ABSTRACT

Surveys of the 23,199 students who entered the Maryland community college system in Fall 1974 and of the 6,975 students who graduated from the system in 1978 were conducted in 1978 and 1979, respectively, to assess the degree to which the colleges helped the students achieve their educational and career goals. The colleges supplied information on the students' major, credit hours, degree, grade point average, enrollment status, sex, age, and race. The surveys sought to determine: (1) the educational goals of the respondents and the proportion that achieved their goals; (2) reasons for college choice; (3) graduation rates of all entrants and those seeking an associate degree; (4) current enrollees; (5) reasons for discontinuance of attendance; (6) full- and part-time employment rates; (7) employment information, such as job location, salary, and satisfaction; (8) relation of job to training; (9) the impact of community college training on theoretical knowledge, job skills, promotions or raises, and finding a job; (10) the proportion of students desiring to transfer that did so; (11) the numbers of full- and part-time transfers; (12) relation of two- and four-year college majors; (13) satisfaction with preparation for transfer; and (14) overall evaluation of community college experience. The study report compares findings for both groups and includes data tables and the questionnaires. (JP)
STUDENT FOLLOW-UP OF ENTRANTS AND GRADUATES

MARYLAND COMMUNITY COLLEGES

November, 1980

James D. Tschechtelin
and
Abby D. MacLean

State Board for Community Colleges

With the assistance of the Maryland Community College Research Group:

Roger Andersen, Allegany Community College
George Barnett, Chesapeake College
Richard Behrendt, Hagerstown Junior College
William Campbell, Community College of Baltimore
Marc Goldstein, Charles County Community College
Virginia Gunther, Harford Community College
Jan Janssen, Garrett Community College
Mary Johnson, Cecil Community College
Matthew Kelly, Frederick Community College
Thomas LaBonte, Anne Arundel Community College
Paul Larkin, Prince George's Community College
Toby Milton, Essex Community College
Martin Nadelman, Wor-Wic Tech Community College
Larry Nespoli, Howard Community College
Cheryl Opacinch, Catonsville Community College
David Stewart, Dundalk Community College
Charlene Wenckowski, Montgomery Community College

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
S. Millman"

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"
MARYLAND COMMUNITY COLLEGES

Allegany Community College
Cumberland
   Dr. Donald L. Alexander
   President

Anne Arundel Community College
Arnold
   Dr. Thomas E. Floresiano
   President

Community College of Baltimore
Baltimore City
   Dr. Rafael L. Cortada
   President

Catonsville Community College
Catonsville
   Dr. John M. Kingsmore
   President

Cecil Community College
North East
   Dr. Robert L. Gell
   President

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

Chesapeake College
Wye Mills
   Dr. Robert C. Schleiger
   President

Dundalk Community College
Dundalk
   Dr. John E. Ravekes
   President

Essex Community College
Essex
   Dr. Vernon Wanty
   President

Frederick Community College
Frederick
   Dr. Jack B. Kussmaul
   President

Garrett Community College
McHenry
   Dr. Donald L. Ruhl
   President

Hagerstown Junior College
Hagerstown
   Dr. Atlee C. Kepler
   President

Harford Community College
Bel Air
   Dr. Alfred C. O'Connell
   President

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

Montgomery Community College
Rockville, Takoma Park, Germantown
   Dr. Robert E. Parilla
   President

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

Wor-Wic Tech Community College
Salisbury
   Dr. Arnold H. Maner
   President
STUDENT FOLLOW-UP OF ENTRANTS AND GRADUATES
MARYLAND COMMUNITY COLLEGES

Abstract

The purpose of the study was to help Maryland community colleges evaluate the extent to which they assisted students in achieving their educational goals, their career development, and their preparation for transfer. The study includes a comparison of two distinct groups: students entering a Maryland community college for the first time in Fall, 1974, and students who were graduated from a Maryland community college in the Spring, 1978. Questionnaires were mailed in 1978 to 23,199 students who entered Maryland community colleges in 1974; the adjusted response rate was 43 percent. Questionnaires were mailed in 1979 to 6,975 students who graduated in 1978; the adjusted response rate was 63 percent. The findings included: (a) the primary reasons for attendance of graduates differ from the primary reasons of entrants, with a larger proportion of graduates preparing for immediate entry into a career and larger proportions of entrants updating skills or attending for self-enrichment; (b) the rate of self-reported goal achievement for graduates was 85 percent, while the rate for entrants was 63 percent; (c) employment among respondents whose goal was career development was about the same for entrants and graduates (approximately 75 percent); (d) transfer among respondents whose goal was transfer was about the same for entrants and graduates (approximately 72 percent); (e) degree of satisfaction with career and transfer preparation was high among both entrants and graduates. Several implications were drawn, including the need to see community colleges in light of student goals and achievement and not with a baccalaureate orientation. Encouraging black students to complete the associate degree has positive implications for their transfer goal achievement.
PREFACE

This report presents the results and implications of the fourth and fifth statewide student follow-up studies, joint projects of the State Board for Community Colleges and the Maryland Community College Research Group. Students who entered for the first time in Fall, 1974 were surveyed in Spring, 1978 and graduates from fiscal year 1978 were surveyed in Spring, 1979. The study of entrants was a replication of earlier studies of entrants in 1970, 1971, and 1972 (Hurley, 1974; Hurley, 1975; Tschechtelin, 1976). The current report includes extensive comparisons with the 1972 entrant study.

Although primary credit for this study goes to Jim Tschechtelin, 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 by 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. Juanita Spencer and Maxine Pope of the State Board staff prepared the manuscript.

BRENT M. JOHNSON
EXECUTIVE DIRECTOR
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>PREFACE</td>
<td>vii</td>
</tr>
<tr>
<td>PURPOSES</td>
<td>1</td>
</tr>
<tr>
<td>PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>DEFINITIONS, ASSUMPTIONS, AND LIMITATIONS</td>
<td>2</td>
</tr>
<tr>
<td>RESEARCH QUESTIONS</td>
<td>3</td>
</tr>
<tr>
<td>REVIEW OF RELATED LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>METHOD</td>
<td>6</td>
</tr>
<tr>
<td>RESULTS</td>
<td>9</td>
</tr>
<tr>
<td>ANALYSIS OF RESEARCH QUESTIONS</td>
<td>11</td>
</tr>
<tr>
<td>Educational Goals</td>
<td>11</td>
</tr>
<tr>
<td>Career Development</td>
<td>19</td>
</tr>
<tr>
<td>Transfer</td>
<td>27</td>
</tr>
<tr>
<td>SUMMARY AND IMPLICATIONS</td>
<td>33</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>39</td>
</tr>
<tr>
<td>Appendix A - Participating Colleges</td>
<td>41</td>
</tr>
<tr>
<td>Appendix B - Questionnaires</td>
<td>43</td>
</tr>
<tr>
<td>Appendix C - Community College Quiz</td>
<td>49</td>
</tr>
</tbody>
</table>
STUDENT FOLLOW-UP OF ENTRANTS AND GRADUATES
MARYLAND COMMUNITY COLLEGES

PURPOSES

The primary purpose of the study was to help Maryland community colleges and the State Board for Community Colleges evaluate the extent to which they:

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

The study was also conducted to provide data for the Program Data Monitoring System and the Vocational Education Data System. Finally, the study was done to compare community college outcomes among entrants and graduates.

PROBLEM

The central problem addressed in this study was that Maryland community colleges and the State Board for Community Colleges needed updated information about the basic outcomes of community college education. While statewide student follow-up studies had been done in Maryland, it was important to have current information about why students came to the community colleges and what they did with their community college education.

In Maryland, program evaluation begins with the Program Data Monitoring (PDM) System, a computerized display of enrollment, degree, follow-up, discipline cost, and manpower information. The computer prints one page of information for each program at each college. The student follow-up studies are important elements of the PDM System since the employment rate, employment in field of training, transfer rate, and student satisfaction are shown in the display. Information is shown for both entrants and graduates for each program. Using the PDM System, the State Board for Community Colleges selects certain programs for qualitative investigation by the colleges.

The Vocational Education Data System is a comprehensive data collection system authorized by the Education Amendments of 1976. Basic information about employment rate and employment in trained field is required. A statewide approach is needed to provide valid and reliable data.

It has been maintained in the literature that community college entrants must be studied because so few students graduate, and that studying graduates alone would only examine the more traditional and the academically successful students. While there is much evidence to suggest such a postulation, the exact differences in the two populations had never been studied on a statewide basis in Maryland.
Beyond the practical uses of the follow-up data, there is a constant need for a better view of reality. Psychological research has established that humans tend to see what they want to see. One of the goals of research is to gain an increasingly clearer picture of reality, as distinguished from perceptions. In a time when community colleges are admitting nontraditional students with new goals, it is especially important to be in touch with the actual effects of college and not the effects that faculty and administrators prefer to see.

DEFINITIONS, ASSUMPTIONS, AND LIMITATIONS

Definitions

Entrant: a student who was attending the community college for the first time and who had no previous college experience.

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

Certificate: an award granted for the successful completion of 12 to 45 credits of instruction in an occupational program.

Associate in Arts: a degree awarded for the successful completion of a prescribed curriculum of at least 60 credits; the same award is given for both transfer and occupational programs.

Academic goal: the aim of the student in terms of credentialing; in this study, academic goals can be courses of interest, certificate, or associate in arts degree.

Personal goal: the aim of the student in terms of functional reasons for attendance, such as to prepare for employment or transfer.

Career development: the preparation for new employment or continued growth in one's current occupation.

Assumptions

It was assumed that (a) the goals of each Maryland community college include helping students to achieve educational, career, and transfer goals; (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 draw an accurate picture.

Limitations

The outcomes explored were basic "ones and generally limited to goal achievement, employment, and transfer. While these outcomes are important, they represent only a fraction of the possible effects of college. Changes in aspirations, competence, and personality were not investigated (Lenning and others, 1977).
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 education. In the study of entrants, goal questions were asked three and one-half years after admission to the college. Some students may not have remembered their original goals, and some may have unconsciously altered them.

Finally, the study made no attempt to compare college outcomes with the outcomes of other institutions, such as proprietary schools and military training programs.

RESEARCH QUESTIONS

1.0 Educational Goals

1.1 What were the educational goals of the respondents?
1.2 What were the graduates' primary reasons for selecting the community college?
1.3 What proportion of the respondents achieved their goals?
1.4 What was the graduation rate among those entrants whose goal was an AA degree?
1.5 What proportion of all entrants had graduated?
1.6 What proportion of the entrants was still enrolled?
1.7 Why did the entrants discontinue attendance at the college?

2.0 Career Development

2.1 What proportion of the respondents whose goal had been career development was employed full-time?
2.2 What proportion of all respondents was employed full-time? Part-time?
2.3 What proportion of the respondents who were employed full-time held jobs in their field of training?
2.4 Where were the full-time respondents employed?
2.5 What were the salaries of graduates who were employed full-time?
2.6 What were the salaries of graduates who were employed part-time?
2.7 How did graduates locate their current jobs?
2.8 How satisfied were the respondents with their community college preparation for employment?
2.9 Did the community college program increase the entrants' theoretical understanding? Increase job skills? Help to get a job? Help to get a promotion or salary increase?

2.10 What was the primary reason for graduates having jobs not related to their community college program?

2.11 What was the primary reason why graduates were unable to secure employment?

3.0 Transfer

3.1 What proportion of the respondents whose goal was to transfer achieved their goal?

3.2 What proportion of all respondents transferred full-time? Part-time?

3.3 To what colleges did the respondents transfer?

3.4 For what proportion of the respondents was their community college program related to their major at the transfer school?

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

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

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

4.0 Overall Evaluation

4.1 How satisfied were graduates with the quality of classroom instruction in their community college program?

4.2 How satisfied were graduates with the overall quality of their community college?

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 had 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 13 Virginia community colleges (Gustillo and Trufant, 1974). 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.

Elterich (1976) conducted a follow-up study of graduates of Connecticut regional community colleges. A survey instrument was administered to 2,911 June, 1975 graduates in transfer, occupational, and general curricula. Forty-eight percent of the graduates responded. Areas studied were the biographical characteristics of the graduates, their educational and career objectives and experience, and their attitudes toward their community college experience. Comparable information from the Connecticut and Maryland studies is given in the Results section of this report.

Knoell (1976) reported on a longitudinal study of 32,245 students enrolled for credit and new to California community colleges during the Fall of 1972. The study investigated patterns of enrollment and characteristics of entrants, and a section on the extent to which the community college system is fulfilling its purposes and achieving its objectives is included.

The Illinois Community College Board (1976) conducted a statewide follow-up study of 10,504 students who transferred in the Fall of 1973 from the community colleges to Illinois senior institutions. The study identified patterns of mobility in both sending and receiving institutions and student characteristics and achievement prior to and after transfer.
Vinarskai reported on the 1974-1975 Oregon community college statewide follow-up of graduates and early leavers. One-half of the graduates surveyed were employed full-time, while 34 percent were continuing their education. Twice as many graduates as early leavers were working in jobs related to their community college program. Data were presented on characteristics, employment, transfer, and satisfaction.

The Tex-SIS Follow-up System issued a report in 1977 on first-year graduates from 37 colleges. Both occupational-technical and transfer graduates were included. Information concerning characteristics, goals, employment, transfer, and satisfaction are discussed. Comparable information from the Texas and Maryland studies is given in the Results section of this report.

METHOD

Study Population

Entrants. The study population was defined as all persons who were first-time degree credit students in Maryland community colleges during Fall, 1974. The population of 23,199 students included students in occupational, transfer, and undeclared programs. Part-time and full-time students, graduates and nongraduates were included. All 16 Maryland community colleges that were in existence in 1974 participated (Appendix A).

Graduates. The population was defined as all students who graduated from a community college during fiscal year 1978. Persons who graduated with a certificate or associate in arts degree were included, as were students from either an occupational or transfer program. All 17 Maryland community colleges participated in the graduate follow-up. A few students are represented in both the entrant and the graduate populations if they graduated in four years.

Data Collection

The questionnaires were developed by the Maryland Community College Research Group and included information in four basic areas: goals and goal achievement, employment, transfer, and student satisfaction. The entrant and graduate questionnaires are shown in Appendix B.

The following 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, year of birth, and race.

Procedure

The State Board for Community Colleges contracted for commercial printing of the questionnaires that 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 United States Postal Service. The first entrant packets were mailed in April, 1978 and consisted of a cover letter from the college, the questionnaire, and a preaddressed, prepaid return envelope. At two-week intervals, a second and third mailing was made to nonrespondents. Entrants were thus surveyed about three and one-half years after entry.

Graduate questionnaires were mailed in January 1979, about eight months after most students graduated. As completed questionnaires were received by the colleges, demographic data were added. In most colleges, demographic data were retrieved from magnetic files, printed on a label with the student's name, and attached to the questionnaire.

Return Rate

Entrants. Among the 23,199 persons in the population, 7,904 returned usable questionnaires for an unadjusted return rate of 34 percent. However, 5,001 questionnaires were returned as undeliverable by the Postal Service, producing a response rate of 43 percent among those actually receiving the questionnaires (Table 1). The response rate in the graduate study was down somewhat from the 1972 entrant study because a few colleges were unable to mail a second or third questionnaire to nonrespondents.

Graduates. Among the 6,975 graduates in the population, 4,223 returned usable questionnaires for a response rate of 61 percent. However, 280 questionnaires were returned as undeliverable by the Postal Service, producing a response rate of 63 percent among those actually receiving the questionnaires. The Texas statewide follow-up study achieved a response rate of 59 percent (Hall and Reed, 1977).

Table 1

INFORMATION ABOUT THE POPULATION AND THE SAMPLE

<table>
<thead>
<tr>
<th>Information</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of colleges participating</td>
<td>16</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Population</td>
<td>19,634</td>
<td>23,199</td>
<td>6,975</td>
</tr>
<tr>
<td>Undeliverable questionnaires</td>
<td>3,549</td>
<td>5,001</td>
<td>280</td>
</tr>
<tr>
<td>Usable responses</td>
<td>7,648</td>
<td>7,904</td>
<td>4,223</td>
</tr>
<tr>
<td>Unadjusted response rate</td>
<td>39%</td>
<td>34%</td>
<td>61%</td>
</tr>
<tr>
<td>Response rate among those receiving questionnaires</td>
<td>48%</td>
<td>43%</td>
<td>63%</td>
</tr>
</tbody>
</table>
Response Bias

Entrants. Given the response rate obtained in the study, it was important to investigate the possibility of response bias. In the earlier study of 1972 entrants, telephone interviews were conducted in a sequential sampling technique to determine whether the results given by the respondents were different from those that might have been given by nonrespondents (Tschechtelin, 1976). The nonrespondents were found to be significantly less interested in transfer goals, less likely to have transferred, more likely to be employed, and more likely to recommend their program of study. Since there were no dramatic differences in the response rate and the results between the earlier and current entrant studies, the previous conclusion about nonresponse bias was maintained: respondents seem to differ from nonrespondents on the critical variables, and it is not possible to generalize to the entire population of students who entered in Fall, 1974. However, the entrant results may be interpreted cautiously, keeping in mind that academically successful students were overrepresented in the sample.

Graduates. Respondents were compared with the population on three variables: sex, race, and program. The sex of the respondents was virtually identical with that of the population, 43 percent men in the sample and 42 percent men in the population. Black students were slightly less likely to have responded, but the difference was not strong (12 percent in the sample and 15 percent in the population). There were only minor differences regarding programs between the sample and the population. The respondents were somewhat less likely to have a transfer program (40 percent vs. 44 percent), but other differences were smaller. For example, in the sample, 20 percent were from health programs compared with 22 percent in the population. Based upon the response rate and the comparisons between the sample and the population on three variables, the results of the graduate study are considered representative of all 1978 graduates.

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 Social Sciences (Nie, Hull, 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: the results for their college, statewide aggregate results, and the original questionnaires. Student identifiers were not keypunched, and there are no personally identifiable student records maintained at the State Board for Community Colleges.

Costs

Table 2 presents a partial listing of the costs of conducting the statewide follow-up studies. The table only includes costs incurred by the State Board for Community Colleges and does not include the salaries for the Director of Planning and Research and the support staff. The Director of Planning and Research spends
about one-fourth of his time on student follow-up studies. The following college costs are not included: computer time, address labels, cover letter, any unreimbursed mailing expenses, staff time, and printing of local reports. If the state costs for computing and printing in Table 2 are divided between the two studies, the state agency costs for the entrant study were $1.14 per response and $1.35 per response for the graduate study. The total costs, including an estimate of state agency staff time and local costs, would be $2.50 to $3.00 per response.

Table 2

PARTIAL STATE AGENCY COSTS FOR FOLLOW-UP STUDIES

<table>
<thead>
<tr>
<th></th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keypunching and verifying</td>
<td>$1,040 for 7,904 responses</td>
<td>$818 for 4,089 responses</td>
</tr>
<tr>
<td>Printing questionnaires</td>
<td>$806 for 55,000 forms</td>
<td>$816 for 16,000 forms</td>
</tr>
<tr>
<td>Partial reimbursement for mailing</td>
<td>$4,640 for 23,199 items</td>
<td>$1,395 for 6,975 items</td>
</tr>
<tr>
<td>Printing combined report</td>
<td>$1,006 for 500 copies</td>
<td></td>
</tr>
<tr>
<td>Computing for both studies</td>
<td>$4,000 (estimate)</td>
<td></td>
</tr>
</tbody>
</table>

RESULTS

Characteristics of the Respondents

Table 3 shows the characteristics of the respondents while enrolled in Maryland community colleges. The typical graduate who earned an associate degree in a career program was white, female, and 28 years old. The typical 1974 entrant was also a white female but was slightly younger and in a transfer program. There were few differences between the 1972 and the 1974 entrants, except that the latter group was more likely to attend part-time and complete fewer credits. Unlike the entrants, more than half of the graduates had been in a career program. The higher proportion of graduates in career programs may reflect the fact that many students in transfer programs go on to another college without completing the requirements for graduation. Another possibility is that a high proportion of the students with an undeclared program eventually select a career program.

The existence of 42 graduates from an "undeclared program" indicates a minor problem with updating the students' curriculum codes in the student data files. Except for attendance status, all data in Table 3 were provided by the colleges and not reported by the respondent.
Table 3
CHARACTERISTICS OF ENTRANTS AND GRADUATES

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Program Type at Exit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer</td>
<td>3,675</td>
<td>48</td>
<td>3,530</td>
</tr>
<tr>
<td>Career</td>
<td>2,612</td>
<td>34</td>
<td>2,875</td>
</tr>
<tr>
<td>Undeclared</td>
<td>1,344</td>
<td>18</td>
<td>1,295</td>
</tr>
<tr>
<td>Highest Degree Earned</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AA</td>
<td>1,631</td>
<td>21</td>
<td>1,670</td>
</tr>
<tr>
<td>Certificate</td>
<td>55</td>
<td>1</td>
<td>83</td>
</tr>
<tr>
<td>None</td>
<td>5,940</td>
<td>78</td>
<td>5,962</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3,530</td>
<td>47</td>
<td>3,228</td>
</tr>
<tr>
<td>Female</td>
<td>4,002</td>
<td>53</td>
<td>4,628</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>927</td>
<td>12</td>
<td>1,146</td>
</tr>
<tr>
<td>White</td>
<td>6,587</td>
<td>88</td>
<td>6,395</td>
</tr>
<tr>
<td>Attendance Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>3,275</td>
<td>44</td>
<td>4,216</td>
</tr>
<tr>
<td>Full-time</td>
<td>4,116</td>
<td>56</td>
<td>3,392</td>
</tr>
<tr>
<td>Mean Credits Earned</td>
<td>33.2</td>
<td></td>
<td>31.3</td>
</tr>
<tr>
<td>Cumulative Grade Point</td>
<td>2.5</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL RESPONDENTS</td>
<td>7,648</td>
<td>100</td>
<td>7,904</td>
</tr>
</tbody>
</table>

NOTE: For some variables, the number adds to less than the number for all respondents because of blanks. On this and all subsequent tables, percentages do not always add to 100 percent because of rounding.

Status of Entrants and Graduates

Figure 1 summarizes the status of the entrants three and one-half years after admission to the community college. Over half were employed, and another fourth were employed while attending a transfer college. Among persons who were
employed only, most were employed full-time; according to the behavior of their students, the primary function of community colleges in Maryland is career development, including skill upgrading and preparation for employment. Many of the students who transferred were employed part-time. While only one-tenth of the students transferred and were not employed, nearly half had obtained associate degrees from the community college. Fourteen percent of the entrants either had full-time home responsibilities or were seeking work. About half of the persons in this latter category were seeking work.

Figure 2 summarizes the status of graduates about one year after graduation from the community college. The pattern of activities of the graduates is quite similar to that of the entrants, except that more of the graduates transferred without being employed (15 percent vs. 11 percent). Fewer of the graduates had full-time home responsibilities or were seeking work than among the entrants (8 percent vs. 14 percent). About half of the persons in the latter category were seeking work, and less than one percent were in the military.

ANALYSIS OF RESEARCH QUESTIONS

In the section which follows, the research questions stated earlier are discussed in terms of the results from the studies of entrants and graduates. Questions appear in the order previously presented.

1.0 Educational Goals

1.1 What were the educational goals of the respondents?

One-third of the entrants and graduates said that their primary reason for attending a community college was to prepare for transfer to a four-year institution (Table 4). The goals of the graduates were more career-oriented than those of the entrants, with about 40 percent of the graduates being interested in either preparation for a new career or updating current skills. However, the entrants were more interested in updating skills than the graduates. Only about half as many graduates as entrants have personal interest goals.

In addition to educational goals, 1974 entrants were asked to indicate their academic goal. Fifty-eight percent responded that they had an AA degree as their academic goal; 7 percent a certificate; and 34 percent simply courses of interest. A greater proportion of entrants in career programs sought an AA degree than did entrants in transfer programs (71 percent vs. 59 percent).
Figure 1
STATUS OF ENTRANTS THREE AND ONE-HALF YEARS LATER

7,904 Entrants Fall 1974

- Employed Only 52%
  - 83% Completed Courses
  - 17% Received Degrees
  - 85% Full-time Employment
  - 15% Part-time Employment

- Employed and Transferred 23%
  - 70% Completed Courses
  - 30% Received Degrees
  - 57% Full-time Employment
  - 43% Part-time Employment

- Transferred Only 11%
  - 55% Completed Courses
  - 45% Received Degrees

- Home or Seeking Employment 14%
  - 93% Completed Courses
  - 7% Received Degrees
Figure 2

STATUS OF GRADUATES ONE YEAR LATER

4,223 Graduates FY 1978

Employed Only 52%

Employed and Transferred 25%

Transferred Only 15%

Home or Seeking Employment 8%

81% Full-time Employment 19% Part-time Employment

56% Full-time Employment 44% Part-time Employment
Table 4
EDUCATIONAL GOALS OF THE RESPONDENTS

<table>
<thead>
<tr>
<th>Primary Goal</th>
<th>1974 Entrants</th>
<th></th>
<th>1978 Graduates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Explore new career or academic areas</td>
<td>1,045</td>
<td>14</td>
<td>544</td>
<td>15</td>
</tr>
<tr>
<td>Prepare for immediate entry into a career</td>
<td>1,362</td>
<td>18</td>
<td>1,144</td>
<td>32</td>
</tr>
<tr>
<td>Prepare for transfer to a four-year college</td>
<td>2,346</td>
<td>32</td>
<td>1,170</td>
<td>32</td>
</tr>
<tr>
<td>Update skills for a job currently held</td>
<td>971</td>
<td>13</td>
<td>264</td>
<td>7</td>
</tr>
<tr>
<td>Interest and self-enrichment</td>
<td>1,378</td>
<td>19</td>
<td>369</td>
<td>10</td>
</tr>
<tr>
<td>Other goal</td>
<td>243</td>
<td>3</td>
<td>107</td>
<td>3</td>
</tr>
</tbody>
</table>

1.2 What were the graduates' primary reasons for selecting the community college?

Reasons selected most often for attending the community college were its convenient location, program availability, and low cost (Table 5). Only 4 percent of the graduates said they came to the community college because they were unwilling or unable to attend another college, suggesting that the students may have been drawn to the assets of the community college and not forced to accept it. The question was not asked of 1972 or 1974 entrants.

Table 5
PRIMARY REASONS FOR CHOICE OF THE COMMUNITY COLLEGE

<table>
<thead>
<tr>
<th>Primary Reason</th>
<th>1978 Graduates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Convenient location</td>
<td>1,161</td>
<td>35</td>
</tr>
<tr>
<td>Program I wanted was offered</td>
<td>1,126</td>
<td>34</td>
</tr>
<tr>
<td>Low cost</td>
<td>540</td>
<td>16</td>
</tr>
<tr>
<td>College's academic reputation</td>
<td>196</td>
<td>6</td>
</tr>
<tr>
<td>Unwilling or unable to attend another college</td>
<td>119</td>
<td>4</td>
</tr>
<tr>
<td>Advice of friends</td>
<td>70</td>
<td>2</td>
</tr>
<tr>
<td>Financial aid available</td>
<td>67</td>
<td>2</td>
</tr>
<tr>
<td>Advice of high school counselor</td>
<td>23</td>
<td>1</td>
</tr>
</tbody>
</table>
Eighty-five percent of the graduates stated that they had achieved their goals (Table 6). The rate of goal achievement for 1974 entrants was 63 percent, up somewhat from the 1972 entrants. As reported in research question 1.7, a number of the entrants leave because of scheduling conflicts and personal reasons. It might be expected, therefore, that the goal achievement rate would be higher for the graduates who have persisted to the degree. Nickens (1976) studied community college students in Florida and reported that 58 percent of the students accomplished the goal they had hoped to achieve when they enrolled; the Maryland study found similar results, with 59 percent goal achievement for 1972 entrants and 63 percent goal achievement for 1974 entrants.

The rate of goal achievement was related to the sex and race, with higher goal achievement for females and whites. The racial differences were more extreme than the sex differences. Among programs in the study of 1974 entrants, the highest self-reported goal achievement was in the Allied Health area, such as Dental Hygiene (96 percent), Nursing (75 percent), and Medical Laboratory Technology (72 percent). Programs with the lowest goal achievement included several from the business area, such as General Business (56 percent), Computer Programming (48 percent), and Accounting (47 percent).

Table 6

SELF-REPORTED GOAL ACHIEVEMENT

<table>
<thead>
<tr>
<th>Group</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,355</td>
<td>59</td>
<td>3,555</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,507</td>
<td>58</td>
<td>1,398*</td>
</tr>
<tr>
<td>Female</td>
<td>1,790</td>
<td>60</td>
<td>2,138*</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>289*</td>
<td>46</td>
<td>313*</td>
</tr>
<tr>
<td>White</td>
<td>3,029*</td>
<td>61</td>
<td>2,961*</td>
</tr>
</tbody>
</table>

* Differences within each study significant at the .01 level.
What was the graduation rate among those entrants whose goal was an Associate in Arts degree?

Forty-three percent of the 1974 entrants with an AA goal had received the degree within three and one-half years from the time of entry. The percentage was approximately the same for the 1972 entrants (Table 7). Students who had changed their goal or who were currently enrolled were not included in the analysis. Among programs in study of 1974 entrants, the highest degree achievement was in Dental Hygiene (96 percent), Medical Laboratory Technology (72 percent), and Nursing (62 percent). Community colleges often have academic requirements for admission to allied health programs, a fact that may help to account for the high rates of degree goal achievement. Programs with the lowest degree goal achievement were Accounting (25 percent), General Business (24 percent), and Early Childhood Development (17 percent).

The health programs have specific skill requirements that must be completed in order to be employed. This is less true for Accounting and General Business. In Early Childhood, employment can take place after only 64 clock hours have been completed.

Achievement of an AA goal was analyzed by sex, race, and program type. Significant differences by program type were not found. Racial differences were found in both groups however. There is some evidence that black students are academically less prepared than whites when they enroll (Linthicum, 1979). The high school grade average of community college blacks is 2.03, compared with 2.55 for whites. First-time black students comprise 30 percent of the students in remedial English courses while only comprising 10 percent of the introductory college-level English courses. Requirements for the associate degree and for transfer programs include English, math, and science courses not present in many occupational programs. The combination of less academic preparation and a math-English oriented curriculum could help to explain the lower rates of degree and transfer achievement for blacks. This matter is addressed in greater detail in Tschechtelin (1979).

Linthicum also studied the effectiveness of remedial programs. First-time students who took remedial English courses were compared with students who enrolled directly in college-level English. Forty-one percent of the students who began in remedial English stayed at the college for four semesters versus 53 percent of the students who began in college-level English. Students who began in regular English also completed a higher percentage of their hours attempted (90 percent vs. 76 percent) and earned higher cumulative grade point averages (2.66 vs. 1.94 on a 4.0 system). The study concluded that students in remedial programs were reasonably successful in their community college work but also pointed to the need for competent diagnostic testing of all students (full- and part-time), more faculty development, and programs that go beyond cognitive skills to personal factors such as self-concept and attitudes about learning.
Table 7

DEGREE ACHIEVEMENT AMONG ENTRANTS WHOSE GOAL WAS AN ASSOCIATE IN ARTS DEGREE

<table>
<thead>
<tr>
<th>Group</th>
<th>1972 Entrants</th>
<th></th>
<th>1974 Entrants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,268</td>
<td>45</td>
<td>1,370</td>
<td>43</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>568*</td>
<td>41</td>
<td>555</td>
<td>41</td>
</tr>
<tr>
<td>Female</td>
<td>700*</td>
<td>49</td>
<td>815</td>
<td>45</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>106*</td>
<td>33</td>
<td>113*</td>
<td>26</td>
</tr>
<tr>
<td>White</td>
<td>1,155*</td>
<td>47</td>
<td>1,135*</td>
<td>45</td>
</tr>
<tr>
<td>Program Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer</td>
<td>703</td>
<td>45</td>
<td>670</td>
<td>45</td>
</tr>
<tr>
<td>Career</td>
<td>529</td>
<td>48</td>
<td>671</td>
<td>46</td>
</tr>
<tr>
<td>Undeclared</td>
<td>38</td>
<td>2</td>
<td>29</td>
<td>1</td>
</tr>
</tbody>
</table>

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

1.5 What proportion of all entrants had graduated?

Twenty-two percent of the 1974 entrants had received an AA degree within three and one-half years after entrance. The graduation rate for all entrants therefore was only half the rate among those with an AA goal. About one percent of 1974 entrants received a certificate.

In the study of 1974 entrants, a special analysis was done to determine the demographic characteristics of graduates and nongraduates. Students most likely to graduate were full-time, under age 20, white, in occupational programs, and with average grades (2.5 to 2.99 on a 4.0 scale). No differences by sex were found. Students with high grades (3.5 and above) were as likely not to graduate as students with lower grades (2.0 to 2.49). It could be that students with transfer goals who do extremely well in the community college transfer before obtaining the degree.

1.6 What proportion of the entrants was still enrolled?

Seventeen percent of the 1974 entrants were still enrolled at their community college three and one-half years after entering college, up slightly from the 1972 study. Of course, students who were reported as still enrolled had not necessarily been enrolled continuously since their entry into college. 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 for Maryland was 17 percent for 1974 entrants.

- 17 -
1.7 Why did the entrants discontinue attendance at the college?

The four reasons given most often by the 1974 entrants as the primary reason for discontinuing attendance (among nongraduates) were that they had achieved their educational goals, had transferred, had a scheduling conflict between job and studies, or personal/marriage reasons (Table 8). In the Illinois study of occupational entrants (Lach, 1978), 19 percent said that they left the college because they took all courses originally planned, a similar item and response to the Maryland item "achieved educational goal."

In a national longitudinal study, Fetters (1977) questions the validity of self-reported reasons for withdrawal. He maintains that withdrawal behavior is complex and that there is a natural tendency to rationalize unsuccessful behavior. Fetters does conclude that self-reported reasons are still useful, particularly for students who do not have academic problems. Spady (1971) cites a number of studies showing that students tend to explain failure with more socially acceptable reasons. They tend to inflate their financial problems and to deny academic difficulties, lack of motivation, and indecision. However, national studies that include four-year colleges tend to define failure as the inability to complete a baccalaureate degree. Fetters found that over 25 percent of the former students listed financial difficulties as a reason for leaving, compared to only 4 percent in the Maryland study of entrants.

Table 8

<table>
<thead>
<tr>
<th>PRIMARY REASON FOR NOT RETURNING TO COLLEGE AMONG 1974 ENTRANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason                                              Number</td>
</tr>
<tr>
<td>Achieved educational goal                        631</td>
</tr>
<tr>
<td>Transferred                                       600</td>
</tr>
<tr>
<td>Scheduling conflict between job and studies       558</td>
</tr>
<tr>
<td>Personal/marriage                                504</td>
</tr>
<tr>
<td>Accepted a job                                   358</td>
</tr>
<tr>
<td>Program or courses not available at this college  303</td>
</tr>
<tr>
<td>Unsure about choice of major                     183</td>
</tr>
<tr>
<td>Changed educational goal                         171</td>
</tr>
<tr>
<td>Dissatisfaction with program                      123</td>
</tr>
<tr>
<td>Dissatisfied with quality of teaching             89</td>
</tr>
<tr>
<td>Financial aid was not sufficient                 89</td>
</tr>
<tr>
<td>Applied, but could not obtain financial aid       56</td>
</tr>
<tr>
<td>Low grades                                        54</td>
</tr>
<tr>
<td>Course work not challenging                      46</td>
</tr>
<tr>
<td>Found courses too difficult                      40</td>
</tr>
<tr>
<td>This college was too expensive                    36</td>
</tr>
<tr>
<td>Went into military service                        31</td>
</tr>
<tr>
<td>Child care too costly                            29</td>
</tr>
</tbody>
</table>

NOTE: Only nongraduates are included.
2.0 Career Development

2.1 What proportion of the respondents whose goal had been career development were employed full-time?

Three-fourths of the respondents whose goal had been career development were employed full-time (Table 9). Career goal achievement was analyzed by sex and by race. While significantly more male respondents in the 1974 study achieved career goals, no racial differences were found. No differences by sex or by race were found among the 1978 graduates.

Among programs in the study of 1974 entrants, the highest employment goal achievement was reached in Data Processing (93 percent), Fire Science (93 percent), and Dental Hygiene (91 percent). Programs with the lowest employment goal achievement were Mental Health (72 percent), Accounting (70 percent), and Medical Laboratory Technology (59 percent).

Table 9
EMPLOYMENT AMONG RESPONDENTS WHOSE GOAL WAS CAREER DEVELOPMENT

<table>
<thead>
<tr>
<th>Group</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,416</td>
<td>74</td>
<td>1,405</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>558*</td>
<td>81</td>
<td>590*</td>
</tr>
<tr>
<td>Female</td>
<td>829*</td>
<td>70</td>
<td>807*</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>197</td>
<td>71</td>
<td>229</td>
</tr>
<tr>
<td>White</td>
<td>1,204</td>
<td>74</td>
<td>1,047</td>
</tr>
</tbody>
</table>

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

2.2 What proportion of all respondents were employed full-time? Part-time?

Seventy-seven percent of the 1978 graduates were employed; 56 percent employed full-time, and 21 percent part-time (Table 10). The proportion of respondents reporting full-time employment is comparable for both entrants and graduates, but the 1978 graduates were somewhat more likely to be employed part-time than the entrants. Among those 1978 graduates who were employed full-time, about half held the same job they held prior to or while attending college. The proportion of students getting their present job after leaving the college was quite similar in the entrant and graduate studies.
In the Virginia follow-up study of occupational students, 77 percent were employed (Eyler, Kelly, and Snyder, 1974); the comparable Maryland figure was 71 percent. In the Connecticut follow-up study of 1975 graduates, about three-fourths of the respondents were employed (Elterich, 1976); the comparable figure for Maryland was 77 percent.

Figure 3 (page 21) summarizes employment and employment goal achievement among entrants and graduates. Over half of the students were employed full-time, and over three-fourths achieved their career development goal. Results on these two items are nearly identical in the studies of entrants and graduates.

Table 10
EMPLOYMENT STATUS

<table>
<thead>
<tr>
<th>Variable</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>4,230</td>
<td>55</td>
<td>4,524</td>
</tr>
<tr>
<td>Part-time</td>
<td>1,235</td>
<td>16</td>
<td>1,438</td>
</tr>
<tr>
<td>Present job began</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to or during college</td>
<td>2,508</td>
<td>46</td>
<td>2,928</td>
</tr>
<tr>
<td>After college</td>
<td>2,983</td>
<td>54</td>
<td>3,211</td>
</tr>
</tbody>
</table>

2.3 What proportion of the respondents who were employed full-time held jobs in their field of training?

Eighty percent of 1978 graduates were employed in full-time jobs that were either directly related to or somewhat related to their community college program (Table 11). In the study of graduates, the highest rates of direct relationship between job and training were Dental Hygiene (97 percent), Nursing (94 percent), and Dental Assisting (88 percent). Programs with the least relationship between job and training were Human Services (22 percent), Child Care (46 percent), and Retail Management (49 percent).

Among entrants, about three-fourths were employed full-time in jobs that were either directly or somewhat related to their community college program. In general, there seems to be more program-to-job relationship among graduates than among entrants.
Figure 3
EMPLOYMENT AND EMPLOYMENT GOAL ACHIEVEMENT

![Bar chart showing employment and employment goal achievement]

Col. 72 shows percentage of students who entered in Fall 1972. Col. 74 shows percentage of students who entered in Fall 1974. Col. 78 shows percentage of students who graduated in FY 1978.
The Virginia follow-up study of entering occupational students reported that 72 percent held a present job that was directly or somewhat related to their community college program; the comparable figure for 1974 Maryland entrants was 75 percent. The Connecticut follow-up of graduates found that 65 percent held a job which was directly or somewhat related to their program. The comparable figure for Maryland graduates was 80 percent.

Table 11

RELATIONSHIP OF THE RESPONDENTS' PROGRAMS TO THEIR FULL-TIME EMPLOYMENT

<table>
<thead>
<tr>
<th>Relationship</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Directly related</td>
<td>799</td>
<td>47</td>
<td>953</td>
</tr>
<tr>
<td>Somewhat related</td>
<td>441</td>
<td>26</td>
<td>534</td>
</tr>
<tr>
<td>Not related</td>
<td>470</td>
<td>28</td>
<td>506</td>
</tr>
</tbody>
</table>

2.4 Where were the full-time respondents employed?

Nearly one-half of the graduates who were employed full-time were employed in the same county as their community college. Thirty-nine percent were employed in some other Maryland location, and the remainder were employed out-of-state (Table 12). Even though the entrant data in Table 12 includes only career program students, it seems clear that the proportion remaining in Maryland for employment is the same among entrants and graduates, about 85 percent. The Virginia follow-up study of occupational entering students showed that 92 percent were employed in their home state or the District of Columbia. The corresponding figures for all three Maryland studies were each 92 percent.

Table 12

EMPLOYMENT LOCATION OF RESPONDENTS

<table>
<thead>
<tr>
<th>Location</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Same county as</td>
<td>833</td>
<td>49</td>
<td>986</td>
</tr>
<tr>
<td>community college</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland county</td>
<td>288</td>
<td>17</td>
<td>283</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>336</td>
<td>20</td>
<td>425</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>117</td>
<td>7</td>
<td>126</td>
</tr>
<tr>
<td>Delaware</td>
<td>3</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>25</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Virginia</td>
<td>31</td>
<td>2</td>
<td>32</td>
</tr>
<tr>
<td>West Virginia</td>
<td>11</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Other state</td>
<td>55</td>
<td>3</td>
<td>62</td>
</tr>
</tbody>
</table>
2.5 What were the salaries of graduates who were employed full-time?

Table 13 presents the weekly salaries of graduates employed full-time. One-fourth of the graduates reported earning less than $176 per week. Half of the graduates earned between $176 and $295, and the remaining graduates earned more than $295 per week. Salary data were not collected in the study of 1974 entrants.

Table 13
WEEKLY SALARY OF GRADUATES EMPLOYED FULL-TIME

<table>
<thead>
<tr>
<th>Weekly Salary</th>
<th>1978 Graduates</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - $145</td>
<td></td>
<td>273</td>
<td>13</td>
</tr>
<tr>
<td>$146 - $175</td>
<td></td>
<td>281</td>
<td>14</td>
</tr>
<tr>
<td>$176 - $205</td>
<td></td>
<td>311</td>
<td>15</td>
</tr>
<tr>
<td>$206 - $235</td>
<td></td>
<td>254</td>
<td>12</td>
</tr>
<tr>
<td>$236 - $265</td>
<td></td>
<td>304</td>
<td>15</td>
</tr>
<tr>
<td>$266 - $295</td>
<td></td>
<td>165</td>
<td>8</td>
</tr>
<tr>
<td>$296 - $325</td>
<td></td>
<td>131</td>
<td>6</td>
</tr>
<tr>
<td>$326 and above</td>
<td></td>
<td>318</td>
<td>16</td>
</tr>
</tbody>
</table>

2.6 What were the salaries of graduates who were employed part-time?

Fifty-four percent of the graduates who were employed part-time reported an hourly salary of less than $4.00 per hour (Table 14). More than half the respondents earned between $2.00 and $4.00. The mean hourly salary was $4.19; the minimum wage in 1979 was $2.90 per hour.

Table 14
HOURLY SALARY OF GRADUATES EMPLOYED PART-TIME

<table>
<thead>
<tr>
<th>Hourly Salary</th>
<th>1978 Graduates</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.01 - $1.99</td>
<td></td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>$2.00 - $3.99</td>
<td></td>
<td>291</td>
<td>52</td>
</tr>
<tr>
<td>$4.00 - $5.99</td>
<td></td>
<td>171</td>
<td>31</td>
</tr>
<tr>
<td>$6.00 - $7.99</td>
<td></td>
<td>73</td>
<td>13</td>
</tr>
<tr>
<td>$8.00 - $9.99</td>
<td></td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>$10.00 - $11.99</td>
<td></td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>
2.7 How did graduates locate their current jobs?

Almost two-thirds of the graduates located their current jobs either by personally contacting an employer or through a family member or friend (Table 15). Respondents were allowed to check as many sources of help as were applicable, and only graduates employed full-time were included in the table. One percent indicated that they located their job through a College Placement Office and 6 percent through a faculty member. Even though 29 percent of the respondents had obtained their jobs prior to attending college, the data suggest that faculty and, in particular, college placement services assist only a very small proportion of the graduates in locating a job.

The Illinois study of entrants in occupational programs (Lach, 1978) found that the majority of students found a job on their own. Less than 3 percent of the students got a job through their college placement office.

Table 15

<table>
<thead>
<tr>
<th>Source of Assistance</th>
<th>1978 Graduates</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacted employer on own</td>
<td>977</td>
<td>41</td>
</tr>
<tr>
<td>Family or friend</td>
<td>452</td>
<td>19</td>
</tr>
<tr>
<td>Newspaper</td>
<td>291</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>269</td>
<td>11</td>
</tr>
<tr>
<td>Faculty</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td>Employment Agency</td>
<td>103</td>
<td>4</td>
</tr>
<tr>
<td>College Placement Office</td>
<td>33</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTE: Respondents could check more than one source; only responses from full-time employees were included.

2.8 How satisfied were the respondents with their community college preparation for employment?

More than nine-tenths of the graduates who were employed full-time reported that they were satisfied with their preparation for employment with 65 percent satisfied and 27 percent extremely satisfied (Table 16). Programs with the highest rate of satisfaction among graduates were Radiology (60 percent extremely satisfied), Medical Laboratory Technician (52 percent), Early Childhood (48 percent), and Secretarial Science (45 percent). Programs with the least satisfaction among graduates were Computer Programming (22 percent extremely satisfied), Accounting (22 percent), and Business (20 percent). The question was not asked in the entrant studies.
Table 16
SATISFACTION WITH PREPARATION FOR EMPLOYMENT

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Extremely satisfied</td>
<td>516</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1,251</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>149</td>
</tr>
</tbody>
</table>

2.9 Did the community college program increase the entrants' theoretical understanding? Increase job skills? Help to get a job? Help to get a promotion or salary increase?

Entrants were asked four questions about employment assistance provided by their career program. Almost nine-tenths of 1974 entrants reported that their career program increased their theoretical understanding and increased their job skills (Table 17). Almost half of the entrants reported that their career program helped them obtain their job or get a salary increase or promotion.

In the Connecticut graduate follow-up, 45 percent reported that their program helped them obtain a job (vs. 49 percent in Maryland), and 38 percent reported that their program assisted in obtaining salary increases (the comparable Maryland figure was 45 percent). Seventy percent of Connecticut graduates reported that their program increased their theoretical understanding (89 percent in Maryland) and 67 percent reported that their program increased job skills (87 percent in Maryland).

Table 17
EMPLOYMENT ASSISTANCE PROVIDED BY CAREER PROGRAMS

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Increased theoretical understanding</td>
<td>1,015</td>
<td>88</td>
</tr>
<tr>
<td>Increased job skills</td>
<td>952</td>
<td>83</td>
</tr>
<tr>
<td>Helped to obtain job</td>
<td>545</td>
<td>49</td>
</tr>
<tr>
<td>Helped to obtain salary increases and/or promotions</td>
<td>428</td>
<td>41</td>
</tr>
</tbody>
</table>
2.10 What was the primary reason for graduates having jobs not related to their community college program?

Of the graduates who were employed full-time in a job that was unrelated to their program, one-fourth said they were unable to find a job in their field (Table 18). Seventeen percent were able to find a better paying job outside their field of study, and 22 percent indicated that the program of study at their college had not been career-oriented. Only 4 percent reported that they had decided that they did not want to work in their field of study. The question was not asked in the entrant studies.

Table 18

REASONS FOR WORKING IN JOBS NOT RELATED TO COMMUNITY COLLEGE PROGRAM

<table>
<thead>
<tr>
<th>Reason</th>
<th>1978 Graduates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Could not find job in trained field</td>
<td>90</td>
<td>25</td>
</tr>
<tr>
<td>Other</td>
<td>86</td>
<td>24</td>
</tr>
<tr>
<td>Program at college</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not career oriented</td>
<td>80</td>
<td>22</td>
</tr>
<tr>
<td>Better pay in another field</td>
<td>62</td>
<td>17</td>
</tr>
<tr>
<td>Better advancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in another field</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>Didn't want prepared field</td>
<td>21</td>
<td>4</td>
</tr>
</tbody>
</table>
2.11 What was the primary reason why graduates were unable to secure employment?

Of the 392 graduates who were not employed, about half were seeking a job. Among graduates seeking a job, the reason most often given for unemployment was that there were too few openings in their field of training (Table 19). The occupational programs with the most graduates stating that there were too few openings were Mental Health Technology and Human Services. One-fourth of the respondents seeking employment reported that they needed more education to qualify for the job they wanted. Table 19 only displays results among graduates who responded to the item; 31 percent of the unemployed graduates who were seeking work did not answer the question.

Table 19

<table>
<thead>
<tr>
<th>PRIMARY REASON FOR BEING UNABLE TO SECURE EMPLOYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Few openings in the field in which graduate prepared</td>
</tr>
<tr>
<td>Need more education to qualify for job wanted</td>
</tr>
<tr>
<td>Have not looked hard enough</td>
</tr>
<tr>
<td>Changed career objectives since graduating</td>
</tr>
<tr>
<td>Salary too low in the field in which graduate prepared</td>
</tr>
</tbody>
</table>

3.0 Transfer

3.1 What proportion of the respondents whose goal was to transfer achieved their goal?

Among graduates with this goal, 74 percent transferred. Among entrants whose goal was to transfer, 76 percent transferred, up 8 percent from the 1972 entrants (Table 20). Transfer goal achievement was analyzed by sex and by race. There were no significant differences in the rate of transfer goal achievement by sex. While minorities achieved transfer goals at a significantly lower rate among entrants, there was no significant racial difference in transfer goal achievement among graduates.
Table 20
TRANSFER AMONG RESPONDENTS WHOSE GOAL WAS TRANSFER

<table>
<thead>
<tr>
<th>Group</th>
<th>1972 Entrants</th>
<th></th>
<th>1974 Entrants</th>
<th></th>
<th>1978 Graduates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,055</td>
<td>68</td>
<td>1,375</td>
<td>76</td>
<td>861</td>
<td>74</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,136</td>
<td>69</td>
<td>693</td>
<td>76</td>
<td>466</td>
<td>73</td>
</tr>
<tr>
<td>Female</td>
<td>909</td>
<td>67</td>
<td>680</td>
<td>76</td>
<td>395</td>
<td>75</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td>169*</td>
<td>58</td>
<td>93*</td>
<td>59</td>
<td>94</td>
<td>67</td>
</tr>
<tr>
<td>White</td>
<td>1,860*</td>
<td>69</td>
<td>1,200*</td>
<td>78</td>
<td>729</td>
<td>74</td>
</tr>
</tbody>
</table>

* Differences within each study are significant at the 0.01 level.

3.2 What proportion of all respondents transferred full-time? Part-time?

Among all graduates (regardless of their goal), 40 percent transferred (Table 21). In this study, transfer refers to any work at another college or university after leaving the community college. Forty percent of the graduates that transferred were from occupational programs in the community college. The transfer rate was 35 percent among 1974 entrants, down slightly from the 1972 entrants and below the rate for graduates. The majority of respondents who transferred, did so on a full-time basis.

Table 21
RESPONDENTS WHO TRANSFERRED

<table>
<thead>
<tr>
<th>Group</th>
<th>1972 Entrants</th>
<th></th>
<th>1974 Entrants</th>
<th></th>
<th>1978 Graduates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,872</td>
<td>38</td>
<td>2,723</td>
<td>35</td>
<td>1,681</td>
<td>40</td>
</tr>
<tr>
<td>Status of Transfer Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>2,287</td>
<td>81</td>
<td>2,025</td>
<td>75</td>
<td>1,041</td>
<td>63</td>
</tr>
<tr>
<td>Part-time</td>
<td>542</td>
<td>19</td>
<td>663</td>
<td>25</td>
<td>620</td>
<td>37</td>
</tr>
</tbody>
</table>

Figure 4 shows the rate of transfer and transfer goal achievement among entrants and graduates. The rate of transfer goal achievement is nearly double the transfer rate among all respondents.
Figure 4
TRANSFER AND TRANSFER GOAL ACHIEVEMENT

Col. 72 shows percentage of students who entered in Fall 1972. Col. 74 shows percentage of students who entered in Fall 1974. Col. 78 shows percentage of students who graduated in FY 1978.
3.3 **To what colleges did the respondents transfer?**

More than four-fifths of the graduates who transferred went to a Maryland institution, including 34 percent to the University of Maryland and 34 percent to a Maryland State college (Table 22). Graduates were more likely to attend a Maryland college and one of the public state colleges than were entrants.

**Table 22**

TRANSFER INSTITUTIONS OF THE RESPONDENTS

<table>
<thead>
<tr>
<th>Institution</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td><strong>Maryland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Maryland</td>
<td>879</td>
<td>31</td>
<td>816</td>
</tr>
<tr>
<td>Public State College</td>
<td>758</td>
<td>26</td>
<td>688</td>
</tr>
<tr>
<td>Private four-year</td>
<td>214</td>
<td>8</td>
<td>187</td>
</tr>
<tr>
<td>Community College</td>
<td>189</td>
<td>7</td>
<td>242</td>
</tr>
<tr>
<td>Technical/commercial</td>
<td>49</td>
<td>2</td>
<td>61</td>
</tr>
<tr>
<td>Private two-year</td>
<td>11</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL MARYLAND</td>
<td>2,100</td>
<td>74</td>
<td>2,008</td>
</tr>
<tr>
<td><strong>Non-Maryland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public four-year</td>
<td>386</td>
<td>13</td>
<td>334</td>
</tr>
<tr>
<td>Private four-year</td>
<td>284</td>
<td>10</td>
<td>262</td>
</tr>
<tr>
<td>Others</td>
<td>102</td>
<td>4</td>
<td>119</td>
</tr>
<tr>
<td>TOTAL NON-MD</td>
<td>772</td>
<td>27</td>
<td>715</td>
</tr>
</tbody>
</table>

3.4 **For what proportion of the respondents was their community college program related to their major at the transfer school?**

Over nine-tenths of the graduates reported that their community college program was either directly or somewhat related to their major at the transfer institution (Table 23). In Maryland, transfer programs are grouped into seven transfer program areas: Arts and Sciences, Biological and Physical Sciences, Humanities and Social Sciences, Engineering, General Studies, Teacher Education, and Business Administration. Differences were found in the relationship of community college program and transfer major by transfer program area. General Studies had the least relationship between community college program and transfer major, and Business Administration showed the greatest relationship. More graduates than entrants reported that their community college program was directly related to their major at the transfer school. The Connecticut follow-up of graduates found that 86 percent reported that their community college field of study was directly or somewhat related to their transfer curriculum. The comparable Maryland figure is 91 percent.
Table 23

RELATIONSHIP OF RESPONDENTS' COMMUNITY COLLEGE PROGRAMS TO THEIR TRANSFER MAJOR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly related</td>
<td>1,372</td>
<td>48</td>
<td>1,328</td>
<td>49</td>
<td>914</td>
<td>57</td>
</tr>
<tr>
<td>Somewhat related</td>
<td>994</td>
<td>35</td>
<td>925</td>
<td>34</td>
<td>549</td>
<td>34</td>
</tr>
<tr>
<td>Not related</td>
<td>463</td>
<td>16</td>
<td>440</td>
<td>16</td>
<td>151</td>
<td>9</td>
</tr>
</tbody>
</table>

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

More than half of the graduates reported that they lost three credits or less in the transfer process (Table 24). While the number of credits lost remained stable for the entrants, the entrants lost substantially fewer credits than the graduates lost. The difference may be due to the fact that 40 percent of the graduates that transferred were from occupational programs in the community college, and some of their occupational courses may not have been accepted in the transfer college. Furthermore, the entrants simply took fewer credits at the community college, and most of their early college coursework may have been general education courses readily transferable. Of the graduates in the Texas follow-up, 71 percent reported losing three credits or less; the study reported 65 percent losing three credits or less. The comparable figure for Maryland was 62 percent.

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

Three-fifths of the graduates reported earning a grade point average of 3.0 or higher at the transfer institution (Table 24). The grade point averages reported by the graduates and the 1974 entrants were quite similar. The argument that students should stay longer at the community college in order to get higher grades at the transfer school is not supported. In order to assess the validity of the self-reported grades, data from the University of Maryland College Park were checked. The proportion of students dismissed after the Fall term is typically 2 percent and 6 percent after the Spring term. While the University of Maryland has a sliding scale for dismissal, a 2.0 average is ultimately required. Although University of Maryland transfers are only about one-third of the total, the proportion of self-reported grades of less than 2.0 seems to be fairly accurate.

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

Nine-tenths of the graduates reported that they were either extremely satisfied or satisfied with their preparation for transfer (Table 24). Graduates reported more satisfaction than the entrants. The Connecticut follow-up of graduates found that 95 percent of the respondents were extremely satisfied or satisfied with their transfer preparation; the comparable Maryland figure for graduates is 92 percent.
Table 24
SUCCESS OF RESPONDENTS IN TRANSFER INSTITUTIONS

<table>
<thead>
<tr>
<th>Credits Lost</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>None</td>
<td>1,394</td>
<td>53</td>
<td>1,294</td>
</tr>
<tr>
<td>1 - 3</td>
<td>535</td>
<td>20</td>
<td>470</td>
</tr>
<tr>
<td>4 - 6</td>
<td>307</td>
<td>12</td>
<td>295</td>
</tr>
<tr>
<td>7 - 12</td>
<td>214</td>
<td>8</td>
<td>209</td>
</tr>
<tr>
<td>13 - 20</td>
<td>103</td>
<td>4</td>
<td>89</td>
</tr>
<tr>
<td>21 or more</td>
<td>80</td>
<td>3</td>
<td>82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade Point Average</th>
<th>1972 Entrants</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 2.0</td>
<td>72</td>
<td>3</td>
<td>68</td>
</tr>
<tr>
<td>2.0 - 2.4</td>
<td>377</td>
<td>14</td>
<td>290</td>
</tr>
<tr>
<td>2.5 - 2.9</td>
<td>815</td>
<td>30</td>
<td>718</td>
</tr>
<tr>
<td>3.0 - 3.4</td>
<td>947</td>
<td>35</td>
<td>904</td>
</tr>
<tr>
<td>Above 3.5</td>
<td>495</td>
<td>18</td>
<td>594</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely satisfied</td>
<td>845</td>
<td>30</td>
<td>840</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1,711</td>
<td>61</td>
<td>1,401</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>242</td>
<td>9</td>
<td>295</td>
</tr>
</tbody>
</table>

4.0 Overall Evaluation

4.1 **How satisfied were graduates with the quality of classroom instruction in their community college program?**

4.2 **How satisfied were graduates with the overall quality of their community college?**

Among graduates, satisfaction with the quality of instruction was quite high with 42 percent reporting that they were extremely satisfied and an additional 54 percent reporting that they were satisfied (Table 25). Among transfer areas, graduates in Arts and Science and in Teacher Education reported the highest rates of satisfaction (55 percent extremely satisfied in each area). The least satisfaction with the instruction in their program was reported by Humanities and Social...
Science graduates (30 percent). Among occupational programs, the highest rates of satisfaction with instruction were reported by graduates in Medical Laboratory Technician (55 percent extremely satisfied), Recreation (53 percent), Early Childhood (49 percent), and Secretarial Science (48 percent). The occupational program with the least satisfaction was Fire Science (21 percent extremely satisfied). The question was not asked of the entrants. Satisfaction with the overall quality of the community college was also high with 43 percent of the graduates extremely satisfied and 54 percent satisfied.

Table 25
COMMUNITY COLLEGE EVALUATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Quality of Instruction</td>
<td></td>
</tr>
<tr>
<td>Extremely satisfied</td>
<td>1,545</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1,999</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>121</td>
</tr>
<tr>
<td>Overall Quality</td>
<td></td>
</tr>
<tr>
<td>Extremely satisfied</td>
<td>1,677</td>
</tr>
<tr>
<td>Satisfied</td>
<td>2,081</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>130</td>
</tr>
</tbody>
</table>

SUMMARY AND IMPLICATIONS

Summary

The studies were a part of a continuing program of student follow-up in Maryland to provide information about the outcomes of community college education. Their primary purpose was to help Maryland community colleges evaluate the extent to which they assisted students in achieving their educational goals, their immediate career development, and their preparation for transfer to senior colleges and universities. The studies were also conducted to provide data for the Program Data Monitoring System and the Vocational Education Data System. Finally, the studies were done to compare community college outcomes among entrants and graduates. The research was a joint project of the State Board for Community Colleges and the Maryland Community College Research Group.

The results from two studies are given. Students (23,199) who entered in Fall 1974 were surveyed in 1978, and the response rate among those receiving the questionnaires was 43 percent. Graduates (7,175) of fiscal year 1978 were surveyed in 1979, and the response rate among those receiving the questionnaires was 63 percent. Specific research questions for both graduates and entrants were directed toward five areas: student educational goals, goal achievement, career development, transfer, and satisfaction.
Student educational goals. About one-third of both entrants and graduates held a transfer preparation goal. Graduates tended to be more interested in preparation for a new job (32 percent vs. 18 percent). Entrants were more concerned about self-enrichment and updating current job skills.

Goal achievement. About two-thirds of the entrants and 85 percent of the graduates reported that they achieved their community college educational goals. Men and minority students reported achieving educational goals at a significantly lower rate than women and white students; the differences were significant in both the entrant and the graduate studies. While only 22 percent of all 1974 entrants had received an AA degree within 3½ years, 43 percent of the entrants whose goal was an AA had earned the degree.

Career development. About three-fourths of both entrants and graduates were employed full-time when their goal was career development. There were no racial differences in employment goal achievement, but women experienced significantly less goal achievement in the entrant study; no differences by sex were found in the graduate study. Considering all respondents apart from their goals, about 55 percent of both entrants and graduates were employed full-time, and about 20 percent were employed part-time. Graduates reported a higher rate of employment in a job related to their community college program than entrants (80 percent vs. 72 percent). One-half of the full-time employees in both studies were employed in the same county as their community college and 85 percent were employed in Maryland.

Transfer. About three-fourths of both entrants and graduates transferred when their goal was to transfer. There were no differences in transfer goal achievement by sex. Among entrants, white students were more likely to achieve transfer goals, but among graduates no significant racial differences in transfer goal achievement were found. Considering all respondents apart from their goals, about 40 percent transferred to another college. Over three-fourths of both entrants and graduates transferred to a Maryland institution, but students in the entrant study were more likely to transfer out-of-state than graduates. Graduates were more likely than entrants to transfer into a program that was related to their community college program, and the graduates reported slightly more satisfaction with their preparation for transfer. However, the graduates tended to lose more credits in transferring than did the entrants. Entrants and graduates both earned the same grades at the transfer college.

Student satisfaction. Graduates were quite satisfied with the quality of instruction, with 42 percent extremely satisfied and 54 percent satisfied. They were also highly satisfied with the overall quality of their community college, with only three percent reporting dissatisfaction.

Implications

Perception of the community college. As pointed out in the follow-up of 1972 entrants (Tschechtelin, 1976) there is still a need for educators and policymakers to see community colleges for what they actually do, and not simply as half of a four-year college. Maryland follow-up studies have shown that many students
come to college for reasons apart from a degree, including upgrading job skills and self-enrichment. It is inappropriate to speak of freshmen or college-age population in the community college. One manifestation of the distorted perception of the community college is the failure of federal student assistance programs to aid part-time students, who comprise two-thirds of the community college students. A continuous effort is needed to be sure that decision-makers see community colleges through clear lenses. The Community College Quiz (Appendix C) may be helpful in making the point.

Racial differences in student success. The follow-up report on the 1972 entrants called for research about the racial differences in student goal achievement. Why did black students achieve degree and transfer goals less often than whites? (There was no difference in employment goal achievement.) Additional research was conducted (Tschechtelin, 1979), and racial differences were not found to be unique to one study or to one community college. Colleges need to make assistance to black students a high priority through: (a) excellent developmental programs, (b) adequate student financial aid, (c) course scheduling for evening and weekends, and (d) an overall sensitivity to the needs of black students. There is evidence that such increased effort can have rewards; among entrants, blacks have a significantly lower transfer goal achievement rate, but among graduates the racial differences are not significant. The implication is that if the community college can help black students to persist to the AA degree, blacks and whites will do equally well in achieving transfer.

The transfer process. Entrants and graduates reported similar transfer goal achievement. However, while graduates were more likely to be in a program related to their community college studies, they lost more credits in the transfer process than did the entrants. Such a phenomenon could be caused by the fact that entrants simply carry fewer credits to the transfer college, and thus have a smaller probability of courses being disallowed. Another possibility is that some graduates are transferring with AA degrees in occupational fields, and having some occupational courses disallowed. Of course, the articulation agreements between community colleges and transfer institutions may be the problem. In any event, further research is needed to determine the reasons for the loss of credits among graduates, including an analysis of the community college curricula of the students with higher credit losses.

There seems to be a trend in the proportion of community college students transferring to four-year institutions. The percentage of respondents indicating that they did any transfer work has declined 39-38-35 percent in the 1971-1972-1974 entrant studies, respectively. Data from the University of Maryland at College Park have confirmed the follow-up evidence.

Accuracy of student program codes. About two percent of the graduates had invalid program codes, such as "undeclared program." This suggests a minor problem in the updating of student records. At some colleges, students declare a program when they first register and are never required to confirm the decision.
until they are about to graduate. With such a process, many students change their program and take different courses, but college records do not reflect the fact. Improvements in college record systems would help colleges have a more accurate picture of the real curricula of their students.

Differences among entrants and graduates. Since only a minority of community college students graduate, it has seemed appropriate to conduct follow-up research on entrants as well as graduates. How do the basic outcomes of community college differ between entrant and graduation populations? Table 26 summarizes the differences in the areas of goals, employment, and transfer. In terms of goals, the two studies found considerable differences, with graduates more interested in immediate career preparation and less interested in self-enrichment. Graduates also reported higher educational goal achievement.

In terms of employment, results from the entrant and graduate studies were quite similar. Employment goal achievement, employment, and job location were all comparable. Only the relationship of program to job was slightly higher for the graduates.

The comparison of results from the entrant and graduate studies produces considerable differences in the transfer area. Apart from their goal, more of the graduates tend to transfer, and to a college in Maryland. Graduates say that their transfer programs are more related to their community college program, but somehow they lose more credits in the transfer process. Entrants and graduates do achieve transfer goals equally well, though, and receive similar grades at their transfer college. On balance, it would appear that it is important to conduct entrant as well as graduate follow-up of community college students. The combination of the two populations is necessary to see a clear picture of the results of community college education, especially regarding goals and transfer.
Table 26
DIFFERENCES IN GOALS AND OUTCOMES
AMONG ENTRANTS AND GRADUATES

<table>
<thead>
<tr>
<th>Goal Items</th>
<th>1974 Entrants</th>
<th>1978 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal achievement</td>
<td>63%</td>
<td>85%</td>
</tr>
<tr>
<td>More update skills and self-enrichment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More career preparation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employment Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment goal achievement</td>
<td>79%</td>
<td>75%</td>
</tr>
<tr>
<td>Full-time employment</td>
<td>57</td>
<td>56</td>
</tr>
<tr>
<td>Job related to program</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Job located in Maryland</td>
<td>86</td>
<td>85</td>
</tr>
<tr>
<td><strong>Transfer Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer goal achievement</td>
<td>76%</td>
<td>74%</td>
</tr>
<tr>
<td>Transferred</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Transferred to a Maryland college</td>
<td>73</td>
<td>84</td>
</tr>
<tr>
<td>Transfer programs related to community college program</td>
<td>84</td>
<td>91</td>
</tr>
<tr>
<td>Lost no credits in transfer</td>
<td>53</td>
<td>43</td>
</tr>
<tr>
<td>Transfer grades 3.0 and above</td>
<td>58</td>
<td>59</td>
</tr>
</tbody>
</table>
REFERENCES


Nickens, J. "Community College Dropout Redefined." College and University, Spring, 1976.


- 39 -

45


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 QUESTIONNAIRE
FIRST-TIME STUDENTS, FALL 1974

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

A. Please check what you hoped to achieve at this community college.
   □ 1. Take courses without working toward a degree or certificate
   □ 2. Certificate
   □ 3. Associate degree

B. Please check the one statement which most closely corresponds to your primary reason for attending this college.
   □ 1. Exploration of new career or academic areas
   □ 2. Preparation for immediate entry into a career
   □ 3. Preparation for transfer to a four-year institution
   □ 4. Update skills for a job currently held
   □ 5. Interest and self-enrichment
   □ 6. Other (specify) __________________________

C. Was your goal (indicated in Item B) achieved by the time you left this community college?
   □ 1. Yes
   □ 2. No
   □ 3. Still attending this community college

D. Did you attend this community college primarily on a part-time or full-time basis?
   □ 1. Part-time (11 credits or less per term)
   □ 2. Full-time (12 credits or more per term)

E. Would you recommend your program of study at this community college to a friend? (Check one)
   □ 1. Yes
   □ 2. No
   □ 3. Uncertain

F. Would you recommend this college to a friend? (Check one)
   □ 1. Yes
   □ 2. No
   □ 3. Uncertain

G. Please respond to this item if you are no longer a student at this college.
   Listed below are some academic, employment, financial, and personal reasons why a student might leave college. To what extent were these your reasons for leaving this college? (Check as many as apply.)
   □ a. Achieved educational goal
   □ b. Changed educational goal
   □ c. Scheduling conflict between job and studies
   □ d. Accepted a job
   □ e. Went into military service
   □ f. Program or courses not available at this college
   □ g. Dissatisfaction with program
   □ h. Unsure about my choice of major
   □ i. Course work not challenging
   □ j. Low grades
   □ k. Found courses too difficult
   □ l. Dissatisfied with quality of teaching
   □ m. Transferred
   □ n. Applied, but could not obtain financial aid
   □ o. Financial aid was not sufficient
   □ p. Child care too costly
   □ q. This college was too expensive
   □ r. Personal/marriage

H. If you are no longer a student at this college, look at the above list and select the three most important reasons why you did not return to this college. (List, in order of importance, the appropriate letter [a, b, c, etc.] in the boxes below.)
   □ 1. First
   □ 2. Second
   □ 3. Third

OVER
### EMPLOYMENT

Check one answer for each question.

1. Your current employment status.
   - [ ] 1. Employed part-time
   - [ ] 2. Employed full-time
   - [ ] 3. Unemployed and seeking a job
   - [ ] 4. Unemployed and not seeking a job
   
   If you are currently unemployed, skip to item N.

2. Did you hold this same job while attending the community college?
   - [ ] 1. Yes
   - [ ] 2. No

3. Geographic location in which you are presently employed.
   - [ ] 1. 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 state

4. 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

5. Did your educational program at this community college assist you in:
   - [ ] Increasing your theoretical understanding 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

---

### TRANSFER

If you enrolled at another college since leaving this college, please respond to the following questions, even if you are no longer a student.

Check one answer for each question.

6. 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. Other out-of-state college or university

7. What was your enrollment status when you enrolled in the institution indicated above.
   - [ ] 1. Part-time
   - [ ] 2. Full-time

8. Indicate your overall grade point average at the transfer institution (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

9. To what extent was your curriculum program at this community college related to your major at the transfer institution?
   - [ ] 1. Directly related
   - [ ] 2. Somewhat related
   - [ ] 3. Not related

10. How satisfied were you with your preparation for transfer?
    - [ ] 1. Extremely satisfied
    - [ ] 2. Satisfied
    - [ ] 3. Unsatisfied

11. How many credit hours earned at this community college were not accepted at the transfer institution?
    - [ ] 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
MARYLAND PUBLIC COMMUNITY COLLEGES
GRADUATE FOLLOW-UP QUESTIONNAIRE

The purpose of this questionnaire is to help your community college and the State Board for Community Colleges assess and improve their programs. Please complete it promptly and return it in the envelope provided. This form should require less than 10 minutes to complete. All answers will be strictly confidential. Thank you for your assistance.

(Please make corrections if necessary.)

(Name)

(Address)

ALL GRADUATES SHOULD COMPLETE PART I.

PART I.

A. Check the items that describe your current status. (check as many as apply)

[ ] In school
[ ] Employed
[ ] Not employed
[ ] Full-time home responsibility
[ ] In active military services
[ ] Other (specify) ________________________

B. Check the one statement which most closely corresponds to your primary reason for attending this community college. (check one)

[ ] 1. Exploration of new career or academic areas
[ ] 2. Preparation for immediate entry into a career
[ ] 3. Preparation for transfer to a four-year institution
[ ] 4. Update skills for a job currently held
[ ] 5. Interest and self-enrichment
[ ] 6. Other (specify) ________________________

C. Was your goal (indicated in Item B) achieved by the time you graduated from this community college? (check one)

[ ] 1. Yes
[ ] 2. No

D. How satisfied were you with the quality of classroom instruction in your program of study? (check one)

[ ] 1. Extremely satisfied
[ ] 2. Satisfied
[ ] 3. Unsatisfied

E. How satisfied were you with the overall quality of this community college? (check one)

[ ] 1. Extremely satisfied
[ ] 2. Satisfied
[ ] 3. Unsatisfied
F. What was the most important reason you chose this community college? (check one)
   [ ] 1. Low cost
   [ ] 2. Convenient location
   [ ] 3. Program I wanted was offered
   [ ] 4. Financial aid was available
   [ ] 5. Unwilling or unable to attend another college
   [ ] 6. College's good academic reputation
   [ ] 7. Advice of friends
   [ ] 8. Advice of high school counselor

IF YOU ARE IN SCHOOL, COMPLETE PART 2; OTHERWISE, GO TO PART 3.

PART 2.

G. What type of school are you currently attending? (check one)
   [ ] 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. Other out-of-state college or university

H. What is your enrollment status in the school indicated above?
   [ ] 1. Part-time
   [ ] 2. Full-time

I. Indicate your overall grade point average for credits earned at the transfer school
   (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
   [ ] 6. Have not yet completed a full semester

J. To what extent was your curriculum program at this community college related to your
   major at the transfer school?
   [ ] 1. Directly related
   [ ] 2. Somewhat related
   [ ] 3. Not related

K. How satisfied were you with your preparation for transfer?
   [ ] 1. Extremely satisfied
   [ ] 2. Satisfied
   [ ] 3. Unsatisfied

L. How many credit hours earned at this community college were not accepted at the
   transfer school?
   [ ] 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
IF YOU ARE EMPLOYED, COMPLETE PART 3; OTHERWISE, GO TO PART 4.

PART 3.

M. Your current employment status.
   [ ] 1. Employed part-time
   [ ] 2. Employed full-time

N. What is the title of your current position?

__________________________

Employer's name and address:

__________________________

__________________________

O. Will you give the college permission to contact your employer for the purpose of evaluating your community college program?
   [ ] 1. Yes
   [ ] 2. No

Supervisor's name: __________________________________________

Supervisor's title: __________________________________________

P. When did you begin your present job? (check one)
   [ ] 1. Before attending this community college
   [ ] 2. While attending this community college
   [ ] 3. After graduating from this community college

Q. Geographic location in which you are presently employed. (check one)
   [ ] 1. 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 state

R. Relationship between your program at this community college and your job. (check one)
   [ ] 1. Program directly related to job
   [ ] 2. Program somewhat related to job
   [ ] 3. Program not at all related to job

S. If your job is not related to your program of study, check the major reason below.
   (check one)
   [ ] 1. Could not find job in field of preparation
   [ ] 2. Better pay in field in which employed
   [ ] 3. Better opportunity for advancement in field in which employed
   [ ] 4. Did not want to work in the field of preparation
   [ ] 5. Program of study at this college was not career-oriented
   [ ] 6. Other (please explain)
T. If you are employed full-time, what is your current weekly salary without overtime and before deductions? (check one)
   [ ] 1. $0-$145
   [ ] 2. $146-$175
   [ ] 3. $176-$205
   [ ] 4. $206-$235
   [ ] 5. $236-$265
   [ ] 6. $266-$295
   [ ] 7. $296-$325
   [ ] 8. $326 and above

U. If you are employed part-time, what is your hourly salary? $________
   On the average, how many hours per week do you work? ________ hours

V. Who helped you locate your current job? (check as many as appropriate)
   [ ] Faculty member
   [ ] College Placement Office
   [ ] Newspaper
   [ ] Employment agency
   [ ] Contacted employer on my own
   [ ] Family or friend
   [ ] Other

W. How satisfied are you with your community college preparation for employment? (check one)
   [ ] 1. Extremely satisfied
   [ ] 2. Satisfied
   [ ] 3. Unsatisfied

IF YOU ARE NOT EMPLOYED, COMPLETE PART 4.

X. Please check one.
   [ ] 1. I am seeking a job
   [ ] 2. I am not seeking a job

Y. If you are seeking a job, please check the major reason you have been unable to secure employment. (check one)
   [ ] 1. Salary too low in the field for which I was prepared at the community college
   [ ] 2. There are few openings in the field for which I was prepared
   [ ] 3. I need more education to qualify for the job I want
   [ ] 4. I have changed my career objective since graduating
   [ ] 5. I have not looked hard enough

What changes could be made to your community college program to improve a graduate's employment and/or transfer performance?

__________________________________________________________

Thank you for completing this questionnaire. Please return it in the enclosed prepaid envelope.
COMMUNITY COLLEGE QUIZ

Maryland State Board for Community Colleges

Test your knowledge about community college students. The answers have been established through extensive student follow-up studies in Maryland and are given at the bottom of page two. Circle the correct answer to each item.

1. What percentage of community college students come to the college for courses only (and not to seek a degree)?
   a. 5 percent.
   b. 20 percent.
   c. 35 percent.
   d. 50 percent.

2. Among the graduates, the two main reasons for attending a community college are (circle two)
   a. low cost.
   b. convenient location.
   c. program that the student wanted was available.
   d. college's academic reputation.
   e. unwilling or unable to attend another college.

3. What percentage of students are employed full-time while attending the community college?
   a. 10 percent.
   b. 30 percent.
   c. 50 percent.
   d. 70 percent.

4. About how many students graduate within 3½ years after entry?
   a. 10 percent.
   b. 20 percent.
   c. 40 percent.
   d. 60 percent.

5. After students leave the community college,
   a. most students transfer to a four-year college.
   b. most students are employed.
   c. about equal numbers transfer as are employed.
6. The student most likely to graduate is one who receives
   a. A grades.
   b. B grades.
   c. C grades.

7. The average community college student completes about how many credit
   hours of instruction in 3½ years?
   a. 15.
   b. 30.
   c. 45.
   d. 60.

8. Black and white students achieve what goal(s) at about the same rate?
   a. Transfer and employment goals.
   b. Employment goals.
   c. Transfer goals.
   d. Degree goals.
   e. None of the above.

9. Graduates who were seeking employment were asked why they could not find
   a job. What reason was selected least often?
   a. Few openings in the field of preparation.
   b. Needed more education to qualify for the job wanted.
   c. Salary too low in the field of preparation.
   d. Did not look hard enough for a job.
   e. Changed career objectives since graduating.

10. What percentage of the graduates that transferred had completed vocational programs at their community college?
    a. 5 percent.
    b. 20 percent.
    c. 40 percent.
    d. 60 percent.

Jim Tschechtelin 10-10-79

ANSWERS: (1) c, (2) b, and c, (3) c, (4) b, (5) b, (6) b, (7) b, (8) b, (9) b, (10) c.