A project was conducted to determine (1) what former telecommunications technology students of Skyline College (California) are doing now; (2) students' perceptions of how well telecommunications technology met their educational needs; (3) what advanced skills courses students feel they need; and (4) whether assessment test scores, mathematics courses completed, or level of education could be used to predict an applicant's success in the program. Background information was obtained and questionnaires were sent to the 365 students who had taken all or some of the telecommunications technology courses. Responses were received from 115 former students. The average age of respondents was 30 years when enrolled in the program; about one-fourth were female. The study found the following: (1) 57 percent of the respondents are currently employed in the telecommunications industry—an increase of 58 percent over the number of respondents who were working in the industry before entering the program; (2) about one-half of the respondents said they completed one or more industry training courses after leaving Skyline College; (3) 64 percent of respondents felt that they received an employable skill and 59 percent said the program resulted in improved job mobility; (4) 51 percent said they had received job placement assistance—they were especially appreciative of the job fair; (5) former students said they learned best by hands-on laboratory courses, then demonstration and lecture, and they thought more hands-on experience was needed; and (6) respondents would have liked to have a variety of other technical courses, especially courses in switching theory, managing a telecommunications system, and microwave technology. (Extensive appendixes present data for various groups of respondents.) (KC)
STUDENT FOLLOW-UP

Students enrolled in Telecommunications Technology

Prepared for
Donald D. Biederman

Prepared by
Christine L. Case

Fall, 1985
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PURPOSE

The purpose of this project was to ascertain:
- what former Telecommunications Technology students are doing now.
- students' perceptions of how well Telecommunications Technology met their educational needs.
- what advanced-skills-courses students feel they need.
- whether assessment test scores, mathematics completed, or level of education could be used to predict an applicants' success in Telecommunications Technology.

BACKGROUND

Telecommunications Technology is a relatively new vocational program offered at Skyline College. The first course was offered during the Spring 1983 semester, with two additional courses added in subsequent semesters. There are three courses scheduled regularly, they are:
- TCOM 401 - Basic Skills for Telecommunications, which is a prerequisite to TCOM 430 and TCOM 440.
- TCOM 440 - Fundamentals of Data Communications

An additional course, TCOM 680 - Assembly Language Programming for the IBM PC, has been offered twice. This course is not part of the program but was taken by some of the Telecommunications Technology students.

Students must apply to this program by special application, separate from the College registration procedure. Additionally, between Spring 1983 and Spring 1985, all applicants took four assessment tests to measure math, reading, writing, spatial discrimination and manual dexterity skills. Twelve students were accepted into advanced Telecommunications Technology classes on the basis of work experience.

PROCEDURES

Final grade sheets for TCOM 401, 430, and 440 were used to form a master list of all students enrolled in Telecommunications Technology between Spring 1983 and Spring 1985. The students were divided into five groups according to the classes they had completed:

1See the corresponding Appendix for data on any particular student group.
1 - Graduates completed TCOM 40, 430, and/or 440.
2 - Noncompleters completed TCCV 40, but withdrew from TCOM 430 or TCOM 440. A grade of W was shown for these students.
3 - Achievers completed TCOM 401 and/or 430 but did not register for the next course; they did not receive a grade of W.
4 - Nonachievers withdrew from TCOM 401.
5 - Experienced students completed TCOM 440 but did not take TCOM 401 and/or 430.

The 365 students were identified as shown in Figure 1.

![Graph showing the distribution of students categorized as Graduates, Noncompleters, Achievers, and Nonachievers.

FIGURE 1. Students contacted for follow-up on Telecommunications Technology.

Background information (age and sex) were obtained from EIS and former education, mathematics courses completed, and employment information were taken from the students' applications to Telecommunications Technology. Assessment test scores were procured from files in the Telecommunications Technology Office. Applications and assessment test scores were not available for Experienced students.

On September 16th a questionnaire was sent to each student. Copies of each questionnaire are in Appendices 1 through 5 and the cover letter sent to all students is in Appendix 6. Students currently enrolled in Telecommunications Technology were not contacted. Responses were

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2San Mateo County Community College District's Educational Information System.
requested on or before October 16th. On October 15 through 25, nonrespondents were telephoned to remind them to complete the questionnaire. Duplicate questionnaires were sent to approximately 20 students who had moved. Questionnaires for Noncompleters and Nonachievers were sufficiently brief to ask these questions on the telephone during the follow-up calls.

RESULTS

The average age of all students enrolled in TCOM 401 is 30 years (range 18-55 years). Females account for 24% of the enrollment. Student performance is shown in Figure 2.

![Graph showing student performance by semester](image)

**FIGURE 2. Number of students completing Telecommunications Technology courses by semester enrolled in TCOM 401.** Arrows indicate students currently enrolled.

Questionnaires were sent to 365 former students. Ninety-six were defined as “address-unknown” after the letters were returned by the post office and attempts to track these individuals through the post office and telephone company were unsuccessful. Fifty-six percent of the address-unknowns are Achievers. Responses were received from 115 former students (43%) (see Figure 1). The average age of respondents was 30 years (when

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Data for each student group are summarized in Appendices 1 through 5.
enrolled in TCOM 401). Eighty-seven of the respondents are males and 28 (24%) are females. The respondents reflect the age and sex distribution of the entire Telecommunications Technology student population. Responses and performance of males and females did not differ significantly, therefore, they were not summarized separately. Females are identified when they are employed in the telecommunications industry because women are underrepresented in scientific/technical areas and the success of these women is noteworthy. Data for each student group is summarized in Appendices 1 through 5.

If Graduates are viewed as the successful students, the level of mathematics completed beyond Elementary Algebra is not apparent as a significant factor toward achieving success in Telecommunications Technology. Most (54%) of the students in Telecommunications Technology had at least three years of high school mathematics (Figure 3).

FIGURE 3. Mathematics courses completed by respondents.

Nonachievers have weaker math. training than Graduates and these students did not complete Telecommunications Technology, however, Noncompleters have comparatively good math. training and also did not complete Telecommunications Technology. The fact that Nonachievers dropped TCOM 401 may indicate that the level of mathematics is a factor or the reasoning skills developed in studying math. are a useful prerequisite. One Achiever commented that he felt a prerequisite level of math. including logs. and trig. functions was necessary for success.
Sixty-two percent of the students completed some higher education. There is a correlation between post-secondary education and success in the Telecommunications program (Figure 4). This phenomenon can be seen in other areas of the College as well and possibly indicates a commitment to education by the student that a high-school-only student may not have made.

![Graph showing education levels completed by respondents](image)

**FIGURE 4.** Education completed by respondents prior to enrolling in Telecommunications Technology.

Four assessment tests were given to students enrolling in TCOM 401 between Spring 1983 and Spring 1985. Although the assessment tests may have had validity in determining the minimum aptitudes required for success, the test scores do not correlate to program completion. No attempt was made to correlate assessment test scores to grades or salaries. Graduates had the widest range of scores, for example

<table>
<thead>
<tr>
<th>Numerical ability</th>
<th>Range</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates:</td>
<td>40-17</td>
<td>29</td>
</tr>
<tr>
<td>Noncompleters:</td>
<td>39-24</td>
<td>32</td>
</tr>
<tr>
<td>Achievers:</td>
<td>37-13</td>
<td>29</td>
</tr>
<tr>
<td>Nonachievers:</td>
<td>39-19</td>
<td>26</td>
</tr>
</tbody>
</table>

The ranges of scores for each group overlapped on all tests and the average scores were virtually identical (see Figure 5).
WHAT THE RESPONDENTS ARE DOING NOW

Fifty-seven (50%) of the respondents are currently employed in the telecommunications industry. This is an increase of 58% over the number of respondents who were working in the telecommunications industry before entering Telecommunications Technology. Figure 6 illustrates employment by group.
Sixty-two percent of the Graduates are working in telecommunications, only two said they are unemployed and looking for work. The average rate of employment for each group is 45%. The average salary, of those answering, is $13.00 per hour (some did not answer as per employer's policy).

Noncompleters, Achievers, and Nonachievers did not complete Telecommunications Technology and show an increase of 21% in employment in the industry. One Noncompleter pointed out that "the transmission class is useful in my new job." This suggests that some students got sufficient exposure and/or experience to apply for an entry-level position and then chose not to complete the Telecommunications Technology Program.

Almost half (46%) of the respondents said they completed one or more industry training courses after leaving Skyline College. Students who completed TCOM 401, 430, and 440 were required to learn about the equipment used by a particular company.
Twelve respondents are in school part-time and two, full-time. Four students are studying data communications or telecommunications management at other institutions, three are enrolled in TCOM 100.

WHAT THE RESPONDENTS SAID
ABOUT JOB PLACEMENT:

Sixty-four percent felt that they received an employable skill and 59% said Telecommunications Technology resulted in improved job mobility. (21% felt that Telecommunications Technology did not improve their position or salary.)

When asked whether Telecommunications Technology provided an understanding of future careers in the telecommunications industry, 78% said yes.

When asked whether they received job placement assistance, 51% said yes. The job faire was praised by those students who participated in it. The former Qantas workers5 were enamored by the placement assistance they received. Table 1 shows the responses of students to questions regarding career preparation received in Telecommunications Technology.

TABLE 1. Responses to the question:
HOW MUCH HELP WAS TCOM IN THE FOLLOWING AREAS?
(Responses given in percent.) (N=76)

<table>
<thead>
<tr>
<th>Area</th>
<th>Much</th>
<th>Some</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Knowing what the jobs are</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>2 Finding needed job-related information</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>3 Getting along with customers and coworkers</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>4 Being able to talk to the boss about job problems</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>5 Applying for a job</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>6 Interviewing for a job</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>7 Career advancement</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>

In all items, responses for "some" were greater than "much". Items 5 and 6 were specifically requested by students when asked what types of job placement activities should be offered.

4TCOM 100 - Survey of Telecommunications was added to the Telecommunications Technology curriculum beginning in the Fall 1985 semester.
5Displaced workers enrolled in TCOM 401 during Spring 1984.
ABOUT COUNSELING:

Forty-four percent of the respondents said they did not seek counseling. Of the remaining students who did seek counseling, 66% said the help they got was average ("got some help") to low ("got no help"). One student added that the "instructors are great" as counselors.

Many of the students are inexperienced in higher education. Although enrollment in a program is a first step toward planning their futures, they need to make realistic goals. One student was disappointed when he found that starting salaries were $6 to $7 per hour and another dropped out of the program because he couldn't get a job after completing TCOM 401 and decided there wouldn't be any jobs after he completed TCOM 430 and TCOM 440. These students might benefit from guidance designed to help them see how education affects their entire future.

ABOUT INSTRUCTION:

Students said they learned best by hands-on lab, then demonstration and lecture. Reading and written homework were rated 3 on a scale of 1 to 5. When asked how instructional activities are used in Telecommunications Technology classes, the students were virtually unanimous in their responses, 80% felt that more hands-on lab was needed (see Figure 7).
FIGURE 7. When asked how learning activities were used overall, a majority of the students felt that there was too little hands-on laboratory, see arrow. (N=75).

Although 64% of the students said their telecommunications classes taught them how to use tools and equipment, many of the comments addressed the need for a fully functioning laboratory. It appears from the responses that some sections of some classes have not had any hands-on lab.

Respondents identified all of the following (Table 2) as additional courses for Telecommunications Technology. Table 2 shows the number of times a topic was identified as the most important.

<table>
<thead>
<tr>
<th>WHAT ADDITIONAL COURSES WOULD YOU LIKE TO SEE IN TCOM? (Number of times item was ranked number 1.) (N=75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching theory</td>
</tr>
<tr>
<td>Managing a telecommunications system</td>
</tr>
<tr>
<td>Microwave technology</td>
</tr>
<tr>
<td>Local area networks</td>
</tr>
<tr>
<td>Management training skills</td>
</tr>
<tr>
<td>Network management</td>
</tr>
<tr>
<td>Fiber optics</td>
</tr>
<tr>
<td>Satellite technology</td>
</tr>
</tbody>
</table>
These responses are consistent with the responses to "What learning experiences do you feel should be added to the TCOM program?" One respondent said that "TCOM provides useful information but not enough regarding systems management."

When asked when they would prefer to take additional Telecommunications Technology courses, the students were divided: 50% preferred 15-week semester length courses and 50% preferred short courses. Evenings were the first choice of three-fifths of the students, then weekends, days were least desirable.

WHY SOME DROPPED

Noncompleters, Achievers, and Nonachievers were asked why they did not continue Telecommunications Technology. A summary of their reasons is provided in Table 3, only four expressed dissatisfaction with the program itself and others commented "Excellent program, sorry I left" and "Good program".

TABLE 3. Selected responses to:
WHY DIDN'T YOU COMPLETE THE TELECOMMUNICATIONS PROGRAM? (N=68)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job schedule/commute</td>
<td>17</td>
</tr>
<tr>
<td>Got a job</td>
<td>7</td>
</tr>
<tr>
<td>Personal (e.g., trip, pregnancy)</td>
<td>4</td>
</tr>
<tr>
<td>Changed major</td>
<td>3</td>
</tr>
<tr>
<td>Too much work*</td>
<td>5</td>
</tr>
<tr>
<td>Lost interest*</td>
<td>5</td>
</tr>
<tr>
<td>Already knew [401] material§</td>
<td>3</td>
</tr>
<tr>
<td>Won't get her a promotion</td>
<td>1</td>
</tr>
<tr>
<td>Dissatisfied with the program*</td>
<td>4</td>
</tr>
</tbody>
</table>

* These are not uncommon reasons for students to withdraw from community college classes.
§ These students have two-year degrees in electronics.
* Two added that more hands-on lab would be desirable.
A number of respondents praised Telecommunications Technology and thanked Skyline College and the Telecommunications staff. One comment summarizes these. "Your TCOM program was, is, and will be an excellent opportunity for students." Another student said, "This program got me in the door of an exciting career." In their excitement for their own careers and this rapidly expanding industry, instructors and other industry professionals "hype the great industry", as one respondent said, forgetting that the students are being prepared for entry level jobs. A few comments addressed the disappointment students felt when they found that the first job is difficult to get and starting wages are lower than they expected. The fact that half of the employed students had to take on-the-job-training courses reminds us that they are being prepared for entry-level jobs.

Even students who did not graduate added: "It's excellent!!" "I learned a lot." "Thanks!!!"

While keeping in mind the attributes of Telecommunications Technology, two respondents remind us "You have a good foundation to build the best training program in the Western region"; "You have the potential". In education, we teach our students to set goals and to strive to achieve those goals. Three items reiterated by each group of respondents might serve as bases for goals for Telecommunications Technology. These are

- A consistent approach to hands-on laboratory work in each class is urged. Almost every respondent wrote in "more hands-on". After introductory material students suggested: bringing up the system and troubleshooting. At least three graduates would like to return to the same classes to get more hands-on experience. There appears to be variability between sections of the same class so that while some students want switching others want basic electricity added to the program.

- The job faire was found to be highly desirable and useful and, an annual job faire, if possible, would be an asset to the program. Additional suggestions included an on-going bulletin board listing jobs and salaries; listings of where students have been hired recently; and resume preparation. An added benefit of a job faire will be to increase the industry's awareness of Telecommunications Technology and facilitate placement of graduates.
Many of the students rely on their instructors for counseling but the classes are primarily offered in the evening and the instructor's time must be directed to coursework. These students are adults ranging in age from 18 to 55 years old and they can be frustrated by being in school rather than working full time and earning the salary they want. An attempt to provide some educational/career planning during each semester might minimize students' frustrations and confusion about their futures.

And, finally,

A few graduates would like an associate degree and one added that an associate degree would tangibly affect financial and promotional opportunities.
Appendices

1 - Graduates
2 - Noncompleters
3 - Achievers
4 - Nonachievers
5 - Experienced
6 - Cover letter to students

17
Graduates
Completed TCOM 401, 430, and 440

Number of students: 91 (-10 address unknown) = 81
Number of responses: 42 (52%)
Age: 30 years (18-54)
Sex: 34 Male, 8 Female
TCOM grades:

<table>
<thead>
<tr>
<th>Course</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>19</td>
<td>15</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>430</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>440</td>
<td>15</td>
<td>14</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>680</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Assessment test scores:
Mechanical reasoning: 69-34, average 54
Numerical ability: 40-17, average 29
Spatial relationships: 58-26, average 40
Verbal reasoning: 50-19, average 40
Number employed in TCOM before program: 10
Number employed in TCOM after graduating: 26 (See page 9)
Responses to Questionnaire

1. What is your current employment status?
   - 34 Employed full-time
   - 3 Employed part-time
     - 1 This is all I can get
     - 0 This is all I care to work
   - 3 Unemployed
     - 2 I am looking for a job
     - 1 I have been employed in telecommunications since completing TCOM.

2. Concerning employment.
   - 24 (including 6 women) employed in Telecommunications. See page 9.

5. What is your approximate hourly wage? $11.02 per hour.

6. After completing TCOM did you complete a company training program?
   - 9 Yes (2 currently enrolled)
   - 18 No

   If yes, what topics were covered in this training program?
   - E-911 systems, concentrator and identification (Pacific Bell).
   - Intro to CBX 8000 desk top (Rolm).
   - Various installation courses (PacTel).
   - Basic installation, data fundamentals, signalling for voice circuits, customer satisfaction skills ((Pacific Bell).
   - Customer relations, cable installation safety, tool identification, use of measurement meters, D/O theory, adjusting levels (Telecommunications Inc).
   - Use of testing equipment (MCI).
   - Analog modulation, modern front end processor theory, installation, diagnostic, troubleshooting (Postal Data Center).

7. What is your current schooling status?
   - 1 In school full-time
   - 12 In school part-time

   Skyline College: Electrical engineering
TCOM 100 (3)
Science
Golden Gate University: Telecommunications management
Foothill College: Data communications
West Valley College: Advanced data and digital communication
CCSF: Aeronautics and avionics
Labor studies
American River College: Range management
CSM: Pilot ground school

8. Do you feel you received an employable skill from your TCOM courses?
   25 Yes
   14 No

9. Did TCOM provide an understanding of future careers in the Telecommunications industry?
   37 Yes
   5 No

10. TCOM resulted in better job mobility (such as a promotion or better job) for me. (Check one)
    Strongly Agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree
    10  13  7

11. In general, how much help was TCOM in the following areas:
    a. Knowing how to use tools and equipment
       Much  Some  Little  None
       11  17  11  3
    b. Knowing what the jobs are
       8  21  11  2

1 More hands-on equipment in lab. (2x)
Very little transmission skill or hands on "field" experience.
He already knew the material.
2 Technical or managerial - not examples of job titles.
More time should be spent on this.
3 Not at this time, there is a surplus condition at Pacific Bell and no transfers are available. (2x)
4 Not in my field but there was some good information.
c. Finding needed job-related information  8  17  12  5  
d. Getting along with customers and coworkers  2  14  12  13  
e. Being able to talk to the boss about job problems  3  11  11  15  
f. Applying for a job  8  18  6  10  
g. Interviewing for a job  7  15  8  12  
h. Career advancement  6  18  12  6  

12. Please rank the following instructional activities in terms of how you learned best.  
   (best) 1  2  3  4  5 (least) 
Lecture  8  17  9  7  1  
Demonstration  14  12  7  5  4  
Hands-on Lab.  22  6  1  6  7  
Reading  10  13  8  8  3  
Written homework  7  3  17  6  9  

13. Please indicate how the following instructional activities were used overall in TCOM. 
   Too much       Just right       Too little 
Lecture  17  23  1 
Demonstration  
Hands-on Lab. 
Reading  5  32  4  

5Lab for [440] was practically nonexistent.  
No lab. after [401].
14. How would you evaluate the help which you received from Skyline's counselors?
   7 High. I got as much help as I needed.
   11 Average. I got some help.
   ☐ Low. I didn't get any help.
   21 Neutral. I never needed or sought any help.

15. Was placement service offered to you?
   30 Yes
   11 No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?
   Job faires. (12x)
   A list of companies that will/may hire students from TCOM and also job
descriptions from these companies to prepare students for applying. (5x)
   Improved credibility with TCOM companies.
   Placement service for those with little previous TCOM experience.
   ...The first job is very, very, very difficult to get."
   Same as provided [for Qantas workers]. (2x)
   Company-sponsored tours. (2x)
   Resumé writing and interview techniques. (4x)
   Assistance getting interviews.
   On-campus recruitment. (2x)
   Career directory for entry-level techs.

17. What learning experiences do you feel should be added to the TCOM program?
   Hands on experience with equipment and test instruments. (2x)
   Hands on with data communications.
   A fully operational lab. Structured labs. with specific objectives. (7x)
   More homework. (2x)
   More field trips.
   Beginning level terminal work.
   Co-op program/internships for students in 401/430. (3x)
   Basic electronics.
   Courses similar to those being offered at Golden Gate Univ.
   Days where a student goes to work with a technician.
   Less electronics theory and more use of measuring equipment in
   relation to signal. Use of fiber optic materials (splicing, troubleshooting).

6 None was given
Learning the basic skills of IDF construction, cable-running, etc.
Have lab set up so students can troubleshoot CDX equipment and phone line problems. (2x)
Switch maintenance/installation lab work. Lab on terminal-modem communication. Key system lab (1A2).
More hands on on how to use TIMS, oscilloscope, and data scope.
Telephone history can be omitted. (2x)
Human relations; TCOM management; FCC Test review.
Better texts.

18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate. All were marked >20 times.?

In the second column, rank from the most important (1) to least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>2</td>
<td>Switching theory</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>5</td>
<td>Network management</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>8</td>
<td>Microwave technology</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>8</td>
<td>Satellite technology</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>4</td>
<td>Fiber optics</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>4</td>
<td>Local area networks</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>1</td>
<td>Managing a telecommunications system</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>2</td>
<td>Management skills training</td>
</tr>
</tbody>
</table>

Other: Higher level of basic electricity and telephony.
Transmission theory/Basic electricity/(Hands-on) wiring. KTS vs. Electronic sets. FCC general class license prep. Key systems. Data/transmission/electronics.

19. When would you prefer to take additional TCOM courses?

19a. 24 15-week semester length courses
19b. 4 Days
19c. 9 Weekends
19d. 33 Evenings
23 Short courses

7 The three main courses should be expanded before adding other courses. Three semesters is too short.
20. Selected comments.

"I want to thank you Mr. Biederman and Skyline for being such a help."
"Your TCOM program was, is, and will still be, an excellent opportunity for students."
*The TCOM program helped her get a promotion. She thinks electronics should be a prerequisite to [401]. She needs more theory in her work.
*He wants to be informed on the status of the A.S. TCOM degree.
*TCOM provides useful information but not enough regarding systems management. She will continue taking TCOM courses.
*The TCOM program taught him enough to get his FCC license.
*He would like to enroll in any new courses to get more hands-on experience. (3x)
*He would be willing to share his job skills with the current classes. He feels there wasn't much instruction in IDF constructions, cross-connecting, and troubleshooting.
*Keep up the good program and keep good instructors.
*This program got him in-the-door of an exciting career. Although he learned a great deal, he feels that the College has potential for more. "...You have a good foundation to build the best training program in the Western region, You have the potential."
-Initial information about job availability and wages was greatly exaggerated. (2x)
-Since receiving his certificate, he has been looking for a job and most companies don't hire entry-level personnel...when they do the starting salary is lower than the average "craft technician".
-Need to get industry to be more aware of Skyline's TCOM program and more willing to hire graduates (even though they have not had paid work experience).
-The teachers knew their field, but they need outlines and learning objectives. (2x)
-He was disappointed with the expense (tool kit and book) and no lab.
-He would like a two-year program.
-Associate degree would tangibly affect financial and promotional opportunities (as per her boss).
Employment:
Before entering TCOM,
if in TCOM industry.

Currently,
if in TCOM industry.

Bay Area Systems (Agent for PacTel)
Telemarketing
Setting up appointments for sales reps.

Pacific Bell - Network Special Services
Systems Tech.
Installation/maintenance of 2-wire and 4-wire voice and data circuits;
testing these circuits with TIMS and other test equipment.

GTE Sprint
Traffic Software Analyst
Computer programmer/analyst

PacTel Communications System
Maintenance Engineer
Troubleshoot wiring, programming, hardware problems.

Pacifica TCI Cable
Utility Person
Checking TV converters, Cable TV installer.

Telecommunications Inc.
Tech III, Service Technician
Maintain and troubleshoot coaxial cable systems, adjust amplifiers;
provide customer service.

Geotech Services
Technician second class
Running 6-pair cable, installing RJIIIs; punching down and constructing IDFUs using BIX distributors; line-tracing.
Troubleshooting.

MCI
Technical Services Rep.
Installation and servicing MCI advantage units (autodialers).

USPS SMPDS
TCOM Tech. trainee

Chronicle Videotex (Bay Area Teleguide)
Technician
Install, maintain, and repair computer terminals and related TCOM equipment.

Rolm
Tech I
Install phones, modems, desktop, run cables.

U.S. West Information Systems
Field Service Technician
Prefield jobs; service PABX and key systems (knowledge of schematics mandatory); installing peripheral devices.

Bank of America
Telecom Analyst
Analyzing and troubleshooting logical and physical problems on a public data network.

GTE Sprint (laid off)
Facility Management Specialist
Assign facility inventories to service orders, maintain database, support Network Operations.

U.S. Telecom
Technician II
Installation and maintenance of automatic dialers (long distance); mainly wiring and programming.

Bank of America
Operations TCOM Analyst

---

He felt he could not apply much of what he learned in TCOM and, at GTE, was unable to transfer to an entry-level position.
Tele-Count Engineers, Inc.
Data Coordinator
Compiling missing data questions, expedite priorities, and keeping the job-flow.

IBM
Field Engineer
Computer technician

Pacific Telephone
Communications Technician
Data transmission, teletype, and voice installation and repair in the central office.

J-Tron
Communications Technician
Repair and install audio equipment.

U.S. Postal Service
Telecommunications Specialist
Design, maintain equipment for national network.

Pacific Bell
Staff Clerk
Process and track all special service business orders for installation, testers for data, 2 wire and 4-wire

Supporting remote data comm. equipment for B of A in No. Calif.

Starnet Corp/Operations
Operations Engineer
Daily AMA tapes; checking for lockouts; using TMS and Ω meter; accepting CKTS from Telco by testing with 3 tone slope, noise, and ERL.

TIE Communications
Technical Service Engineer
Troubleshooting phone system; keeping lab. equipment running.

--

Pacific Bell - Network Special Services
Systems Technician
(Installer/Repairman)
Wiring single-unit or multi-unit voice, data teletype circuits.
Ordering parts, Reading blueprints, Planning jobs.

Low-Voltage Specialties
Owner
Telecommunications Services

USPS Data Operations Division
Program Manager network operations

Pacific Bell: Special Services
Repair
Staff Clerk Dispatcher
Take oral and printed reports from troubles for businesses. Dispatch
Pacific Telephones
Plant Service Clerk
Sorting, coding, dispersing data/voice service orders; data processing; maintain computer hardware, write

Pacific Telephones
Staff Clerk
Processing Orders for telecommunication lines and equipment

MCI
Troubleshooting Clerk
Receive troubles; search data in switch; pull and take statistics; test calls in switch. Pull traffic reports.

Pacific Telephones
Service Technician
Installation of phone, service, and maintenance of equipment.
The Questionnaire
1. What is your current employment status? Please complete the appropriate section.

☐ Employed full-time. If your job is not in the telecommunications industry skip to question 7.

☐ Employed part-time. If you work part-time (less than 30 hours per week) check the reason why:
  - This is all I care to work.
  - This is all I can get.
  - If your job is not in telecommunications skip to question 7.

☐ Unemployed. If you are presently unemployed check the reason why:
  - Full-time homemaker
  - I don't care to work
  - I am looking for a job

Have you been employed in telecommunications since completing TCOM?
  - Yes
  - No, go to question 7

If yes, go to question 3 and answer for your most recent job.

2. What is the name of the company/division you work for?

________________________________________________________________________

2a. Optional. We would like your supervisor's opinion of the TCOM program, please provide the name and address of your supervisor.

________________________________________________________________________

3. What is your job title?

________________________________________________________________________

4. What are your job duties? (Job duties are tasks you are required to do in your job such as soldering, ordering supplies, laying out parts, reading charts, wiring, and the like.)

________________________________________________________________________

________________________________________________________________________

31

Please turn page.
5. What is your approximate hourly wage? $__________ per hour.

6. After completing TCOM did you complete a company training program?
   □ Yes
   □ No

   If yes, what topics were covered in this training program?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

7. What is your current schooling status?
   □ In school full-time
   □ In school part-time

   7a. If you checked one of these, what school are you attending?
   ____________________________

   7b. What program/major are you studying?
   ____________________________

8. Do you feel you received an employable skill from your TCOM courses?
   □ Yes
   □ No

9. Did TCOM provide an understanding of future careers in the Telecommunications industry?
   □ Yes
   □ No

10. TCOM resulted in better job mobility (such as a promotion or better job) for me.
    (Check one)
    Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree
    _______ _______ _______ _______ _______

Please turn page
11. In general, how much help was TCOM in the following areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Knowing how to use tools and equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Knowing what the jobs are</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Finding needed job-related information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Getting along with customers and coworkers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Being able to talk to the boss about job-related problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Applying for a job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Interviewing for a job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Career advancement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Please rank the following instructional activities in terms of how you learned best.

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 (best)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hands-on Lab.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Written Homework</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Please turn page
13. Please indicate how the following instructional activities were used overall in TCOM.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Too much</th>
<th>Just right</th>
<th>Too little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Demonstration</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hands-on Lab.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reading</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Written homework</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

14. How would you evaluate the help which you received from Skyline's counselors?
- □ High. I got as much help as I needed.
- □ Average. I got some help.
- □ Low. I didn't get any help.
- □ Neutral. I never needed or sought any help.

15. Was placement service offered to you?
- □ Yes
- □ No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

17. What learning experiences do you feel should be added to the TCOM program?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate.

In the second column, rank from the most important (1) to least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

☑ 1. Switching theory
☑ 2. Network management
☑ 3. Microwave technology
☐ Satellite technology
☐ Fiber optics
☐ Local area networks
☐ Managing a telecommunications system
☐ Management skills training
☐ Other. (Please specify)________________________

19. When would you prefer to take additional TCOM courses?

19a. ☐ 15-week semester length courses
☐ Short courses

19b. ☐ Days
☐ Evenings
☐ Weekends

20. Comments. Please write any additional comments below.

If the address (used to mail this questionnaire) is incorrect, please provide your correct address so that you can receive information on future TCOM courses and events.

Name__________________________________________________________
Address_______________________________________________________
City, State____________________________________________________
Zip________________________

Thank you!

ID #____________________
For coding purposes only.
Your responses are confidential.
Noncompleters

Completed TCOM 401 but withdrew from TCOM 430 or TCOM 440.

Number of students: 26 (-7 address unknown) = 19
Number of responses: 13 (68%)
Age: 30 years (20—44)
Sex: 10 Male; 3 Female
TCOM grades:

<table>
<thead>
<tr>
<th>Course</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>430</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>440</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

Number who want to return to program: 2

Assessment test scores:
Mechanical reasoning: 65-38, average 52
Numerical ability: 39-24, average 32
Spatial relationships: 48-29, average 38
Verbal reasoning: 49-21, average 41
Education

2-1.5 yr Community College; 2-1 yr Community College; 1-1 yr. Drafting Technology

Number of Students

<table>
<thead>
<tr>
<th>Level</th>
<th>H.S.</th>
<th>A.A.</th>
<th>B.A.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mathematics

- Elementary algebra
- Geometry
- Intermediate algebra
- Trigonometry
- 1-Solid algebra; 1-College algebra; 1-Calculus

Number of Students

<table>
<thead>
<tr>
<th>Level</th>
<th>H.S.</th>
<th>A.A.</th>
<th>B.A.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Number employed in TCOM before program: 3
Number employed in TCOM after leaving program: 4

Employment:
Before entering TCOM, if in TCOM industry:

Bank of America
Telecommunications specialist
Maintain voice network.

--

Eaton Corp/Microwave Products Division
Microwave Engineering R&D technician.
Troubleshoot, align, test hybrid microwave components.

Currently, if in TCOM industry:

Bank of America
Senior Service Technician
Service and repair data card system.

GTE Sprint
Network analyst
Monitor the grade of SVES implement action based on network forecast.

PT & T
Installation supervisor
Handle modulation program, prewire, and service orders.

Eaton Corp/Microwave Products Division
Installation supervisor
Handle modulation program, prewire, and service orders.

GTE Sprint
Traffic planner.

Bank of America
Special Service Supervisor
Handle WATTS lines.

PacBell

1Completed a company training program covering microwave theory, antenna, components.
Why didn't you complete the Telecommunications program at Skyline College?
- No time. Working more hours. Had heard bad things about the program but will finish some time.
- Left class because of pregnancy. Wishes there was an East Bay program.
- Left because working too many hours. (2x)
- Working fulltime and going to class nights was too much.
- Left because got a fulltime job (not in TCOM).
- Moved, impossible to commute.
- Change in work schedule.
- Didn't like night school; wasn't that interested.
- After completing 401 there were no jobs so he didn't think he could get one after completing 430/440.

Selected Comments:
* The program is a very good one and he hopes to be able to continue in the near future.
* Pretty good. Transmission class useful in his new job.
- [401] was pretty good.
- [401] needs a lot more hands on application to better show how basic theory works.
- Too much theory.
- Having a syllabus and working switch would be good.
The Questionnaire
1. What is your current employment status? Please complete the appropriate section.

- Employed full-time. If your job is not in the telecommunications industry skip to question 7.
- Employed part-time.: If you work part-time (less than 30 hours per week) check the reason why:
  - This is all I care to work.
  - This is all I can get.
If your job is not in telecommunications skip to question 7.
- Unemployed. If you are presently unemployed check the reason why:
  - Full-time homemaker
  - I don't care to work
  - I am looking for a job
Have you been employed in telecommunications since leaving the TCOM program?
  - Yes
  - No, go to question 7
If yes, go to question 3 and answer for your most recent job.

2. What is the name of the company/division you work for?

2a. Optional. We would like your supervisor's opinion of the TCOM program, please provide the name and address of your supervisor.

3. What is your job title?

4. What are your job duties? (Job duties are tasks you are required to do in your job such as soldering, ordering supplies, laying out parts, reading charts, wiring, and the like.)
5. What is your approximate hourly wage? $___________ per hour.

6. Did you complete a company training program?
   □ Yes
   □ No
   If yes, what topics were covered in this training program?
   _____________________________________________
   _____________________________________________
   _____________________________________________

7. Why didn't you complete the Telecommunications program at Skyline College?
   _____________________________________________
   _____________________________________________
   _____________________________________________

8. Comments. Please write any additional comments below, use the reverse if needed.

If the address (used to mail this questionnaire) is incorrect, please provide your correct address so that you can receive information on future TCOM courses and events.

Name _____________________________________________
Address _____________________________________________
City, State ________________ Zip ________________

Thank you!

ID # __________________
For coding purposes only.
Your responses are confidential.
Achievers
Completed TCOM 401 and/or TCOM 430; did not register for the next course

Number of students: 183 (-54 address unknown) = 129
Number of responses: 32 (25%)  1 Refused to answer
Age: 30 years (22-44)
Sex: 24 Male, 8 Female

TCOM grades:

<table>
<thead>
<tr>
<th>Course</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>7</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>430</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>440</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>660</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Number who plan to return to program: 5

Assessment test scores:
Mechanical reasoning: 66-40, average 51
Numerical ability: 37-13, average 29
Spatial relationships: 56-27, average 41
Verbal reasoning: 50-22, average 39
Number employed in TCOM before program: 13
Number employed in TCOM after leaving program: 13 (See page 9)
Responses to Questionnaire

1. What is your current employment status?
   26 Employed full-time
   1 Employed part-time
   1 This is all I can get
   1 Unemployed
   1 I am looking for a job

2-4. Concerning employment.
   13 (including 4 women) employed in Telecommunications. See page 9.

5. What is your approximate hourly wage? $13.55 per hour.

6. Did you complete a company training program?
   9 Yes
   7 No

If yes, what topics were covered in this training program?

- Usage of test vehicles; testing procedures (PacBell)
- Basic telephony; data circuits (PacBell)
- Ordering telephone service for customers (PacBell)
- Dimension 400, System 72 (AT&T)
- Computer applications; networks; components (PacBell)
- Coding and defining a Rolm CBX; CBX maintenance; CBX data configuration.

7. What is your current schooling status?
   □ I am presently enrolled in TCOM 430 or 440.
   32 I am not enrolled in TCOM 430 or 440 at present.

7a. If you are not currently taking TCOM 430 or 440, why not?
   - Just completed 15 units at Golden Gate Univ. for TCOM management certificate (TCOM 430 counted 3 units toward his certificate).
   - He is trying to arrange to return to school.
   - He changed his major (and is employed at PacBell).
   - He needed a semester off to evaluate his job situation.
   - The commute is too long. (3x)
   - He had a schedule conflict. (4x)
   - Works swing shift.
   - She will continue. (2x)
   - Changed major (2x) / Pursuing an M.B.A. / Programming
   - He got a job (4x) / Auto industry / Broadcasting / Aircraft maintenance
   - She is no longer in the TCOM industry. (2x)
He feels he needs work experience before advancing to [440] and recommends this to other students.

- Starting salaries too low.
- Does not interest me.
- Registration material not sent (2x)
- Too much work.

8. Do you feel you are receiving an employable skill from your TCOM courses?
   - Yes
   - No

9. Is TCOM providing an understanding of future careers in the Telecommunications industry?
   - Yes
   - No

10. I feel confident that TCOM will result in better job mobility (such as a promotion or better job) for me. (Check one)

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>7</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

11. In general, how much help is TCOM in the following areas:

   a. Knowing how to use tools and equipment
   - Much
   - Some
   - Little
   - None
   - 9
   - 10
   - 10
   - 0

   b. Knowing what the jobs are
   - 5
   - 12
   - 11
   - 1

   c. Finding needed job-related information
   - 3
   - 12
   - 11
   - 3

   d. Getting along with customers and coworkers
   - 5
   - 9
   - 7
   - 8

   e. Being able to talk to the boss about job problems
   - 3
   - 9
   - 7
   - 10

---

1. Allowed her to switch from software only to software and hardware. (Rolv)
2. He feels only a part of the TCOM industry was addressed.
3. She was immediately promoted (and after 8 months was surplused). (PacBell)
12. Please rank the following instructional activities in terms of how you learn best.

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>(least)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td>10</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hands-on Lab.</td>
<td>17</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Written homework</td>
<td>1</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

13. Please indicate how the following instructional activities are used overall in TCOM.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Too much</th>
<th>Just right</th>
<th>Too little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>12</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Demonstration</td>
<td>0</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Hands-on Lab.</td>
<td>1</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Reading</td>
<td>8</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Written homework</td>
<td>2</td>
<td>16</td>
<td>9</td>
</tr>
</tbody>
</table>
14. How would you evaluate the help which you receive from Skyline’s counselors?
   7 High. I get as much help as I need.
   6 Average. I get some help.
   8 Low. I don't get any help.
   9 Neutral. I never need or seek any help.

15. Is placement service offered to you?
   5 Yes
   19 No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?
   Job faires (5x)
   Bulletin board; continual job listings; include salaries (3x)
   On-going recruitment
   Internships (2x)
   On-campus interviews (2x)
   Direct placement
   Coaching to put TCOM students ahead of off-the-street applicants

17. What learning experiences do you feel should be added to the TCOM program?
   TCOM switching system (virtual CKTS); LAN; Microwave
   Key systems
   More basic telephony (2x)
   More electrical theory and hands-on
   Internships (2x)
   Explain that employment after TCOM program will be entry-level
   Field trips (2x)
   Actual troubleshooting; bringing up a system
   Certification on equipment
18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate.

In the second column, rank from the most important (1) to the least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

<table>
<thead>
<tr>
<th>1</th>
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<td>3</td>
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<tr>
<td>8</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other. Satellite tech. and fiber optics should be one course.

Special svc theory. Computer diagnostics. Computer operations
YS & MYS)OS, JCL, job streams, SHA, SDLC, NCCG. Computers &

19. When would you prefer to take additional TCOM courses?4

19a. 12 15-week semester length courses
16 Short courses
16 Short courses
9b. 6 Days
16 Evenings
11 Weekends

20. Comments.

*I very much enjoyed [401 and 403] and the knowledge that I acquired. I would have very much liked to have attained my certificate*

*I have decided to pursue a career in aircraft maintenance. [401] helped me pass my entrance exam. Thanks!!!*

*I would very much like to finish the TCOM program but because of problems I had to stop.*

*Your program has a lot of potential if you have more classes and quality instruction.*

*More hands-on. But I really liked [401]. I will be going back and I hope the program continues. It's excellent!! I learned a lot.*

-Math prerequisite or Math for TCOM course with logs. and trig. functions is needed.

-4[430] was weak on hands-on.

---

4One student wrote-in that he preferred correspondence courses.
- He would like more daytime classes.
- Lab/lecture instructors did not agree (Sp 85), H-P Manual was not used (2x)
- He got tired of the "hype of the great industry" they were getting into.
- The blue text (Telecom Book) cost $80 and was not used; it is not even good reference material for beginning students.
- Starting wages were exaggerated.
- Lack of standards in testing and grading. (3x)
- More hands-on.
Employment:
Before TCOM, if in TCOM industry.

--

Currently, if in TCOM industry.

AT&T Information Systems
Systems Tech.
Installation & maintenance of large phone systems on customers' premises.

S.F. Police Department
Teleprocessing Technician
Install all communications/hardware (phone & IBM).

Rolm
Technician
Adds, moves, & changes hardware & software of Rolm CBX, schedules other technicians, maintains logs.

Tandem Computers Inc
Systems Test Technician
Test PC backplates installed on CPU, tape, & disk drives. Test ports A-B on processor, memory, sync, controller boards. Build systems. Bring system up, perform software diagnostics.

--

S.P. Communications
Service Operator
Schedule, track, and troubleshoot installation, change, and disconnect orders for leased lines.

Pacific Telephone
Staff Supervisor
Personnel administrator on V-P's staff.

Micromation Inc.
Assembler
Assemble and test sub-components.

G.T.E.Sprint
Lead computer operator
Monitor & run batch jobs on two online tandem system.
Bank of America
Network Technician
Troubleshoot/diagnose network problems.

Pacific Bell
Analyst
Computer input addresses of field work.

PT&T
Plant Reports Clerk
Coin telephone accounts.

PT&T
Test Desk Technician
Test and coordinate line-ups of data, voice; grade facility line for other communications companies.

Day and Night Communications Inc.
Communications Consultant
Sales, demos, sales coordination.

Pacific Telephone
Staff Clerk
Typing, filing

PT&T
Test Desk Technician
Troubleshoot and turn-up telephone circuits.

Pacific Bell
Office Assistant
Diagnostic tests to isolate teleprocessing network failures; identify failed components.

U.S.P.S. Data Center
Datacommunications Network Specialist. Interface with users, host, and COMTEN/TYMNET.

Chevron/Telecom Div.
Telecom Tech.
Troubleshoot digital switch, telephones, and data CKTS.

Pacific Bell
Analyst
Verification of databases.

Pacific Bell
Plant Reports Clerk
Coin telephone accounts.

Pacific Bell
Test Desk Technician
Test and coordinate CKT line with installers. Complete paperwork.

Behrman Associates
Owner
Helping clients select phone systems for small businesses; coordinating installation, overseeing training, troubleshooting.

Pacific Bell
Service Representative
Works with CO to get residence phone svc.

Pacific Bell/Network Services
Assistant Manager
Troubleshoot interexchange carrier circuits (voice and data).

Pacific Bell/ISO
Office Assistant
Screen trouble calls and troubleshoot problems via computer applications.

U.S.P.S.
The Questionnaire
1. What is your current employment status? Please complete the appropriate section.

- [ ] Employed full-time. If your job is not in the telecommunications industry skip to question 7.

- [ ] Employed part-time: If you work part-time (less than 30 hours per week) check the reason why
  - [ ] This is all I care to work
  - [ ] This is all I can get
  If your job is not in telecommunications skip to question 7.

- [ ] Unemployed. If you are presently unemployed check the reason why
  - [ ] Full-time homemaker
  - [ ] I don't care to work
  - [ ] I am looking for a job
  - [ ] I am going to school

Have you been employed in telecommunications since completing TCOM 401?

- [ ] Yes
- [ ] No, go to question 7

If yes, go to question 3 and answer for your most recent job.

2. What is the name of the company/division you work for?

________________________________________________________________________

2a. We would like your supervisor's opinion of the TCOM program, please provide the name and address of your supervisor.

________________________________________________________________________

3. What is your job title?

________________________________________________________________________

4. What are your job duties? (Job duties are tasks you are required to do in your job such as soldering, ordering supplies, laying out parts, reading charts, wiring, and the like.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
5. What is your approximate hourly wage? $_____________ per hour.

6. Did you complete a company training program?
   - [ ] Yes
   - [ ] No

If yes, what topics were covered in this training program?

7. What is your current schooling status?
   - [ ] I am presently enrolled in TCOM 430 or 440.
   - [ ] I am not enrolled in TCOM 430 or 440 at present.

7a. If you are not currently taking TCOM 430 or 440, why not?

8. Do you feel you are receiving an employable skill from your TCOM courses?
   - [ ] Yes
   - [ ] No

9. Is TCOM providing an understanding of future careers in the Telecommunications industry?
   - [ ] Yes
   - [ ] No

10. I feel confident that TCOM will result in better job mobility (such as a promotion or better job) for me. (Check one.)
     - [ ] Strongly agree
     - [ ] Agree
     - [ ] Neither agree nor disagree
     - [ ] Disagree
     - [ ] Strongly disagree
11. In general, how much help is TCOM in the following areas:

   a. Knowing how to use tools and equipment
      Much  Some  Little  None
   b. Knowing what the jobs are
      □  □  □  □
   c. Finding needed job-related information
      □  □  □  □
   d. Getting along with customers and coworkers
      □  □  □  □
   e. Being able to talk to the boss about job problems
      □  □  □  □
   f. Applying for a job
      □  □  □  □
   g. Interviewing for a job
      □  □  □  □
   h. Career advancement
      □  □  □  □

12. Please rank the following instructional activities in terms of how you learn best.

   (best) 1  2  3  4  5 (least)

   Lecture
      □  □  □  □
   Demonstration
      □  □  □  □
   Hands-on Lab.
      □  □  □  □
   Reading
      □  □  □  □
   Written homework
      □  □  □  □
13. Please indicate how the following instructional activities are used overall in TCOM:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Too much</th>
<th>Just right</th>
<th>Too little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td></td>
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<tr>
<td>Hands-on Lab.</td>
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<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written homework</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. How would you evaluate the help which you receive from Skyline's counselors?
- High. I get as much help as I need.
- Average. I get some help.
- Low. I don't get any help.
- Neutral. I never need or seek any help.

15. Is placement service offered to you?
- Yes
- No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?

17. What learning experiences do you feel should be added to the TCOM program?
18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate.

In the second column, rank from the most important (1) to the least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

√ 1, 2, 3
☐ Switching theory
☐ Network management
☐ Microwave technology
☐ Satellite technology
☐ Fiber optics
☐ Local area networks
☐ Managing a telecommunications system
☐ Management skills training
☐ Other. (Please specify)

19. When would you prefer to take additional TCOM courses?

19a. ☐ 15-week semester length courses
☐ Short courses

19b. ☐ Days
☐ Evenings
☐ Weekends

20. Comments. Please write any additional comments below, use the reverse if needed.

If the address (used to mail this questionnaire) is incorrect, please provide your correct address so that you can receive information on future TCOM courses and events.

Name__________________________________________
Address________________________________________
City, State______________________ Zip__________

Thank you!

ID #____________________
For coding purposes only.
Your responses are confidential.
Nonachievers
Withdrawn From TCOM 401

Number of students: 53 (-21 address unknown) = 32
Number of responses: 23 (72%)  2 Refused to answer
Age: 27 years (20-38)
Sex: 16 Male; 7 Female
TCOM grades:

<table>
<thead>
<tr>
<th>Course</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>W</th>
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</thead>
<tbody>
<tr>
<td>401</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

Number who want to return to program: 6

Assessment test scores:
Mechanical reasoning: 66-33, average 51
Numerical ability: 39-19, average 28
Spatial relationships: 48-31, average 42
Verbal reasoning: 50-26, average 40

Number employed in TCOM before program: 8
Number employed in TCOM after leaving program: 12 (See page 3)
1-1 year community college
1-Concurrent enrollment in basic electricity at CSM

**Education**

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Students</th>
</tr>
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<tbody>
<tr>
<td>H.S.</td>
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<tr>
<td>A.A.</td>
<td>4</td>
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<tr>
<td>B.A.</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

**Mathematics**

- Elementary algebra: 13
- Geometry: 11
- Intermediate algebra: 10
- Trigonometry: 8
- 1-Appl. Diff. Eq: 4
- 1-Analytic: 2
- 1-Calc. I: 1

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Students</th>
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<td></td>
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</tbody>
</table>
Employment:
Before entering TCOM, if in TCOM industry,

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--

--

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Pacific Bell
Computer operator (OFC assistant)
Perform diagnostic test to isolate teleprocessing network failures, monitor network

Pacific Bell
Communications Technician
Troubleshooting and maintenance of T-carrier equipment, turning up new circuits

Selecterm
Field Service Technician
Maintain computer systems for small businesses

Pacific Telephone
Lineman (Outside Plant Tech)
Placing phone cable

Currently, if in TCOM industry,

The Gap, Computer Room
Data processing

GTE Sprint
Budget administrator

DataCorp
Data processing (shipping/receiving inventory)

The Gap, Computer Room
Mainframe operator; network point-of-sales

Northern Telecom 105
Account Representative (installed base sales)
Sales/customer relations

Pacific Bell
Mainframe operator, clerical

Pacific Bell
Communications Technician

Full time student in CLC computer training program

Pacific Bell
Lineman
Placing and wrecking cable, pole transfers, reading prints, operating heavy equipment

1Company training program on products and sales techniques.
Pacific Telephone
TSPS Operator
Handle calls having to do with "0", OVS, CRCD, SPBL, etc.

Harris Corp. Digital Telephone Syst.
Application Engineer
Implementation of PABY business system

GTE Sprint
Sr. Network Analyst
Analytic support for the Western U.S. switch cut

Pacific Bell
Service Technician (Installer)²
Read maps, blueprints, CO Centrex CO lines. (general business) customer advocate, climb poles, install cable, order parts, stock complete (Bus-Res) line

Signet Tech.
Works with integrated voice-data transmission

GTE Sprint
Sr. Network analyst for shared network
Evaluate cost-effectiveness

Pacific Bell
Test desk technician
Test, turn up, and troubleshoot private line circuits

²Company training program on basic wiring, pole climbing, splicing-color code, 6095, "safe work".
Why didn't you complete the Telecommunications program at Skyline College?

- Had too much to do at new job.
- Insufficient time. (3x)
- Working fulltime. (2x)
- Working graveyard.
- Working too many hours.
- He had an opportunity to go to Greece.
- "Personal": Nothing to do with the program.
- Too fast, didn't know enough electronics.
- Felt overwhelmed. Plans on enrolling in 100.
- Wasn't applying himself and started to lose interest.
- Job shift change.
- 401 was a repeat of Basic Electricity (at CSM). TCOM certificate wouldn't get her a promotion.
- Got bored (he has an A.A. degree in electronics).
- 401 was too easy (he has an A.A. degree in EE tech).
- Took too much time; too much material to learn.

Selected Comments:

*Excellent course, sorry I left.
*Good program.
*Needs day sections of 430 & 440.
*Enjoyed 401 content.
- He feels he should have been allowed to take 430 because he has an A.A. degree in electronics.
- $60 for a book that was incomplete and wasn't even a book.
- Lab/lecture instructors disagreed. (3x) (Spring 85)
- Homework papers not returned for study.
- Too much time spent on history of the phone company; not enough hands-on.
The Questionnaire
1. What is your current employment status? Please complete the appropriate section.

- Employee full-time. If your job is not in the telecommunications industry skip to question 7.

- Employee part-time. If you work part-time (less than 30 hours per week) check the reason why:
  - This is all I care to work.
  - This is all I can get.
  - My job is not in telecommunications skip to question 7.

- Unemployed. If you are presently unemployed check the reason why:
  - Full-time homemaker
  - I don't care to work
  - I am looking for a job
  - Have you been employed in telecommunications since leaving the TCOM program?
    - Yes
    - No, go to question 7
  - I am not looking for a job

2. What is the name of the company/division you work for?

2a. Optional. We would like your supervisor's opinion of the TCOM program, please provide the name and address of your supervisor.

3. What is your job title?

4. What are your job duties? (Job duties are tasks you are required to do in your job such as ordering supplies, laying out parts, reading charts, wiring, and the like.)
5. What is your approximate hourly wage? $_________ per hour.

6. Did you complete a company training program?
   □ Yes
   □ No
   If yes, what topics were covered in this training program?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

7. Why didn't you complete the Telecommunications program at Skyline College?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

8. Comments. Please write any additional comments below, use the reverse if needed

If the address (used to mail this questionnaire) is incorrect, please provide your correct address so that you can receive information on future TCOM courses and events.

Name________________________________________________________
Address_____________________________________________________
City, State_________________________ Zip__________________

Thank you!

ID #______________________
For coding purposes only.
Your responses are confidential.
Experienced
Completed TCOM 440 Without TCOM 401 and/or TCOM 430

Number of students: 12 (-4 address unknown) = 8
Number of responses: 5 (63%) 1 Refused to answer
Age: 37 years (27-52)
Sex: 3 Male, 2 Female
TCOM grades:

<table>
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<tr>
<th>Course</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
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</tbody>
</table>

Applications and assessment test scores are not available for this group.

Responses to Questionnaire

1. What is your current employment status?
   5 Employed full time
   2 (women) Employed in telecommunications industry.

2-4. Concerning employment.
   AT&T: Field Service Organization
   Systems Technician
   Software changes on electronic PBX systems; traffic & trunking consultation
   with my customers; ordering supplies; reading schematics; installing wire for
   telephone and data uses; using various hand tools and test equipment; system record
   keeping and inventory; instruct customer on use of features.
   IBM Service, San Francisco
   Service Representative
   Fixing computer terminals, keeping records, operating terminals, training
   people to operate terminals.

5. What is your approximate hourly wage? $14.50 per hour.

6. After completing TCOM did you complete a company training program?
   1 Yes
   1 No
   If yes, what topics were covered in this training program?
   Training with [AT &T] is on-going. Since she completed the TCOM program,
she has had 6 weeks of data training and 1 week of training on [AT&T’s]
energy communication system. In addition, there is on-the-job-training for
specific functions.
Before TCOM: IBM teleprocessing courses.

7. What is your current schooling status?
   1. In school full-time
   0. In school part-time

7a. If you checked one of these, what school are you attending?
   CCSF

7b. What program/major are you studying?
   Business/accounting

8. Do you feel you received an employable skill from your TCOM courses?
   2. Yes
   3. No

9. Did TCOM provide an understanding of future careers in the Telecommunications industry?
   2. Yes
   3. No

10. TCOM resulted in better job mobility (such as a promotion or better job) for me.
    (Check one)
    | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly disagree |
    |----------------|-------|---------------------------|----------|------------------|
    | 2              | 1     | 2                         |

11. In general, how much help was TCOM in the following areas:
    a. Knowing how to use tools and equipment
    | Much | Some | Little | None |
    | 2    | 1    | 1      | 2    |
    b. Knowing what the jobs are
    | 1    | 2    | 1      | 1    |
    c. Finding needed job-related information
    | 2    | 1    | 2      | 2    |
    d. Getting along with customers and coworkers
    | 3    | 0    | 2      | 0    |

---

1. Only because it is a recently acquired certificate from an accredited institution.
2. In 430, instructor had us teach ourselves to use equipment but there was no instruction book.
e. Being able to talk to the boss about job problems

f. Applying for a job

g. Interviewing for a job

h. Career advancement

12. Please rank the following instructional activities in terms of how you learned best.


13. Please indicate how the following instructional activities were used overall in TCOM.


3In 440 there was no lab.
14. How would you evaluate the help which you received from Skyline's counselors?
   □ High. I got as much help as I needed.
   □ Average. I got some help.
   2 Low. I didn't get any help.
   2 Neutral. I never needed or sought any help.

15. Was placement service offered to you?
   1 Yes
   4 No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?
   Company representatives recruiting from program.
   Career days. List available jobs. Announcements of companies recently hiring graduates.
   Company internship (see question 17).

17. What learning experiences do you feel should be added to the TCOM program?
   Internships at companies to provide hands-on experience; for college credit.
   More hands-on. More digital theory.
   Field trips. Exposure to a more diversified group of instructors.
   Get qualified and responsible instructors.

18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate.
   In the second column, rank from the most important (1) to least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

<table>
<thead>
<tr>
<th></th>
<th>1, 2, 3</th>
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<tbody>
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<td>1</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Rank</th>
</tr>
</thead>
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<td>Switching theory</td>
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<tr>
<td>Network management</td>
<td>1, 3</td>
</tr>
<tr>
<td>Microwave technology</td>
<td>2</td>
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<tr>
<td>Satellite technology</td>
<td>2</td>
</tr>
<tr>
<td>Fiber optics</td>
<td>1</td>
</tr>
<tr>
<td>Local area networks</td>
<td>1, 2, 2</td>
</tr>
<tr>
<td>Managing a telecommunications system</td>
<td>3, 3</td>
</tr>
<tr>
<td>Management skills training</td>
<td>1</td>
</tr>
</tbody>
</table>

Instructors were great.

70
19. When would you prefer to take additional TCOM courses?
19a. 3 15-week semester length courses
       1 Short courses
19b. 1 Days
       4 Evenings
       1 Weekend

20. Why didn't you complete TCOM 401/430?
    1 I already knew the material.
    0 I didn't know I was supposed to.
    0 I had a schedule conflict.
    1 Other. She took 440 to review previously taken courses at IBM.
The Questionnaire
1. What is your current employment status? Please complete the appropriate section.

☐ Employed full-time. If your job is not in the telecommunications industry skip to question 7.

☐ Employed part-time: If you work part-time (less than 30 hours per week) check the reason why:
   ☐ This is all I care to work.
   ☐ This is all I can get.
   If your job is not in telecommunications skip to question 7.

☐ Unemployed. If you are presently unemployed check the reason why
   ☐ Full-time homemaker
   ☐ I don't care to work
   ☐ I am looking for a job
Have you been employed in telecommunications since completing TCOM?
   ☐ Yes
   ☐ No, go to question 7
If yes, go to question 3 and answer for your most recent job.

2. What is the name of the company/division you work for?

_____________________________________________________________________________________

2a. Optional. We would like your supervisor's opinion of the TCOM program, please provide the name and address of your supervisor.

_____________________________________________________________________________________

3. What is your job title?

_____________________________________________________________________________________

4. What are your job duties? (Job duties are tasks you are required to do in your job such as soldering, ordering supplies, laying out parts, reading charts, wiring, and the like.)

_____________________________________________________________________________________

_____________________________________________________________________________________

73
5. What is your approximate hourly wage? $__________ per hour.

6. After completing TCOM did you complete a company training program?
   □ Yes
   □ No

   If yes, what topics were covered in this training program?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

7. What is your current schooling status?
   □ In school full-time
   □ In school part-time

   7a. If you checked one of these, what school are you attending?
   __________________________________________________________

   7b. What program/major are you studying?
   __________________________________________________________

8. Do you feel you received an employable skill from your TCOM courses?
   □ Yes
   □ No

9. Did TCOM provide an understanding of future careers in the Telecommunications industry?
   □ Yes
   □ No

10. TCOM resulted in better job mobility (such as a promotion or better job) for me. (Check one)
    Strongly agree  Agree  Neither agree nor disagree  Disagree  Strongly disagree
    __________  __________  __________  __________  __________
11. In general, how much help was TCOM in the following areas:

<table>
<thead>
<tr>
<th></th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Knowing how to use tools and equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Knowing what the jobs are</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Finding needed job-related information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Getting along with customers and coworkers</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>e. Being able to talk to the boss about job problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Applying for a job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Interviewing for a job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Career advancement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Please rank the following instructional activities in terms of how you learned best.

<table>
<thead>
<tr>
<th>Instructional Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands-on Lab.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written homework</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Please indicate how the following instructional activities were used overall in TCOM:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Too much</th>
<th>Just right</th>
<th>Too little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. How would you evaluate the help which you received from Skyline's counselors?
   - ☐ High. I got as much help as I needed.
   - ☐ Average. I got some help.
   - ☐ Low. I didn't get any help.
   - ☐ Neutral. I never needed or sought any help.

15. Was placement service offered to you?
   - ☐ Yes
   - ☐ No

16. What type(s) of job placement activities do you feel should be offered for TCOM students?

   __________________________________________
   __________________________________________
   __________________________________________

17. What learning experiences do you feel should be added to the TCOM program?

   __________________________________________
   __________________________________________
   __________________________________________

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18. What additional courses do you feel should be part of the TCOM program? Check as many as appropriate.

In the second column, rank from the most important (1) to least important (3), the three courses you would like in the TCOM program. Please mark three boxes only in the second column.

[ ] [ ] [ ] Switching theory
[ ] [ ] [ ] Network management
[ ] [ ] [ ] Microwave technology
[ ] [ ] [ ] Satellite technology
[ ] [ ] [ ] Fiber optics
[ ] [ ] [ ] Local area networks
[ ] [ ] [ ] Managing a telecommunications system
[ ] [ ] [ ] Management skills training
[ ] [ ] [ ] Other. (Please specify)

19. When would you prefer to take additional TCOM courses?

19a. [ ] 15-week semester length courses
[ ] Short courses

19b. [ ] Days
[ ] Evenings
[ ] Weekends

20. Why didn’t you complete TCOM {401} {430}?
[ ] I already knew the material.
[ ] I didn’t know I was supposed to.
[ ] I had a schedule conflict.
[ ] Other. Please specify

21. Comments. Please write any additional comments below, use the reverse if needed.
If the address (used to mail this questionnaire) is incorrect, please provide your correct address so that you can receive information on future TCOM courses and events.

Name________________________________________
Address______________________________________
City, State__________________________ Zip_______

Thank you!

In *__________
For coding purposes only.
Your responses are confidential.
Dear TCOM Student,

As a former Telecommunications student at Skyline College, you are one of our most valuable sources of suggestions on how to improve our program so that we can better serve students and the industry. Your assistance will help us determine whether more and different courses should be offered and when courses and seminars could be scheduled to best meet your needs.

Would you please help us in our efforts by taking a few minutes to complete and return the enclosed form? We have enclosed a stamped envelope and hope to receive your reply by October 15, 1985.

Please be assured that all information you supply will be held in confidence and that your name will never be associated with any response.

We appreciate your cooperation in this important effort.

Sincerely yours,

Donald D. Biederman
Division Director
Science-Mathematics-Technology

Enclosures

TCOM refers to the Telecommunications courses at Skyline College.