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A DESCRIPTION OF GRADUATES OF TWO-YEAR COLLEGES

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A Summary

This study examined the college experiences and achievements of a large sample of two-year college graduates. The data were obtained from a comprehensive follow-up survey administered to second-year students at 29 two-year colleges. Students responded to items regarding their backgrounds and plans, participation in non-academic activities, financial and work status, and general satisfaction with college. The majority of students planned to transfer to a four-year college. Students were satisfied with most aspects of their instructors' performance, and described them as clear, factual, consistent, and concerned with their students. Students typically participated in several areas of extracurricular activity, but seldom "achieved" by attaining public recognition of their accomplishment. Most students worked at least part of their two-year college careers and most commuted to campus. However, working or commuting were found to have little effect on the college experiences or achievements of two-year college students. Finally, graduates were generally satisfied with their two-year college. Some supposed problems of two-year colleges were found to be real; others, such as student time spent in working or commuting were not as great as might be expected.

A Description of Graduates of Two-Year Colleges

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American College Testing Program

This report describes a study designed to provide useful information about two-year colleges and their students. The two-year college is an important topic of study for many reasons. First, two-year colleges educate great numbers of students (current enrollment estimates place the number at about a million and a half). They also provide the first college experience for increasing numbers of students. (Currently, approximately one-third of entering freshmen attend two-year colleges; projections indicate that over one-half of entering freshmen will enroll in two-year colleges by 1975.) In addition, two-year colleges serve many needs not met by four-year institutions: special occupational curricula, adult education, and two years of general education for students who do not wish to obtain a bachelor's degree. Perhaps most important, they meet the need for low-cost education for increasing numbers of high school graduates.

These very factors which contribute to the importance of two-year colleges also create many problems for them. They must handle constantly increasing enrollments. Many of their students are the first in their families to attend college, and they need to be oriented to the collegiate way of life. Many public two-year colleges are required to have open door admission policies and, consequently, have high attrition among their students. Furthermore, two-year colleges must maintain very diverse curricula and facilities for transfer and vocationally oriented students. Finally, two-year colleges often have large numbers of commuting, working, and adult students. Each of these groups has special needs.

Because of their important role in American higher education and the problems which stem from this role, we need to know much more about two-year colleges and their students. The present study was planned to provide such information. It differs from previous studies in several respects. First, it includes a comprehensive survey of the development, plans, achievements, and reactions of two-year college students. Second, we hoped to obtain information that would be useful to many colleges by studying a large number of students in a variety of two-year colleges. Finally, we studied students in the second semester of their second year, rather than in their freshman year.

Students

We obtained data for the present study as part of a comprehensive follow-up of students who took the ACT battery in 1965 and were completing their second year in a two-year college in the spring of 1967. The follow-up questionnaire was administered to 4,009 students at 29 two-year colleges. The number at individual colleges varied from 22 to 490, with a median of 111.

Table 1 shows the means and standard deviations for this group on the ACT tests, high school grades, and high school non-academic achievements. Our sample clearly represents a broad range of talent. It appears unlikely, therefore, that our results are seriously distorted by biases in the sample of students.[1]

Table 1

Means of Students in Follow-up Sample on ACT Tests and High School Achievements

	Men		Women	
Variables	Mean	S.D.	Mean	S.D.
ACT English	17.0	4.6	19.4	4.4
ACT Math	20.1	5.8	17.1	5.6
ACT Social Studies	20.1	5.8	20.2	5.8
ACT Natural Science	20.8	5.9	19.4	5.5
HS GPA	2.42	.65	2.66	.66
HS Leadership Achievement	1.86	1.9	2.11	1.9
HS Music	1.11	1.7	1.87	1.9
HS Drama	1.06	1.5	1.39	1.6
HS Art	.49	1.2	.70	1.4
HS Writing	.62	1.2	1.00	1.4
HS Science	.85	1.5	.67	1.1

[1]A comparison of graduates who did and did not complete the questionnaire showed that completers had slightly higher ACT scores and high school grades. Otherwise, these two groups were similar when they entered college.

The Colleges

The colleges participating in this study are quite diverse: 21 are public, 4 are independent, and 4 are church-related. Geographically, 2 are in the northeastern states, 4 in the southeastern states, 5 in the great lakes states, 6 in the plains states, 7 in the southwest and mountain states, and 4 in the far west states. About one half (15) offer on-campus housing. The colleges had enrollments ranging from 175 students to nearly 13,000. Four colleges had enrollments of less than 500 students, and five had enrollments larger than 4,000. One was a women's college, another was predominantly for men. Two are among the oldest two-year colleges in the United States, while several were established quite recently. Two are associated with universities. One has received awards and national attention for its architecture and landscape design. Another was the subject of a sociological case study.

To discover the extent to which the sample colleges were like American two-year colleges in general, we examined the scores the sample colleges obtained in a study of two-year college environments (Richards, Rand, & Rand, 1966, 1967). By means of factor analysis, six scores were identified for describing two-year college environments: Private Control (or Cultural Affluence), Technological Specialization, Size, Conventionalism (or Age), Transfer emphasis, and High Cost (Business Orientation). Estimated scores for these factors are computed in the form of stanines, which are normalized standard scores, ranging from 1 to 9, with a mean of 5 and a standard deviation of 1.96. The means and standard deviations for the sample colleges on the environmental description scales were computed. Results are summarized in Table 2. The sample appears to be close to the national norms on all scales except size, and the discrepancy on this scale is probably due to the small number of very small two-year colleges in the sample. Perhaps more important is the fact that the standard deviations indicate that the sample colleges are diverse on all scales. Thus, the sample colleges appear to be a reasonable cross-section of American two-year colleges.

Results

The follow-up questionnaire was designed to provide comprehensive information about two-year college students, including items about students' backgrounds and purposes in attending college, evaluations of teachers, participation and achievement, future plans, general college satisfaction, sense of progress, finances, working and commuting. We will describe each of these areas in turn.

Table 2

Mean and Standard Deviation of Sample Colleges on Environmental Description Scales

Environmental variable	Mean	S. D.
Private control (Cultural affl.)	5.00	1.89
Technical specialization	5.29	1.82
Size	5.68	1.52
Conventionalism (Age)	5.14	2.05
Transfer emphasis	5.18	1.81
High cost (Business orientation)	4.82	1.70

Note. Data were unavailable for one college, so these means are based on an N of 28 institutions.

Background and purposes. Students were asked to indicate what they were doing just before they first entered their present colleges. Then students indicated their major purpose in attending college and their most important goal while there. (For a more complete discussion of the interpretation of these goals, see Baird, 1967.) Finally, students checked the highest level of education they expected to complete.

Table 3 shows the responses of the sample students to these items. Most students (69.2%) were attending high school before they entered their college, and a sizable minority (16.3%) were working. Nearly 5% had been attending a four-year college. When asked to indicate their major purpose in attending their college, only a minority of students indicated that they had been preparing for employment, while 58.3% said they were preparing for transfer and 24.0% said they had been trying to increase their general knowledge.

Students' degree aspirations were consistent with their emphasis on transfer. While 10.5% expected to complete only a two-year college education, 44.2% expected to obtain a bachelor's degree, 34.9% expected to obtain a master's, and 7.5% planned some professional level degree (PhD, MD, DDS, LLB, or BD).

Table 3

Percent of Two-Year College Students Choosing Each Response to Background and Plans Items

Item and response	Percent
What were you doing just before you first entered your present college?	
Attending high school	69.2
Working on a job full- or part-time	16.3
Looking for work	.4
In the U. S. Armed Services	2.5
Attending another junior college or trade school	2.0
Attending a four-year college	4.9
Other	2.7
What has been your major purpose while attending your college?	
Have been preparing for a specific job in the local area	4.8
Have been obtaining general preparation for employment	11.8
Have been preparing for transfer to a four-year institution	58.3
Have been trying to increase my general knowledge and level of education	24.0
What is the highest level of education you expect to complete?	
Junior college degree	10.5
Bachelor's degree or equivalent	44.2
One or two years of graduate or professional study (M. A., M. B. A., etc.)	34.9
Doctor of Philosophy (Ph. D.)	3.8
Doctor of Medicine (M. D.)	1.0
Doctor of Dental Surgery (D. D. S.)	.4
Bachelor of Laws (L. L. B.)	1.8
Bachelor of Divinity (B. D.)	.5
Other	2.0
What is your most important goal in attending college?	
To learn how to enjoy life	1.2
To develop my mind and intellectual abilities	33.2
To secure vocational or professional training	45.5
To make a desirable marriage	.5
To earn a higher income	10.8
To develop moral standards	.1
To become a cultured person	2.0
To develop my personality	1.1
To develop a satisfying philosophy	1.8
None of these	4.0

It is sometimes asserted that two-year college students are almost exclusively oriented toward jobs and employment. As shown in Table 3, students did choose the goal of securing "vocational or professional training" more frequently than any other goal. However, 37.0% chose goals that are in some sense intellectual: "to develop my mind and intellectual ability," "to become a cultured person," and "to develop a satisfying philosophy." Thus, while the majority of two-year college students are oriented toward their future careers (as are the majority of students in four-year colleges), many students have goals that are consistent with the values of general liberal education.

Evaluation of teachers. A teacher's "style" of teaching can influence not only how much a student learns but what he learns. The kind of learning instructors emphasize shows what they think most valuable to know. While teaching style is important in every educational setting, it is especially crucial in two-year colleges, since such colleges have very diverse curricula and serve students with a wide range of talents and personal characteristics. Therefore, to obtain information about teaching styles in two-year colleges, we asked students to describe teaching practices at their colleges by answering 33 true-false items. The items concerned examinations, classroom procedures, instructor-student interaction, assignments, and instructor attitudes.

The percentages of students who say each teaching practice is generally characteristic of most of their instructors are shown in Table 4. Apparently instruction in two-year colleges tends to emphasize facts and specific information (items 1, 2, 3, 4). Instructors also seem clear about what they want of students (items 5, 6, 7, 8). Class discussions seem to be common (items 9, 10). Students feel that instructors are concerned with keeping up with the latest developments in their own field (item 11), and that assignments are designed to give the student an understanding of the current state of the field (item 12). Although students feel that instructors like their students (13), they also report that professors seldom go for coffee or sandwiches with students after class (14). Apparently friendliness is not the same as familiarity. Although students think instructors want each student to consider his own set of values and outlook (15), exams do not often ask broad general questions about some current topic (16). It seems, then, that two-year college instructors are generally clear, emphasize specific knowledge, often use class discussions and are friendly.

The items on which there is least consensus (i.e., the overall percentage is between 40 and 60%) are item 17, "The instructors ask many questions in class," item 18, "Questions on exams often ask

Table 4

Percentage of Students Indicating Each Teaching Practice is Characteristic of Their Instructors

	Range of Percentages		
	Overall average	Lowest college	Highest college
1. Examinations emphasize recall of particular items of information about the subject	94.8	83.0	100.0
2. Instructors are most concerned with conveying specific information about their subject matter	84.6	71.7	95.7
3. Assignments are designed to give students a thorough knowledge of the facts about the subject	87.1	77.8	94.9
4. Lectures place a great deal of emphasis on specific details	72.1	53.7	81.3
5. In many classes, it is hard for a student to know how well he is doing	23.3	10.9	37.3
6. Professors seem to keep changing their minds about what they require from students	17.0	10.1	32.7
7. Professors sometimes ask students to do two conflicting things at the same time	13.8	5.9	35.8
8. Professors are often so vague about what they want in assignments, tests, etc., that students have to ask many questions to find out what they mean	21.8	13.3	40.9
9. There is some time given to student discussion in almost every class period	75.2	57.1	91.8
10. Instructors do not encourage questions from the class	10.4	4.6	18.9

Table 4 con't

	Overall average	Lowest college	Highest college
11. The instructors seem to be concerned with keeping up with the latest development in their own field	92.2	79.2	97.6
12. Assignments are designed to give the student an understanding of the current state of the field	83.1	68.2	89.8
13. Instructors really seem to like their students	90.6	77.8	94.1
14. Instructors often go for coffee or snack with students after class	19.9	3.2	55.7
15. Instructors want each student to consider his own set of values and outlook	79.7	64.7	91.5
16. Examinations usually ask broad general questions, often about some current topic, which could have many kinds of answers	23.9	12.6	37.7
17. The instructors ask many questions in class	41.0	14.6	59.4
18. Questions on exams often ask students to contrast two or more views of given topics	49.6	14.7	73.5
19. Most questions instructors ask in class are about disputes and different interpretations of facts in their fields	43.3	26.9	61.2
20. Instructors are mostly interested in their students in an academic rather than personal sense	62.7	23.5	79.6
21. Assignments are designed to broaden students' views of life	65.0	23.5	78.4

Table 4 con't

	Overall average	Lowest college	Highest college
22. Instructors seem concerned with understanding the general implications of ideas in everyday life	71.1	40.9	91.2
23. It is often hard to know just what professors want in their student's work	33.5	23.5	47.2
24. The instructors try to teach students methods of gathering and evaluating information in their field	71.6	53.7	82.1
25. There is quite a bit of laughter or joking in many classes	31.9	19.1	44.6
26. Professors try to tell each student clearly how well he is doing, and how well he has met their expectations	32.5	9.8	48.2
27. Students are often asked to give verbal reports of assignments	26.3	12.0	50.9
28. The instructors try to help students develop a view of their place in the world	71.0	52.9	88.9
29. Instructors try to cover every area in their subject in minute detail	19.2	6.5	35.8
30. Student participation is an important part of most class work	62.6	45.3	79.4
31. Instructors are often sarcastic or critical of students in class	10.1	0.0	22.7
32. Instructors seem to want to see if each student has done the current assignment	62.1	39.0	83.0
33. When students have difficulty responding to a question, instructors will help them answer	73.3	60.6	80.1

students to contrast two or more views of given topics," and item 19, "Most questions instructors ask in class are about disputes and different interpretations of facts in their fields."

Teaching practices vary from college to college. For example, on items 14, 18, 20, 21, and 22, there is a range of over 50 percentage points between the lowest scoring and highest scoring colleges. Thus, instruction is not the same in all colleges. Other items (23-33) did not receive a consensus of strong agreement or disagreement. Finally, instructors are rarely sarcastic (item 31).

Students were also asked to form a general overall impression of their teachers and rate them on a four-point scale: somewhat inadequate, fairly capable, very capable, and extremely capable. The student ratings of faculty members are shown in Table 5. Students tend to give high ratings to their teachers' knowledge of their subject matter and their overall ability as teachers. (Similar figures have been reported by Kneoll and Medsker, 1964.) In contrast, the average two-year college faculty member seems to have a harder time stimulating students to do reading in the field beyond class work.

Table 5

Student Ratings of Faculty Capability
(Percentage Choosing Each Alternative)

These items ask you to describe the faculty of your college. You should try to form a general overall impression of them as a group.

Rate your teachers on their:	Inadeq	F cap	V cap	E cap	M data[a]
Knowledge of their subject matter	.6	11.2	60.2	25.0	3.0
Overall ability as teachers	1.8	24.2	60.5	10.5	3.0
Ability as counselors or advisors	14.8	37.9	33.7	10.0	3.6
Ability to stimulate students to think	6.7	38.0	41.5	9.8	4.1
Ability to stimulate students to do reading in the field beyond class work	26.8	50.1	16.3	3.1	3.6
Ability to make their subject interesting	5.2	36.6	44.3	10.6	3.3

[a]Headings are: somewhat inadequate, fairly capable, very capable, extremely capable, and missing data.

In summary, two-year college students tend to describe their instructors as clear, factual, consistent, and concerned with their students. The students also were very satisfied with most aspects of their instructor's performance.

Participation and nonacademic achievement. College administrators are often concerned lest their college be a mere commuters' campus, with students coming only to attend classes, not participating in the extracurricular life of the campus, and consequently not developing an identification with their college. In order to provide information about the extent of such student concern, we studied the rate of extracurricular participation, an important index of students' involvement with their college. We asked students whether they had participated in nine areas of extracurricular activity during college.

The rate of participation in various activities and the range across the colleges in our sample is shown in Table 6. Participation in departmental clubs and intramural athletics is fairly common, but participation in other areas is uncommon, especially in debate, acting, and science clubs. Checklists of extracurricular accomplishment also yielded scores in the following areas: leadership, social participation, social service, music, drama and speech, art, writing, science, business, humanities, and social science (Richards, Holland, & Lutz, 1967). Each scale consisted of 10 items ranging from common and less important accomplishments to rare and more important ones. Typical items included: "Elected as one of the officers of a class (freshman, sophomore, etc.) in any year of college," "had drawings, photographs, or other art work published in a public newspaper or magazine," "received a prize or award for a scientific paper or project," "conducted music which was publically performed," "was editor of college paper, annual, magazine, anthology, etc.," "had one or more leads or minor roles in plays not produced by my university." A simple scale of recognition for academic attainment was also used.

The means on the nonacademic achievement scales indicate that achievement of any kind is rare (less than one achievement is typical in every area but humanities), and that nonacademic achievement in science, music, social science and speech and drama is especially rare. The higher average score on humanities achievement is probably due to items which include "read one or more 'classic' literary works on my own (not a course assignment)" and "built a personal library around a core collection of poetry, novels, biographies, etc."

Table 6

Participation and Achievement of Junior College Students

Percent Participating in Each Activity	Total Sample	Lowest col	Highest col
Athletics-intercollegiate	14.1	0.0	26.5
Music	17.9	4.5	38.6
Writing	9.7	3.6	17.6
Student government	13.7	4.9	41.5
Science clubs and projects	7.9	0.9	28.3
Debate	3.0	0.0	17.9
Acting	7.5	0.9	28.3
Departmental clubs related to my major field	27.7	0.0	57.4
Athletics--intramural	32.5	4.1	69.8

Non-Academic Achievement		
Area of Achievement	Mean	Standard deviation
Leadership	.86	1.67
Social participation	.83	1.36
Art	.65	1.35
Social service	.78	1.27
Science	.20	.62
Business	.69	.95
Humanities	1.09	1.34
Music	.24	.80
Writing	.42	.95
Social science	.35	.67
Speech & drama	.35	.93
Recognition for academic accomplishment	.26	.62

These results suggest that many two-year college students are active participants in some extracurricular activity, but that achievement in the form of some public recognition or accomplishment is rare. Since participation in one area is unrelated to participation in another, it is likely that a fairly high proportion of two-year college students are involved in some extracurricular activity. The range of participation across colleges also suggests that some colleges are able to draw many of their students into extracurricular activity while others are not. In short, two-year college students are often involved in the extracurricular life of their campus.

Future plans. The career plans of students may be the most important outcomes of college education, with consequences for both students and their colleges. College administrators may plan better if they know the proportions of graduates who plan to transfer, to find employment, to enter the armed services, or to marry. In addition, they should know the steps students have already taken toward these goals. The extent and realism of these steps can suggest ways in which educational and vocational counseling might be changed. This study, therefore, included several items which bear on the plans of two-year college students who are at the end of their college training.

A shown in Table 7, the plans of students after college reflect the high rate of transfer orientation we noted in the section on purposes. Nearly two-thirds of all students definitely planned to transfer to a four-year college and another 8.9% planned to transfer if their grades allowed it. The responses to another question indicate that 73.3% of students said they planned to transfer when they entered college and still plan to transfer. Only 8.1% said they had never planned to transfer. However, as also shown in Table 7, only about a third of the students who say they plan to transfer have been accepted by a college, while another third had not yet sent for applications.

While it is difficult to estimate from these data the number of students who will actually transfer, many students who planned to transfer almost certainly will not be able to. (Approximately a quarter of the students have grades of less than C.) This suggests that many students have not begun to think realistically about some of the alternatives they will very probably have to face. Perhaps two-year colleges could perform a needed service by helping these students consider other alternatives before, not after, they leave college.

Students who plan to work present a similar picture. Nearly a quarter of these students say they have been training for a specific job which had been promised them in their local area, another 16.2% were training for a specific job for which they had not made application, and nearly 30% were obtaining general training for employment. While nearly a third have already been hired by a company, another third had not yet begun to look for work. Thus, there are many vocationally-oriented students who also might be encouraged to think about their futures.

Table 7

Percentage of Students Choosing Each Alternative of Future Plans Items

If you planned to transfer to a four-year institution when you first entered your college, has your experience in college affected your plans?	
Have not changed my plans, still plan to transfer	73.3
I am beginning to think of other alternatives	8.0
I have decided to seek employment instead	2.9
I have developed other plans (getting married, entering service, etc.)	6.0
I have never planned to transfer	8.1
Data missing	1.7
What are your plans when you complete your training at your present college?	
Will continue with present employment	2.3
Definitely plan to obtain a job	12.6
Definitely plan to transfer to a four-year institution	66.2
Probably will transfer, if my grades allow it	8.9
Plan to be married (will not work)	.7
Plan to enter Armed Services	4.1
Other	3.9
If you plan to obtain a full-time job next year, what kind of job have you been preparing for?	
A specific job for a particular firm in the area (job has been promised to me)	24.7
A specific job for a particular firm (I have not made an application yet)	16.2
A specific kind of job--but not for a particular firm (e.g., jobs such as draftsman, TV repairman, etc.)	29.7
I have been obtaining general training to help me find a job.	29.4
If you plan to obtain a full-time job next year, what steps have you taken?	
I have not yet begun to look for work	35.4
I have filled out applications for employment, but have not yet received a reply	31.9
I have been hired by a company	32.7
If you plan to transfer to a four-year institution, what steps have you taken?	
I have not yet sent for applications	34.6
Have applied for admission but have not received reply	33.0
Have been accepted by a four-year college	32.4

Table 8

Responses to Satisfaction and Sense of Progress Items

Satisfaction with preparation		Sense of Progress	
If you plan to obtain a full-time job next year, how well do you think your college has prepared you for the work you will do?		The se items deal with your reactions to your college experience. We would like your best estimate and your overall impression.	% saying yes
Very poorly	4.9	Do you think your college has given you a detailed knowledge of your field?	50.7
Somewhat poorly	5.6	Has your college prepared you for employment (that is, taught you skills and techniques directly applicable to a job)?	46.8
Fairly well	44.1	During your college career, do you feel you have gained a broad understanding and appreciation of your field?	76.6
Very well	36.3	Do you feel you have gained a general comprehension of contemporary thought--the philosophies, controversies and ways of life that influence us today?	76.9
Extremely well	9.1	Has your college experience made you more aware of the needs of yo ur community?	75.5
Do you feel that the training you received at your college has helped or will help you obtain a full time job for next year?			
Definitely not a help	3.3		
Little help	9.2		
Somewhat helpful	29.3		
Very much help	28.1		
Definitely helpful	30.1		
If you plan to transfer to a four year college, how well do you think your college has prepared you for the academic problems you will face?			
Very poorly	0.9		
Moderately poorly	3.5		
Moderately well	49.6		
Very well	38.9		
Extremely well	7.2		

(Table 8--Continued next page)

Table 8 (Con't)

General Satisfaction

These items ask about your satisfaction with various aspects of your college experience.

	Dissatisfied	Somewhat satisfied	Very satisfied	Missing data
Preparation for employment	11.4	59.0	25.9	3.7
Preparation for further education	3.6	44.4	49.0	3.1
Quality of teaching	4.4	49.6	43.1	3.0
Quality of social life	22.6	51.2	22.9	3.2

Is your junior college a center of cultural activities in your community such as concerts, exhibits, or lectures?

Never a center of activity	5.0
Rarely a center of activity	13.8
Occasionally a center of activity	34.3
Frequently a center of activity	29.6
Constantly a center of activity	7.8
Data missing	9.5

Overall, have you found your college experience enjoyable?

Little of the time	2.6
Some of the time	16.4
Most of the time	65.8
All of the time	12.4
Data missing	2.7

General college satisfaction. How well do two-year college students think their institution has prepared them for work or transfer? Several items in the questionnaire referred to this question. As shown in Table 8, most students who planned to obtain a full time job the following year felt that their college had prepared them for the work they would do either "fairly well" or "very well". However, 10.5% felt their preparation was either somewhat poor or very poor. They gave a similar rating to the help their college training would be in obtaining a job.

Similarly, most students who planned to transfer to a four-year college felt their college had prepared them moderately well to very well for the academic problems they would face.

In addition, students were asked whether they thought their college experience had given them certain skills and understandings. On the sense of progress items shown in Table 8, only 50.7% felt their college had given them a detailed knowledge of their field, and only 46.8% felt their college had prepared them for employment--that is, taught them skills and techniques directly applicable to a job. However, 76.6% felt they had gained a broad understanding and appreciation of their field, 76.9% felt they had gained a general comprehension of contemporary thought, and 75.5% felt their college experience had made them more aware of the needs of the community.

Table 8 also shows the distribution of responses to satisfaction items dealing with four aspects of students' college experience scored on a three-point scale: dissatisfied, somewhat satisfied, and very satisfied. Students seemed to be fairly satisfied with the preparation for further education and the quality of teaching. They seemed to be less satisfied with the quality of the social life. (As we shall see, the majority of students spend little time on campus, so this result may be understandable.) Only about a third thought their college was a frequent or constant center of cultural activity in their community. Overall, however, students found their college experience enjoyable most of the time.

All these figures reflect a surprisingly high degree of satisfaction. Most two-year college students, whatever their plans, were quite satisfied with most aspects of their college careers.[2] Thus, if we accept the testimony of the students, themselves, two-year colleges are doing a good job of meeting their needs. It must be remembered, of course, that our results are based on students who stayed in college for the full two years. It is possible that dropouts would be less satisfied.

Finances and working. Probably the most crucial problem faced by two-year college students is the financing of their education. One of the most important reasons many students attend two-year colleges is that they cannot afford to go to four-year colleges, and many students must work to attend an inexpensive two-year college. It is important, therefore, to know how students finance their education.

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[2]The results of a correlational analysis not reported here show that satisfaction was unrelated to the grades students received and to the students' nonacademic achievements.

Table 9

The Financial and Working Status of Junior College Students

For each source of educational funds listed below, indicate how important it has been in financing your college work.

	Major source	Minor source	Not a source	Missing data
Loans from the National Defense Education Act Loan Fund	5.4	3.2	71.4	20.0
Loans from school loan funds	.6	1.8	75.5	22.2
Loans from banks or other organizations	2.8	4.2	71.2	21.8
Loans from family or friends	5.0	11.0	60.9	23.1
Parents, family or sponsors	49.7	23.0	16.5	10.7
A trust fund	1.4	2.1	73.2	23.3
My own savings	29.9	36.5	18.9	14.7
Working while attending school	29.7	32.0	23.5	14.8
Scholarships or grants from school attended	4.1	7.6	67.7	20.6
Scholarships or grants from other sources	6.0	6.9	66.7	20.5

Have you worked part- or full-time while attending college?

Did not work	17.0
Sometimes worked part-time	34.0
Always worked part-time	27.4
Have had both full- and part-time jobs	13.2
Sometimes worked full-time	3.4
Always worked full-time	3.7

On the average, how many hours per week have you worked?

Have not worked on a regular basis; just once in awhile	26.5
Less than 10 hours per week	10.7
10-14	14.2
15-19	14.4
20-24	12.3
25 or more	17.4

What type of part- or full-time work have you done most often while attending college?

Babysitting	3.9
General clerical(receptionist, file clerk, library assistant, etc.)	7.3
Typist (able to type at least 40 words per minute with few errors)	2.4
Secretarial (able to take and transcribe dictation)	1.2
Gas station attendant	3.3
Dance band musician	.8
Waiter (waitress)	3.3
Dishwasher	1.4
Odd jobs (yardwork, storm window installation, etc.)	6.8
Sales (door to door, dept. store, campus representative, etc.)	8.4
Tutor or teacher	1.6
Technical work (lab. technician, draftsman, etc.)	4.7
Protective work (policeman, guard, fireman, etc.)	.7
My usual job cannot be classified above	32.9

Students were asked to rate the importance of each of 10 sources of finance on a three-point scale: a major source, a minor source, or not a source. Students also indicated whether they had worked during college, the average number of hours they had worked, and the type of work they had done most often while attending college (secretarial, gas station attendant, sales, etc.). Table 9 shows the responses to these questionnaire items dealing with finances and working. The responses to the item dealing with sources of educational funds indicate that the major sources of educational funds for most students were parental or family support, their own savings, and work while attending school. Only a few students rated scholarships of any kind as a major source. Thus, most students are supported by their families, but a sizable group are supported, at least partially, by their own employment. Indeed, the next item indicates that only 17% of the sample did not work while attending two-year college. Furthermore, nearly three out of ten students have worked 20 or more hours a week. Students worked in many varied jobs-- the most common being sales (8.4%), general clerical (7.3%) and odd jobs (6.8%). Other investigators (Medsker & Trent, 1965; Richards, Rand, & Rand, 1966; Cross, 1968) have reported that between half and two-thirds of two-year college students were working while attending college.

Commuting and allocation of time. Students were asked the number of miles and the amount of time they traveled to attend college. They also described the type of transportation they usually used. Students indicated where they did most of their studying for classes, and the proportion of their leisure time spent on campus. The responses to these items are shown in Table 10.

These figures reveal that 21.6% of students live on or close enough to campus to eliminate a car. Only about 14% commute to campus by public transportation, while 45.7% drive to campus in their own cars. These figures suggest that most students in two-year colleges are commuters. Indeed, over a quarter of the students traveled more than 10 miles to attend classes, and over a quarter spent more than a half hour traveling to and from college each day. Perhaps this commuting accounts for the fact that 63.5% of the students spend little of their leisure time on campus, and less than 10% spend most of their time there. Furthermore, few students (17.3%) do most of their studying for classes in the college library or study room, while 60.2% study at home.

Table 10

The Commuting and Allocation of Time of Junior College Students

What provisions have you made for transportation while you are in college?	
Live on or near campus, so I don't need a car	21.6
Live on or near campus, but keep a car for my personal use	17.8
Commute to campus by public transportation or ride; do not have a car at home	6.3
Commute to campus by public transportation or ride; have a car at home	7.5
Drive to campus in my own car	45.7
How far do you travel to attend classes?	
0-1mile	33.6
2-5 miles	23.7
6-10 miles	15.2
11-20 miles	13.4
21 or more miles	13.3
Missing data	.7
How much time do you spend traveling to and from college?	
I live on campus	19.9
1-10 minutes a day	17.8
11-30 minutes	34.5
31-60 minutes	18.7
One to two hours	7.0
More than two hours	1.7
Missing data	.6
Where do you do most of your studying for classes?	
At home	60.2
In a city or county library	.5
In a study room or the college library	17.3
In my dormitory, fraternity or sorority room	17.5
Other	3.8
Missing data	.7
Not including the time you are in class or studying, what proportion of your leisure time do you spend on campus?	
Little of my leisure time(1/4 or less)	63.5
Some of my leisure time(1/4 to 1/2)	16.4
Much of my leisure time(1/2 to 3/4)	9.9
Most of my leisure time(3/4 or more)	9.8
Missing data	.4

The effects of working and commuting. Working and commuting students are often a matter of great concern in two-year colleges. Administrators and counselors feel that these students do not participate in the life of the college as much as other students. They suspect that students who must travel long distances to attend college, or students who work during their college years, do not have the same college experiences as other students and may not achieve as much.

This study attempted to examine the effects of working and commuting on the participation, achievement, satisfactions, and experiences of two-year college students.

We examined the effects of working by correlating the extent of working and the average number of hours per week worked with the other information in the questionnaire. The extent of working and the number of hours worked were almost completely unrelated to students' plans, academic and nonacademic achievement, participation in campus activities, teaching styles, and satisfaction items. In fact, in correlations with 60 other variables, only three variables were related to working with correlations as high as .10. The amount of leisure time spent on campus was correlated -.13 and-.21 with the extent and number of hours worked. The other two variables that are related to working are the number of steps taken to obtain a job after junior college (.17 with the extent of working and .12 with the number of hours) and Business Achievement (.36 and .32 respectively). This last correlation may reflect some of the items in the business achievement scale referring to success in private business--which, of course, are easier if one is working in private business. Apparently, working students in two-year colleges have college careers which are very similar to those of other students.

What are the effects of the extensive commuting of two-year college students? To answer this question we correlated the distance students traveled to campus, and the time students needed to travel to college with the other information described in the methods section. These correlations showed that the commuting student has essentially the same academic and nonacademic achievements as other students. His college grades and scores on most of the nonacademic achievement scales are not very different from those of other students. The exception to this is in leadership achievement, where there are correlations of -.17 with commuting distance and -.20 with commuting time.

There are negative relations between participation in extracurricular activities and commuting, but the participation of commuting students was only slightly less in any area. The largest differences occurred in student government (-.12 and -.16 with distance and time, respectively), departmental clubs (-.14 and -.14), and intramural athletics (-.17 and -.18). The proportion of students' leisure time spent on campus was moderately negatively related to commuting (-.34 and -.45).

One would have expected this slightly lower rate of participation to be reflected in the satisfaction items, but this is not the case. There appeared to be no relation between commuting distance or time and the sense of progress items, satisfaction with the college experience items (including satisfaction with the quality of social life), or with the teacher rating items. Furthermore, commuting students appeared to have found their college experience just as enjoyable and felt just as strongly that their college had been a help, whether they planned to work or transfer to a four-year college. Commuting students also reacted to the faculty in much the same way as other students. Commuting students, then, tended to participate slightly less in extracurricular activities (although they had nonacademic accomplishments just as frequently as other students in every area but leadership) but were not different from other students in terms of their grades, satisfactions, reactions to teachers, or plans.

Discussion

This report has shown that some of the problems of two-year colleges which we described in the introduction are serious, while others are not. First, the very diversity of student needs presents a challenge to the two-year college. It must provide advanced vocational and technological training for students who desire technical education; it must offer the first two years of a four-year education for transfer students; and it must be a center of learning which provides general education for the many students who want to increase their knowledge but do not want to transfer. These are demanding roles. But the results described in this report suggest that most students think their colleges are performing these diverse roles very well. Their responses to the satisfaction and sense of progress items suggest that they believe their colleges have given them good technical training, education for transfer, and general education. Most important, transfer students felt they were ready for four-year college work; students who planned to obtain jobs felt they had been well trained; and those whose goal was general education believed they had gained general knowledge.

The same diverse student needs place many demands on instructors. Students' descriptions of the teaching practices in two-year colleges suggest that instructors emphasize factual information and exact answers. Perhaps, relative to their four-year college peers, these instructors do not place as much emphasis on broad understanding and controversies in the field. This may account for the clarity of instruction. Although there is some diversity in teaching practices from college to college, the most important point is that most students described their instructors as very capable in most ways. Furthermore, the practices which students report as common and uncommon suggest that the teaching practices in two-year colleges are generally good.

Another problem of two-year colleges, the high incidence of commuting and working students, was not as serious as has been thought. Our analyses indicated that commuting and working were generally unrelated to students' satisfaction, sense of progress, perceptions of teaching, plans, nonacademic achievement, or academic performance. Of course, working and commuting students did not participate as much as other students in some areas--but even this difference was small. Apparently, commuting and working do not have many effects in the lives of two-year college students. Perhaps working and commuting students make adaptations which allow them to participate in the life of their college. Perhaps students with special talents find ways to exercise their talents in spite of minor obstacles. And perhaps students do the things they want to do by simply finding time to do them. In any case, it is clear that commuting and working had only small effects on the college careers of the students in this sample.

One problem does appear to be important--the high proportion of students who claim they want to transfer to four-year college. About two-thirds of the students in our sample said they definitely planned to transfer to a four-year college. It is possible that most of these students were accurately reporting their aspirations, since they could have chosen another alternative, "plan to transfer if my grades allow." However, only about a third of the students planning to transfer had been accepted by a college (the survey was administered in April and May of 1967). It is difficult to estimate from these data the proportion of students who will actually continue. (Other estimates have varied between 30 and 50%.) About 89% wanted at least a bachelor's degree, but many of these students may have unrealistic aspirations. Only a minority plan to work and few have begun to look for work. Clearly, many of the other students will have to find jobs. Perhaps two-year colleges could encourage students

who are unlikely to be able to transfer to think more realistically about their futures. Such programs as "Career Days" or special meetings with local employers might be useful. In any case, it is clear that very few students have been "cooled out"--lowered their aspirations--during their two-year college career.

In summary, this report on two-year colleges has shown that some differences are sizable while others, such as the differences between working and commuting students and other students, are not. We have tried to show that two-year colleges face many common problems, but often choose different solutions. A good way to describe two-year colleges in the United States may be as a complex pattern of similarities and differences. This complex pattern reflects the challenging task of two-year colleges: to educate and elevate their students, thereby educating and elevating the greater society.

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