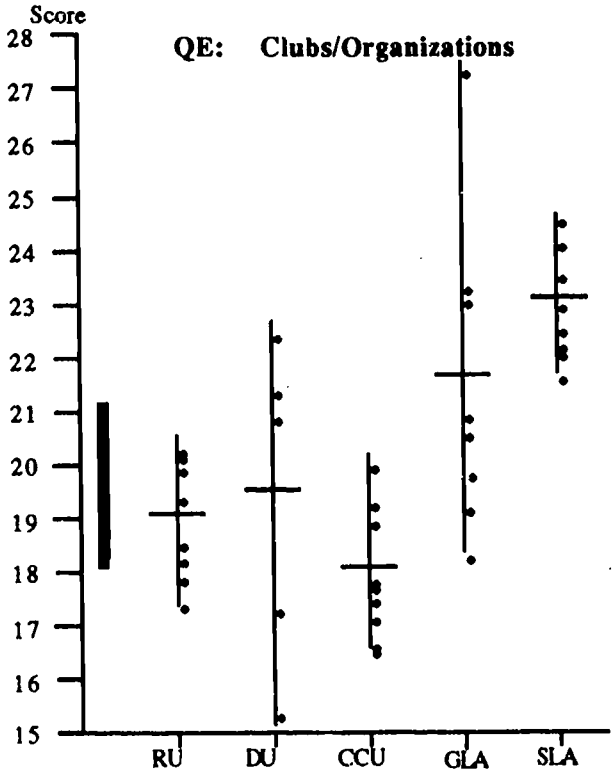
the types. In every institutional type, however, there is more diversity within the type than there is between the averages of the types.

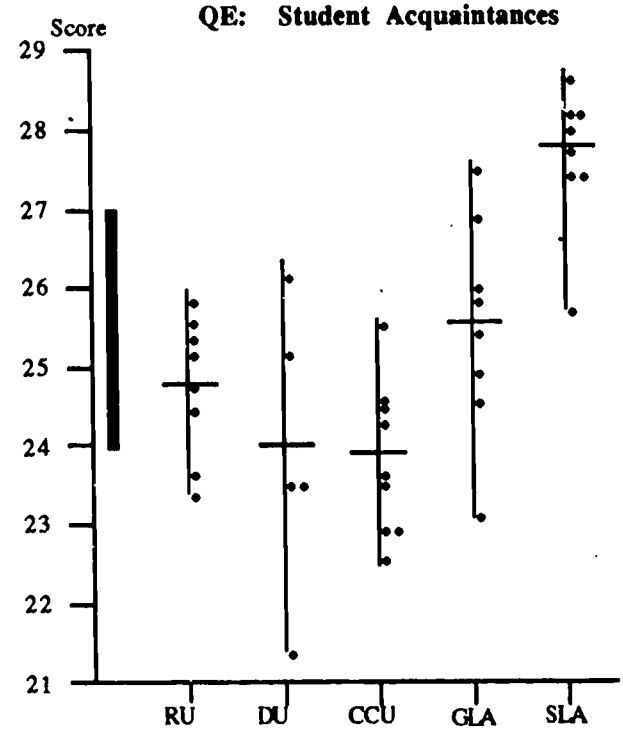
Turning to the non-academic topics, there is again more diversity within the types than between the types. The greatest diversity is evident

on the topic labeled QE: Clubs/Organizations. Indeed, the diversity is so great among the doctoral universities, and the general liberal arts colleges, that the average score for the type has no firm meaning. The difference between averages of the types is five points but the difference between single institutions is 12 points.

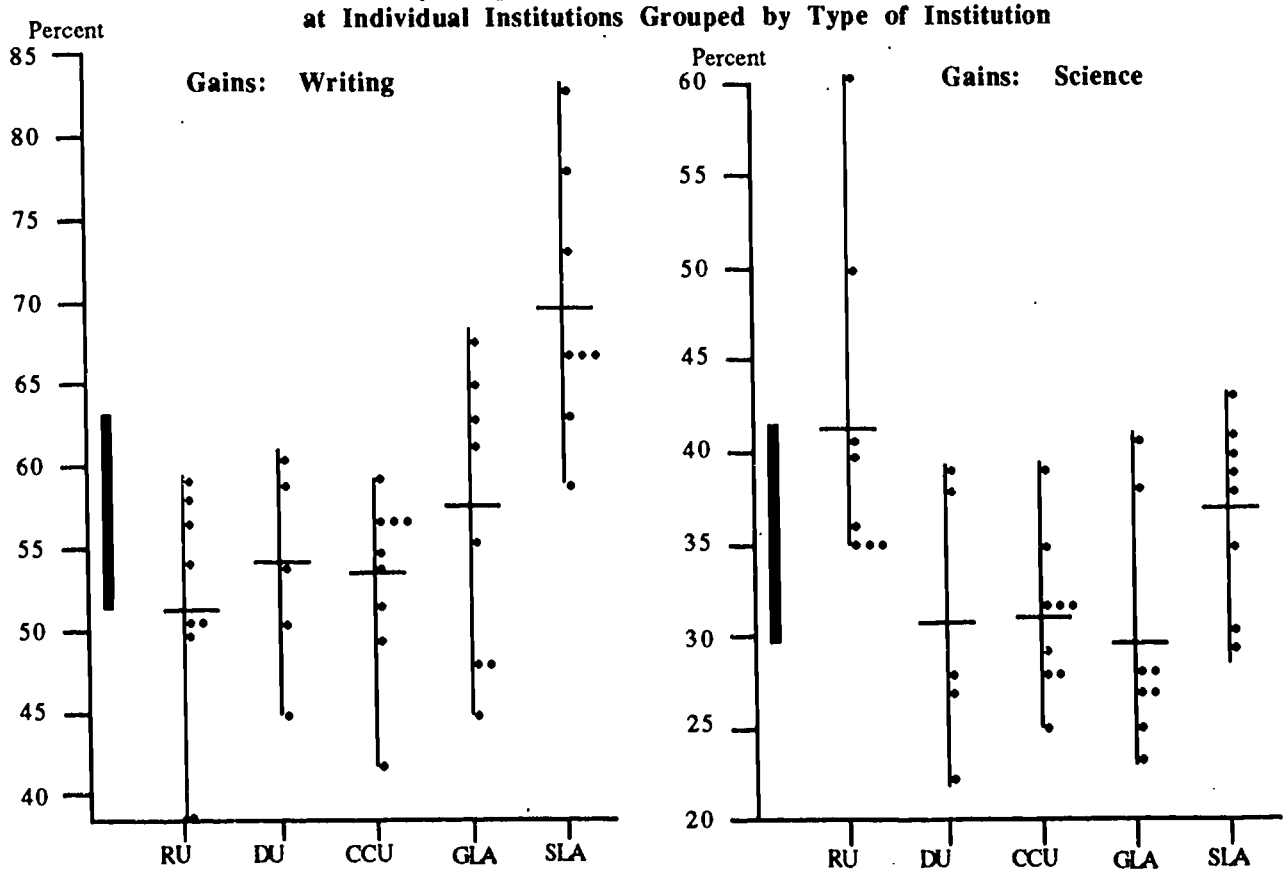
The institutional differences in student outcomes are even greater than the differences in student activities. The percentages plotted in the next set of charts are, for each institution, the percent of students who believed they had made "quite a bit" or "very much" progress toward the objective. The bar at the left of each chart illustrates the range of 12 percentage points which has previously been used to suggest an educationally important difference between groups. When we first reported data on outcomes we noted that, except for the selective liberal arts colleges, differences between the other types of institutions were very small. This is clear in the following charts where the percentages for the selective liberal arts colleges are much much higher with respect to the goals labeled breadth, writing, philosophies, and literature. For the goal "broadening your acquaintance and enjoyment of literature" (Gains: Literature), the percent indicating substantial progress at the lowest selective liberal arts college is higher than the highest percent at any other place. For the goal "developing your own values and ethical standards" (Gains: Values), there are no research universities as high as the lowest SLA; and for the goal "gaining a broad general education about different fields of knowledge" (Gains: Breadth), there are only three of the other 30 colleges that are higher than the lowest SLA. For the goal of "writing

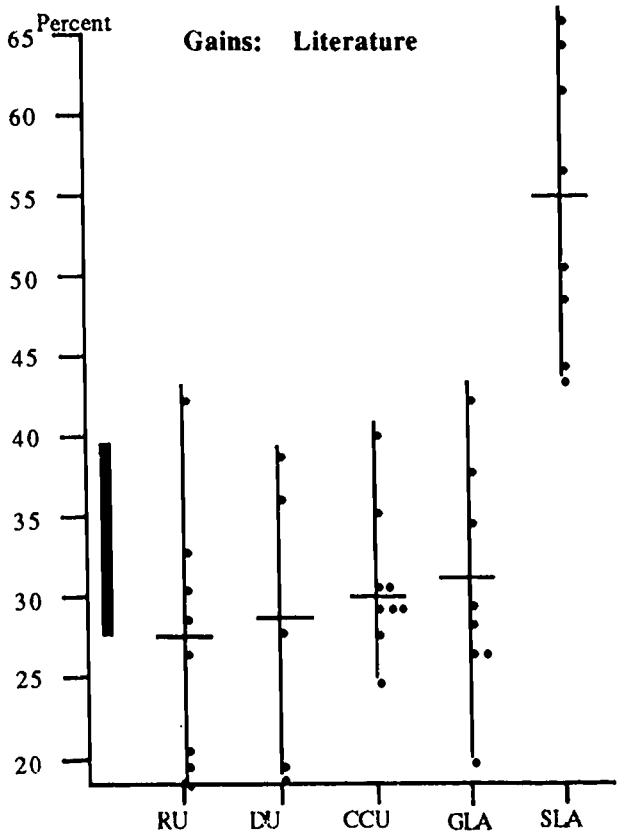
Quality of Effort Scores on Non-Academic Activities Scales for Individual Institutions Grouped by Type of Institution

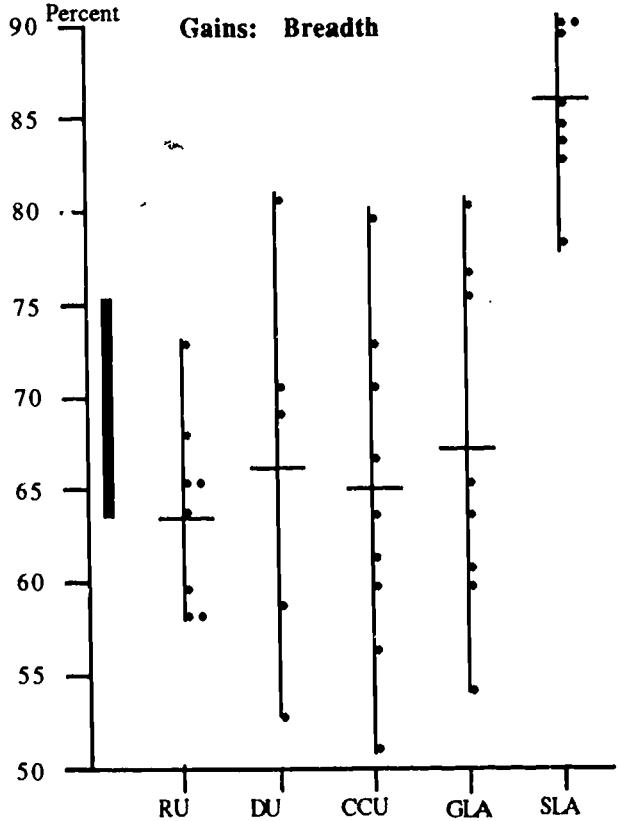


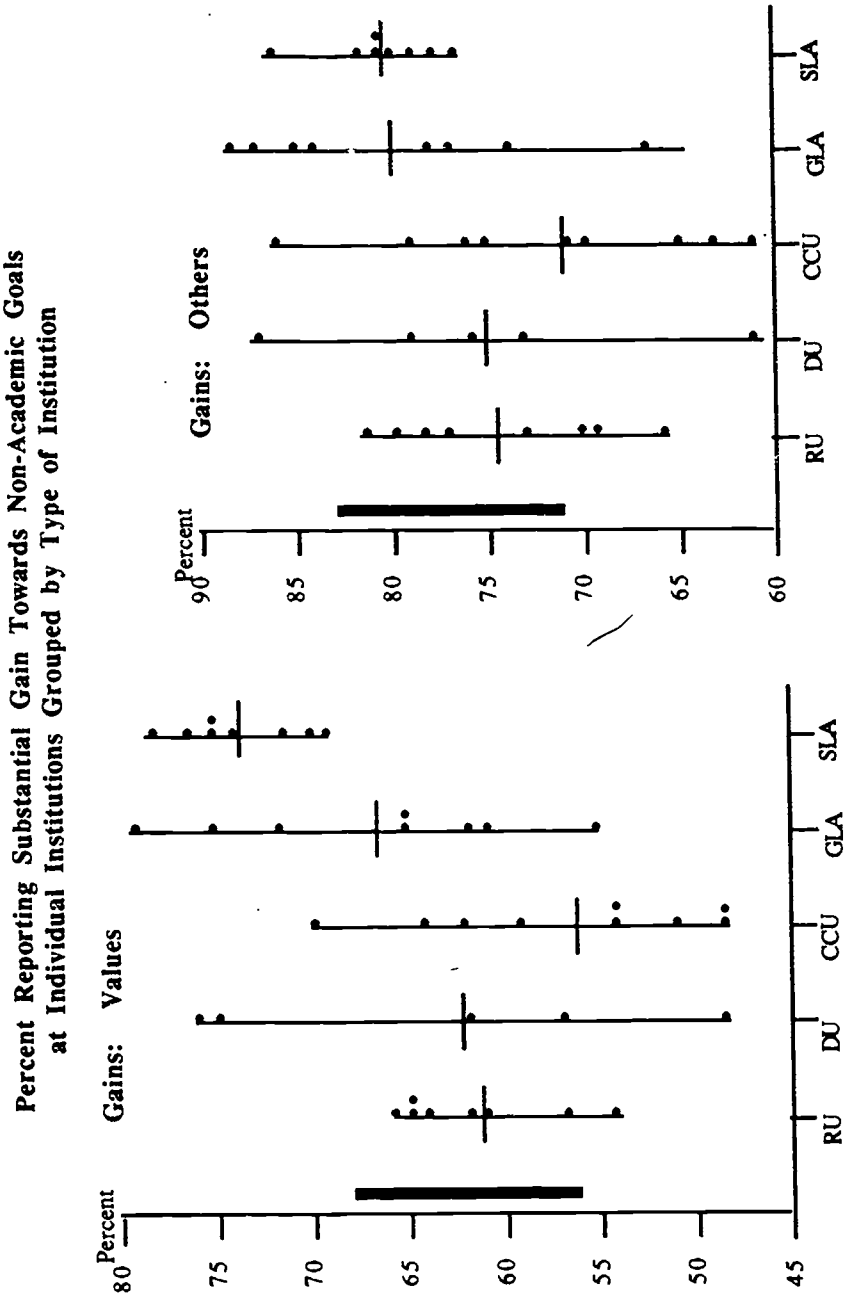


Percent Reporting Substantial Gain Towards Academic Goals at Individual Institutions Grouped by Type of Institution









clearly and effectively" (Gains: Writing), the average of the SLA's is higher than any institution of any other type. Using the standard of a difference of 12 percentage points or greater as indicating an educationally important difference in attainment, the most striking feature of the charts is

that the range of difference between the highest and lowest school within a type is, in all but two of the 30 examples plotted, much greater than the difference between the average scores of the five types of institutions. Toward the goal "understanding other people and the ability to get along with different kinds of people" (Gains: Others), there are no noticeable differences between the average percentages reporting substantial progress at any of the five types of institutions, but within each type there are very large differences between the gain reported by students at the separate institutions.

Although average student activities and student progress appear to be rather similar across different types of institutions, leading to the incorrect conclusion that it doesn't make much difference where one goes to school, the previous charts documenting the differences between individual institutions show that there is considerable diversity in activities and outcomes. It does indeed make a difference in what students will probably do and what they will probably gain depending on the particular institution they attend. If one dissected the data in greater detail, examining the activities and progress of individual students, still more diversity would be evident.

After they get to college there are other factors that influence students' activities and attainments, whatever the type of college they attend. One factor is where they live; another factor is what they study. Students who lived in college housing, or within walking distance of the campus were much more likely to use the athletic and recreation facilities, the student union, participate in clubs and organizations, attend cultural events, and develop friendships with many other students than were those who lived farther from the campus or at home. Moreover, the resident students were more likely to report substantial progress toward all the goals that in-

volve interpersonal associations and self-understanding. The curriculum was also an important influence. Students choice of a major field of study reflects a selective attraction of persons and programs, and defines what will be (or has been in the case of seniors) the field in which they have the most courses. With respect to many activities there were large differences between major fields. In use of the library, contacts with faculty members, experiences in writing, and in activities related to the arts, students who majored in humanities or social sciences were much more involved than students in the sciences, or engineering, or business. Humanities and social science majors were also much more active in broadening the range of their student friendships and in experiences related to self-understanding, than were engineering and business majors. A similar pattern was evident in outcomes. Goals related to literature or the arts and to effective writing, and an awareness of different philosophies and ways of life were all cited by humanities and social science majors as ones toward which they made substantial gains, much more than majors in sciences or engineering. One the other hand, goals related to understanding science and technology, to quantitative thinking, and to analysis and logic were ones toward which science and engineering majors reported much greater progress than majors in humanities or social sciences.

Still other differences in college activities and outcomes are related to characteristics of the students themselves--their age, gender, and ethnic identification. We found that older and younger students put about the same quality of effort into the academic experience and reported about the same level of progress toward all academic goals. Older students, however, were minimally involved, if at all, in the collegiate or social and interpersonal aspects of college. Men, more than women, were involved in the use of athletic and recreation facilities and in activities related to

science. They also more frequently reported substantial progress in understanding new scientific and technical developments and in quantitative thinking. A somewhat higher percentage of women than men claimed progress toward goals related to general education and personal/social development. Among different ethnic groups, there were not marked differences between Asian, Hispanic, or black students in the quality of effort they put into the academic, intellectual aspects of college, or in various personal and interpersonal activities. Asian students were more engaged in science activities, but less involved in group activities such as clubs and organizations, and campus housing. Also, progress toward goals related to science and technology was greatest among Asian students; but progress toward effective writing and a broadened acquaintance with literature was lowest among Asian students. In general, the differences between men and women, and between the ethnic groups, no doubt reflect the selective attraction of different major fields of study. Many Asian students are majors in engineering and computer sciences. Women are more likely than men to major in humanities; and men are more likely to major in engineering or physical sciences. Sex differences and ethnic differences were not highly influential determiners of undergraduate activities and outcomes. At least among the students in this national survey,. the quality of effort invested in various college activities and the progress claimed toward various goals was relatively similar for each gender and each ethnic group.

In this re-view of students' questionnaire responses, we have reached some unexpected conclusions. Except for the selective liberal arts colleges, students at other types of institutions engage in very similar activities and make similar progress toward various goals. It doesn't seem to make much difference whether the type of place is a big doctoral university or a small traditional liberal arts college. Diversity is not readily found

between types; but diversity is very evident when one looks at single institutions separately. Another unexpected conclusion is the relatively small differences in activities and outcomes in the comparisons between men and women, and between black, Hispanic, and Asian students. From much that one reads about sex differences and about discrimination and minorities one would suppose that their college activities and outcomes would be very different but apparently their experiences are very similar. We also found, contrary to the critics who claim that students don't learn anything, that all students at all types of colleges believe they have made at least some progress toward every one of the important goals listed in the questionnaire. What is even more dramatically contrary to the critics is the finding that a majority of students at all types of institutions believe they have made substantial progress toward ten of the most basic and historically most highly regarded goals of higher education—gains in intellectual skills, in breadth of knowledge, in vocational preparation, and in personal and social development. If we are to believe the students, the critics are wrong and badly misinformed.

There are, nevertheless, some conditions that have an important bearing on the nature of the college experience. If one lives on or near the campus, one participates more frequently and more fully in the opportunities for associations that are readily at hand. And, depending on the major field one chooses to study, there are differences in activities and achievements related to the broad subject matter of the major field—for example, humanities versus sciences.

Perhaps most influential on activities and attainments is simply the time and effort one devotes to the college experience. For a majority of students, going to college is a full-time enterprise. They spend about 15 hours a week in classes, and another 20 to 25 hours a week in study—in

other words about 35 to 40 hours a week on academic activities. There are 168 hours in a week. About 10 hours a day are probably devoted to sleeping, eating, and other "housekeeping" activities. So that leaves about 100 hours a week for other activities. The typical full-time student spends 35 to 40 hours of that time on school work, leaving 60 to 65 hours for other activities. These other activities include participation in numerous college events and facilities—clubs, student union, cultural activities, developing friendships with many people, social activities, athletic and recreational activities, etc. Some students also have part-time jobs. And, of course, all students spend time on activities that have no relation to college learning and development.

It is true that some students invest very little time or effort in the college experience—only 20 hours a week or less. But a larger number invest 50 hours a week or more. When we identified two groups of students described as engaged and disengaged, we found that the engaged students outnumbered the disengaged students three to one. Moreover, the level of effort and the scope or breadth of effort students put into their college experience was found to be a very good indicator of the quality of the undergraduate experience, clearly associated with progress toward all important goals, with better grades, and with greater satisfaction. The students who invest little get little in return. The are a distinct minority.

For most students, college is an enriching experience—personally, socially, and intellectually. It is an experience that has contributed a lot to clarifying their values and ethical standards. From time to time, nearly all students have serious discussions about philosophy and values, politics, and religion with students whose opinions are very different from their own. And nearly all of them get involved in discussions about different life-styles and customs. Most of them also talk on occasion about

conditions in the world they all live in—about current events, science and arts, peace, human rights, equality, justice, energy, pollution, chemicals, genetics, and war. These are not idle conversations. Most students say they often refer to knowledge and views gained from their courses and readings and from their professors. Sometimes they get into discussions that last far into the night. A very large majority of the students believe they have gained much in their understanding of other people and their ability to get along with different kinds of people. They also learn about different fields of knowledge. They improve their ability to think critically, logically, and analytically. They test their own understanding by trying to explain ideas, principles, procedures to others; and they often ask other students to read something they have written to see if it is clear to them. In their courses they try to see how different facts and ideas fit together and they think about the practical applications of what they are learning.

They all know that if they expect to benefit from what college has to offer, they have to take the initiative. So they do. Quality of effort is a reflection of initiative. How much effort do they put into their college experience? How much do they think they get out of it? From most students the answer to both questions is: a lot.

CHAPTER 14

REDIRECTING THE CRITICS AND THE COLLEGES

What follows are some personal observations about the results of this survey of undergraduates, some suggestions for improving the quality of their education, and some advice to future critics of higher education.

I think two of the most important conclusions from the survey are first, that the selective liberal arts colleges are uniquely powerful environments for student learning and development; and second, that except for the selective liberal arts colleges, there are relatively few differences in student activities or outcomes that can be attributed to the type of institution one attends.

The strength of the selective liberal arts colleges is probably a cumulative consequence of many conditions: students with a record of high test scores and high achievement in high school; a full-time traditional college age student body living in campus residence facilities; students who expect to continue their education in graduate or professional school and are motivated to excel in their college courses; faculty who convey high expectations and standards for student achievement, as indicated by the fact that their students do a lot more reading, a lot more writing, and spend a lot more time on their academic work than students at any of the other types of institutions; faculty members who take a personal interest in the progress of their students, as indicated by the fact that, far more so than at other types of institutions, students regard the faculty as approachable, helpful, understanding, and encouraging, and almost no student regards the faculty members as remote, discouraging, or unsympathetic; and a cur-

riculum and courses that are firmly embedded in the liberal arts—math, physics, chemistry, biology, languages, literature, history, philosophy, and the various social sciences. In a sense, these colleges might be described as a community of scholars, expecting scholarship of the students.

It is possible that the lower levels of student involvement at the large colleges and universities is a natural consequence of their size and diversity. Obviously the University of Minnesota with its 60,000 students cannot try to be like Carleton. What is typical of University of Minnesota students? If you added all its parts to get an average, what would the average mean? In the big universities we might find higher quality of effort scores and higher percentages of students reporting substantial progress if we looked separately at sub-cultures within the larger environment—academic groups, social groups, etc. At each of the institutional types there is a group of hard working students (spending 50 or more hours a week on their school work) that outnumbers those spending 20 hours a week or less.

What persuades students to make a high quality investment in their education? There are, of course, some students who genuinely enjoy learning. Some observers say that vocational motives are especially influential. But in our data the students who invest the least amount of time and effort are business majors, and this generally lower investment applies to the personal/social aspects of the college experience as well as the academic/scholarly aspects. In any case, I am not persuaded that serious academic effort and broad involvement in campus life are promoted by vocational motives. My guess is that on most campuses students soon perceive what is expected of them—from their professors and from their observations of other students. In the very large universities, this perception of the campus climate or ethos may not be clear for the university-as-a-

whole, but nevertheless quite clear for different parts of the university, so that students are aware of what is expected where they are. The way to stimulate higher levels of involvement by more students may be to create distinctive programs with which certain groups can identify—perhaps an honors program, an intensive language program, a single course required of all freshmen so that everybody has something in common to talk about; perhaps certain student activity centers such as the theater, or publications, or politics each connected to closely related academic courses. In universities where many students expect to go to graduate school, departmental clubs in which undergraduate majors and graduate students both participate, pre-professional clubs, and other groupings that combine academic and social elements may promote closer identification with the institution as well as a higher quality of effort.

Whatever the big university may do, the fact remains that some students can enroll year after year, go to class, pass their exams, without any faculty member really knowing who they are, or having any scholarly or personal conversation with them. Large classes, plus faculty responsibilities for teaching graduate courses and engaging in research, almost preclude close monitoring of the personal and intellectual growth of large numbers of undergraduates. Consequently, in the large universities, student initiative is especially important. It probably takes more initiative to get what you want in a big place than it takes in a small place. In a study at one large university, students who were in the upper fourth on the Breadth Index reported just as much progress toward various goals as did the average student at selective liberal arts colleges. Being high in the breadth index is evidence of initiative.

Surely the quality of the courses and the curriculum is another major element in influencing students academic activity and progress. We

have summarized what students reported about their undergraduate experience. We have not surveyed faculty members, or reading lists, or course examinations. Nor have we studied college catalogues, or the quality of teaching. If the quality of the students' investment in learning seems to be about the same, at least on the average, whether at a research or doctoral university, a comprehensive college, or a traditional liberal arts college, perhaps it just means that students, wherever they are, generally do what is expected of them, or just assume that what they are expected to learn is worth learning. It's what one does in college. Despite small differences between average activities and outcomes at the institutional types, there are large differences between individual institutions within each type and between types. Those large differences may be caused by the content of courses, or perhaps more broadly, by the contemporary relevance and meaning students find in the courses.

Another major finding from the questionnaire results is the complementary connection between academic and non-academic experiences. In each type of institution four of the goals toward which the most students reported substantial progress included two academic and two non-academic. The academic outcomes were "ability to learn on your own, pursue ideas, and find information you need," and "ability to put ideas together, to see relationships, similarities, and differences." The two non-academic goals were "understanding yourself—your abilities, interests, and personality," and "understanding other people and the ability to get along with different kinds of people." In addition to that balance, the breadth index at every level from the lowest to the highest was about equally balanced between academic and non-academic activities. For most undergraduate students, college is a rounded experience. In our survey more than 90% were full-time students, and in each type of institution a majority had lived in

campus housing and were now living on or within walking distance of the campus—95% of the students in the selective liberal arts colleges, 74% in the traditional liberal arts colleges and in the research universities, and 56% and 57% respectively in the doctoral universities and the comprehensive colleges.

We are dealing here with a traditional college-age population for whom college attendance is their primary activity. It is a mistake to think about the curriculum and the extra-curriculum as unrelated. They are separate administratively but they are not separate educationally. I believe that a major improvement in the quality of undergraduate experience might result from greater awareness among faculty members and administrators that the extra-curricular life of students is a very important part of higher education. In fact, the non-academic activities—clubs and organizations, student union, cultural and athletic activities, the campus residence, the breadth of student acquaintances, etc.—contribute to intellectual skills and to general education. To think only about the curriculum and teaching is restrictive; to think about "the college experience" is expansive and more likely to generate new ideas and programs to enrich the quality of education.

For researchers and critics in higher education I would hope that a forthright acknowledgment of what they are not considering as well as a frank acknowledgement of the limitations of their observations would become common. The present book deals only with student responses to a questionnaire. Different insight would no doubt come from different methods of inquiry about students—from diaries, for example, or from interviews, or group discussions at different campuses, or a battery of achievement tests and attitude tests.

The field of higher education is a very large topic. It goes without saying that what you see depends on where you look; that where you look depends on what you are looking for; and that how you interpret what you find depends on your values.

To illustrate the magnitude of the topic, I would like to suggest four perspectives or ways of looking at higher education; each of which is different and each of which is important, as follows: 1) higher education is a value; 2) higher education is a social system; 3) higher education is a professional enterprise; and 4) higher education is a personal achievement.

First, higher education is a value. It is a belief that knowledge of the past and present is better than ignorance, that reason and logic are desirable, that skill is better than ineptitude, and that the search for understanding and meaning and the experience of learning are valuable for their own sake. In this sense, colleges and universities can be viewed as the embodiment of that belief, just as churches are the embodiment of belief in religion, and court houses are the embodiment of belief in justice, however well or poorly these institutions may symbolize the values they represent. Given this starting point, one would be concerned about the missions and purposes of higher education, about internal and external forces that strengthen or weaken value commitments, about value changes over time, about the extent to which value clarification is clouded by conflicting practices, about public faith or belief in such values.

Second, higher education is a social system. It is a network of institutions, programs, and people organized and interacting in a variety of means for a variety of ends. Given this starting point, one would be concerned with the magnitude of the system, the relative sizes of its different elements, the extent of diversity within it, with changes over time, and understanding the dynamics behind historical changes that may account for

the shape of the system. One would be concerned, too, with access to the system and mobility within it, and with the congruence between people and programs. At the institutional level within the system one would be concerned with how the institution works—its organization and administration, its governance and finance, its decision-making and adaptive mechanisms, and with connections between practices and attainments. In short, one would be concerned with how the system as a whole serves societal values, expectations, and needs; and with how the institutions within the system operate to attain or produce what they intend.

Third, higher education is a professional enterprise. Not only is higher education the training ground for society's major professions, it is itself a profession in the sense that its major personnel are professionals—i.e. experts in their particular endeavors. Presumably this applies to administrators and managers as well as to the professoriate. One would be concerned with such topics as the nature of professional training, with professional competence, development, and achievement, with professional roles of teaching, research, and service and the rewards for such roles, with professional ethics, and with accountability. One would be concerned too with academic freedom and other conditions of employment; and with the extent to which role definitions and expectations may exert a selective attraction on the decision to enter the profession. One would also be concerned with public confidence in the profession, and the basis for such confidence or lack of confidence.

Fourth, higher education is a personal achievement. This perspective focuses attention on student learning and personal development, on achievement during college and achievement after college. To understand learning and development one would be concerned with all the conditions that may enhance it—with the facilities and resources, the events and ex-

periences, the opportunities for learning and development in the college setting, with the programs and procedures, the stimuli and standards in the college environment, and with the amount, scope, and quality of effort students themselves put into using the facilities and opportunities. One would also be concerned with a variety of achievements—with the acquisition of knowledge in many subjects, with critical thinking and other intellectual skills and habits, with self-understanding, social development, esthetic appreciations, and all the other achievements commonly mentioned in statements of objectives. One would also be concerned with a similar range of achievements after college.

Referring back to my opening chapter about colleges and critics, I would describe Bennett's report for the National Endowment for the Humanities as reflecting the view that higher education is a value, which for him is the importance of understanding Western Civilization; the report from the Association of American Colleges seems to reflect a combination of higher education as a value and of higher education as a professional enterprise; the report of the National Institute of Education with its emphasis on effective teaching and measuring outcomes stems mainly from the view of higher education as a profession and as a personal achievement; Boyer's book deals mainly with how the institution works; and the present book reflects the view that higher educational is a personal achievement.

No one critique of higher education has viewed the enterprise from all four of these perspectives. And no doubt there are still other perspectives or images for thinking about higher education.

One of the findings from my own study that surprised me was the absence of large differences in student activity and progress between the universities, the comprehensive colleges, and even the traditional liberal arts colleges. I guessed that this lack of difference may have resulted from

my comparing averages rather than specific institutions. That guess was partly correct because there were some large differences in behavior and in gains between individual institutions. Nevertheless it did seem that the system of higher education was not as differentiated as many people assumed it was with respect to student experiences at different types of institutions.

We could, of course, interpret this lack of differentiation in another way. We could say that, despite known differences in clientele, in programs, and other campus features, there is a basic core of student behavior and student progress in the undergraduate experience. Moreover, this basic core of student behavior is voluntary. It reflects initiative by the students; it is not compelled by the administration or by some rule book. It reflects the quality and scope of personal investment that students are making for their own higher education. For most students at most places it is a solid investment.

It is my personal hope that the positive record of student activities and student progress from this survey of more than 25,000 undergraduates in the mid 1980's will help to counterbalance some of the negative comments made by some of the critics about today's college students. When I look at the numbers, I see a lot of students doing what we all hope they will do and gaining what we all hope they will gain from their undergraduate experience.

COLLEGE STUDENT EXPERIENCES

The main purpose of this inquiry is to learn more about how students spend their time – in course work, in the library, in contacts with faculty, in extracurricular activities, in various social and cultural activities, and in using other facilities and opportunities that exist in the college setting.

The information obtained from you and from other students at many different colleges and universities will provide new insight to administrators, faculty members, and others who provide the resources and shape the programs that are meant to be of benefit for student learning and development within the college experience.

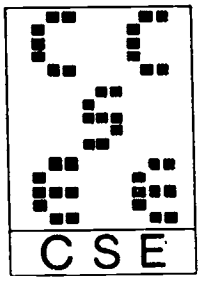
At first glance you may think it will take a long time to fill out this questionnaire, but you will find that it can be answered quite easily, that you can do it in less than an hour and perhaps only 30 to 45 minutes. You will find, too, when you have finished it, that your answers provide a kind of self-portrait of what you have been giving and getting in your college experience.

The ultimate benefits in this or any other survey depend on the thoughtful responses and willing participation from those who are asked to help. Your willingness to participate is important and very much appreciated.

We do not ask you to write your name anywhere in this questionnaire; but we do need to know where the reports come from, and that is why each questionnaire has a number on the back page – certain blocks of numbers tell us that those questionnaires have come from your college.

And, as you will see on the next page, we need to know a few things about you and where you come from, so that we can learn how activities might be related to age, sex, year in college, major field, whether one lives on the campus, whether one has a job, etc.

The questionnaire responses will be read by an electronic scanning device. The machine can only read messages given to it with a soft, **black lead pencil.** Please be careful in marking your responses. Erase cleanly any response you wish to change.



This questionnaire is available through the Center for the Study of Evaluation, UCLA Graduate School of Education, 405 Hilgard Ave. Los Angeles, CA 90024. It is intended for use by any college or university that wishes to have an inventory of the campus experiences of its students.

BACKGROUND INFORMATION

DIRECTIONS: Indicate your response by filling in the appropriate space under each question.

Age

- ○ 22 or younger
- ○ 23-27
- ○ 28 or older

Sex

- ○ male
- ○ female

Are you single or married?

- ○ single
- ○ married

What is your classification in college?

- ○ freshman
- ○ sophomore
- ○ junior
- ○ senior
- ○ graduate student

Did you enter college here or did you transfer here from another college?

- ○ entered here
- ○ transferred from another college

Have you at any time while attending this college lived in a college dormitory, fraternity or sorority house, or other college housing?

- ○ yes
- ○ no

Where do you now live during the school year?

- ○ dormitory or other college housing
- ○ fraternity or sorority house
- ○ private apartment or room within walking distance of the college
- ○ house, apartment, etc away from the campus
- ○ with my parents or relatives

At this college, up to now, what have most of your grades been?

- ○ A
- ○ A . B+
- ○ B
- ○ B . C+
- ○ C C . or lower

Which of the following comes closest to describing your major field of study (or your expected major)?

- ○ Agriculture
- ○ Arts (art, music, theater, etc.)
- ○ Biological Sciences (biology, biochemistry, botar zoology, etc.)
- ○ Business
- ○ Computer Science
- ○ Education (including physical education and recrea
- ○ Engineering
- ○ Health related fields (nursing, physical therapy, h technology, etc.)
- ○ Humanities (literature, languages, history, philos religion, etc.)
- ○ Physical Sciences (physics, chemistry, mathemat astronomy, earth science, etc.)
- ○ Social Sciences (economics, political science, psychology, sociology, etc.)
- ○ Other. What? →

  [ ]

- ○ Undecided

Did either of your parents graduate from college?

- ○ no
- ○ yes, both parents
- ○ yes, father only
- ○ yes, mother only

When, or if, you graduate from college, do you expe to enroll for a more advanced degree?

- ○ yes
- ○ no

Are you going to school full-time or part-time?

- ○ full-time
- ○ part-time

During the time school is in session, about how ma hours a week do you usually spend on activities tha related to your school work? This includes time spe in class and time spent studying.

- ○ about 50 hours a week or more
- ○ about 40 hours a week
- ○ about 30 hours a week
- ○ about 20 hours a week
- ○ less than 20 hours a week

During the time school is in session, about how many hours a week do you usually spend working on a job?

- ○ none I am not employed during the school year
- ○ about 10 hours or less
- ○ about 15 hours
- ○ about 20 hours
- ○ about 30 hours
- ○ more than 30 hours

About how much of your college expenses this year are provided by your parents or family?

- ○ all or nearly all
- ○ more than half
- ○ less than half
- ○ none or very little

What is your racial or ethnic identification?

- ○ White, Caucasian
- ○ Black
- ○ Hispanic Mexican-American Puerto Rican
- ○ Oriental or Asian
- ○ Other What?

How are you classified in the United States?

- ○ Citizen of the United States
- ○ Immigrant (permanent resident)
- ○ Non-immigrant

If you are not a citizen of the United States, in what country are you a citizen?

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of tl following? Indicate your response by filling in ona of the spaces to the left of each statement.

Very often	Often	Occasionally	Never	Library Experiences
○	○	○	○	Used the library as a quiet place to read or study materials you brought with you
○	○	○	○	Used the card catalogue to find what materials there were on some topic
○	○	○	○	Asked the librarian for help in finding material on some topic.
○	○	○	○	Read something in the reserve book room or reference section
○	○	○	○	Used indexes (such as the Reader's Guide to Periodical Literature) to journal articles
○	○	○	○	Developed a bibliography or set of references for use in a term paper or other report.
○	○	○	○	Found some interesting material to read just by browsing in the stacks
○	○	○	○	Ran down leads, looked for further references that were cited in things you read
○	○	○	○	Used specialized bibliographies (such as Chemical Abstracts, Psychological Abstracts, etc)
○	○	○	○	Gone back to read a basic reference or document that other authors had often referred to

Very often	Often	Occasionally	Never	Experiences with Faculty
○	○	○	○	Talked with a faculty member
○	○	○	○	Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc)
○	○	○	○	Visited informally and briefly with an instruct after class
○	○	○	○	Made an appointment to meet with a faculty member in his/her office
○	○	○	○	Discussed ideas for a term paper or other cla project with a faculty member
○	○	○	○	Discussed your career plans and ambitions wit a faculty member
○	○	○	○	Asked your instructor for comments and criticisms about your work
○	○	○	○	Had coffee, cokes, or snacks with a faculty member
○	○	○	○	Worked with a faculty member on a research project
○	○	○	○	Discussed personal problems or concerns w a faculty member

DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of t following? Indicate your response by filling in one of the spaces to the left of each statement.

Very Often / Often / Occasionally / Never

Course Learning

- ○○○○ Took detailed notes in class
- ○○○○ Listened attentively in class meetings
- ○○○○ Underlined major points in the readings.
- ○○○○ Tried to see how different facts and ideas fit together
- ○○○○ Thought about practical applications of the material
- ○○○○ Worked on a paper or project where you had to integrate ideas from various sources.
- ○○○○ Summarized major points and information in your readings or notes.
- ○○○○ Tried to explain the material to another student or friend.
- ○○○○ Made outlines from class notes or readings.
- ○○○○ Did additional readings on topics that were introduced and discussed in class.

Very Often / Often / Occasionally / Never

Art, Music, Theater

- ○○○○ Talked about art (painting, sculpture, architecture, artists, etc) with other students at the college.
- ○○○○ Gone to an art gallery or art exhibit on the campus.
- ○○○○ Read or discussed the opinions of art critics.
- ○○○○ Participated in some art activity (painting, pottery, weaving, drawing, etc.).
- ○○○○ Talked about music (classical, popular, musicians, etc) with other students at the college
- ○○○○ Attended a concert or other music event at the college
- ○○○○ Read or discussed the opinions of music critics.
- ○○○○ Participated in some music activity (orchestra, chorus, etc)
- ○○○○ Talked about the theater (plays, musicals, dance, etc) with other students at the college.
- ○○○○ Seen a play, ballet, or other theater performance at the college
- ○○○○ Read or discussed the opinions of drama critics
- ○○○○ Participated in or worked on some theatrical production (acted, danced, worked on scenery, etc)

Very Often / Often / Occasionally / Never

Student Union

- ○○○○ Had meals, snacks, etc at the student union or student center
- ○○○○ Looked at the bulletin board for notices abo campus events.
- ○○○○ Met your friends at the student union or student center.
- ○○○○ Sat around in the union or center talking wit other students about your classes and oth college activities.
- ○○○○ Used the lounge(s) to relax or study by yourself.
- ○○○○ Seen a film or other event at the student union or center.
- ○○○○ Attended a social event in the student union or center
- ○○○○ Heard a speaker at the student union or cent
- ○○○○ Played games that were available in the stud union or center (ping-pong, cards, pool, pinball, etc.).
- ○○○○ Used the lounge(s) or meeting rooms to me with a group of students for a discussion

Very Often / Often / Occasionally / Never

Athletic and Recreation Facilities

- ○○○○ Set goals for your performance in some skill
- ○○○○ Followed a regular schedule of exercise, or practice in some sport, on campus
- ○○○○ Used outdoor recreational spaces for casual and informal individual athletic activities.
- ○○○○ Used outdoor recreational spaces for casual and informal group sports.
- ○○○○ Used facilities in the gym for individual activities (exercise, swimming, etc)
- ○○○○ Used facilities in the gym for playing sports that require more than one person
- ○○○○ Sought instruction to improve your performan in some athletic activity.
- ○○○○ Played on an intramural team.
- ○○○○ Kept a chart or record of your progress in some skill or athletic activity
- ○○○○ Played in any varsity sport or athletic event

DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the spaces to the left of each statement.

Very often / Often / Occasionally / Never

Clubs and Organizations

- ○○○○ Looked in the student newspaper for notices about campus events and student organizations
- ○○○○ Attended a program or event put on by a student group
- ○○○○ Read or asked about a club, organization, or student government activity
- ○○○○ Attended a meeting of a club, organization, or student government group.
- ○○○○ Voted in a student election
- ○○○○ Discussed policies and issues related to campus activities and student government.
- ○○○○ Worked in some student organization or special project (publications, student government, social event, etc.)
- ○○○○ Discussed reasons for the success or lack of success of student club meetings, activities, or events
- ○○○○ Worked on a committee
- ○○○○ Met with a faculty adviser or administrator to discuss the activities of a student organization.

Very often / Often / Occasionally / Never

Experience in Writing

- ○○○○ Used a dictionary or thesaurus to look up the proper meaning of words.
- ○○○○ Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing
- ○○○○ Wrote a rough draft of a paper or essay and then revised it yourself before handing it in.
- ○○○○ Spent at least five hours or more writing a paper (not counting time spent in reading or at the library).
- ○○○○ Asked other people to read something you wrote to see if it was clear to them
- ○○○○ Referred to a book or manual about style of writing, grammar, etc
- ○○○○ Revised a paper or composition two or more times before you were satisfied with it.
- ○○○○ Asked an instructor for advice and help to improve your writing
- ○○○○ Made an appointment to talk with an instructor who had criticized a paper you had written
- ○○○○ Submitted for publication an article, story, or other composition you had written

Very often / Often / Occasionally / Never

Personal Experiences

- ○○○○ Told a friend why you reacted to another person the way you did.
- ○○○○ Discussed with other students why some grou get along smoothly, and other groups don't
- ○○○○ Sought out a friend to help you with a person: problem.
- ○○○○ Etected a course that dealt with understandinç personal and social behavior.
- ○○○○ Identified with a character in a book or movie and wondered what you might have done under similar circumstances
- ○○○○ Read articles or books about personal adjustment and personality development.
- ○○○○ Taken a test to measure your abilities, interest or attitudes.
- ○○○○ Asked a friend to tell you what he/she really thought about you.
- ○○○○ Been in a group where each person, including yourself, talked about his/her personal proble
- ○○○○ Talked with a counselor or other specialist ab problems of a personal nature.

Very often / Often / Occasionally / Never

Student Acquaintances

- ○○○○ Made friends with students whose academic major field was very different from yours.
- ○○○○ Made friends with students whose interests were very different from yours.
- ○○○○ Made friends with students whose family background (economic and social) was very different from yours.
- ○○○○ Made friends with students whose age was very different from yours.
- ○○○○ Made friends with students whose race was different from yours.
- ○○○○ Made friends with students from another country.
- ○○○○ Had serious discussions with students whose philosophy of life or personal values were very different from yours.
- ○○○○ Had serious discussions with students whose religious beliefs were very different from yours
- ○○○○ Had serious discussions with students whose political opinions were very different from yours
- ○○○○ Had serious discussions with students from a country different from yours

DIRECTIONS. In your experience at this college during the current school year, about how often have you done each of the following?

Very often	Often	Occasionally	Never	Science/Technology
O	O	O	O	Memorized formulas, definitions, technical terms
O	O	O	O	Tried to express a set of relationships in mathematical terms
O	O	O	O	Tested your understanding of some scientific principle by seeing if you could explain it to another student
O	O	O	O	Read articles (not assigned) about scientific theories or concepts
O	O	O	O	Practiced to improve your skill in using some laboratory equipment
O	O	O	O	Showed a classmate how to use a piece of scientific equipment
O	O	O	O	Attempted to explain an experimental procedure to a classmate.
O	O	O	O	Went to an exhibit or demonstration of some new scientific device
O	O	O	O	Worked on a paper or project where you used a computer
O	O	O	O	Used a computer to assist in course learning (language skills, math skills, etc.)
O	O	O	O	Wrote a program to analyze data on a computer
O	O	O	O	Sought out-of-class instruction in ways to use computers

DIRECTIONS: If you are now living in a dormitory or fraternity/sorority, about how often have you done each of the following in that residence unit during the current school year? Indicate your response by filling in one of the spaces to the left of each statement. If you do not live in a campus residence, omit these items.

Very often	Often	Occasionally	Never	Dormitory or Fraternity/Sorority
O	O	O	O	Had lively conversations about various topics during dinner in the dining room or cafeteria
O	O	O	O	Gone out with other students for late night snacks
O	O	O	O	Offered to help another student (with course work, errands, favors, advice, etc.) who needed some assistance
O	O	O	O	Participated in bull sessions that lasted late into the night.
O	O	O	O	Asked others for assistance in something you were doing
O	O	O	O	Borrowed things (clothes, records, posters, books, etc.) from others in the residence unit
O	O	O	O	Attended social events put on by the resident unit.
O	O	O	O	Studied with other students in the residence un
O	O	O	O	Helped plan or organize an event in the residence unit.
O	O	O	O	Worked on some community service or fund raising project with other students in the residence unit.

CONVERSATIONS

DIRECTIONS: In conversations with other students at this college during the current school year, about how often have you talked about each of the following?

Very often	Often	Occasionally	Never	Topics of Conversation
O	O	O	O	Job prospects, money, careers
O	O	O	O	Movies and popular music
O	O	O	O	Social events, parties
O	O	O	O	Boyfriends, girlfriends
O	O	O	O	Current events in the news
O	O	O	O	Major social problems such as peace, human rights, equality, justice
O	O	O	O	Different life styles and customs
O	O	O	O	The ideas and views of other people such as writers, philosophers, historians.
O	O	O	O	Fine arts - painting, theatrical productions, ballet, symphony etc
O	O	O	O	Science - theories experiments, methods
O	O	O	O	Computers and other technologies
O	O	O	O	Social and ethical issues related to science and technology such as energy, pollution, chemicals genetics military use

In these conversations with other students, about how often have you done each of the following?

Very often	Often	Occasionally	Never	Information in Conversations
O	O	O	O	Referred to knowledge you had acquired in your reading
O	O	O	O	Explored different ways of thinking about the topic
O	O	O	O	Referred to something a professor said about the topic.
O	O	O	O	Subsequently read something that was relate to the topic
O	O	O	O	Changed your opinion as a result of the knowledge or arguments presented by other
O	O	O	O	Persuaded others to change their minds as a result of the knowledge or arguments you cited

READING/WRITING

During the current school year, about how many books have you read? Fill in one space in each column.

Textbooks or assigned books	Non-assigned books
○	○ none
○	○ fewer than 5
○	○ between 5 and 10
○	○ between 10 and 20
○	○ more than 20

During the current school year, about how many written reports have you made? Fill in one space in each column.

Essay exams in your courses	Term papers or other written reports
○	○ none
○	○ fewer than 5
○	○ between 5 and 10
○	○ between 10 and 20
○	○ more than 20

OPINIONS ABOUT COLLEGE

How well do you like college?

- ○ I am enthusiastic about it
- ○ I like it
- ○ I am more or less neutral about it
- ○ I do not like it

If you could start over again, would you go to the same college you are now attending?

- ○ Yes, definitely
- ○ Probably yes
- ○ Probably no
- ○ No, definitely

What is your opinion about the following statement: "If students expect to benefit from what this college or university has to offer, they have to take the initiative."

- ○ Strongly agree
- ○ Agree
- ○ Disagree
- ○ Strongly disagree

THE COLLEGE ENVIRONMENT

Colleges differ from one another in the extent to which they emphasize or stress various aspects of students' development. Thinking of your own experience at this college, to what extent do you feel that each of the following is emphasized? The responses are numbered from 7 to 1, with the highest and lowest points described. Fill in the space of whichever number best indicates your impression on this seven-point rating scale.

Emphasis on the development of academic, scholarly, and intellectual qualities

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the development of esthetic, expressive, and creative qualities

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on being critical, evaluative, and analytical

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the development of vocational and occupational competence

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the personal relevance and practical values of your courses

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

The next three ratings refer to relationships among people at the college. Again, thinking of your own experience, how would you rate these relationships on the seven-point scales?

	Relationship with other students, student groups, and activities						
Friendly, Supportive, Sense of belonging	⑦	⑥	⑤	④	③	②	① Competitive, Uninvolved, Sense of alienation
	Relationships with faculty members						
Approachable, Helpful, Understanding, Encouraging	⑦	⑥	⑤	④	③	②	① Remote, Discouraging, Unsympathetic
	Relationships with administrative personnel and offices						
Helpful, Considerate, Flexible	⑦	⑥	⑤	④	③	②	① Rigid, Impersonal, Bound by regulations

ESTIMATE OF GAINS

DIRECTIONS: In thinking over your experiences in college up to now, to what extent do you feel you have gained or progress in each of the following respects? Indicate your response by filling in one of the spaces to the left of each statement.

Very much / Quite a bit / Some / Very little

- ○○○○ Vocational training – acquiring knowledge and skills applicable to a specific job or type of work.
- ○○○○ Acquiring background and specialization for further education in some professional, scientific, or scholarly field.
- ○○○○ Gaining a broad general education about different fields of knowledge.
- ○○○○ Gaining a range of information that may be relevant to a career
- ○○○○ Developing an understanding and enjoyment of art, music, and drama.
- ○○○○ Broadening your acquaintance and enjoyment of literature.
- ○○○○ Writing clearly and effectively.
- ○○○○ Acquiring familiarity with the use of computers.
- ○○○○ Becoming aware of different philosophies, cultures, and ways of life.
- ○○○○ Developing your own values and ethical standards.
- ○○○○ Understanding yourself – your abilities, interests, and personality.

Very much / Quite a bit / Some / Very little

- ○○○○ Understanding other people and the ability t· get along with different kinds of people
- ○○○○ Ability to function as a team member.
- ○○○○ Developing good health habits and physical fitness.
- ○○○○ Understanding the nature of science and experimentation.
- ○○○○ Understanding new scientific and technical developments.
- ○○○○ Becoming aware of the consequences (bene· hazards/dangers/values) of new applicatio· in science and technology
- ○○○○ Ability to think analytically and logically
- ○○○○ Quantitative thinking – understanding probabilities, proportions, etc
- ○○○○ Ability to put ideas together, to see relations similarities, and differences between ideas
- ○○○○ Ability to learn on your own, pursue ideas, a find information you need

No. 69172

Since the electronic scanning device can only read pencil marks, please fill in the grid at the left corresponding to the number printed above it. This tells us the name of your college and that you are one of the students from that college.

THANK YOU FOR YOUR PARTICIPATION

ADDITIONAL QUESTIONS

1.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
2.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
3.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
4.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
5.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
6.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
7.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
8.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
9.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
10.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

OTHER ID#, if requested

NCS Mark Reflex® EM988

EXAMPLES OF INSTITUTIONAL TYPES INCLUDED IN THE SURVEY

(RU) Research Universities

- UCLA
- U Arizona
- Ohio State
- Penn State
- U. South Carolina

(DU) Doctoral Universities

- U Denver
- Boston College
- North Carolina State U
- U South Dakota
- Miami U (OH)

(GLA) General Liberal Arts Colleges

- Allentown College
- Roberts Wesleyan
- Westminister (MO)
- Keuka
- Susquehanna

(SLA) Selective Liberal Arts Colleges

- Amherst
- Hamilton
- Carleton
- Grinnell
- Occidental

(CCU) Comprehensive Colleges and Universities

- James Madison
- U Wisconsin, LaCrosse
- Rhode Island College
- Canisius
- Salisbury State U

LIST OF CHARTS AND TABLES

ACKNOWLEDGEMENTS

All computer programming and the production of tables, charts, etc. has been performed by graduate students employed as Research Assistants.

a) Normative data for 1983 and 1984 was prepared by Karen Lefever.

b) Normative data for 1985 and 1986, plus merging the results with the 1983 and 1984 data was prepared by David Kaplan.

c) Dividing doctoral universities into two groups—RU and DU—was done by Penny Lehman.

d) Various studies of "disengaged" students were carried out by Doris Barahona and Curtis Shepard.

e) Explorations of the "breadth index" were made by Karen Lefever.

f) Comparisons of student responses by campus residence, major field, year in school, sex, age, and ethnicity were made by Penny Lehman; and also the analyses of time for reading, writing, and study.

g) Penny Lehman, using a Macintosh and LaserWriter, produced all pages of the manuscript, including all the charts and graphs.

Since I have not personally learned to talk to computers, my dependence on those who do have that skill and understanding is surely obvious. We all can, however, communicate in English. We have had many discussions about higher education, measurement and evaluation, research methods, and the analysis and interpretation of data; and these discussions have been personally rewarding. The opportunity to work with and learn from students is one of the most valued benefits of being in a university.

C.R.P.

ABOUT THE AUTHOR

Dates in Dr. Pace's History

1912	The beginning
1933	BA DePauw
1937	PhD Minnesota
1937-40	The General College, Minnesota
1940-43	American Council on Education
1943-47	Bureau of Naval Personnel
1947-61	Syracuse University
1961-	UCLA

Over a period of more than fifty years, Dr. Pace has written scores of articles, chapters in books, monographs, and books about higher education—about college students, college graduates, college programs college teaching, college evaluation, college environments, college organization, and college outcomes. Although in 1982 he became an Emeritus Professor at UCLA, he has continued to pursue his research and writing about higher education. Among his recent national awards are:

From the American Educational Research Association and the American College Testing Program

The **E.F. Lindquist Award**, for outstanding research dealing with college student growth and development. Presented in 1984

From the Association for Institutional Research

The **Sidney Suslow Award** for outstanding research. Presented in 1989.

From the Association for the Study of Higher Education

The **Distinguished Career Award**, for continuous outstanding contributions to the profession and the association. Presented in 1989.