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ABSTRACT

This document reports the methodology and results of the third annual statewide student follow-up study of the Maryland community colleges. Questionnaires were sent to 19,634 persons who were first-time students in a Maryland community college in fall, 1972. Response rate was 48%. A sequential sampling procedure was used to test for nonrespondent bias. Significant differences between respondents and nonrespondents were found; generally, respondents were more academically successful and more likely to have transferred than were nonrespondents. Five main areas were addressed by the study: student academic and demographic characteristics, educational goals and goal achievement, employment experiences, college transfer experiences, and satisfaction with the community college. Results indicated that: (1) transfer was the primary educational goal of half of the respondents; (2) half listed an associate degree as their goal; (3) 60% reported primary goal achievement; (4) Blacks achieved educational goals significantly less frequently than whites; (5) no differences in goal achievement were found to exist between males and females; (6) 74% were employed full-time when career development was a primary goal; (7) 68% transferred when their goal was transfer; (8) Blacks achieved transfer goals at a significantly lower rate than whites; and (9) 80% were satisfied with instructional quality. (Author/JDS)

MARYLAND COMMUNITY COLLEGES

STUDENT FOLLOW-UP STUDY: FIRST-TIME STUDENTS FALL 1972

Maryland State Board for Community Colleges
State Treasury Building Annapolis, Maryland 21404

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MARYLAND COMMUNITY COLLEGES

STUDENT FOLLOW-UP STUDY:

FIRST-TIME STUDENTS, FALL 1972

October 1976

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Abstract

Responding to a lack of information about the outcomes of community college education, the purpose of the study was to help Maryland community colleges evaluate the extent to which they were assisting students in achieving their educational goals, their immediate career development, and their preparation for transfer. Questionnaires were sent to 19,634 persons who were first-time students in Maryland community colleges, Fall 1972. The findings included: (a) only half of the respondents held an AA goal, and 14 percent came for "courses of interest," (b) 60 percent stated that they achieved their educational goal, (c) while 55 percent were employed full-time, 74 percent were employed full-time when their goal was career development, (d) while 38 percent transferred, 68 percent transferred when their goal was transfer, and (e) 87 percent stated that they would recommend their community college to a friend. Several implications were drawn, including the need for colleges to assess student educational goals at each registration, the need to redefine student success, the need to review the traditional concept of a program, and the need to study the massive career and personal adjustments made while at the community college.

Preface

This report presents the resu'ts and implications of the third Statewide student follow-up study, a joint project of the State Board for Community Colleges and the Maryland Community College Research Group. Previous research studied Maryland first-time freshmen that entered community colleges in 1970 (Hurley, 1974) and 1971 (Hurley, 1975). The current report includes extensive comparisons between the 1971 and the 1972 studies.

The study could not have been completed without the cooperation and assistance of the follow-up study coordinators at each community college. Their help with the research design and data collection is gratefully acknowledged. Participation of the State Board for Community Colleges is supported, in part, by a grant from the Maryland State Department of Education, Division of Vocational-Technical Education. The office support staff of the State Board was quite helpful, especially Maxine Pope and Louise Reed, who prepared the manuscript.

STUDENT FOLLOW-UP STUDY: FIRST-TIME STUDENTS, FALL 1972

Carol Tavris: Ted, you have been teaching over 45 years, in large universities and small ones, on both coasts and in the Midwest. You have headed up a major longitudinal study of the impact of college on students. From all that research and personal experience, what does college do for a person?

Theodore Newcomb: Frankly, very little that is demonstrable. (1974)

Purposes

The primary purpose of the study was to help Maryland community colleges evaluate the extent to which they are:

1. Assisting students in achieving their educational goals;
2. Assisting students in their immediate career development;
3. Assisting students in their preparation for transfer to a senior college or university.

The secondary purpose of the study was to augment data used in the Level I monitoring of career programs, as described in the System for the Evaluation of Career Programs in the Community Colleges of Maryland (1974).

Problem

The central problem addressed in this study was that Maryland community colleges and the State Board for Community Colleges had insufficient information about the outcomes of community college education. While certain Maryland community colleges had done local studies, there was a need to develop a standardized procedure for gathering planning and evaluation data.

Why was it important to study the outcomes of the educational process? Some persons think education is inherently valuable and that studying its effects is a waste of time. From this point of view, the value of education is inherent. Similar to religion, education is accepted as a matter of faith, not subject to empirical verification. While few would state their position in these same words, the lack of evaluation effort testifies to the wide acceptance of the "inherent value" theory. Nationally few colleges and universities have staff members assigned the task of evaluating the impact of their institution. A review of follow-up studies of occupational-technical students showed that less than half of the community colleges conduct formal studies

resulting in written reports. Most studies excluded nongraduates, providing data only about academically successful students (Williams and Snyder, 1974).

From another point of view, Bion (1961) has offered evidence that a group will grow and develop to the extent that it deals with reality. Dealing with reality includes questioning a group's own practices and results. One question is, "What are the results of the educational process?" For all of the dollars and hours being poured into the educational process, what is being accomplished? The assumption is that there must be some point at which the investment of resources is not worthwhile to students. For example, if only two out of 500 persons at a community college actually transferred to a four-year college, it probably would not be worth the effort to prepare students for transfer. By the same token, if only one out of 100 students in data processing ever became programmers, it would be a waste of staff and student effort to continue such a program. The time and talent could be better used. The existence of these extreme examples establishes that there are criteria for success. The question could be asked, "At what level do the colleges consider themselves to be successful?" If 40 percent of the students achieve their transfer goals, is this effective enough? Can that percentage justify the expenditure of time and effort? How about 60 percent? How about 80 percent? Few colleges have debated or established such criteria for their success, even though many persons would agree that there must be some point at which the effort is not justified.

Another reason for a rigorous study of the effects of college is that psychologists have established that humans tend to see what they want to see. Since most college faculty and administrators want to think they are being helpful, the tendency will be to selectively perceive their successes. If one or two students write a letter to the President saying how much old Ivy Wall Community College helped them, the President feels ecstatic. Only rigorous study will allow colleges to detect the reality of their student outcomes.

To summarize, the problem was not a dissatisfaction with the outcomes of education. The problem was not that funding for colleges needs to be tied to "outputs." The problem was that the outcomes of community colleges were not known with sufficient clarity to enable improvement in the educational process.

Definitions, Assumptions, and Limitations

Definitions

Educational goal: the original, primary aim for attending the community college, as reported by the student in the follow-up questionnaire.

Career development: growth in the capacity for satisfying and successful employment among persons seeking new jobs and persons currently employed.

Special student: a student who is not formally enrolled in a specific program of study.

Program: a series of courses leading to a certificate or associate degree and the basis for reporting student data at the State level.

Level I monitoring of career programs: a quantitative program evaluation system that compares program projections with results on criteria such as enrollment, completions, employment in field of training, etc. The Level I procedure is a trigger device to signal the need for qualitative local program evaluation, Level II (A System for the Evaluation of Career Programs in the Community Colleges of Maryland, 1974).

Assumptions

It was assumed that: (a) the goals of each Maryland community college include assisting students in achieving their educational goals, their career development, and their transfer to other colleges and universities; (b) each Maryland community college wants to know about the outcomes of the educational process and will use such knowledge to improve the college; and (c) assessing the outcomes of education is a complex task, and the current study must be combined with other evidence to paint an accurate picture.

Limitations

The study was goal oriented and did not assess the outcomes of college beyond the initial aims of the student. For example, a student may not have achieved the goal of transfer but may have developed a satisfying career in photography through a course taken as an elective. Such a student may consider college as a successful experience but the study would not record the student as a "success."

The study did not assess the factors which helped and hindered student success, a crucial element if the results are to be used by colleges to improve their service to students. The questionnaire also failed to ask if unemployed persons were seeking work.

Educational goals upon entrance to college were reported by students three and one-half years later. Some students may have forgotten their initial educational goals and some may have unconsciously altered their original goals.

The study made no attempt to compare college outcomes with the outcomes of other educational experiences in society. For example, students in the study reported the extent to which their community college helped them develop job skills. Perhaps industrial and military training programs provide as much skill development as community colleges.

Research Questions

1. Educational objectives

1.1 What were the primary educational goals of the respondents?

1.2 What proportion of the respondents stated that they achieved their educational goals?

1.3 What was the graduation rate among those whose goal was an AA degree?

1.4 What proportion of the respondents had graduated?

1.5 What proportion of the respondents was still enrolled?

1.6 What were the reasons for discontinuing attendance at the college?

2. Career development

2.1 What proportion of the respondents was employed full-time where career development was their goal?

2.2 What proportion of the respondents was employed full-time? Part-time?

2.3 What proportion of the full-time employees held jobs in their trained field?

2.4 Where were the full-time career respondents employed?

2.5 Among career students in their trained field, what was the average initial salary of respondents who obtained their first full-time job after leaving the college? Of those who held the same full-time job while attending the college?

For the same two groups, what were the average current salaries? (also by graduates and nongraduates)

2.6 Was there a significant relationship between salary and job location among full-time career respondents? Between salary and age?

2.7 Did the community college program increase theoretical understanding? Increase job skills? Help to get a job? Help to get a promotion or salary increase? (among full-time career employees in trained field)

3. Transfer

3.1 What proportion of the respondents transferred where transfer was their goal?

3.2 What proportion of the respondents transferred?

3.3 To what colleges and universities did the respondents transfer?

3.4 What proportion of the respondents transferred to majors that were related to their community college curriculum?

3.5 How many credits did respondents lose in the transfer process?

3.6 What was the grade point average of the respondents at their transfer institutions?

3.7 How satisfied were the respondents with their preparation for transfer work?

4. Student satisfaction

4.1 What proportion of the respondents was satisfied with the quality of instruction? With the quality of student support services? (counseling, student activities, registration, etc.)

4.2 What proportion of the respondents would recommend their program of study to a friend?

4.3 What proportion of the respondents would recommend the college to a friend?

Review of Related Literature

Williams and Snyder (1974) conducted a study to determine the status of community college occupational student follow-up. They found that while nearly all community colleges said they did some type of follow-up study, less than one half conducted formal studies resulting in written reports. Although the range of quality among the reports was broad, most studies excluded nongraduates and failed to test for nonresponse bias; half of the reports consisted primarily of uninterpreted data.

Nickens (1976) studied a sample of 1,000 persons from 15 Florida community colleges. The purpose of the study was to investigate student attrition rates in the context of student educational objectives. Nickens concluded that two groups of students had been inappropriately labeled as dropouts. In the first group were students whose original goal was the completion of several courses with no intention of earning a degree. "When these students have finished the courses according to plan and no longer attend college, it does not seem appropriate to label them as dropouts." In the second group were students who have left the college but planned to return, possibly after working for a while to earn tuition and expense money. It was suggested that the word "dropout" be defined to mean those students who have not reached their educational goals and have no plans to complete these goals.

A study was conducted on former occupational-technical students in thirteen Virginia community colleges. In 1974, questionnaires were sent to 11,623 persons who were enrolled in occupational programs from Fall 1966 through Fall 1969. Sixty-one percent of the former students returned useful questionnaires. Four contacts were made with the population, and telephone sampling was done to test for nonresponse bias; only a few areas of significant difference were found between nonrespondents and respondents.

Eyler, Kelly, and Snyder (1974) reported on the post-college activities of the Virginia occupational students. Data were presented about employment rate, relationship of college program to employment, salary, job location, and reasons for leaving the college. Trufant, Kelly, and Pullen (1974) reported the perceptions of the Virginia occupational students, including ratings of their community college experience, program change, goal achievement, and employment ratings. Comparable information from the Virginia and Maryland studies is given in the Results section of this report.

The United States high school graduating class of 1972 was surveyed in October 1973 by the National Center for Education Statistics (1976). Fifty-six percent of the sample were currently enrolled in a postsecondary educational institution, and sixty-five percent were employed in full-time or part-time jobs. Among those not holding jobs, one out of five was looking for work.

Bayer, Royer, and Webb (1973) conducted a national study of students who entered a college for the first time in Fall 1967. The follow-up questionnaire was sent four years later, in 1971. Among other dimensions, the study investigated persistence, degree aspirations, grades earned, career interests, and personal attitudes. The population included only those who began as full-time students in the Fall of 1967. Four years after entry to two-year colleges,

44 percent were attending college either full-time or part-time. Fifty-two percent were working either full-time or part-time.

In summary, several state and national student follow-up studies have been conducted. The national studies explored follow-up trends among groups that were quite different than the current study. Results from studies in Florida and Virginia were quite similar to the Maryland follow-up and are discussed in the Results section.

Method

Study Population

The study population was defined as all persons who were first time college students in Maryland community colleges during Fall 1972. The population of 19,634 students included transfer, career, and special students, part-time and full-time students, as well as graduates and nongraduates. All sixteen community colleges which were in existence in Maryland in 1972 participated (Appendix A).

Data Collection

The questionnaire was developed by the Maryland Community College Research Group and included information in five areas: demographic information, goals upon entry to the community college, employment, transfer, and satisfaction with selected aspects of the community college (Appendix B). The questionnaire used in the 1971 Study is also included in Appendix B. The questionnaire was shortened considerably in the 1972 Study in an attempt to increase the response rate.

The following demographic information was supplied directly by each college from its records: program at exit from the community college, credit hours earned, highest degree earned, overall grade point average, current enrollment status, sex, and year of birth.

Procedure

The State Board for Community Colleges contracted for commercial printing of the questionnaires which were distributed to the colleges for mailing. Each college used student records to develop a master list of its study population. The master list was used to keep track of the respondents, nonrespondents, and packets returned as undeliverable by the Postal Service. The first packets were mailed in March 1976 and consisted of a cover letter from the college, the questionnaire, and a preaddressed, prepaid return envelope. At three-week intervals, a second and third mailing was made to all nonrespondents. As completed questionnaires were received by the colleges, demographic data was added to each questionnaire by the college. In most colleges demographic data was retrieved from magnetic files, printed on a label with the student's name and attached to the questionnaire.

Return Rate

Among the 19,634 persons in the population, 7,648 returned usable questionnaires, for an unadjusted response rate of 39 percent. However, 3,549 questionnaires were returned as undeliverable by the Postal Service, producing a response rate of 48 percent among those actually receiving questionnaires. The response rate was up from the rate achieved in the 1971 Study (Table 1). The improved rate may be a result of the shortened questionnaire as well as the use of more accurate student address files in the 1972 Study.

Table 1

Information about the Population and the Sample

Information	1971 Study	1972 Study
Number of colleges participating	13	16
Population of first-time students	17,832	19,634
Questionnaires returned as undeliverable	2,600	3,549
Usable responses	5,667	7,648
Unadjusted response rate	32%	39%
Response rate among those receiving questionnaires	37%	48%

Nonrespondent Bias

Given the response rate obtained in the study, it was necessary to test for nonrespondent bias in order to see if the results given by the respondents were different than those that might have been given by nonrespondents. A sequential sampling technique was used to determine if such a bias could be inferred (Kip, 1975; Wilks, 1962). The sequential sampling procedure is described in the procedure for sequential sampling (Appendix C). Briefly, the sequential sampling technique involved selecting nonrespondents at random and interviewing them by telephone on selected items from the questionnaire. With one exception, all items were "yes-no" questions. Charts were maintained of the cumulative percent "yes" to each question. Nonrespondents were selected and interviewed until the graph of cumulative percent "yes" clearly leveled off. Then a line was drawn on the chart representing the percent "yes" reported by the respondents. A 10 percent tolerance limit was arbitrarily accepted as an estimate of similarity between respondents and nonrespondents.

Nine community colleges, accounting for 83 percent of the study population, conducted the sequential sampling of nonrespondents (Appendix C). A chi-square statistic was computed to test the relationship between the respondents and nonrespondents at the nine colleges. The nonrespondents were found to be significantly less interested in transfer goals, to recommend their program more highly, to be more likely to be employed, and to be less likely to have transferred. No differences were found between respondents and nonrespondents in the rate of achieving their educational goals.

In a further attempt to explore nonrespondent bias, tests were conducted to compare respondents and nonrespondents on demographic characteristics. The records of 6,018 students (31 percent of the study population) from two large colleges were investigated (Appendix C). Significant differences were found

on all dimensions except age. Respondents tended to be the more academically successful students, gathering more credit hours, earning a higher grade point average, and more inclined to graduate.

In summary, there was considerable evidence that the respondents differed significantly from the nonrespondents on most variables in the study. Therefore, it was not possible to generalize from the results of this study to the entire population of first-time students who entered Maryland community colleges in the Fall of 1972.

Analysis

Each college coordinator forwarded the completed questionnaires, including demographic information, to the State Board for Community Colleges. The data were keypunched, verified, and analyzed at the University of Maryland Computer Science Center. The Statistical Package for the Social Sciences (Nie, Hall, Jenkins, Stienbrenner, and Bent, 1976) was used for the statistical analysis. The level of significance was set at .05 for all statistical tests. The following materials were provided to each community college: results for their college, Statewide aggregate results, punched card decks of the questionnaire data, and the original questionnaires. The printouts were organized in the same sequence as the research questions. College and Statewide aggregate printouts were also provided for the 1971 data using the 1972 analysis program to facilitate comparison of the 1971 and 1972 data.

Results

Characteristics of the Respondents

Table 2 shows the characteristics of the respondents while they were at Maryland community colleges. The typical respondent was white, about 24 years old, in a transfer program, earning 33 credits, and not a graduate. Respondents were about evenly divided by sex and by part-time and full-time attendance. While the respondents were quite similar in both the 1971 and 1972 Studies, more special students and more part-time students responded to the 1972 Study.

Table 2

Characteristics of the Respondents while at a Community College

Characteristic	1971 Number	1971 Percent	1972 Number	1972 Percent
Program Type at Exit				
Transfer	2,923	53	3,675	48
Career	1,855	34	2,612	34
Special	697	13	1,344	18
Mean Credits Earned	34.0		33.2	
Highest Degree Earned				
Associate	1,262	22	1,631	21
Certificate	73	1	55	1
None	4,299	76	5,940	78
Cumulative Grade Point Average	2.4		2.5	
Mean Age in 1971/1972	23.1		24.0	
Sex				
Male	2,712	50	3,530	47
Female	2,689	50	4,002	53
Race				
Black	539	10	795	11
White	4,897	89	6,587	88
Other	64	1	132	2
Primary Attendance Status				
Part-time	2,106	38	3,275	44
Full-time	3,373	62	4,116	56
Total	5,667	100%	7,648	100%

1. Educational objectives

1.1 What were the primary educational goals of the respondents?

About half of the respondents said that their primary educational goal was a preparation for transfer to another college or university (Table 3 and Figure 1). About one third of the respondents stated that their primary goal was career development, including improvement of skills and training in a special program. Fourteen percent of the respondents said their educational goal was simply to take courses of interest. Only half listed an AA degree as their goal. Answers in the 1972 Study were quite similar to the 1971 Study, except that there was a slight movement away from transfer goals and toward courses of interest.

Table 3

Educational Goals of the Respondents

Goal	1971		1972	
	Number	Percent	Number	Percent
AA then transfer	2,137	39	2,646	36
AA then employment	823	15	1,170	16
Certificate to improve skills	456	8	565	8
Training in special program	563	10	746	10
Courses - transfer	890	16	1,202	16
Courses of interest	635	12	1,021	14

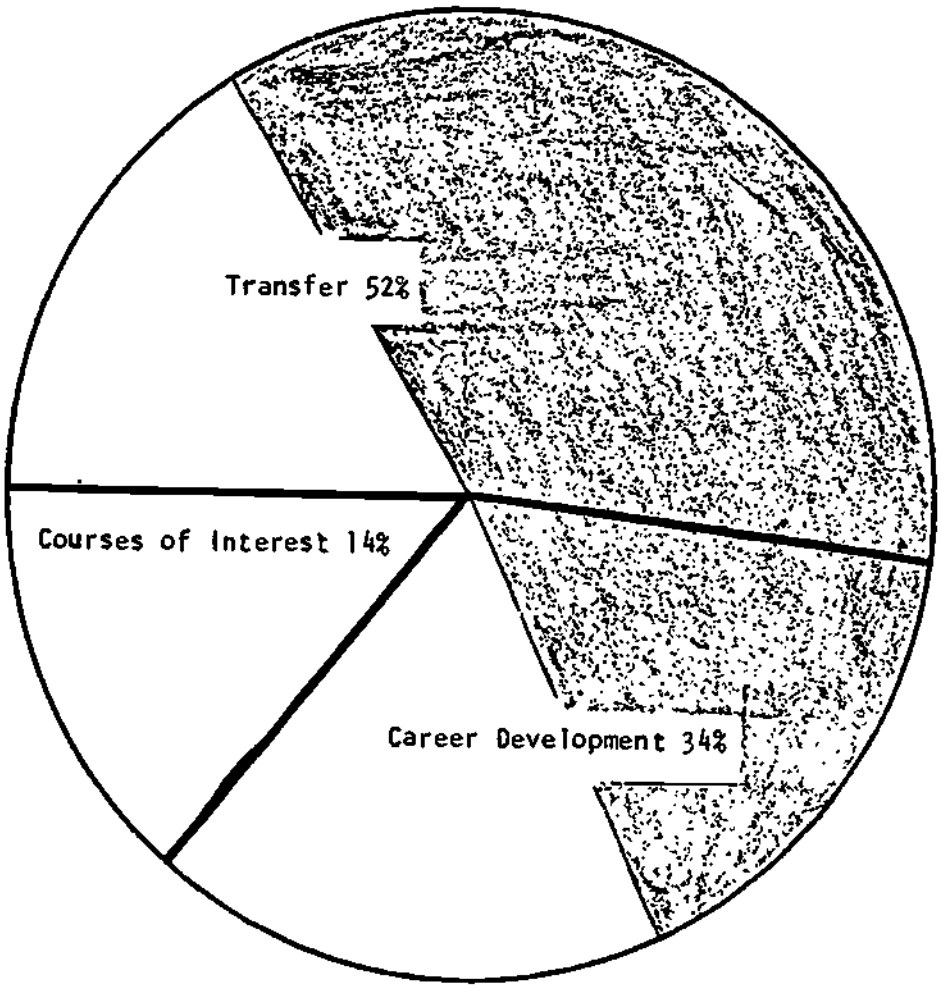
Educational goals among a sample of 441 nonrespondents from nine colleges showed a stronger interest in taking courses of interest than was evident among respondents (Appendix C).

There were statistically significant differences in educational goal by sex and by race. Men were more inclined to list a transfer goal, and women were more inclined to list a career goal. Blacks tended to be more interested in career goals than whites.

The American Council on Education conducted a national survey of entering full-time freshmen, Fall 1972. In response to the question about highest degree planned anywhere, 7 percent of the two-year college students said, "None," 20 percent said AA degree, and the remaining 73 percent said the bachelor's degree or higher. Even allowing for the fact that the current study included part-time students, it would appear that Maryland entering students were less concerned about extended degree attainment than their national counterparts.

Figure 1

Educational Goals of the Respondents



Shaded area denotes AA degree goal 52%

Data provided by the American College Testing Program about full-time Maryland community college freshmen in the Fall of 1972 showed that 5 percent were interested in no degree, 31 percent aspired to an AA degree, and 64 percent were interested in a bachelor's degree or above. This data is not a direct comparison with the 1972 Follow-Up Study, since the ACT information includes only full-time students at colleges that required the ACT service.

Analysis of educational goals and programs indicated that the program is not always a good indication of purpose for attending the community college. For example, 28 percent of the students in transfer programs did not have transfer as their educational goal. Thirty-five percent of the students in career programs listed transfer as their primary educational goal. The goals of special students were equally divided among transfer, career, and courses of interest.

1.2 What proportion of the respondents stated that they achieved their educational goals?

Sixty percent of the respondents stated that they achieved their educational goals, an increase of 5 percent from the 1971 Study (Table 4). For this analysis, only students who had not changed their goals and who were no longer enrolled in the community college were considered. Educational goal achievement in a sample of 441 nonrespondents from nine colleges indicated a rate of goal achievement only 1 percent less than the goal achievement reported by the respondents. Nickens (1976) studied community college students in Florida and reported that 58 percent of the students accomplished the goal they had hoped to reach when they enrolled; the Maryland study found similar results, with 60 percent goal achievement.

Table 4

Educational Goal Achievement among Respondents

	1971		1972	
Group	Number	Percent	Number	Percent
Total	2,382	55%	3,355	60%
Sex				
Male	1,075*	53	1,507	58
Female	1,200*	58	1,790	60
Race				
Black	136*	37	238*	44
White	2,165*	57	3,029*	60
Other	25*	61	51*	62

* Differences within each study are significant at the .01 level.

Educational goal achievement was analyzed by sex and race. While no significant differences were found by sex, a significantly higher proportion of whites stated that they achieved their educational goals than blacks. Similar significant differences in goal achievement by race were found in the 1971 Study. Sedlacek and others (1976) found that black commuting students at a large university tended to be older; to be married; if female, to travel further; and to spend more time and money to commute than whites. Blacks were also more likely to receive lower grades and were more interested in counseling services than whites. It could be that there are real cultural and racial differences, and that colleges must make a greater accommodation to these differences. Wilson (1975) has suggested the need for an in-depth study of subcultures of black commuters so that more effective student services can be provided.

There were statistically significant differences in the rate of reported goal achievement by the students' educational goals. Sixty-four percent of the students with a transfer goal stated that this was achieved, compared to 50 percent goal achievement for career development goals and 59 percent achievement of the courses of interest goal.

1.3 What was the graduation rate among those whose goal was an AA degree?

Forty-five percent of the respondents with an AA goal had received the degree within three and one-half years from the time of entry. Not included in this analysis were students who changed their goals or students who were currently enrolled (Table 5). A similar percentage was achieved by the students in the 1971 Study.

Table 5

Degree Achievement among Respondents whose Goal Was an AA Degree

	1971		1972	
Group	Number	Percent	Number	Percent
Total	968	43%	1.268	45%
Sex				
Male	459*	39	568*	41
Female	483*	47	700*	49
Race				
Black	67*	30	86*	32
White	894*	45	1,155*	47
Other	7*	35	20*	38
Program Type				
Transfer	563	43	703	45
Career	399	47	529	48
Special	11	13	38	22

* Differences within each study are significant at the .01 level.

Achievement of an AA goal was analyzed by sex, race, and program type. Females and whites were significantly more likely to achieve their AA goal. Similar significant differences were found in the 1971 Study. AA goal achievement was only slightly higher among students in career programs than among students in transfer programs. The existence of a handful of persons achieving an AA goal as special students illustrates a problem with the data, since it is not possible for a special student to receive an AA degree. Since students often begin their college career as a special student and declare a program at or near graduation, it could be that some student records were not changed to reflect the true exit curriculum.

1.4 What proportion of the respondents graduated?

Among all students in the study, 21 percent had received an AA degree within three and one-half years after entrance. In the 1971 Study, the figure was 22 percent. The overall graduation rate was less than half the graduation rate among those whose goal was graduation and who did not change their goal. About 1 percent of all respondents had received a certificate.

Comparison of respondents with nonrespondents at two large colleges suggests that the true overall graduation rate was somewhat lower than 21 percent. Among 4,740 respondents and nonrespondents, the graduation rate was 14 percent (Appendix C).

Figure 2 provides a graphic display of the AA goals of students and their success. The figure characterizes the complexity in assessing student success in community colleges. Column 2 shows that 82 percent of the respondents were enrolled in programs that could possibly result in an associate degree. Column 3 shows that only 21 percent of all the respondents had received an associate degree within three and one-half years from entry. Similar information has been quoted by others to depict a problem with community colleges. Astin (1972) conducted a four-year follow-up of the class of 1970, concluding that community colleges tended to have a higher dropout rate than four-year institutions. Astin attributed this difference to lower motivation and the lack of academic preparation on the part of community college students.

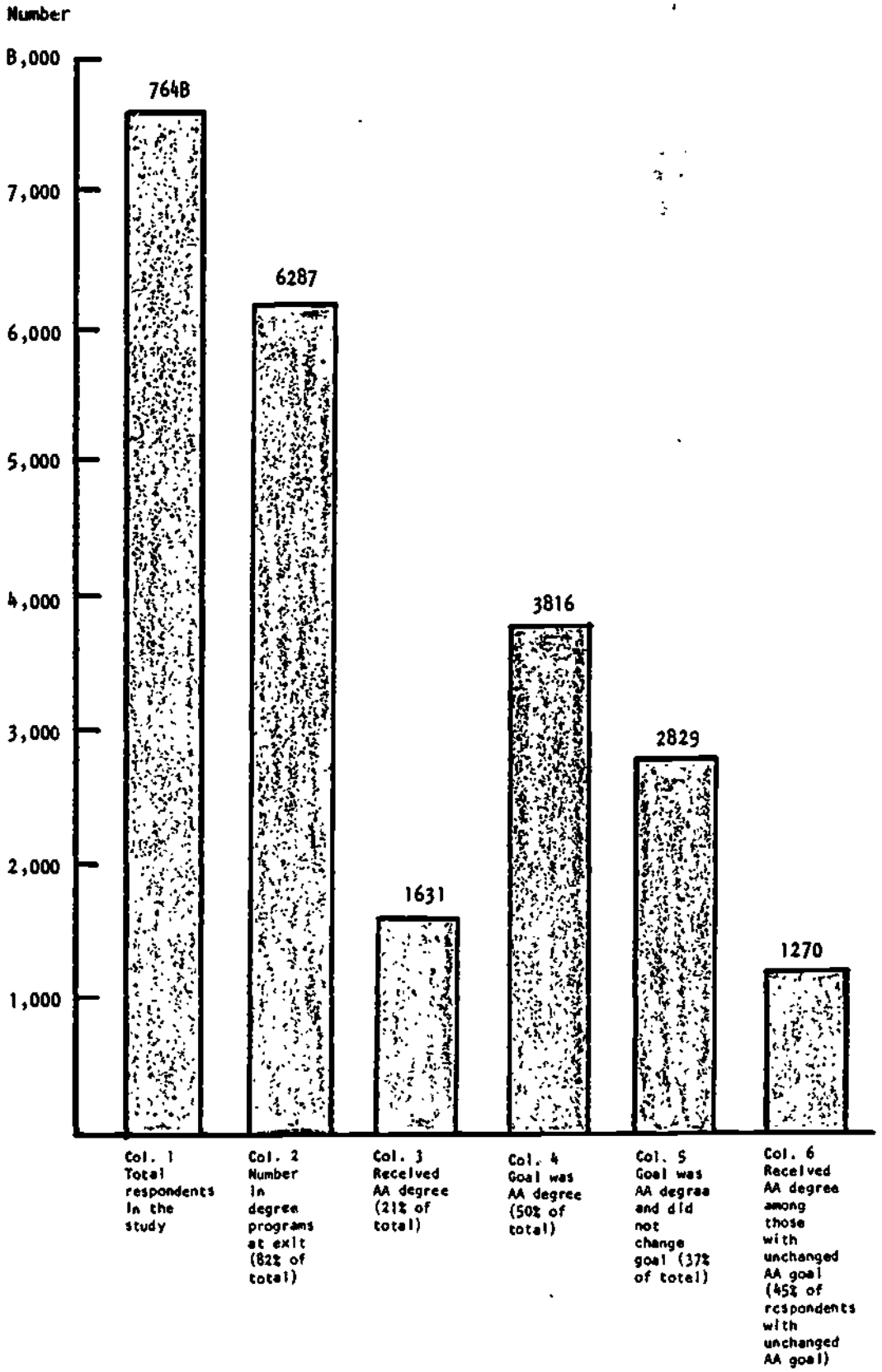
However, column 4 shows that only 50 percent of the respondents were interested in achieving an associate degree. A sizeable number of the students with associate degree goals changed their goal during their time at the community college (column 5).[4] Column 6 shows that 45 percent of the respondents who did not change their goal achieved an AA degree; this rate is more than double the "success rate" seen in the overall percentage of students receiving an AA degree. The findings confirm work by Nickens (1976) who concluded that the apparent lower motivation of many community college students is actually a lack of desire to earn a degree. Attending college to develop certain knowledge and skill apart from a degree can be viewed as a legitimate educational pursuit, and its success can be evaluated.

1.5 What proportion of the respondents was still enrolled?

Fourteen percent of the respondents were still enrolled at their community college in Spring 1976, an identical percentage with the 1971 Study.

Figure 2

Degree Aspirations and Achievement among Respondents



Based upon a study of nonrespondents at two large colleges, the true percentage still enrolled is probably somewhat lower (Appendix C). Of course, students who are reported as still enrolled have not necessarily been continuously enrolled since Fall 1972. Some respondents may have left the college for one or more semesters and re-entered. A statewide occupational student follow-up study in Virginia indicated that 15 percent of the students were still enrolled in a community college two to five years after entrance (Eyler, Kelly, and Snyder, 1974); the comparable figure in the Maryland study was 14 percent.

Significant differences were found in the rate of current enrollment by program type. Eighteen percent of the students in career programs were still enrolled, while only 12 percent of the transfer and special students were still enrolled. Similar significant differences were also found in the 1971 Study.

1.6 What were the reasons for discontinuing attendance at the college?

The three reasons given most often by the respondents were employment, 42 percent; personal/marriage, 28 percent; and lack of financial support, 21 percent (Table 6). The analysis of reasons for leaving the community college was only conducted among respondents who stated that they did not achieve their educational goal. Each respondent could list up to three reasons for leaving. Personal and marriage were two separate reasons in the 1971 Study, inflating the number of responses. Accounting for this difference in the questionnaire, the reasons for leaving were quite similar in the 1971 and 1972 Studies.

Table 6

Reasons for Leaving the Community College

Reason	1971		1972	
	Number	Percent	Number	Percent
Employment	884	46	1,186	42
Personal/Marriage	1,062	55	802	28
Lack of financial support	401	21	582	21
Lack of interest	451	23	537	19
Change in educational goal	352	18	520	18
Dissatisfaction with the college	NA		372	13
Transferred	315	16	310	11
Moved	149	8	191	7
Military	106	6	103	4

NA = Not available

A new possible reason for leaving was tabulated in the 1972 Study, "Dissatisfaction with the college." Thirteen percent of the respondents listed this as their reason for leaving the college, emphasizing the need to explore in greater detail the specific ways that colleges hinder educational progress.

In the Virginia follow-up study of occupational students, the following reasons for leaving were given: employment, 33 percent; personal/marriage, 31 percent; lack of financial support, 15 percent; lack of interest, 16 percent; and change of educational goal, 7 percent. The Virginia study made no provision for a student to state dissatisfaction with the college as a reason for leaving. However, the general pattern of reasons for leaving are quite similar in the Virginia and Maryland studies.

2.0 Career development

2.1 What proportion of the respondents was employed full-time where career development was their goal?

Seventy-four percent of the respondents were employed full-time where career development was their educational goal (Table 7). The analysis excluded respondents who changed their educational goals and those still enrolled at the community college. Career goal achievement was analyzed by sex and race. Significantly more male respondents achieved career goals, and such differences were found in both the 1971 and 1972 Studies. However, no significant differences were found by race in either study in the rate of career goal achievement.

Table 7

Employment among Respondents whose Goal was Career Development

Group	1971		1972	
	Number	Percent	Number	Percent
Total	1,052	73%	1,416	74%
Career programs only	637	76	826	75
Sex				
Male	453*	81	558*	81
Female	537*	67	829*	70
Race				
Black	131	76	182	71
White	890	73	1,204	74
Other	7	54	15	71

* Differences within each study are significant at the .01 level.

2.2 What proportion of the respondents was employed full-time? Part-time?

Seventy-one percent of the respondents were employed, 55 percent full-time and 16 percent part-time. Among those who were employed, 46 percent held the same job as while they were attending the college and 54 percent were in new jobs since leaving the college. In the 1971 Study, 73 percent of the respondents were employed, 56 percent full-time and 17 percent part-time. Among 441 nonrespondents from nine colleges, 77 percent were employed, suggesting that the true employment rate in the population is somewhat higher than the 71 percent reported by the respondents.

In the Virginia follow-up study of occupational students, 77 percent were employed (Eyler, Kelly, and Snyder, 1974). The comparable figure in the Maryland study was 71 percent.

Employment was analyzed by highest degree earned at the community college and program type. Significant differences were found in both cases. Respondents who had received a certificate or no award were more likely to be employed full-time than those who received an AA degree. Respondents from career programs and special students were more likely to be employed full-time than those from transfer programs.

Figure 3 provides a graphic display of career goals of students and their success. Column 2 shows that only 34 percent of the respondents were enrolled in programs designed for career development. Column 3 shows that 55 percent of the respondents were employed full-time within three and one-half years from entry. Only 32 percent of the respondents listed career development as their goal upon entrance to the college (column 4). Column 5 reflects a drop from the changes in career goals and students still enrolled. Column 6 shows that 74 percent of the respondents with an unchanged career goal were employed full-time. Only 55 percent of all respondents were employed full-time.

2.3 What proportion of the full-time employees held jobs in their trained field?

Seventy-three percent of the respondents who were employed full-time held the jobs that were either directly or somewhat related to their community college program (Table 8). The analysis included only respondents who were in career programs.

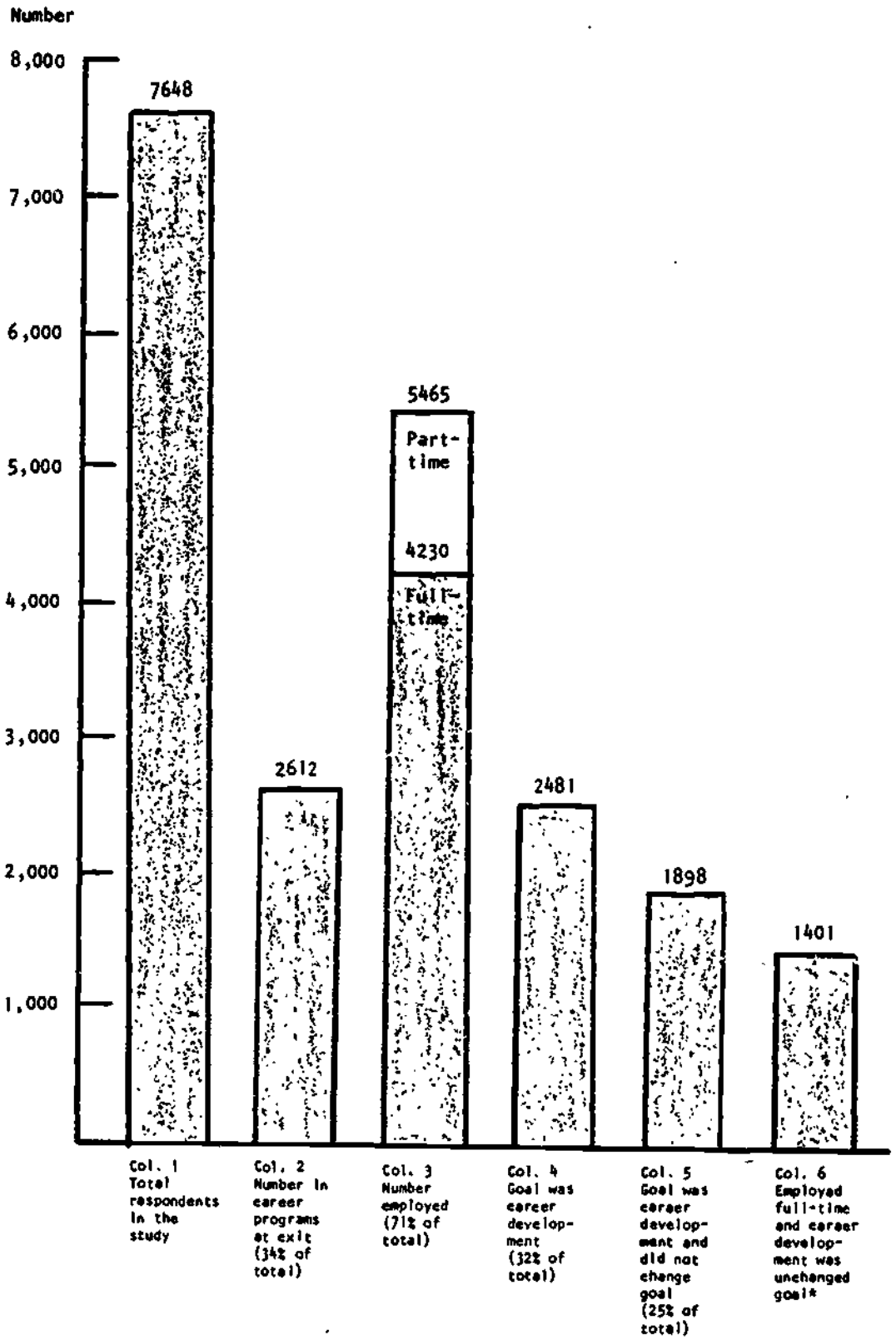
Table 8

Relationship of the Respondents' Program to their Employment

	1971		1972	
Relationship	Number	Percent	Number	Percent
Directly related	570	47	799	47
Somewhat related	314	26	441	26
Not related	338	28	470	28

Figure 3

Career Development Aspirations and Achievement among Respondents



* (74% of respondents with unchanged career development goal)

The Virginia follow-up study of occupational students found that 60 percent held a first job that was directly or somewhat related to their college program. Seventy-two percent held a present job that was directly or somewhat related to their community college program. The latter figure is most comparable to the Maryland figure of 73 percent and shows a striking similarity.

2.4 Where were the full-time career respondents employed?

Nearly one half of the full-time career respondents were employed in the same county as their community college. Thirty-seven percent were employed in some other Maryland location, and the remaining were employed out-of-state (Table 9). Data from the 1971 Study were quite similar. The Virginia follow-up study of occupational students showed that 92 percent were employed in their home state or the District of Columbia. The corresponding figure in the 1972 Maryland Study was 93 percent.

Table 9

Employment Location of Respondents

Location	1971		1972	
	Number	Percent	Number	Percent
Same county as community college	612	50	833	49
Other Maryland county	225	18	288	17
Baltimore City	191	16	336	20
Washington, D. C.	85	7	117	7
Delaware	5	-	3	-
Pennsylvania	33	3	25	2
Virginia	19	2	31	2
West Virginia	10	1	11	1
Other state	50	4	55	3

2.5 Among career students in their trained field, what was the average initial salary of respondents who obtained their first full-time job after leaving the college? Of those who held the same full-time job while attending the college?

For the same two groups, what were the average current salaries? (Also, by graduates and nongraduates)

Table 10 presents data in response to the above research questions. Comparable data were not available from the 1971 Study. While an increase in salary is shown for each category of respondents, the data must be interpreted with caution. The time that has elapsed between the salary upon leaving and the salary in Spring 1975 is different in each category. For example, a person who received an AA degree in two years would have one and one-half years to increase his or her salary. Another person may have taken three years to achieve an AA degree and would have worked less than one year; yet this person would be included in the same category as the person who graduated in two years. The average salary of nongraduates appears to have grown faster than that of AA graduates. However, the AA graduates have been working for a shorter time, and therefore a direct comparison is not possible. In any event, it is clear that the respondent who entered a new job received a higher initial salary if he or she held an AA degree.

Table 10

Mean Salary of Respondents Employed Full-time in their Trained Field, 1972 Study

Group	Salary upon leaving Community College	Salary Spring 1975
New job	$ 6,977	$ 9,425
AA graduates	7,486	9,636
Nongraduates	6,469	9,212
Same job as while attending	8,972	11,258
AA graduates	7,717	9,471
Nongraduates	9,184	11,528

NOTE: Data from the 1971 Study is not available.

2.6 Was there a significant relationship between salary and job location among full-time career respondents? Between salary and age?

A Pearson correlation coefficient was computed to test the relationship between age and initial salary and between age and present salary. The correlations were .40 and .31 respectively, and both were statistically significant (.01). While these relationships were statistically significant, age accounted for only 10 to 16 percent of the variance in salary, suggesting that many other factors than age were related to salary. Further research should be done among persons holding new or the same job and among degree and non-degree holders.

A chi-square statistic was computed to test the relationship between employment location and initial salary and between employment location and present salary. Both tests were statistically significant (.01). Respondents

employed in Baltimore and Washington, D. C. appeared to earn higher salaries than persons employed in the same county as their community college.

2.7 Did the community college career program increase theoretical understanding? Increase job skills? Help to get a job? Help to get a promotion or salary increase?

Information about the above research questions is shown in Table 11, which shows number and percent "yes" answers among full-time employees in a job related to their program. The analysis included career program students only. While most respondents stated that their community college programs increased theoretical understanding and job skills, only about half reported that the programs helped them obtain their jobs and get salary increases or promotions. On each of the four types of assistance, the percentages dropped between the 1971 and 1972 Studies.

Table 11

Employment Assistance Provided by Career Programs

Type of Assistance	1971		1972	
	Number	Percent	Number	Percent
Increased theoretical understanding	708	90	1,015	88
Increased job skills	688	86	952	83
Helped to obtain job	398	57	545	49
Helped to obtain salary increases and/or promotions	346	51	428	41

3. Transfer

3.1 What proportion of the respondents transferred when transfer was their goal?

Sixty-eight percent of the respondents transferred among those whose goal was transfer. This compares with a 65 percent transfer rate in the 1971 Study (Table 12). The analysis excluded respondents who changed their educational goals and those still enrolled at the community college. Transfer goal achievement was analyzed by sex and race. While there were no differences in transfer goal achievement by sex, blacks experienced a significantly lower rate of transfer goal achievement than whites or members of other minority races. However, transfer goal achievement among blacks increased between the 1971 and 1972 Studies.

Table 12

Transfer among Respondents whose Goal was Transfer

Group	1971 Number	1971 Percent	1972 Number	1972 Percent
Total	1,544	65%	2,055	68%
Transfer programs only	NA		1,496	71
Sex				
Male	858	65	1,136	69
Female	629	64	909	67
Race				
Black	81*	47	124*	54
White	1,405*	66	1,860*	69
Other	17*	81	45*	74

* Differences within each study are significant at the .01 level.

NA = Not available

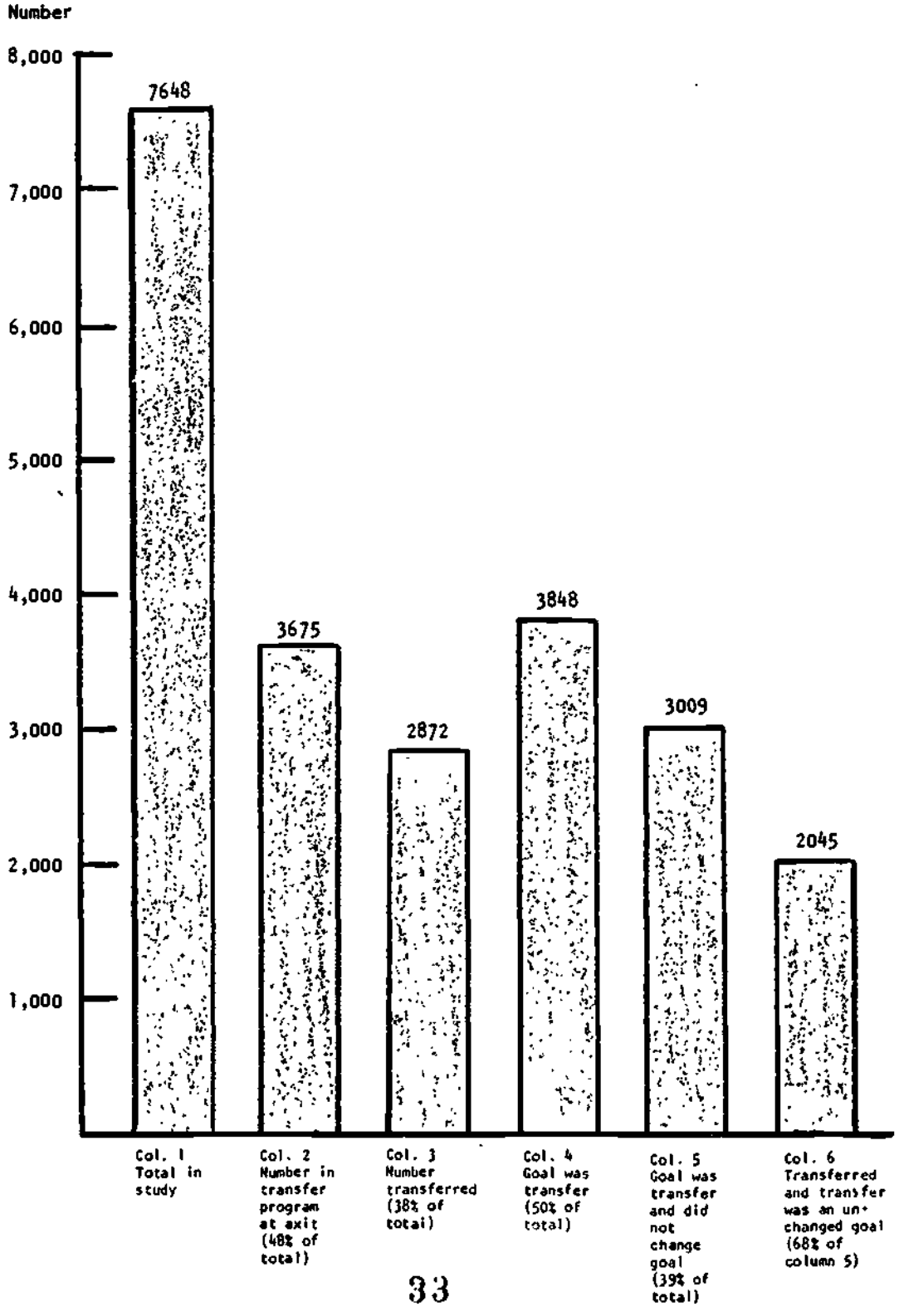
3.2 What proportion of the respondents transferred?

Among all respondents, 38 percent took some courses at a transfer institution. Eighty-one percent of these respondents were full-time transfer students and 19 percent were part-time. In this study, transfer refers to any work at another college or university since leaving the community college. It does not necessarily mean transfer work at the time the questionnaire was administered. A survey of 441 nonrespondents from nine colleges indicated that 30 percent had transferred, suggesting that the true rate of transfer was somewhat lower than the 38 percent reported by the respondents. The Virginia follow-up study of occupational students indicated that 28 percent continued their education after leaving the community college (Eyler, Kelly, and Snyder, 1974), compared with 38 percent in the Maryland study.

Figure 4 provides a graphic display of transfer goals and student success. Column 2 shows that only 48 percent of the respondents were enrolled in programs that were designed for transfer. Column 3 shows that 38 percent of all respondents had transferred within three and one-half years from entry. Only 50 percent of the respondents entered the college with transfer as their educational goal. This number can be reduced by the number of respondents who changed their goals or were still enrolled at the community college (column 5). Among respondents with an unchanged transfer goal, 68 percent transferred, as shown in column 6. Thus, the rate of transfer goal achievement is nearly double the percentage of students that transferred among all persons in the study.

Figure 4

Transfer Aspirations and Achievement among Respondents



3.3 To what colleges and universities did the respondents transfer?

Three fourths of all respondents transferred to a Maryland institution, including 31 percent to the University of Maryland and 26 percent to a Maryland State college (Table 13). Except for an increase in the proportion of respondents transferring to other Maryland community colleges, the institutions selected for transfer were quite similar in the 1971 Study.

Table 13

Transfer Institutions of the Respondents

Institution	1971		1972	
	Number	Percent	Number	Percent
Maryland				
University of Maryland	632	29	879	31
Public State college	566	26	758	26
Private four-year	169	8	214	8
Community College	53	3	189	7
Technical-commercial	48	2	49	2
Private two-year	6	-	11	-
Non-Maryland				
Public four-year	299	14	386	13
Private four-year	226	11	284	10
Public two-year	71	3	55	2
Private two-year	82	4	13	1
Technical-commercial	10	1	34	1

3.4 What proportion of the respondents transferred to programs that were related to their community college program?

Over four fifths of the respondents transferred to a program that was either directly or somewhat related to their community college program (Table 14). Similar experiences were reported in the 1971 Study. In the Virginia follow-up study of occupational students, 75 percent transferred to a major that was directly or somewhat related to their community college program, compared with 83 percent in the Maryland study. However, the Virginia study only concerned students from occupational programs.

Table 14

Relationship of the Respondents Community College Programs to their Transfer Programs

Relationship	1971		1972	
	Number	Percent	Number	Percent
Directly related	1,068	50	1,372	48
Somewhat related	775	36	994	35
Not related	305	14	463	16

3.5 How many credits did respondents lose in the transfer process?

3.6 What was the grade point average of the respondents at the transfer institutions?

3.7 How satisfied were the respondents with their preparation for transfer work?

Table 15 displays information related to the above questions. Over half of the respondents lost no credit hours in transfer, and nearly three fourths lost three credits or less. Over half of the respondents reported receiving a grade point average of 3.0 or above. Thirty percent of the respondents said they were extremely satisfied with their preparation for transfer work, and an additional 60 percent said they were satisfied.

Responses on all three of these variables were quite similar in the 1971 Study. For example, 71 percent of the 1971 respondents lost three credits or less in transfer; among the 1972 respondents, the figure was 73 percent. In the 1971 Study, 92 percent were either satisfied or extremely satisfied with their preparation for transfer. In the 1972 Study, the comparable figure was 91 percent.

Table 15

Success of Respondents in Transfer Institutions

Variable	1971 Number	1971 Percent	1972 Number	1972 Percent
Credit hours lost in transfer				
None	992	49	1,394	53
1-3	447	22	535	20
4-6	248	12	307	12
7-12	181	9	214	8
13-20	88	4	103	4
21 or more	59	3	80	3
Grade point average				
Below 2.0	66	3	72	3
2.0-2.4	300	14	377	14
2.5-2.9	666	32	815	30
3.0-3.4	685	33	947	35
Above 3.5	361	17	495	18
Satisfaction with preparation				
Unsatisfied	176	8	242	9
Satisfied	1,210	57	1,711	61
Extremely satisfied	738	35	845	30

4. Student satisfaction

4.1 What proportion of the respondents were satisfied with the quality of instruction? With the quality of student support services?

Four out of five respondents said they were satisfied with the quality of instruction, and more than three out of five said they were satisfied with the quality of student support services (Table 16). Examples of student support services are counseling, student activities, registration, etc. Similar questions were not asked in the 1971 Study.

4.2 What proportion of the respondents would recommend their program of study to a friend?

Seventy-nine percent of the respondents said they would recommend their program of study to a friend, up from 74 percent in the 1971 Study. In a sample of 441 nonrespondents from nine colleges, 88 percent said they would recommend their program of study to a friend. While it is possible that the telephone interviews were distorted by a desire to please the interviewer, it is possible that the true percentage that would recommend their program of study is higher than 79 percent. In the Virginia follow-up study of occupational students, the questionnaire did not include a provision for

answering "uncertain." However, 90 percent of the Virginia students said that they would recommend their program of study at the community college (Trufant, Kelly, and Pullen, 1974). Excluding the "uncertain" responses in the 1972 Maryland Study, the proportion recommending their program is identical.

The recommendation of a community college program was analyzed by the type of program in which the respondent was enrolled. No significant differences were found, indicating that transfer, career, and special students all recommend their community college program at the same rate. Since special students tend to take courses in line with their personal needs, it is particularly interesting to find that special students would recommend their educational "program" as often as students in a transfer or career program. It is possible that special students consider themselves to be in a program, regardless of how the college may officially classify them.

4.3 What proportion of the respondents would recommend their college to a friend?

Eighty-seven percent of the respondents would recommend their community college to a friend, up slightly from the 1971 Study. To illustrate this sentiment, one respondent wrote, ". . . is a great college." Another wrote, " . . .Community College was an excellent experience for me and gave me confidence to pursue more education."

Table 16

Respondents' Overall Evaluation of their Community College

Question	1971 Number	1971 Percent	1972 Number	1972 Percent
Were you satisfied with the quality of instruction?				
Yes	Not available		6,150	82
No	Not available		547	7
Uncertain	Not available		765	10
Were you satisfied with the student support services?				
Yes	Not available		4,680	63
No	Not available		1,090	15
Uncertain	Not available		1,632	22
Would you recommend to a friend your program of study at this community college?				
Yes	4,039	74	5,961	79
No	455	8	674	9
Uncertain	978	18	899	12
Would you recommend this college to a friend?				
Yes	4,582	84	6,572	87
No	255	5	339	4
Uncertain	643	12	643	9

Summary and Implications

Summary

The central problem addressed in this study was that Maryland community colleges and the State Board for Community Colleges had insufficient information about the outcomes of the community college education. Such information is necessary to improve the quality of education. The primary purpose of the study was to help Maryland community colleges evaluate the extent to which they are assisting students in achieving their educational goals, their immediate career development, and their preparation for transfer to senior colleges and universities. The research was a joint project of the State Board for Community Colleges and the Maryland Community College Research Group.

Specific research questions were directed toward five areas: student educational goals, goal achievement, career development, transfer, and satisfaction with college. Questionnaires were sent to 19,634 persons who were first-time students in a Maryland community college, Fall 1972. The response rate among those receiving the questionnaires was 48 percent. A sequential sampling procedure was used to test for nonrespondent bias, and significant differences were found between respondents and nonrespondents. In general, the respondents were more academically successful and more likely to have transferred.

Student educational goals. About half of the respondents said that their primary educational goal was a preparation for transfer, one third career development, and one sixth to obtain courses of interest. Only half of the respondents listed an associate in arts degree as their goal.

Goal achievement. Sixty percent of the respondents stated that they achieved their primary educational goals. While there were no differences in the rate of goal achievement between men and women, black respondents reported a significantly lower rate of goal achievement than white respondents. However, the rate of goal achievement among blacks increased from the 1971 Study. While only 21 percent of all respondents had received AA degrees, 45 percent of the respondents whose goal was an AA had earned the degree.

Career development. Seventy-four percent of the respondents were employed full-time when career development was their educational goal. While there were no differences in the rate at which blacks and whites achieved their career goals, men achieved their career goals significantly more often than women. Considering all respondents apart from their original goals, 71 percent were employed, 55 percent full-time and 16 percent part-time. Among the full-time employees from career programs, 73 percent were employed in jobs that were either directly or somewhat related to their community college program. One half of the full-time career respondents were employed in the same county as their community college. Over four fifths of the respondents from career programs who held full-time jobs said that their theoretical understanding and job skills were increased at the community college. Nearly half of this group said that their community college education helped them to obtain a job or to obtain salary increases or promotions.

Transfer. Sixty-eight percent of the respondents transferred when their goal was transfer. While there were no differences in the rate at which transfer goals were achieved by men and women, black students achieved transfer goals at a significantly lower rate than white students. However, the rate of transfer goal achievement for blacks increased from the 1971 Study. Considering all respondents apart from their original goal, 38 percent transferred, with most transfer students attending either the University of Maryland or a Maryland State college. Over half of the respondents lost no credit hours in transfer and nearly three fourths lost three credits or less. Over half of the respondents received a grade point average of 3.0 or above. Thirty percent of the respondents said that they were extremely satisfied with their preparation for transfer, and an additional 60 percent said they were satisfied.

Student satisfaction. Four out of five respondents said they were satisfied with the quality of instruction and more than three out of five said they were satisfied with the quality of student support services. Examples of student support services are counseling, student activities, registration, etc. Seventy-nine percent of the respondents said they would recommend their community college program of study to a friend. No significant differences were found among transfer, career, and special students in the rate at which they would recommend their program. Eighty-seven percent of the respondents stated that they would recommend their community college to a friend.

Implications

Student educational goals. Colleges should consider assessing student educational goals at each registration. There are two variables to be assessed: the first is the student's degree aspiration and the second is the student's personal goal, such as immediate career development or transfer. The follow-up study has shown that programs are not a valid indicator of educational goals. Many students in career programs aspire to transfer and vice versa. Without an assessment of student goals, nothing is known about the growing number of students who do not declare a program and are classified as special students. Since the follow-up study also showed that students often change their educational goals, it would be insufficient to assess goals only upon entry to the college or even once a year. In order to understand and be responsive to student educational needs, goals should be assessed at every registration. It is suggested that the Maryland Community College Research Group take the initiative to develop standardized questions for assessing degree and personal educational goals that could be included on all Maryland community college registration forms.

Definition of student success. A new effort must be made to inform educators and citizens about what constitutes success in a community college. The follow-up study not only found that half of the incoming students did not want an AA degree, but that nongraduates get jobs, receive increases in salary, and even recommend their experiences to their friends. The common definition of the term "dropout" and its negative connotation of failure must be changed. The Program Proposal Manual and the Quantitative Program Data Monitoring System of the State Board for Community Colleges should be revised to describe success in terms of student goals and criteria beyond program completion, such as educational goal achievement and employment of nongraduates.

Racial differences in student success. There is a need for detailed research about the possibility that black students experience less success than white students in Maryland community colleges. This study found that on three key dimensions, white respondents were more successful than black respondents: rate of achieving educatlonal goals, rate of AA goal achievement, and the rate of transfer goal achievement. Research is needed to determine whether these differences are real, and if so, why the differences exist.

Concept of a program in the community college. The traditional concept of a program in Maryland community colleges should be reconsidered. An increasing number of students are enrolling as special students, declining to make a commitment to any particular program. The follow-up study has shown that only a minority of students complete an academic program and that special students rate their educational experiences as highly as students who were enrolled in a specific transfer or career program. In short, fewer students are using the traditional program structure and they are being successful as special students. It is suggested that the State Board for Community Colleges and the Program Development Council review the traditional definition of a program and consider alternate ways to plan, structure, implement, and evaluate educational experiences.

Career and personal adjustment. It is suggested that further research be conducted on the massive adjustments that apparently take place between the students' initial goals and what they ultimately do after leaving the community college. The follow-up study showed that a considerable proportion of students entered a community college aspiring to an associate degree and transfer to another college. In reality, few students transferred and even fewer achieved the AA degree. Further research could explore whether this adjustment is real or imposed. A "real" adjustment is defined as a genuine reconciliation of personal attitudes and abilities with the demands of the world of work. While often painful, real adjustment is positive. To the extent that the student's adjustment is real, the research could investigate the ways in which community colleges are helping or hindering this process. An adjustment can be defined as "imposed" if the disparity between initial goals and actual outcomes is imposed upon students from causes beyond their control. For example, do some persons become turned off by the academic life and change their goals because of a frustration with classroom or college experience? Further research would help to determine if the student adjustment process is real or imposed and suggest ways to deal with it.

Frequency and use of the follow-up study. The State Board for Community Colleges and the Maryland Community College Research Group should review the frequency and use of the Statewide follow-up study. The follow-up study has shown that few differences can be detected between one year and the next, suggesting that the study need only be repeated every other year or even every third year. After three trials, the Statewide follow-up study has shown that it is extremely difficult to achieve a high rate of response when surveying the entire population of entering first-time students in Maryland. A low rate of response represents a serious problem, for there was an insufficient response to warrant conclusions about most career programs. Recommendations regarding the frequency and use of follow-up information should be related to the work of the Program Development Council, the review of the Program Proposal Manual, and the Quantitative Program Data Monitoring System of the State Board for Community Colleges.

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Appendix A

Participating Colleges

Allegany Community College

Anne Arundel Community College

Community College of Baltimore

Catonsville Community College

Cecil Community College

Charles County Community College

Chesapeake College

Dundalk Community College

Essex Community College

Frederick Community College

Garrett Community College

Hagerstown Junior College

Harford Community College

Howard Community College

Montgomery Community College

Prince George's Community College

MARYLAND PUBLIC COMMUNITY COLLEGES
STUDENT FOLLOW-UP STUDY
QUESTIONNAIRE

Maryland's Public Community Colleges
Maryland State Board for Community Colleges

•1971

Appendix B

Dear Student:

Originally the purpose of Community Colleges in Maryland, as in other states, was to provide the first two years of a baccalaureate program. Over the years, however, they have become more comprehensive in the scope of their curricular offerings. Therefore, in order that we may assess how well these programs are serving the Maryland public, we ask you to complete this questionnaire.

For your convenience a preaddressed and stamped return envelope is enclosed.

Thank you for your assistance and cooperation.

Sincerely yours,

Alfred C. O'Connell
Executive Director
Maryland State Board for Community Colleges

PART I. GENERAL INFORMATION

A. Indicate to which one of the following groups you consider yourself belonging.

1. White
2. Black
3. Oriental
4. Spanish Surnamed American
5. American Indian
6. Other (specify) _____

B. Please indicate your year of high school graduation _____ (year) or the year you acquired the high school equivalency diploma _____ (year of GED).

C. Please indicate the type of program you pursued in high school.

1. College parallel
2. Agriculture
3. Distributive Education
4. Health Occupations
5. Home Economics
6. Business & Office Education
7. Industrial Arts
8. Technical Education
9. Trade & Industrial Occupations

D. Please indicate the geographic location of your high school.

1. Same county/city as this community college
2. Other Maryland county
3. An out-of-state county

PART II. EDUCATIONAL GOALS UPON ENTRY TO THIS COMMUNITY COLLEGE (All students please respond to these items.)

E. Please circle your one primary purpose for first attending this community college.

1. To obtain an A.A. degree with plans to transfer
2. To obtain an A.A. degree with plans for immediate employment
3. To obtain a certificate or diploma to upgrade or improve skills
4. To obtain training in a special program
5. To take some college level courses before transferring
6. To take one or several courses of special interest

F. Was your primary purpose, indicated above, achieved by the time you left this community college?

1. Yes 2. No (If you respond No, please answer G and H otherwise proceed to I.)

G. Please indicate your intentions toward accomplishing your purpose stated in (E) above.

1. No further plans
2. Still pursuing
3. Hope to continue pursuit at a later date

H. What primary reason(s) made you decide to discontinue attendance at this community college? (If more than one reason applies circle the two or three most important reasons.)

1. Transferred
2. Employment
3. Personal
4. Marriage
5. Lack of interest
6. Entered military service
7. Lack of financial support
8. Moved to another area
9. Change in educational goal
10. Dissatisfaction with this college

I. Did you attend this community college primarily on a part-time or full-time basis (Part-time — less than 12 credit hours per term; full-time — 12 or more credit hours per term.)

1. Part time 2. Full-time

J. The following items describe aspects and services of this community college. In the appropriate space to the right of each statement would you please check the degree to which you were satisfied?

	No Experience With item	Highly Dissatisfied				Highly Satisfied
	1	2	3	4	5	6
Overall quality of instruction	☐	☐	☐	☐	☐	☐
Faculty availability after class	☐	☐	☐	☐	☐	☐
Faculty interest in students	☐	☐	☐	☐	☐	☐
Freshman orientation program	☐	☐	☐	☐	☐	☐
Availability of cultural programs	☐	☐	☐	☐	☐	☐
Assistance finding employment	☐	☐	☐	☐	☐	☐
Counseling for course selection	☐	☐	☐	☐	☐	☐
Counseling for personal problem(s)	☐	☐	☐	☐	☐	☐
Overall college facilities	☐	☐	☐	☐	☐	☐
Facilities in my college program	☐	☐	☐	☐	☐	☐
Student-faculty relationships	☐	☐	☐	☐	☐	☐
Student relationships	☐	☐	☐	☐	☐	☐
Student influence in college decisions	☐	☐	☐	☐	☐	☐
Variety of student extracurricular activities	☐	☐	☐	☐	☐	☐
Variety of student organizations	☐	☐	☐	☐	☐	☐
Academic atmosphere	☐	☐	☐	☐	☐	☐
Overall college atmosphere	☐	☐	☐	☐	☐	☐

K. Would you recommend to a friend your program of study at this community college?

1. Yes 2 No 3. Uncertain

L. Would you recommend this college to a friend?

1. Yes 2. No 3. Uncertain

PART III.

CURRENTLY EMPLOYED FORMER STUDENTS (All students who are now employed, even if you transferred to another institution, should respond to these questions.)

M. Indicate the geographic location in which you are presently employed.

1. The same county/city as this community college
2. Other county in Maryland
3. Baltimore City
4. Washington, D.C.
5. Delaware
6. Pennsylvania
7. Virginia
8. West Virginia
9. Other out-of-town location

N. What is your current employment status?

1. Part-time 2. Full-time

O. Have you changed jobs between the time you left this community college and March, 1975?

1. Yes 2. No

P. How long have you been employed in your present job?

1. Less than 1 year
2. 1-2 years
3. 3-5 years
4. 6-10 years
5. 11 years or more

Q. Please indicate both your initial employment yearly salary upon leaving this community college and your present employment yearly salary.

Initial Salary: $_____

Present Salary: $_____

R. How did you locate your first job after leaving this community college?

1. Faculty at this college
2. This community college's placement office
3. Employment agency
4. Family or friend
5. Newspaper
6. Held same job while attending this college
7. Other

S. Indicate the most accurate relationship between your program at this community college and your job.

1. Program directly related to job
2. Program somewhat related to job
3. Program not at all related to job

Please rate your satisfaction with your present job.

	Highly Dissatisfied 1	2	3	4	Highly Satisfied 5
Salary	☐	☐	☐	☐	☐
Opportunities for salary increases	☐	☐	☐	☐	☐
Opportunities for advancement	☐	☐	☐	☐	☐
Job enjoyment	☐	☐	☐	☐	☐
Fringe benefits	☐	☐	☐	☐	☐
Job importance to you	☐	☐	☐	☐	☐
Communication with superiors	☐	☐	☐	☐	☐

T. Did your educational program at this community college assist you in:

	Yes 1	No 2	Not Applicable 3
Increasing your theoretical understanding of skills required for your job	☐	☐	☐
Increasing your abilities to perform skills required by your job	☐	☐	☐
Obtaining your job	☐	☐	☐
Obtaining salary increases and/or promotions	☐	☐	☐

U. Would you please list the following information about your current employment.

1. Job title _____

_____

2. Name and address of employer (Voluntary)_____

_____

_____

_____

3. Can employer be contacted?

☐ YES ☐ NO

PART IV.

FOR FORMER STUDENTS WHO HAVE SINCE TRANSFERRED TO ANOTHER EDUCATIONAL INSTITUTION (Please use the first institution to which you transferred since leaving this community college as your reference in responding to these items.)

V. Immediately after leaving this community college, please indicate the type of institution to which you transferred.

1. Another Maryland public community college
2. A public State college in Maryland
3. The University of Maryland
4. Maryland private four-year college or university
5. A private two-year Maryland college
6. Maryland technical or commercial school
7. Out-of-state four-year public college or university
8. Out-of-state four-year private college or university
9. Out-of-state two-year public college
10. Out-of state two-year private college
11. Out-of-state technical or commercial school

W. When you enrolled in the institution indicated in (V) above, circle your present enrollment status.

1. Part-time
2. Full-time

X. Please indicate your enrollment classification when you enrolled in the institution indicated in (V) above.

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Graduate student

Y. Check your overall grade point average at the institution in (V) above based on a 4-point scale.

(1.) less than 2.0
(2.) 2.0 - 2.4
(3.) 2.5 - 2.9
(4.) 3.0 - 3.4
(5.) 3.5 and over

Z. To what extent was your curriculum program at this community college related to your major at the institution indicated in (V) above?

1. Directly related
2. Somewhat related
3. Not related

AA. Please check the degree of satisfaction to which you feel this community college prepared you for additional academic work?

1. Extremely satisfactorily
2. Satisfactorily
3. Unsatisfactorily

BB. How many credit hours earned at this community college were not accepted at the institution indicated in (V) above?

1. All credit hours accepted
2. Lost 1-3 credit hours
3. Lost 4-6 credit hours
4. Lost 7-12 credit hours
5. Lost 13-20 credit hours
6. Lost more than 21 credit hours

THANK YOU FOR YOUR CONTINUED INTEREST IN MARYLAND'S COMMUNITY COLLEGES

MARYLAND PUBLIC COMMUNITY COLLEGES
STUDENT FOLLOW-UP QUESTIONNAIRE
1972

54701

Appendix B

The purpose of this questionnaire is to help your community college and the State Board for Community Colleges assess how well their programs are serving the Maryland public. Please complete it promptly, even if you only took one or two courses, and return it in the envelope provided. All answers will be strictly confidential. Thank you for your assistance.

PART ONE Circle the appropriate answers.

A Please indicate your year of high school graduation or the year you acquired the high school equivalency diploma

_____(year)

B. Please circle the type of program you pursued in high school.

1. College parallel
2 Agriculture
3 Distributive Education
4 Health Occupations
5. Home Economics
6 Business & Office Education
7 Industrial Arts
8. Technical Education
9. Trade & Industrial Occupations

(40)

C. Please circle the geographic location of your high school.

1 Same county/city as this community college
2 Other Maryland county
3 Out of Maryland

D. Please circle one of the following groups you consider yourself belonging.

1 American Indian
2. Asian
3 Black
4 Hispanic
5. White

E Please circle your one primary purpose for first attending this community college

1 To obtain an A. A. degree with plans to transfer
2 To obtain an A A degree with plans for immediate employment
3 To obtain a certificate to upgrade or improve skills
4 To obtain training in a special program
5 To take some college level courses before transferring
6. To take one or several courses of special interest

F Was your primary purpose, indicated in Item E, achieved by the time you left this community college?

1. Yes SKIP TO ITEM I.
2 No GO TO ITEM G.

G Please circle your intentions toward accomplishing your purpose stated in Item E.

1. No further plans
2 Still pursuing
3. Hope to continue pursuit at a later date

H What primary reasons(s) made you decide to discontinue attendance at this community college? (If more than one reason applies, circle the two or three most important reasons.)

1 Entered military service
2 Dissatisfaction with this college
3 Lack of financial support
4 Moved to another area
5 Change in educational goal
6. Transferred
7 Employment
8 Personal/marriage
9 Lack of interest

I Did you attend this community college primarily on a part-time or full-time basis? (Part-time - less than 12 credit hours per term full-time 12 or more credit hours per term)

1. Part-time
2 Full-time

(49)

J Were you satisfied with the quality of instruction?

1 Yes
2 No
3 Uncertain

K Were you satisfied with the student support services? (counseling student activities, registration, etc.)

1 Yes
2 No
3 Uncertain

L Would you recommend to a friend your program of study at this community college?

1 Yes
2 No
3 Uncertain

M Would you recommend this college to a friend?

1. Yes
2 No
3 Uncertain

NOW GO TO OTHER SIDE.

PART TWO.

CURRENTLY EMPLOYED (All students who are now employed should respond to these questions.)

N Circle the geographic location in which you are presently employed.

1. Same county/city as this community college
2. Other county in Maryland
3 Baltimore City
(54) 4. Washington, D.C.
5 Delaware
6 Pennsylvania
7 Virginia
8 West Virginia
9 Other State

O Circle you. current employment status.

1 Part-time
2. Full-time

P Did you hold this same job while attending the community college?

1 Yes
2 No

Q Please indicate both your initial employment yearly salary upon leaving this community college and your present employment yearly salary

$_____ Initial Yearly Salary
$_____ Present Yearly Salary

R. Circle the relationship between your program at this community college and your job.

1. Program directly related to job
(67) 2. Program somewhat related to job
3 Program not at all related to job

S. Did your educational program at this community college assist you in

Increasing your theoretical understanding of skills required for your job?

1 Yes
2. No
3. Not applicable

Increasing your abilities to perform skills required by your job?

1. Yes
2 No
3. Not applicable

Obtaining your job?

1. Yes
2 No
3. Not applicable

Obtaining salary increases and/or promotions?

1 Yes
2. No
3. Not applicable

PART THREE

TRANSFERRED TO ANOTHER INSTITUTION (Please use the first institution to which you transferred since leaving this community college as your reference in responding to these items.)

T Immediately after leaving this community college please indicate the type of institution to which you transferred.

1. Another Maryland public community college
2. A public State college in Maryland
3. The University of Maryland
4 Maryland private four-year college or university
5 A private two-year Maryland college
6 Maryland technical or commercial school
7. Out-of-state four-year public college or university
8 Out-of-state four-year private college or university
9 Out-of-state two-year public college
10. Out-of-state two-year private college
11 Out of-state technical or commercial school

U When you enrolled in the institution indicated in T. above, what was your enrollment status?

(74) 1 Part-time
2 Full-time

V Circle your overall grade point average at the institution in T above based on a 4-point scale

1 Less than 2.0
2 2.0 - 2.4
3 2.5 - 2.9
4 3.0 - 3.4
5 3.5 and over

W To what extent was your curriculum program at this community college related to your major at the institution indicated in T. above?

1. Directly related
2 Somewhat related
3 Not related

X Please circle the degree of satisfaction to which you feel this community college prepared you for additional academic work?

1 Extremely satisfied
2 Satisfied
3 Unsatisfied

Y How many credit hours earned at this community college were not accepted at the institution indicated in T. above?

1. All credit hours accepted
2 Lost 1-3 credit hours
3. Lost 4-6 credit hours
4. Lost 7-12 credit hours
5 Lost 13-20 credit hours
6. Lost more than 21 credit hours

THANK YOU FOR YOUR ASSISTANCE

Appendix C

Nonrespondent Sampling

Procedure for Sequential Nonrespondent Sampling, 1972 Student Follow-Up

1. Identify a list or file of nonrespondents (NR's), excluding "addressee unknowns." Number each NR on the list from 1 to n.

2. Prepare a "Cumulative Percent Yes" sheet for each of the five yes-no items that you will ask the NR's.

   a. Draw a solid line to represent the unadjusted percent yes for that item among the respondents from the 1972 follow-up. See attached example.

   b. Decide what percent error you are willing to tolerate and draw dashed lines corresponding to that tolerance above and below the percent yes among the respondents; + or - 10% is suggested. See example.

3. Randomly select one NR, using the table of random numbers or other random scheme.

4. Telephone the NR and follow the Nonrespondent Interview Form. If the NR is not home or has moved, call later or get new number. (Do not take answers from anyone other than the NR.) If you reach a complete dead end, discard the NR and select a new one.

5. After about 30 valid trials, record the NR answers on the proper "Cumulative Percent Yes" sheets, line a. Put "1" for yes and "-" for a no or other response. Put the cumulative number yes on line b. Compute the cumulative percent yes by dividing line b by line c. Enter this on line d. Plot the cumulative percent yes. See example. Check each graph to see if the cumulative percent yes is beginning to stabilize (level off).

   If it stabilizes at or inside your error tolerance, you conclude that your NR's are similar to your respondents on that item.

   If the cumulative percent yes stabilizes outside your error tolerance limits, your NR's are apparently different than your respondents on that item.

   If the graph is still climbing or falling, keep calling NR's until the graph levels off. You will probably need at least 50 trials.

6. When you complete the sampling, please send a copy of each graph and a tally of responses to item E to Jim Tschechtelin. If you have any questions about the procedure, please call.

7. This is a practical test and not a hard statistical one. However, you could do a chi-square test with this data to test for differences between respondents and nonrespondents. You could also check the sampling error to find the probability that your sample of NR's truly represents the NR group. See attached sheet.

JDT:lcr:6-23-76

NONRESPONDENT INTERVIEW FORM

COLLEGE _____ TRIAL # _____

TELEPHONE # _____ NAME _____

Hello, my name is _____ from _____ College. Is this _____? (If not the nonrespondent, ask when or where the person can be reached.) We are doing a survey to assess our programs at the college. There are only six questions.

E. What was your primary purpose for attending this community college?

Would you say it was: (read each and circle one)

1. To obtain an A.A. degree with plans to transfer.
2. To obtain an A.A. degree with plans for immediate employment.
3. To obtain a certificate to upgrade or improve skills.
4. To obtain training in a special program.
5. To take some college level courses before transferring.
6. To take one or several courses of special interest.

F. Was your primary purpose just indicated achieved by the time you left this community college? (circle one)

1. Yes 2. No

L. Would you recommend to a friend your program of study in this community college? (circle one)

1. Yes 2. No

O. Were you employed either full- or part-time during March 1976?

1. Yes 2. No

P. Did you hold this same job while attending the community college?

1. Yes 2. No

T. Have you attended another college as a transfer student at any time since you left _____ College? (circle one)

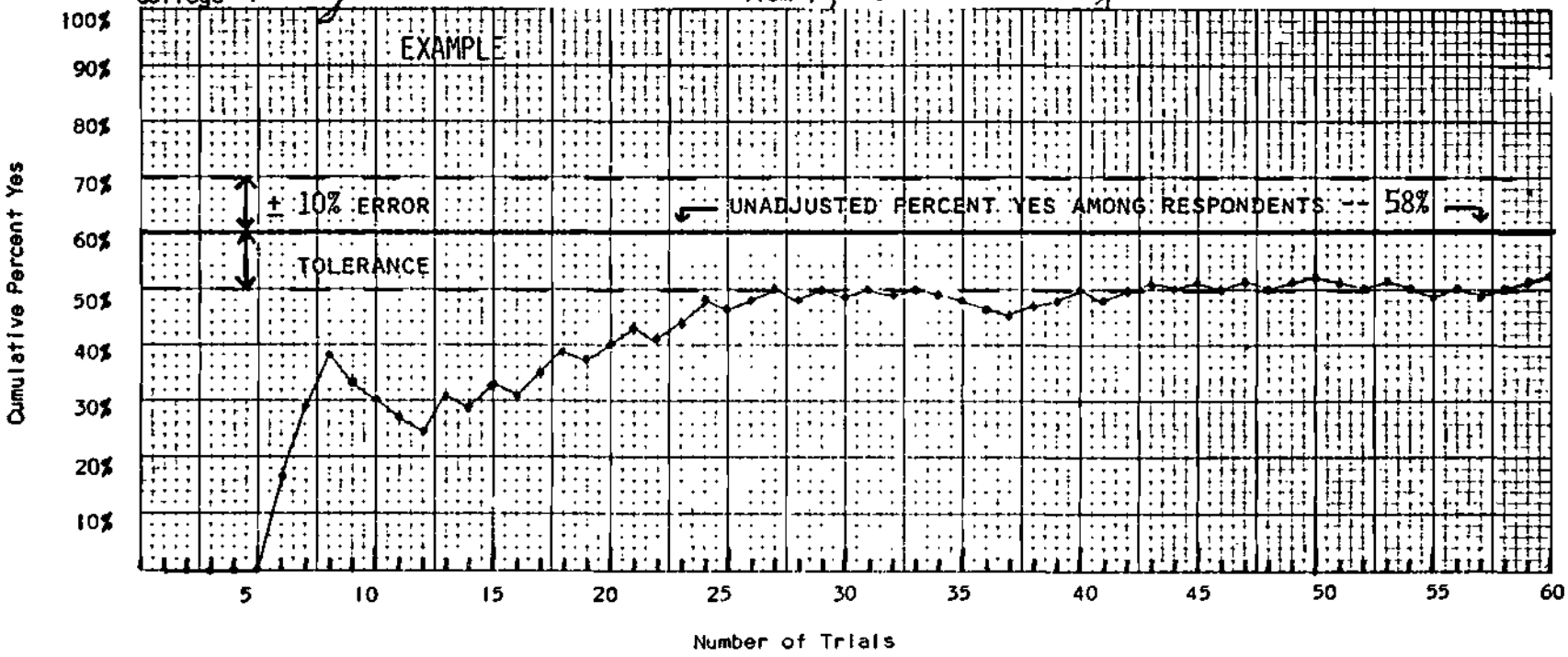
1. Yes 2. No

Thank you for your help!

6/21/76

CUMULATIVE PERCENT YES -- SEQUENTIAL SAMPLING OF NON-RESPONDENTS

College Harford Item F Achieve Objective?



a. Answer (yes=1)	– – – – –	1 1 1 – –	– – 1 – 1	– 1 1 – 1	1 – 1 1 –	1 1 – 1 –
b. Cum. # yes	0 0 0 0 0	1 2 3 3 3	3 3 4 4 5	5 6 7 7 8	9 9 10 11 11	12 13 13 14 14
c. Trial #	1 2 3 4 5	6 7 8 9 10	11 12 13 14 15	16 17 18 19 20	21 22 23 24 25	26 27 28 29 30
d. Cum. % yes	0 0 0 0 0	17 29 38 33 30	27 25 31 29 33	31 35 39 37 40	43 41 43 46 44	46 48 46 48 47
a. Answer (yes=1)	1 – 1 – –	– – 1 1 1	– 1 1 – 1	– 1 – 1 1	– – 1 – –	1 – 1 1 1
b. Cum. # yes	15 15 16 16 16	16 16 17 18 19	19 20 21 21 22	22 23 23 24 25	25 25 26 26 26	27 27 28 29 30
c. Trial #	31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50	51 52 53 54 55	56 57 58 59 60
d. Cum. % yes	48 47 48 47 46	44 43 45 46 47	46 48 49 48 49	48 49 48 49 51	49 48 49 48 47	48 47 48 49 50

MCCRG JDT/rk 7/24/75

Table A1

Comparison of Respondents with Nonrespondents
on Demographic Characterlstics at two Large Colleges

Variable	Respondents		Nonrespondents	
	Number	Percent	Number	Percent
Program type				
Transfer	1,282	49	1,582	46
Career	687	27	756	22
Special	623	24	1,080	32
Highest community college degree				
Associate	477	18	127	6
Certificate	23	1	22	1
None	2,098	81	1,993	93
Currently enrolled (Spring 1976)				
Yes	399	15	317	9
No	2,199	85	3,100	91
Sex				
Male	1,174	45	1,815	53
Female	1,414	55	1,601	47
Mean credits earned at community college	36.7		22.5	
Mean cumulative grade point average at community college	2.5		1.9	
Mean age in 1972	22.0		22.2	

NOTE: All differences between respondents and nonrespondents are significant at the .001 level except age. The comparison is based upon 6,018 records from two large colleges, 31 percent of the 1972 Study population.

Table A2

Comparison of Respondents with Nonrespondents on Selected Questionnaire Items at Nine Colleges

Questionnaire Item	Respondents		Weighted Nonrespondents	
	Number	Percent	Number	Percent
1. Educational Goal				
AA - Transfer	2,225	37	153	35
AA - Employment	923	15	70	16
Certificate to improve skills	466	8	25	6
Training in special program	561	9	42	10
Courses - transfer	1,009	17	64	15
Courses of interest	826	14	82	19
2. Was your primary purpose achieved by the time you left this community college?				
Yes	3,009	52	219	50
No	2,778	48	222	50
3. Were you employed in March 1976?				
Yes	4,539	73	341	77
No	1,713	27	100	23
4. Have you attended another college as a transfer student at any time since you left the college?				
Yes	2,434	39	131	30
No	3,818	61	310	70
5. Would you recommend your program of study to a friend?				
Yes	4,866	79	387	88
No/uncertain	1,386	21	54	12

NOTES: The nine colleges accounted for 16,212 students, 83 percent of the study population. The nonrespondents from each college were weighted in proportion to their frequency in the population.

Differences between respondents and nonrespondents are significant at the .05 level on all questionnaire items shown above except item 2.

MARYLAND COMMUNITY COLLEGES

Allegany Community College
Cumberland
Dr. W. Ardell Haines, President

Anne Arundel Community College
Arnold
Dr. Justis D. Sundermann, President

Community College of Baltimore
Baltimore

Catonsville Community College
Baltimore County
Dr. B. A. Barringer, President

Cecil Community College
North East
Dr. William J. O'Connor, President

Charles County Community College
La Plata
Dr. J. N. Carsey, President

Chesapeake College
Wye Mills
Dr. Robert C. Schleiger, President

Dundalk Community College
Baltimore County
Dr. John E. Ravenis, President

Essex Community College
Baltimore County
Dr. Vernon Wanty, President

Frederick Community College
Frederick
Dr. Lewis W. Stephens, President

Garrett Community College
McHenry
Dr. Alfred C. O'Connell, President

Hagerstown Junior College
Hagerstown
Dr. Atlee C. Kepler, President

Harford Community College
Bel Air
Mr. Ralph H. Jordan, Acting President

Howard Community College
Columbia
Dr. Alfred J. Smith, Jr., President

Montgomery Community College
Rockville and Takoma Park
Dr. William C. Strasser, President

Prince George's Community College
Largo
Dr. Robert I. Bickford, President

Wor-Wic Tech Community College
Salisbury
Dr. Arnold Maner, President