DOCUMENT RESUME

ED 067 523 AA 001 054

AUTHOR Wolman, Jean M.; And Others
TITLE A Comparative Study of Proprietary and Non-Proprietary Vocational Training Programs. Volume I. Final Report.
INSTITUTION American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.
SPONS AGENCY Office of Program Planning and Evaluation (DHEW/OE), Washington, D.C.
PUB DATE Nov 72
CONTRACT OEC-0-70-5018
NOTE 130p.

EDRS PRICE MF-$0.65 HC-$6.58
DESCRIPTORS *Comparative Analysis; Cost Effectiveness; Data Collection; Information Dissemination; Metropolitan Areas; Program Evaluation; *Proprietary Schools; *Public Schools; *School Surveys; *Vocational Education

ABSTRACT

Results of a survey undertaken to provide data about proprietary schools, their students, and their programs are presented. All proprietary schools in four metropolitan areas of the United States which trained students in four selected occupational areas were surveyed. Included for comparison purposes were non-proprietary schools offering comparable vocational training in the same geographical areas. This report contains the results of these surveys and focuses particularly on the following: (1) a comparative description of proprietary and non-proprietary schools, students, and alumni; (2) analysis and discussion of alternate measures of training effectiveness including placement, cost-benefit, and non-monetary measures; (3) discussion of such issues as recent changes in program offerings and student bodies; and the incentives to which proprietary schools respond in making these changes; and (4) concludions and recommendations regarding evaluation, government funding and dissemination of information regarding vocational education. (For related document, see AA 001 055) (Author/CK)

FINAL REPORT

Contract No. OEC-0-70-5018

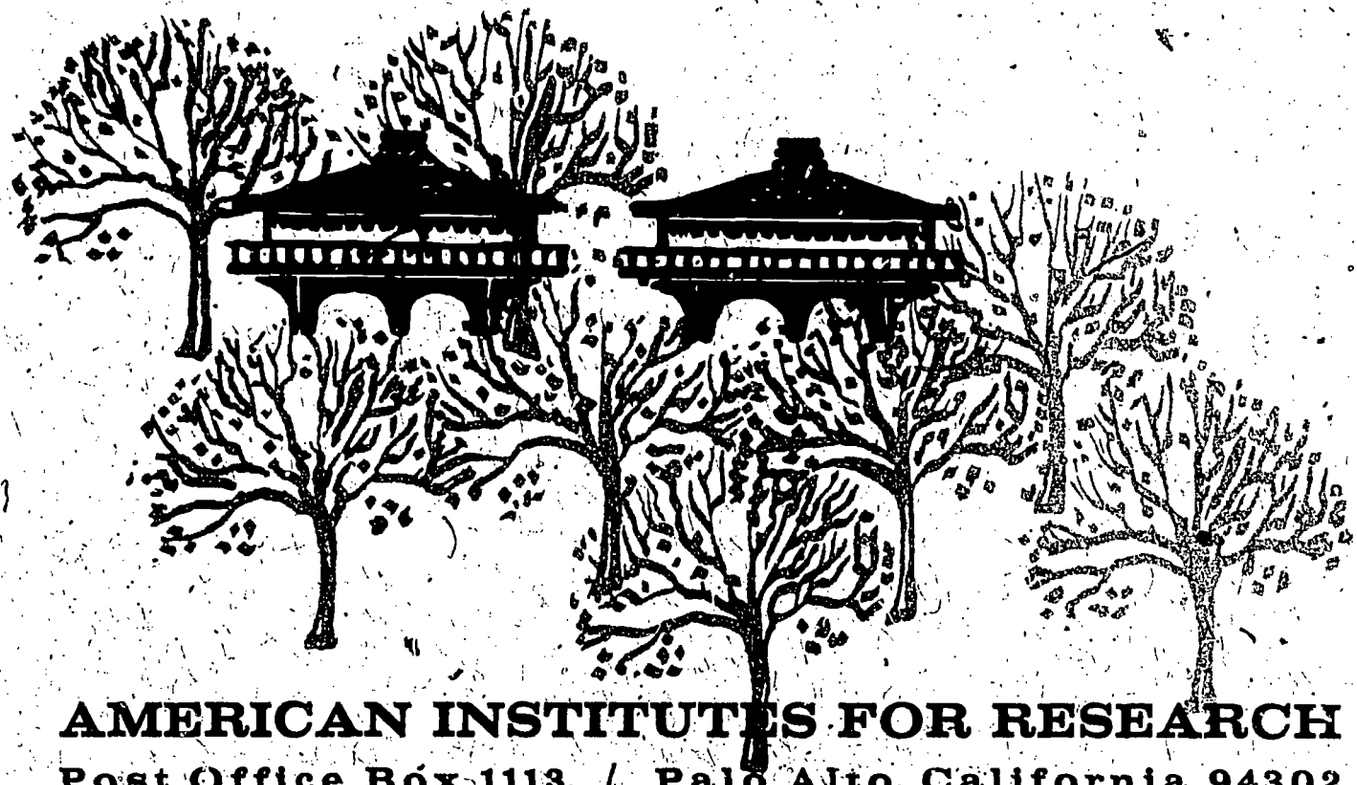
A COMPARATIVE STUDY OF PROPRIETARY AND NON-PROPRIETARY VOCATIONAL TRAINING PROGRAMS

Volume I

Jean M. Wolman
Vincent N. Campbell
Steven M. Jung
James M. Richards

November 1972

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education/Office of Program Planning and Evaluation



AMERICAN INSTITUTES FOR RESEARCH
Post Office Box 1113 / Palo Alto, California 94302

FINAL REPORT

Contract No. OEC-0-70-5018

A COMPARATIVE STUDY OF PROPRIETARY AND NON-PROPRIETARY VOCATIONAL TRAINING PROGRAMS

Volume I

Jean M. Wolman
Vincent N. Campbell
Steven M. Jung
James M. Richards

with the assistance of

Calvin E. Wright
Ardys J. Bloomquist
Carol A. Brotz
Jane W. Kilkenny
Elizabeth A. Reid

American Institutes for Research
in the Behavioral Sciences
Palo Alto, California

November 1972

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education/Office of Program Planning and Evaluation

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

ACKNOWLEDGMENTS

The authors wish to express their appreciation for the assistance of other persons whose support was instrumental in completing the final project report. We are particularly indebted to Miss Mary Ann Millsap and Mr. Richard Levine, United States Office of Education Project Monitors, for their continued support and guidance throughout the duration of the project. We wish to thank Mr. William Goddard of the National Association of Trade and Technical Schools, Mr. Richard Fulton of the United Business Schools Association, and Dr. Zachary Lansdowne of Control Analysis Corporation for consultant advice in the preparation of the final manuscript.

Finally, we acknowledge with warm thanks the assistance of the following individuals at AIR: Dr. David V. Tiedeman and Dr. John C. Flanagan, who provided continued and valuable technical advice; Mrs. Wendy Bartlett and Dr. John Claudy, who assisted in planning and implementing the computer analysis phase of the study; Miss Luella Austin and Mrs. Alice Frimmersdorf, who helped prepare the manuscript in its earlier phases; Mr. Ronald Stout, who prepared many of the figures and graphs; and finally the AIR Printing and Reproduction Service.

NOTE: The authors wish to note that persons acknowledged above do not necessarily endorse the statements and conclusions of this final project report.

INTRODUCTION

Private proprietary schools have long contributed to vocational education through initial occupational training, retraining programs, and more recently, special training programs for the disadvantaged. In order to formulate policy decisions in vocational education properly, it is important to understand the role of proprietary schools within the educational system and in the economy. This implies a strong need for comprehensive data about proprietary schools, their students, and their programs.

This report contains the results of a survey undertaken to provide this needed information. The survey sought data about all proprietary schools in four metropolitan areas of the United States which trained students in four selected occupational areas. Also included in the survey for comparative purposes were non-proprietary schools offering comparable vocational training in the same geographical areas.

The survey was oriented around three broad questions: 1) What are proprietary schools like, and how do they compare with public schools offering similar training programs? 2) What are the students like who go to proprietary schools, and how do they compare to students who attend non-proprietary vocational schools? 3) What do students gain as a result of attending proprietary schools, and how do their gains compare to the gains recorded by students who attend public schools?

The survey was commissioned by the United States Office of Education partially in response to a growing national awareness of the importance of proprietary schools as a national educational resource and a simultaneous awareness of the dearth of objective data about this resource. Additional motivation for the study no doubt stemmed from recognition of an attitude of coolness and sometimes antagonism toward proprietary schools that is very common among educators, counselors, and to some extent the federal government. As Moses (1970) has already pointed out, the most effective form of political exclusion is non-consideration.

> The periphery (including proprietary education) has generally been excluded from the attention and consideration of public policy makers and this is reflected in the lack of adequate data and information regarding its activities and participants. (Moses, 1970, p. 28)

As part of the present study, a brief review of the literature was prepared; four geographical and occupational areas were selected to comprise a survey sample; instruments were developed to survey the institutions, their students, and their alumni; and data were collected, tabulated, and analyzed. This report contains the results of these surveys and focuses particularly on the following: 1) a comparative description of proprietary and non-proprietary schools, students, and alumni; 2) analysis and discussion of alternate measures of training effectiveness including placement, cost-benefit, and non-monetary measures; 3) discussion of such issues as recent changes in program offerings and student bodies and the incentives to which proprietary schools respond in making these changes; and 4) conclusions and recommendations regarding evaluation, government funding, and dissemination of information regarding vocational education.

CHAPTER 1: REVIEW OF LITERATURE

Vocational Education: The Stepchild

In recent years there has been a proliferation of studies of post-secondary education. Many of these studies have directed themselves to characteristics of two- and four-year colleges and universities and have been more concerned with academic than with occupational education. For example, a large body of research relating to characteristics of colleges and junior colleges, student bodies, faculties, and graduates has been sponsored by the American College Testing Program. (Richards, Rand, & Rand, 1966 and 1967; Richards & Braskamp, 1967; Hoyt, D. P., 1968; Baird, Richards, & Shevel, 1969). Another similar body of research, sponsored by the American Council on Education, concerned a "program of longitudinal research on the higher educational system" (Astin, Panos, Creager, 1966), and the creation of "a national research data bank for higher education" (Astin & Panos, 1966).

More recently, greater emphasis has been placed on national needs in the areas of education and manpower development (Brandon, 1969). This emphasis stems from increasing national commitments to equality of educational opportunity and widespread disenchantment with the outcomes of a four-year "liberal education." Increased outcries have begun to be raised against the prevalent bias in America against what has come to be called occupational education. In a descriptive article abbut occupationally-oriented students, Cross (1970) stated

> Occupational education has all too often been thought of in negative terms: i.e., students take occupational courses not because of what they can do, but because of what they can't do.

Similarly, the National Advisory Council of Vocational Education (NACVE, 1969) stated

> At the very heart of our problem is a national attitude that says vocational education is designed for somebody else's children.

In its first report in 1969 (having been founded in 1968) the NACVE cited the fact that for every $14 the federal government spends on four-year colleges, it spends $1 for vocational education. The council recommended immediate remedial action by government "to cure our country of the

national sin of intellectual snobbery." Perhaps it is worthwhile to repeat again former HEW Secretary Gardner's oft-quoted remark about plumbers and philosophers.

> The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.
>
> (Quoted by Gerald R. Ford, Congressional Record, August 12, 1970)

In actuality, recognition and initial remedy of these biases have been supported by substantial outlay of federal monies in recent years. Funds have been directed towards vocational education through such legislation as the Vocational Education Act of 1963 and its 1968 amendments, the National Defense Education Act (NDEA), Area Redevelopment Act, and the Manpower Development and Training Act.

Despite apparently increased interest and support in vocational education, the bulk of literature relating to existing vocational training institutions concerns occupational programs offered in publicly-supported secondary schools and community colleges. Only a few studies have considered, on a national basis, the proprietary vocational schools in the United States. For example, extensive reviews of literature geared specifically to evaluating the effectiveness of high school vocational training programs have been compiled by Hawkridge, et al., (1970) at the American Institutes for Research and by Little (1970) at the Center for Studies of Vocational and Technical Education, University of Wisconsin.

Other studies of proprietary schools have usually been limited to a small geographical area and generally included public vocational education as well. For example, Podesta (1966) used vocational education in Santa Clara County, California as his focus; Enns et al. (1967) studied programs in Alameda and Contra Costa Counties, also in California; and the Oklahoma State Department of Vocational and Technical Education (1970) cooperated in issuing a report on Project OTIS (Occupational Training Information System) with an eye to defining Oklahoma's manpower needs and resources.

Descriptive Information on Schools

The history of proprietary education in this country can be traced to the early 19th century. Fulton (1969) cites the 1827 opening of Foster's Commercial School in Boston. Fulton quotes President Garfield as having said in 1881 that business colleges originated as a protest against deficiencies in our schools and colleges. He estimates that in that year proprietary business schools enrolled 71,000 students, as compared to 5800 business students enrolled in colleges and universities.

Belitsky's study (1969) disclosed that in 1966, 7000 proprietary schools served approximately 1.5 million students, as compared to an estimated 1966 enrollment of 1.4 million in America's two-year colleges (Gleazer, 1967). Despite these continuing high enrollments, in recent years the esteem of proprietary education has been questionable. Indeed, proprietary education has been to vocational education in general what vocational education in general has been to academic education. Fulton believes this low esteem is a result of the need of proprietary schools to make a profit. "Largely because of the profit motive, proprietary education has been viewed often as a hardy weed in the academic garden," (Fulton, 1969). Whatever the basis of current attitudes, it seems clear that proprietary education is a manpower training resource which cannot be ignored.

Background information is available from earlier studies about students in some types of proprietary schools. Hoyt (1967) reported on a sample of 3316 students in 11 private business colleges; most students were between 18 and 21 years of age, came from lower-income families, had graduated from high school, and ranked in the upper three-fourths of their high school class. Business administration students were predominantly male, while most secretarial and clerical students were female. Similar conclusions were reached by Miller (1964) in his description of business school students, the majority of whom were female, clerical/secretarial enrollees. Belitsky (1969, 1970) studied member schools of the National Association of Trade and Technical Schools (NATTS) whose occupational orientation is directed towards trade and technical skills rather than business. Belitsky's study of day students found most of them to be male with a median age of 20 years. A large proportion of evening students were over 26 years of age. The schools accommodated students having very different educational and work backgrounds, though less than 20% of the students were high school dropouts. Most students seemed to require financial assistance beyond the scope of parental help or personal savings, though it was not known how many students came from disadvantaged groups. In his five-year Specialty-Oriented Student (SOS) report, K. B. Hoyt (1968) cited a relationship between the commuting status of students and the type of school they attended. His data revealed that business school students tended to come from communities less than 50 miles from the school, technical school students from less than 200 miles, and trade school students from over 200 miles. These data refute the traditional concept of proprietary vocational schools serving a local commuting student population.

Several researchers asked students why they had enrolled in a more costly proprietary school program when similar publicly-supported programs were available. Students surveyed by the Stanford Research Institute gave three main reasons: flexible enrollment schedule and shorter course time; more concentrated, practical course content; and better placement services (Podesta, 1966). More than half of the 3316 students reached in the Specialty-Oriented Student research program reported that concentrated course offering was their major reason for enrolling (Hoyt, 1967).

Some information is also available about teachers in proprietary schools. Podesta (1966) found that most teachers in the sampled business schools had college degrees, and many had both state teacher certification and experience in teaching or as workers in the appropriate field. Instructors in machine skill courses, such as keypunch or switchboard operation, had less college but more relevant work experience. Miller (1964) cites a trend of increases in faculty qualifications in business schools: a 1939 study indicated 31% of business school faculty had college degrees and only 12% had advanced degrees, while a 1963 survey of United Business Schools Association members showed 55% of the teachers had bachelor's degrees and 23% had advanced degrees.

Johnson (1967) presents similar information about teachers in the member schools of the National Association of Trade and Technical Schools. The average trade school teacher was reported to be male, 36 to 55 years old, a high school graduate with at least one year of college and at least eight years of work experience.

In addition to information on background qualifications of faculty, Belitsky's report (1969) describes the special role of instructors in proprietary schools. He reports that instructors are held accountable to their students, since the success of proprietary schools depends largely on the satisfaction of their students and graduates; teachers are seldom given tenure and are rewarded most often on the basis of their teaching capability. He also indicates that teacher-student ratios are generally low (1:19 or less), and teachers are often involved in providing counseling and placement assistance.

Some information is available about the characteristics of proprietary schools and their programs. Comprehensive directories of member schools and program offerings are regularly published by the Accrediting Commission for Business Schools (1971) and the National Association of Trade and Technical Schools (1971). Similarly, Belitsky (1969) presents a fairly comprehensive list of programs offered by 544 trade and technical schools, and Miller (1964) describes in detail typical business school offerings. Belitsky and Miller describe the characteristics of their respective schools in terms of small school size, flexible entrance requirements, frequent admissions, day/night attendance schedules, flexible operation policies, and corporate ownership status.

Information and comments regarding licensing and accreditation are gathered in a series of papers edited by Ward (1970). Although the main topic is public post-secondary vocational education, some of the concerns are quite relevant to the accreditation of proprietary schools as well, e.g., the need for non-governmental accreditation, occupationally specialized accrediting activities, and the U. S. Office of Education's role in the accreditation of post-secondary occupational education. Current accreditation procedures are based almost entirely on characteristics of schools and inputs to the training process, rather than on outcomes of training. Perhaps this is understandable since accreditation criteria have developed

largely in a context of public educational institutions which have never been held accountable for their results. When applied to proprietary schools which are judged by employers, students and their own managers primarily in terms of job success after graduation, the paradox of excluding outcome criteria becomes especially evident. Proprietary school accreditation and licensing will be discussed further in this report.

Effectiveness

The most vital questions about proprietary schools concern the effectiveness of their programs. If the literature seemed scarce in the descriptive area, it is even more scarce in the area of evaluation. Two logical measures of effectiveness are placement and salary records. These are important in their own right and in their role in cost-benefit analysis. Hoyt's (1967) survey of students in private business schools indicated that about 70% of enrolled students completed their training and over 80% (both graduates and dropouts) were working in training-related jobs six months after leaving school. Follow-up two years later indicated a sizable increase in weekly earnings which presumably was associated with general job success. It is curious that Miller's (1964) study of business schools provides no evaluation data of any kind. Belitsky (1969), on the other hand, reports that the placement ratio for 128 NATTS schools was 55%--this ratio was supposedly based on the number of students placed in jobs in 1966 divided by the number completing their courses in 1966. The ratio may be distorted because some schools may have counted mere referrals as placements. Belitsky reports that over 80% of NATTS member schools do some kind of follow-up, though the frequency of such follow-up diminishes sharply one year after graduation. He reports similarly that accreditation requires some follow-up and placement records but generally in the initial application and re-evaluation stages only. It is apparent that definitions and procedures in maintaining and assessing placement records are problematic. This topic will receive attention later in this report.

The bulk of the literature relating to placement follow-up is directed towards secondary school occupational programs. Little (1970) compiled a "Review and Synthesis of Research" in this area. He concluded from the body of research studied that although follow-up studies are continually plagued by inherent hazards such as instrument reliability and adequate sampling, trained persons tend to have an advantage over untrained persons in eventual earnings and job satisfaction. In an extensive inquiry into the status of trade and industrial graduates from 100 randomly sampled high schools, Eninger (1965) also concluded that vocationally trained graduates usually surpassed non-vocational graduates in terms of long-run employment, wages, and job satisfaction. At the same time, Little concluded that graduates from post-high school training programs had employment advantages over those from high schools. He also stated that placement activities were virtually non-existent in secondary schools because such schools do not see placement as their role. Junior colleges were not very different in this regard. Little cited Jeanroy's 1968 study on placement services in two-year colleges

which found that, of 132 colleges sampled in 14 states, 48% had no placement service. Another related literature search at the secondary school level (Hawkridge, et al., 1970) also reported a serious dearth of systematic follow-up information in school records.

In exploring cost-benefits as a measure of program effectiveness, it is obvious that follow-up information is crucial and that the lack thereof makes any reasonable analysis difficult. Despite this problem, a number of studies have been directed to assessing the cost-effectiveness of vocational education. Here, too, most such studies have been conducted at the secondary school level. Kaufman (1968) explains that a major reason for the emphasis on secondary education is that cost-benefit analysis is primarily a technique for determining the allocation of public resources to various public programs. In other words, cost-effectiveness analysis is an attempt to establish the equivalent of a system of market principles for various types of government activities. Therefore, it is more profitable for comparing the cost-effectiveness of vocational and academic high school curricula than for evaluating proprietary school vocational education programs. On the other hand, in theory it is possible to get some estimate of the cost-effectiveness of proprietary school programs from the point of view of the student. Basically the total dollar cost to the student both in fees and foregone income is determined. Then the return on this investment in increased salary is compared to the return that would have been obtained if the same number of dollars had been invested concurrently at compound interest (Center for Vocational and Technical Education, 1968). An example of this use of cost-effectiveness analysis is Dupree's (1968) questionnaire survey of 200 graduates of eight post-secondary schools providing technical education. Cost-benefit estimates were derived relative to two years of post-secondary education. Dupree estimated that the average total educational cost to the student was $4768, the average net income per student foregone was $3849, and the average net productivity foregone per student was $4186. The average institutional cost per student was $1637. This investment yielded an estimated 35% return to the student and an estimated 25% return to society. A similar approach is used in this study.

Another measure of effectiveness of vocational education is the extent to which the program enables its graduates to meet prerequisites for some types of employment. A limited amount of information is available with regard to proprietary schools. For example, the training program for some trade and technical fields is oriented to union or licensing standards (Belitsky, 1969). Similarly, since 1967 the U. S. Civil Service Commission (1967) has put study at business schools on the same basis as study at two-year and four-year colleges in the Junior Federal Assistant Examination.

Still another way to evaluate the results of proprietary education is to compare its effectiveness with that of similar programs offered by non-proprietary, public schools. This is a major intent of the present study which differentiates it from most earlier research efforts. An exception is Hoyt (1971), who made a preliminary effort in this direction in a follow-up study of matched groups of students who had completed training in three

occupational areas at both public community colleges and proprietary schools in Iowa. The paucity of follow-up information in the available literature has been described above. Unfortunately, Hoyt demonstrated the difficulty in obtaining usable follow-up information from his survey sample; the average return rate was well under 50% with a substantially smaller percentage of public school graduates responding than proprietary school graduates in the trade and technical areas. Since the discrepancy between the public and proprietary response rate from business graduates was small (29.9% and 22.6% respectively) Hoyt assumed the bias resulting from the low response rate to be uniform in order to justify analyzing the data. The resulting analysis yielded significant differences in favor of the public schools in such areas as percentage completing training, percentage placed prior to completing training, percentage assisted in placement by school, and percentage earning more than $80/week. However, Hoyt emphasized the non-conclusiveness of these results in view of the low percentage responding.

Some evaluative statements are available on a level considerably more subjective than those described above. For example, in August 1970, the Honorable John Dellenback of Oregon issued a "Report on Proprietary Vocational Schools" to the U. S. House of Representatives. The report was based on some of the same research already cited (e.g., Belitsky, 1970; Podesta, 1966). On this rather limited body of research, the report drew very favorable conclusions about the effectiveness of proprietary education in terms of meetings its students' training needs and in terms of meeting the nation's skilled manpower needs. It recommended that students in proprietary schools be as eligible for government assistance as students in two- and four-year institutions. It recommended also that, in light of the paucity of information about proprietary schools, the U. S. Office of Education should collect and publish data about these schools. A supportive address by Representative Gerald R. Ford made a similar plea, citing increasing technical manpower needs and inadequacies in public education as rationale for proprietary school support.

On the other side of the subjective coin are negative testimonials such as those which appeared in a series of articles in the Washington Post in July 1971. Their titles are descriptive of their concerns: "Hard Sell on Job Training, Career Schools: Promises at a Price"; "The 'Real Money': Signing up Students" with a subtitle "Career Chain Denies High-Pressuring"; "'Deceptive' Career School Ads Cited by FTC." Although the articles were of the muckraking exposé sort and certainly cannot be categorized as research, they cannot be ignored when looking at the total body of information available. It is information of this sort which led the Federal Trade Commission to issue its "Proposed Guides for Private Vocational and Home Study Schools," (July 1970) and the U. S. Office of Education, in its response to these proposed guides, to issue a commendation to the FTC (USOE memo from Associate Commissioner for Higher Education, November 9, 1970). However, in fairness to proprietary schools on the whole, it is important to note the many similarities between the FTC guides and the ethical criteria already established

and reportedly enforced among member schools of such accrediting bodies as the Accrediting Commission for Business Schools (ACBS) and the National Association of Trade and Technical Schools (NATTS).

Perhaps at this point it is important to note that most of the limited generalizations regarding proprietary school characteristics discussed above are derived from member schools of the major proprietary school associations connected with these accrediting agencies. Little or no information is available, however, about the characteristics of students, teachers, or programs in proprietary schools which have joined neither the United Business Schools Association nor the National Association of Trade and Technical Schools. Such schools comprise substantially more than half the proprietary schools in the United States. An attempt has been made to examine the characteristics of such schools in this report.

Summary

The literature on proprietary vocational training is as scarce as that on public vocational education is voluminous. Objective evidence regarding the characteristics of such schools, their faculties, their students, and the satisfaction of their graduates, is still more scarce, even though the importance of their contribution is widely acknowledged. The present study is a first step in providing such needed data and in assessing the relative effectiveness of proprietary vs. public post-secondary vocational education. It is hoped that these data can serve a useful purpose in facilitating informed decisions regarding the utilization of proprietary school resources in the burgeoning area of career education.

CHAPTER 2: METHOD

Selection of Survey Sample

Because of the broad diversity among proprietary schools in terms of occupational programs, offerings, and geographical locations, it was necessary, within the scope of this initial research effort, to select a sample of these domains.

Selection of occupational areas to be studied. The first consideration in selecting occupational areas was to identify a relatively small number of "growth occupations"--that is, fields of work which are expected to absorb relatively large numbers of new workers in the future. U. S. Department of Labor projections and similar reports on manpower training needs were examined to meet this criterion. A second requirement was that occupations for both men and women be included. And, finally, it was obviously important to include occupations for which training is available in at least some proprietary schools. In view of these criteria, the following occupational areas were selected: office occupations (e.g., secretarial, bookkeeping), health occupations (e.g., medical secretary, dental assistant), computer occupations (e.g., data processing, programming), and technical occupations (e.g., electronics technology, engineering technology).

Using such sources as the U. S. Office of Educational Occupational Classification System, published in the Dictionary of Occupational Titles, a more inclusive list of occupations included in the major categories was prepared to aid in determining the eligibility of schools and students identified as potential participants. The list appears as Appendix A to this report. Although additional occupations might well have appeared under the four categories, they were not included due to the necessary limitations of sample size.

Selection of metropolitan areas to be studied. The study was further restricted to a few of the largest metropolitan areas in the country. Although this restriction precluded a truly representative national sample, it was important to select cities which would provide results that were general enough to be relevant for metropolitan areas throughout the country. Criteria for site selection were as follows:

(1) one of the two or three largest metropolitan areas in the country;
(2) variation in extent to which other institutions (e.g., public two-year colleges) provide occupational training programs comparable to those of proprietary schools;

(3) diversity of proprietary school program offerings within each site;
(4) variation in the strictness of state licensing laws for proprietary schools;
(5) geographical diversity; and
(6) some matching of sites with those included in other studies of vocational education, such as Project Metro and the Bureau of Social Science Research study of community colleges and vocational-technical centers.

Four cities were chosen in view of the criteria outlined above:

(1) Atlanta, Georgia--South, no licensing requirements, one area technical school, no public community colleges.
(2) Chicago, Illinois--Midwest, second largest city in the nation, strict licensing laws, developed urban community college system.
(3) Rochester, New York--Middle Atlantic, strict licensing laws, state supported community college.
(4) San Francisco, California--West, moderate licensing laws, developed community college system and adult schools.

In the preliminary planning of the study, it was anticipated that New York City would be included. It was an obvious candidate, since it is the largest metropolitan area, is in Project Metro, and has what seemed to be the strictest licensing laws. Eventually, however, it became clear that too many problems unique to New York City would be involved. The fact that the fall of 1970 was the first term of open admissions to the City University of New York was of particular importance. Under such dramatically new conditions, it would have been difficult to consider students enrolled in proprietary schools as typical of such a student population, and even more difficult to examine the characteristics of vocational programs at the city college level. Therefore, ultimately it was decided not to include New York. It was still considered desirable, however, to include another metropolitan area in New York state. Buffalo and Rochester were considered. Rochester was finally chosen because it was in Project Metro and because it seemed to have slightly more diversity of proprietary school offerings.

Development of a list of proprietary and non-proprietary schools offering training programs in the selected occupational areas and geographical locations. Within the constraints of the above sample limitations, an effort was made to identify all proprietary schools offering training in the designated occupational and geographical areas. Several information sources were utilized in compiling the list of schools. Current membership directories of the United Business School Association and the National Association of Trade and Technical Schools yielded names of member schools, but Belitsky (1969) had previously found such sources to produce lists that were far from complete. These schools comprised less than 25% of the final list. The most useful and complete information sources were the current classified telephone directories for each metropolitan area.

The preliminary list compiled prior to October 1970 included a total of 129 proprietary schools. Approximately 47% of those schools provided training for office occupations, 36% for computer occupations; 22% for health occupations, and 17% for technical occupations. (The total is greater than 100% because some schools provide training in more than one area.) This list was updated in the fall of 1971 by examining revised telephone directories. A number of schools were added and some were deleted, bringing the total number of proprietary schools identified to 150, with no significant change in occupational breakdown. During the course of interviews at schools which ultimately agreed to participate in the study, staff were asked to identify other local schools which offered similar or competing training programs. No additional names were mentioned. Thus the investigators are satisfied that the final list of 150 schools adequately identified all schools in existence at that time.

A similar list of public and private nonprofit institutions was developed for the same occupational and geographical areas. A list of criteria of comparability for eligibility by non-proprietary school programs was developed: specifically, programs which (1) have non-restrictive admissions policies; (2) are basically terminal in nature, rather than designed for transfer of credit into degree-granting programs; (3) do not require liberal arts courses as pre- or co-requisites; and (4) have similar terminal goals in terms of job-related skills and occupational opportunities for graduates. A number of educational directories such as the National Center for Educational Statistics (NCES) Higher Educational Directory (1971) and the Eligible institutions-Guaranteed Student Loan Program (DHEW, 1971), as well as telephone book listings, were utilized. A total of 18 non-proprietary schools was identified as likely to be eligible to participate in the survey.

Development of Survey Instruments

In order to gather the required data regarding characteristics of participating schools, students, and graduates, it was necessary to design three separate data collection instruments. In designing these instruments, special effort was made to examine and build on previous research. For example, questions used earlier by Belitsky (1969) in his study of NATTS member schools were reviewed and utilized where applicable to this study. Instruments used in the previously mentioned higher education research program conducted by the American Council on Education and the American College Testing Program were also examined, as were questionnaires used in Project Metro, the Bureau of Social Science Research studies of community colleges and vocational training centers, and K. B. Hoyt's Specialty-Oriented Student (SOS) Research Program. In an effort to design questionnaires that would yield information comparable to that gathered in accreditation evaluations, the instruments used by the Accrediting Commission for Business Schools and the Accrediting Commission of the National Association of Trade and Technical Schools were also reviewed.

The large anticipated numbers of student and alumni respondents clearly called for the use of computer techniques to analyze the student and alumni

data. Questionnaires were therefore designed to permit optical scanner scoring, and automatic transfer of data to computer tape. It was desirable as well to collect data in a form that would permit additional or later follow-up studies on these same students. Accordingly, it was necessary that each student record or verify his name and permanent address on the questionnaire in a form that would permit transfer of this information to computer tape.

Although the questionnaires were expected to tap little if any sensitive information, it was also felt desirable to design the questionnaires so that a student's name and address would be entered on a separate computer tape. Other precautionary measures were taken to preserve the confidentiality of data generated by all instruments.

Student questionnaire. The student questionnaire was designed for easy and rapid administration by school instructors during class time. It was arranged so as to be suitable for machine scoring, verification, and data processing. The student questionnaire was designed to gather standard background information such as sex, age, race, marital status, career plan, amount of previous education and work experience, grades obtained in previous education, socio-economic status, and sources of funds for current support. In addition to this basic background data, the questionnaire also sought information directly relevant to the student's post-secondary education, such as program of study, how long he or she had been enrolled, what influenced the choice of school, extent and nature of concurrent work, and sources of satisfaction or dissatisfaction with the school's educational program.

In addition, an administrator's guide was developed. This guide contained detailed instructions to school personnel on how to administer the student questionnaires and return them for processing.

Alumni questionnaire. A relatively limited amount of information was needed from graduates of schools. Therefore, the graduate questionnaire was designed to gather only information about current job, tenure and satisfaction with it, beginning and current salaries, and effectiveness of vocational training as preparation for this job. Two versions, a short and long form, (Form A and Form B) of a graduate questionnaire were developed. To limit costs, it was planned originally to use a simple postcard questionnaire with return postage paid. Form A of the pretest questionnaire was designed for this purpose. Subsequent discussions with representatives of a mailing service suggested a somewhat more detailed mailed questionnaire could be used without materially raising costs. Therefore, an expanded graduate questionnaire (Form B) was also developed, and ultimately used in the survey.

Institutional questionnaire. An institutional questionnaire was designed to yield, together with catalogs and application forms gathered from participating schools, broad data about the characteristics of the institutions and their programs, the services they provide their students, the number

and status of their enrollees, the characteristics of their faculty and staff, the operational costs of their programs, and the effectiveness of their programs in terms of placement after graduation.

The institutional questionnaire was initially designed to be administered in much the same way as the student instrument; that is, it would be mailed to participating schools for completion by appropriate members of the school administration.

Pretest of Survey Instruments

A pretest of the three data collection instruments described above was conducted to ascertain their adequacy through the analysis of item-responses, subjective responses to items, and consistency and completeness of responses. Revisions in the form and content of the questionnaires were subsequently made prior to the main study.

Selection of site and schools. The following criteria were used in selecting the pretest site and pretest institutions: (1) a large metropolitan area with proprietary schools providing resident programs in each of the four families of occupations; (2) at least one public or private nonprofit institution providing comparable resident training programs in the same fields; and (3) some diversity of socio-economic and ethnic groups in the population. The San Jose, California, metropolitan area was selected since it met the criteria listed above and was conveniently located.

Securing the cooperation of pretest schools. A total of 13 proprietary schools in the San Jose area were invited to participate in the pretest. Two of these schools were found to be ineligible, one because it had gone out of business and the other because it was a correspondence school. In order to try out the procedures for contacting schools and soliciting participation, a letter was sent which outlined the purpose of the study, identified its sponsorship, and urged cooperation. Changes were made in the basic letter to make it appropriate for each individual school. A stamped, addressed card was enclosed on which directors could indicate that they would or would not participate or would like an AIR representative to call on them before they decided. Few positive responses were received from these cards; thus it was necessary to call the directors, set up an appointment to discuss the study, and show them copies of the institutional questionnaire, student questionnaire, and graduate questionnaire. At this stage, the directors usually expressed a great deal of interest in the study. In no case did a director refuse to allow his/school's participation, although some never definitely agreed. Ultimately, however, five eligible schools failed to cooperate in the pretest. All were members of some sort of chain with a national head office from whom clearance had to be obtained. Securing their participation would have created undue delays for the pretest. This left six schools which agreed to participate. One of these schools had been founded in 1970 and had no alumni; another school refused to allow the mailing of questionnaires to its alumni because of a conflict with its own institutional alumni survey. Therefore, alumni from only four schools were surveyed.

On the basis of these experiences, it was decided that: (1) school directors invited to participate in the actual survey should be supplied with more complete information regarding the purposes and procedures of the study, including copies of the survey questionnaires; (2) project staff would have to contact school personnel by telephone to insure adequate response; and (3) chain school headquarters would have to be contacted as well before approvals could be expected from member institutions.

Concurrently with the pretest in proprietary schools, a study was conducted to determine the extent to which the training programs offered by community colleges are comparable to programs offered by proprietary schools. The main procedure in this study involved interviews with department heads of community colleges in the San Jose area.

In general, it proved very difficult to secure cooperation from community colleges. In fact, the only flat refusals to cooperate in the pretest came from community colleges. These refusals eliminated from the comparability study all department heads concerned with vocational training in health occupations. Another department head concerned with business and computer training never replied to the initial letter, never was available when telephoned, and never returned calls. Accordingly, project staff interviewed department heads concerned with training in business, computer, and technical fields at two community colleges, and a department head concerned with technical training at a third college.

On the basis of the interviews, it appeared that difficulties in obtaining cooperation in community colleges resulted from the fact that such colleges are besieged by questionnaires from federal and state governments, local districts, accrediting agencies, social scientists at four-year colleges, and graduate students writing dissertations. Therefore, they had little reason to cooperate with another study whose main focus was not even on two-year colleges. Another apparent difficulty in securing cooperation was the very heavy teaching loads which limit the time faculty members have available. Finally, student and graduate records are often kept at a college, or even district, central office.

Despite these difficulties, interviews with department heads yielded the following tentative conclusions on the issue of comparability: (1) at the vocational skills level, proprietary schools and community colleges are providing comparable training; (2) the community colleges are transfer-oriented and provide liberal arts courses as co-requisites to occupational training while proprietary schools are not transfer-oriented and provide only occupational training; and (3) a major reason for attending proprietary schools is to avoid this liberal arts and transfer emphasis.

Results and modification of survey instruments and data collection procedures. Pretest questionnaires were administered by project staff to 307 students in six proprietary schools, distributed among programs in the four occupational areas, and 65 business and computer students in one public

community college. Although a wide range of time was required for students to complete the questionnaire, all finished within 45 minutes. It was expected that general refinement in wording and format might shorten the time required without eliminating important information. Several questions proved very difficult for students to answer, and were altered accordingly prior to the main survey. Most of these changes involved simplifying the wording of an item, separating a multiple-part question into separate items, eliminating some of the less crucial options in a multiple-option item, and so forth. It is virtually impossible to eliminate a percentage of omissions on all items, and the distributions of responses to various alternatives in the items appeared to be satisfactory. Thus, other than a number of relatively minor changes in wording and format, no major changes in the content of the pretest student questionnaire were made. The final questionnaire was similar to those utilized in other surveys aimed at similar target populations. Table 2.1 contains an item-by-item comparison. Copies of the revised student questionnaire and administration guide are included as Appendices B and C respectively.

The four proprietary schools which participated in the alumni portion of the pretest provided lists totaling 343 graduates of the 1968-69 school year. Half of this group received the shorter Form A, and the other half received the longer Form B. (See earlier section on development of alumni questionnaire.) Completed questionnaires were received from 104 graduates, and 55 were returned by the post office as undeliverable. Thus the total return rate was 30.3%, and the return rate for alumni who appear to have received questionnaires was 36.1%. These results were obtained with one mailing of the questionnaire; no reminder card was sent. It seemed probable that a significantly higher return rate could be expected from the final survey effort, which was to include a reminder post card and a full second mailing of questionnaires. There was no significant difference in response rate for Form A and Form B; therefore, the longer Form B was selected for the final study. The distribution of responses to the alumni questionnaires was generally satisfactory. Some minor item problems like those in the student questionnaire arose, and such items were similarly revised. Appendix D contains a copy of the revised alumni questionnaire.

The main problem with the graduate portion of the pretest was obtaining lists of alumni names and addresses. Difficulties included lack of complete graduate records and inability to sort out graduates from non-graduates and/or recent graduates from old ones in the records that did exist. Such problems became obvious when project staff themselves helped to compile the lists. Although it was important to offer similar assistance to schools in the final survey, it was decided to offer such aid in the form of hiring outside clerical personnel or reimbursing internal personnel (e.g., students) for completing the lists under supervision of school staff. To alleviate the problem of identifying graduates from one year (1968-69), it was further decided to collect the names and to survey graduates from the last three years (1968-71).

The general reaction of school directors to the pretest institutional questionnaire was quite negative; they felt that the questionnaire was long,

TABLE 2.1

Item by Item Cross-References to Other Sources
for Student Questionnaire

Student Questionnaire Item Number	Source Reference Name of Test	Item Number
1	BSSR	3
2	BSSR	4
3	BSSR	8
4	original item	
5	BSSR	15
6	BSSR	11
7	ACT	16
8	BSSR	12
9	BSSR	13
10	ACT	17
	ACE	12
11	BSSR	5
12	BSSR	10
13	BSSR	24
14	Belitsky	1
15	original item	
16	ACE	10
17	ACT-SPS	44-51
18	ACT	15
	ACE	9
19	original item	
20	ACT-SPS	31-43 and 54-57
21	ACT	90
22	ACT	91
23	BSSR	18
24	BSSR	42
25	BSSR	43
26	BSSR	41
27	BSSR	44
	ACE	4
28	BSSR	50
29	BSSR	19
30	BSSR	19
31	original item	
32	original item	
33	BSSR	35
	ACE	3
34	BSSR	36
35	original item	
36	original item	
37	BSSR	22
38	original item	
39	original item	
40	BSSR	22
41	BSSR	37
42	BSSR	32
43	BSSR	32
44	BSSR	31
	ACT	12
45	BSSR	33
46	BSSR	33

ACE - The American Council on Education, 1970 Student Information Form
ACT - The American College Testing Program, 1970 Survey of College Seniors
ACT-SPS - The American College Testing Program, Student Profile Section
BSSR - Bureau of Social Science Research, Study of Community Colleges and Vocational-Technical Centers, 1970 Student Questionnaire

cumbersome, and asked questions about very sensitive matters. It was clear that extensive modification was necessary for the main study if the cooperation of these schools was to be secured. In other words, it was felt essential that the director's immediate first impression of the survey would be that it would provide information on which he would really like to compare his school with other schools, and that it would be easy for him to participate. The institutional questionnaire, as constituted, failed this test. It appeared that the best solution would be to collect institutional data by means of a structured interview with the director rather than any kind of questionnaire. The initial institutional questionnaire was thus modified into an interview form.

In connection with the institutional questionnaires, considerable concern was also expressed about the confidentiality of data. The most acceptable solution to this problem seemed to be that schools, students, and alumni would be identified only by I. D. numbers on the final data tapes. The information showing which schools and individuals correspond to which I. D. numbers would be kept by AIR in separate secure files and would be available only to members of the AIR staff directly concerned with this project. This implied that the data tape supplied to the Office of Education in accordance with the contract would identify schools and the individuals only by I. D. number.

The questions most criticized by the school directors were those that dealt with finances. All the interviewed school directors stated that they would be unwilling or unable to provide a detailed breakdown in dollar amounts of sources of their income or of categories of expenditure. They were also unwilling to provide a dollar amount for the total budget. These directors said they would be willing, however, to provide a percentage breakdown of their income and expenditures. It was suggested by one director that we ask "Into which of the following ranges did your gross income before taxes fall?," using categories at least $5000 wide. Subsequent interviews indicated that other directors might be willing to provide this information, and they regarded it as meaningful for comparing schools.

Very detailed questions about what happens to graduates also seemed objectionable for the institutional questionnaire. First, a considerable number of schools were newly established. Second, there were frequent changes in schools' programs, directors, etc. Consequently, a significant portion of the schools did not have any alumni, at least for their current programs. Third, the main information most schools were likely to have seemed to be the proportion of recent graduates who were placed in jobs. The schools did not have information about starting salaries or about the degree of relationship between jobs and training.

Finally, directors objected to multiple choice and multiple rating questions. Accordingly, as many questions as possible were changed to a short answer format.

Directors were asked what sorts of information they would like to have on which to compare their schools with other proprietary schools. Their answers revealed considerable overlap with the basic interests of the Office of Education, and included such questions as size of student body, size and investment in the school's physical facility, problems and solutions in the areas of dropouts and absenteeism, course length and average cost, marketing procedures and the success thereof, and problems associated with fee collection and bad debts. Some provision was thus made for school directors in the final study to comment on what they considered to be important issues for proprietary schools. It should be noted that the contents of the institutional questionnaire were determined almost entirely by the specifications resulting from the strict interpretation of the RFP and the project proposal. Use of an interview procedure, in addition to minor content modifications, was expected to mitigate some of the pretest problems described. The interview format could be adapted more easily than a questionnaire to omit objectionable or inappropriate references for specific institutions, to reorder and reword questions as appropriate, to ask follow-up questions, etc. Appendix E contains a copy of the institutional interview record form.

In summary, results from the pretest were quite useful to project staff in making appropriate revisions in data collection instruments, in refining procedures for securing school cooperation, and generally in anticipating and seeking to avoid some of the problems inherent to surveys of this kind.

Securing the Cooperation of Schools in the Main Study

Initial contact by mail. As previously stated, a total of 150 proprietary schools and 18 non-proprietary schools in Atlanta, Chicago, Rochester, and San Francisco were initially identified as eligible to participate in the study. As soon as forms clearance was obtained on November 16, 1971, a letter requesting participation in the survey was sent to each school. The letter outlined the purpose of the study, identified its sponsorship, indicated what participation by the school would involve, urged the school director to participate, and offered to pay an administration fee of $50.00 plus $.10 for each student questionnaire returned. Copies of the student and alumni questionnaires and a brochure describing AIR were included with the letter. The letter sent to non-proprietary schools differed slightly from that sent to proprietary schools in that it spelled out the criteria for eligibility, or comparability, for non-proprietary schools, and included the list of eligible training programs which appears as Appendix A. Directors were told they would be contacted by phone within two weeks after receipt of the letter. Copies of the letters sent to proprietary and non-proprietary schools appear as Appendices F and G respectively.

Telephone contact with proprietary schools. Telephone calls to proprietary school directors were begun about two weeks after the initial mailing. The caller offered the director an opportunity to ask questions to clarify the study, re-emphasized the purposes and importance of the study, and gathered information regarding student questionnaire dissemination, interview appointment time, and alumni name and address lists. A record of each telephone contact was made using the record form which appears in Appendix H.

Before telephone calls were begun, 13 letters to proprietary schools were returned to AIR by the post office as undeliverable. None of these schools were listed in current telephone directories, so all 13 were eliminated from the survey sample. Subsequent telephone contacts found an additional 24 proprietary schools no longer in business or not reachable at any listed phone number or address, and 8 proprietary schools which were combined with or the same as other listed schools. Another 22 schools were identified as not eligible because they did not offer courses in the designated areas, they had no resident students, or their educational facilities were located outside the designated metropolitan areas.

Responses to the telephone calls were quite varied, ranging on a broad spectrum from immediate, unqualified acceptance to immediate, unqualified rejection. Approximately 30% of the school directors reached had thoroughly digested the materials and agreed to participate in the study with no further questions. Another 20% who ultimately agreed to participate, requested further time to consider the study and by and large expressed concern as to: (1) what benefits would accrue to them from the study; (2) extra workload and time required by staff and students; and (3) approval from supervisor (or national director in the case of chain schools) required. Several school directors commented on the difficulty of doing an effective follow-up study, having tried on their own to do alumni studies of one sort or another. On the other hand, several, who had done no studies of their own, seemed delighted that AIR would do it for them at no expense. Every effort was made to alleviate their concerns. Benefits of the study to the schools as well as to the Office of Education were re-emphasized (e.g., copies of data would be provided to them and government policies regarding proprietary schools might be re-examined); clerical help or reimbursement for clerical help and flexibility of scheduling questionnaire administration were offered; and national approvals were requested. In this regard, additional interviews were arranged with directors of three participating chain school operations.

Quite a large number of the school directors contacted (about 15%) said they had not read or received the survey materials which had been mailed two weeks earlier. This was due in some cases to internal reorganizations or wrongly addressed letters. In other cases, however, it appeared to be a delay tactic or an indication that the materials had been put into a low-priority category. In all such instances, descriptive letters and questionnaires were sent again to appropriate persons and telephone contacts were made again. About 50% of these directors subsequently agreed to participate.

Counting only those 83 proprietary schools considered eligible, 53 (or 63.9%) of the directors actually agreed to set up interview appointments and 30 refused. A breakdown by city of final school contacts appears in Table 2.2. It may be seen that the majority of refusals occurred in Chicago. In light of insights gained later in interviews with directors in Chicago, this situation was explainable and is discussed in Chapter 3.

Table 2.2

Summary of School Contacts by City[1]

Contact	Atlanta	Chicago	Rochester	San Francisco	Total
Original letters sent	35 (2)	62 (10)	19 (3)	34 (3)	150 (18)
School out of business or not reachable	14	12	6	5	37
School combined with another listed school	1	4	1	2	8
School ineligible to participate	2	13 (1)	4 (1)	3	22 (2)
School refused to participate	5	18 (2)	0	7	30 (2)
School agreed to participate	13 (2)	15 (7)	8 (2)	17 (3)	53[2] (14)

[1]Non-proprietary school figures appear in parentheses beside proprietary school figures.

[2]Two (2) of these schools later refused to participate.

Virtually all of the proprietary school directors who refused to participate gave "no time" as their reason, and were generally curt (sometimes discourteous) and adamant in their refusals. Several left refusal messages with their secretaries. Only one of eight identified chain school executives refused altogether to allow member schools to participate, giving a somewhat vague reason relating to time shortage as an excuse; and one national executive allowed only one of two identified subsidiary schools to participate.

Four school directors who had initially approved the study subsequently cancelled their agreement, two giving "no time" as the reason, the third

saying he reversed his decision "after studying your questionnaire more thoroughly," though the nature of his objections was unclear. Only one refusing school director gave what appeared to be intensive consideration to the study before refusing; he felt the study was not significantly different from Kenneth Hoyt's Specialty-Oriented Student (SOS) research program to warrant his participation. However, he offered to talk to a member of the project staff and was later interviewed.

Suspiciousness was encountered only moderately from refusing and marginally-approving school directors. No one expressed doubts regarding the real purposes of the study, as occurred during the pretest, but doubts as to the value of the study to the schools themselves were frequently expressed. Perhaps the most common reaction to the calls, apart from immediate agreements to participate, was something akin to "Oh, we filled (will fill) out those forms . . .," indicating an impatience and disinterest with surveys of this type. Many proprietary school directors stated they were deluged with surveys and accreditation and licensing applications, and saw no reason to discriminate among them.

It is important to note that among directors who agreed to participate an encouraging degree of enthusiasm towards the survey was often encountered, along with a ready willingness to "cooperate in any way possible." Many school directors were audibly excited that such a study was being undertaken and seemed especially motivated by the feedback and alumni follow-up aspects of the project. Probably the most effective incentive to participate was the investigators' promise to return to each school a summary of data gathered from all of its currently enrolled students and from all of its recent graduates. Few directors, if any, made mention of the administration fee participants would be paid, though that may have been an effective incentive. Interestingly enough, one refusing director expressed resentment at being offered such a "bribe."

Telephone contacts with non-proprietary schools. The same procedures as described above were used in contacting non-proprietary school officials. Telephone contacts quickly indicated difficulty among the public two-year colleges in meeting all the original criteria of acceptability, especially the one requiring that no liberal arts courses be offered as pre- or co-requisites to the vocational programs. Consequently this criterion was eliminated, since such courses seemed to be inevitable co-requisites of all public-supported educational programs and did not interfere with the terminal occupational nature of the programs. In addition, since the number of identified schools was small, the tentative non-proprietary quota of 20-25 schools was amended, with Office of Education approval, to 10-15 schools with a target quota of 5000 student participants.

Much less difficulty was experienced in securing cooperation of the non-proprietary schools than had originally been anticipated. Telephone contacts indicated, as did the pretest interviews, that non-proprietary schools are besieged by questionnaires from federal and state governments, local districts, and accrediting agencies. However, school officials did

not appear to be irritated by the request, even though the focus of the study was not on two-year colleges. In fact, of the 18 non-proprietary school officials contacted, 14 agreed to participate—many enthusiastically. In contrast to unsatisfactory pretest results, only two refused to participate, giving "no time or staff" as their reasons; another two were not eligible to participate because their occupational programs were transfer rather than terminal in nature. Based on the number of eligible non-proprietary schools this yielded a participation rate of 87%. An anticipated delay in securing central approval from city colleges in Chicago and San Francisco never materialized. A breakdown by city of final school contacts appears in Table 2.2.

Follow-up of telephone contacts. First, a system for logging and filing all information was established. All initially contacted schools were listed on a master log sheet, and separate file folders were prepared for each school. Information relevant to the status of each school was recorded on log sheets and inserted in school files daily, so that up-to-date knowledge on the status of each school was available at all times. Information forms were sent to the subcontractor responsible for automatic data processing, National Computer Systems (NCS) of Minneapolis, Minnesota, as soon as information was available on the number of student questionnaires and administrator's guides required and the name and address of the person designated to coordinate the survey in each school. A letter of thanks and confirmation was then sent to all participating schools, reaffirming the interview appointment time, the number of questionnaires and guides required, the name of the designated contact person, and the arrangements made for compiling the alumni list. The letter also requested schools to send available descriptive literature ahead of the scheduled visit. A copy of this letter appears as Appendix I.

As alumni lists were received, they were logged in, xeroxed, and transmitted to NCS for mailing of alumni questionnaires. About 80% of the schools compiled alumni lists on their own. Project staff arranged for clerical help or reimbursed students for compiling lists at the remaining schools. Only two proprietary schools initially indicated that no alumni lists could be provided, one because the school was new and one because no alumni records were kept.

As descriptive literature was received prior to interview time, it was dated and logged in; available information relating to program descriptions, school services, and so forth, was abstracted and recorded on a preliminary form, so that the interviewer would be able to demonstrate prior familiarity with the school and shorten the interview time required, as appropriate.

Sample bias. Since no data were collected from the 37 proprietary schools which had gone out of business and the 32 proprietary and 2 non-proprietary schools which refused to participate; there is no objective basis for comparing these 71 schools with the 65 which participated in the study. It is important to keep in mind possible differences between participating and non-participating schools in interpreting the results, however.

Schools which survive and participate may tend to have greater success to demonstrate and less to hide, than those which go out of business or refuse to participate; or there may be no appreciable differences in job success of graduates among these three categories of schools. For participating schools to be less effective than the others would perhaps be the most surprising difference, since no ready explanation comes to mind.

Schools which go out of business may do so because their training is less effective, or because they are financially insolvent, among other reasons. Schools which refuse to participate may actually be too busy, or in disagreement with the research aims, or trying to conceal their status and procedures. Most refusals came from one city in this study and follow-up interviews suggested "too busy" as the main reason for refusals, as discussed in the next chapter.

Data Collection Procedures

Proprietary school interviews. Project staff visited 51 participating proprietary schools and personally interviewed the school directors or persons designated to coordinate the survey. Of the 53 proprietary school directors originally agreeing to participate, only two did not carry through in their agreement.

Virtually every school director was prepared for the visit and was able to provide both the time and information required for a satisfactory interview. Generally the format of a school visit included a brief review of the purposes and procedures of the survey, discussion and answers to interview questions, and a tour of the school premises. Interviews and school visits ranged in time from one hour to a generous five and one-half hours, with the typical time required a little over two and one-fourth hours. By and large, school directors were very cooperative and demonstrated favorable attitudes towards the survey and its potential for benefiting proprietary education.

In conducting interviews, project staff used the interview record form as a guide and response-marking device. Questions were not necessarily asked in exactly the same wording or in the same order as indicated in the form. The response options indicated on the record were not quoted as the only possible respondent options; rather, obtained responses were categorized according to these options. New categories were added when responses did not fall within an existing category. An effort was made to collect data for all indicated points or to indicate why data were unavailable.

Early interviews suggested useful revisions in the questions and format of the interview, and refinements were made throughout the course of the visits. Gathering information from available school literature ahead of the visits was extremely useful, both in demonstrating individual attention to and concern for schools and in somewhat lessening the time required for the interviews. In fact, catalogs and brochures, when available, provided a preliminary look at virtually all the required information relating to

school history, accreditation status, and program descriptions. However, it is interesting to note that some of the information gathered from such printed sources was neither up-to-date nor complete in outlining school policies and procedures as described later by personnel during interviews.

Most of the data desired from the interviews were fairly easy to obtain. However, difficulty was continually encountered in gathering data regarding school finances and placement records. Contrary to the pretest results, school personnel did not generally find questions regarding receipts and expenditures objectionable; rather the data were simply unavailable. This was particularly true for the large, corporate-owned chain schools whose account records are centralized and logistically difficult to obtain. The scarcity of placement and follow-up data was somewhat more disturbing. This will be examined in detail in a later section of this report.

Perhaps the most interesting discussions were in response to open-ended questions regarding changes that have occurred in the last three years in curricula, student bodies, and faculties, as well as changes desired in these areas. Another important source of information about proprietary schools, largely in the subjective vein, was a series of interviews with national directors of several corporate chains whose member schools had participated in the survey. Three such directors, as well as one director of a non-participating school, were interviewed. These men offered extensive and frank comments in such areas as placement, accreditation, and the role of large corporations in private occupational education.

Non-proprietary school interviews. Essentially the same procedures as those described above were used for interviewing staff of the non-proprietary schools. Emphases in discussion differed from school to school because the schools themselves differed rather broadly. Some were much more comparable to the proprietary schools than others. Of the 14 non-proprietary schools visited, nine are large public, tax-supported schools--eight community colleges and one area technical school--providing relatively broad course offerings in academic as well as occupational areas at virtually no cost to students. The remaining five non-proprietary schools are private, tax-exempt corporations which are in some ways more similar to the proprietary schools studied than to the public non-proprietary schools.

Institutional interview data. Detailed tallies and abstracts of objective data collected during institutional interviews were prepared. Summary tables were prepared where appropriate and selected items of information were coded for addition to the master project data file on magnetic computer tape. Detailed description of institutional data results appear in Chapter 3.

Student survey. Student questionnaires were distributed to each school coordinator in numbers adequate to cover enrollment estimates. National Computer Systems (NCS) printed and mailed questionnaires to schools in mid-January, 1972, for administration to students by mid-February. School coordinators were also sent a transmittal letter and return envelope to be

used for collecting their administration fee, as well as a prescribed number of administrator's guides. A copy of the transmittal letter appears as Appendix J. As previously stated, questionnaires were designed to be group administered during class time by instructors or designated personnel. The administrator was asked to read a short statement about the importance of the study, the intended anonymity of responses so far as the school administration was concerned, and proper marking techniques. Each student was asked to print his or her name, a permanent home address, and current course of studies on the cover, which was then detached and returned separately. These identifying data were later keypunched and matched with the student's questionnaire responses through use of a binary coding system developed by NCS especially for this study.

Initially all participating schools (51 proprietary and 14 non-proprietary schools) agreed to administer student questionnaires within a prescribed time period to all students currently enrolled in the surveyed training programs. These schools originally requested about 16,750 questionnaires, based on estimated enrollments. At the close of an eight-week time period, 37 proprietary and 8 non-proprietary schools had returned 7700 completed questionnaires. Almost 5% of these questionnaires (365) were eliminated from further analysis because initial editing revealed serious omissions or inadequacies in the information provided. From 7335 ostensibly usable cases, another 5% (385) were deleted from the final analysis pool, because they represented students enrolled in a course of study other than the four occupational areas surveyed. Thus, a total of 6950 students (3340 proprietary and 3610 non-proprietary) are represented in the analyses discussed in the Results section of the report. About seven-hundred questionnaires were received too late to be included in the analysis for the present report, although the information in raw form is on file and summaries of the data are being sent to the five schools involved. Ten proprietary and five non-proprietary schools, which had requested a total of 2455 questionnaires, never returned any questionnaires for processing.

Although the total number of questionnaires received is substantially smaller than the number originally sent to schools, the investigators find no reason to suspect a serious non-response bias in the data. Contacts with school administrators indicated that their estimates of the number of questionnaires needed were gross and on the high side (to be sure they had enough). Furthermore, many schools were limited by time and schedule constraints in the number of classes to which they could administer the questionnaire. Conversations with the school directors or coordinators convinced project staff that questionnaires were administered to all available classes in the selected course areas and to all students attending those classes on the day of administration, in nearly all cases. There appears to be no reason to suspect an appreciable bias or selectivity as to which students in the schools provided data.

Alumni survey. All participating schools were requested to submit lists of names and recent addresses of persons who graduated from the designated programs in 1969, 1970, and 1971. In order to ensure adequate participation in this phase of the study, schools were assured that all graduates identified by them would be surveyed and that schools would receive summary data

on all responding graduates. To facilitate their cooperation further, schools were offered clerical assistance or monetary reimbursement for compiling alumni lists. Ultimately, 46 schools provided alumni lists; 19 schools were unable to supply lists either because they were too new and had no alumni, their records were inadequate, or time constraints were too great. Project staff verified legibility of each list, then transmitted it to NCS for key-punching. When a greater than expected number of alumni were identified, project staff decided to survey the entire population of 13,549 in order to maintain its pledge of complete feedback to participating schools. NCS mailed alumni questionnaires, cover letters, and return envelopes on February 11, 1972, and sent a postcard reminder to these persons on February 14. A second cover letter and questionnaire were mailed three weeks later to all persons whose envelope containing the first mailing had not been returned as undeliverable. (Copies of cover letters and postcards, all prepared by AIR staff, appear as Appendix K.) Data on 5696 alumni (4194 proprietary and 1502 non-proprietary) or some 42% of the total surveyed, were received by the end of March and processed by NCS. Ultimately 481 cases (8.4%) were eliminated from final data analyses, representing 72 inadequately identified persons, 212 persons who had not completed a training program, and 197 persons enrolled in an unidentifiable course of study other than the areas surveyed. Thus, a pool of 5215 eligible alumni (3919 proprietary, 1296 non-proprietary) responded to the series of mailings.

Persons who had not responded to any mailing by six weeks after the first mailing became candidates for an intensive survey of non-respondents. This survey was conducted in order to assess the extent of bias resulting from non-response, to correct for this bias, and to produce a data pool which represents the total alumni population surveyed.

After deleting 349 names of alumni who did not take programs included in this study, the population of 7504 non-respondents consisted of 6308 proprietary and 1196 non-proprietary school alumni, including about 1600 persons whose questionnaires had been returned as non-deliverable. This population was divided into eight subgroups defined by proprietary/non-proprietary status and by city.

A sample of 500 non-respondents was drawn, 300 from proprietary schools and 200 from non-proprietary schools. In relation to the total population of non-respondents, this represents a sampling ratio of 21 for proprietary and 6 for non-proprietary school alumni. The sampling procedure was to select every rth name (where r is the sampling ratio) from the list of non-respondents which was ordered by school within each city. This insured proportional representation of cities, and also of schools to a greater extent than would have been likely with a completely random procedure. The non-respondent sample was actually drawn in two halves. When data from the first half revealed a fairly even distribution of responses among the four occupational areas, the second half of the sample was drawn in the same way as described above.

AIR staff made extensive efforts to locate and gather data from each of the 500 non-respondents sampled. Appropriate telephone directories and

operator assistance services were the most useful sources for locating individuals, their parents or spouses. Where necessary, AIR staff contacted the schools from which persons had graduated to gather additional information which might help to locate a person such as a more current address or telephone; parents' name, address, and/or telephone; an employer; a personal reference; or an emergency number. Letters and/or telegrams were sent to graduates with unlisted telephone numbers urging them to call AIR and complete a questionnaire. When AIR efforts failed, names were turned over to the Retail Credit Company for further search. Once located, persons were asked all questions on the alumni survey; all but a handful of the persons located were cooperative and willing to answer each question. In some cases where it was impossible to reach subjects themselves, data were gathered from close relatives familiar with the subjects' school and work experience.

These procedures ultimately yielded a 77% response of the non-respondents sampled. That is, 387 (225 proprietary, 162 non-proprietary) out of the sample of 500 were located and responded to the survey questions: 319 were located by AIR's in-house efforts; an additional 68 were located by the Retail Credit Company. Forty-eight of these cases (12%) were eliminated from the analyses because they had not completed an eligible program or were deceased. Non-respondent data for the remaining 339 persons were weighted and combined with respondent data to yield estimates for the total population surveyed. The following section provides a detailed description of procedures used for weighting these data, as well as a summary of all data analysis procedures.

Analysis Procedures

Two principal analyses were performed on student and alumni data: intercorrelations among item response variables and institutional variables, and cross-tabulations of item response percent distributions. The procedures involved in these analyses are described below. In addition, a cost-benefit analysis was performed on the alumni data; the procedures for this analysis are discussed in Chapter 5.

Correlational analyses. Specifications for the analysis of student and alumni data were similar. Variables were derived from school interview, student, and alumni data. They were selected to define different types of schools and to assess whether students and alumni with particular characteristics are associated with certain types of schools. Nineteen institutional variables were identified and intercorrelated with thirty-two student and twenty-seven alumni variables, using the individual school as the unit of analysis. Data on each variable were gathered for each school for which adequate data were available. and were recoded, averaged, or recorded as simple percents as necessary to put them into a form suitable for correlational analysis. Because some schools provided only student data and other schools provided only alumni data, separate analyses were performed for each set of data. Means and standard deviations were also computed for each variable. Since the focus of the study was on proprietary education, additional correlations were performed using data from proprietary schools only,

in order to assess any significant relationships among characteristics of proprietary schools--in particular, to assess any differences between accredited and non-accredited proprietary schools. A complete list and definition of the nineteen school and thirty-two student variables and the matrix of intercorrelations, means, and standard deviations (based on data for forty-six schools) are shown in Appendix L. A similar list of the twenty-seven alumni variables and the matrix of correlations among them and the nineteen school variables (based on data for forty-six schools) is shown in Appendix M. Since there was no reason to suspect, a priori, different degrees of non-respondent bias among different schools, unweighted respondent data were used for alumni correlations. Only correlations greater than plus or minus .30, which therefore differed from zero at the .05 level of significance, were used in inferring relationships among the variables in all correlational analyses.

Cross-tabulations. Cross-tabulations presenting the percentage of students giving each coded response to each item on the student questionnaire are shown in Appendices N, O and P. These are presented respectively for each of the four occupational areas, males and females, and each of the four cities surveyed. For each of these cross-tabulations, results are presented separately for proprietary and non-proprietary schools and for all schools combined.

Cross-tabulations of alumni data combine data from the respondent and non-respondent samples. Since the non-respondent sample size allowed a .05 confidence interval of approximately ±5% for percentages in the middle range, and about ±2% near the extremes, differences smaller than these percentages were considered insignificant. Virtually all differences between respondents and non-respondents fall into these ±2% to ±5% ranges, except on items relating to number of years out of school (Item 2), age (Item 20), nature of current job (Item 9), and job satisfaction (Item 15). Non-respondents appeared to have been both older and out of school longer than respondents--characteristics which probably contributed to their non-response. In addition non-respondents appeared to have remained in the same job they obtained immediately after training and to be more clearly satisfied with their present jobs than their respondent counterparts. It is important to note that differences even on these items were small, in the ±10% range. On the basis of this analysis, it appears that bias resulting from non-response was minimal, perhaps negligible.

Non-respondent data were nonetheless weighted to correct for any possible bias, and to obtain estimates for the total alumni population. Weights for non-respondent data were assigned on the basis of the ratio of located non-respondents to the total non-respondent population. Different weights were used for proprietary and non-proprietary alumni because of the different ratios used in drawing the sample. (The population of non-proprietary alumni was much smaller than proprietary alumni, and a higher sampling ratio was required to insure an adequate sample size.) A weight of one (1) was assigned to each respondent case. For proprietary school non-respondents, a weight of 28 was obtained by dividing the proprietary non-respondent population by

the number of proprietary non-respondents located: 6308 ÷ 225 = 28. The same procedure yielded a weight of 7 for the non-proprietary school non-respondent sample: 1196 ÷ 162 = 7. Weights of 28 and 7, respectively, were assigned to each proprietary and non-proprietary non-respondent case.

Combined cross-tabulations--weighted and unweighted--were prepared for each of the four occupational areas surveyed, by proprietary status and for all schools combined. Only trivial differences emerge between weighted and unweighted data. Weighted percent distributions for all items on the alumni questionnaire are presented in Appendix Q.

Reliability of small differences. The Results chapters focus on those aspects of the data which are particularly meaningful and relevant to the purposes of the study. Because the survey samples are large, many small percent differences between school types and among occupational groups are significant statistically. However, for the purposes of discussion and analysis, only those differences which are significant educationally as well as statistically are dealt with here. A table presenting minimally significant percent differences (.05 significance level at both midpoint and extreme values) for various sample sizes is shown below.

Table 2.3

Minimally Significant Percent Differences (.05 level) Between Two Groups of Varying Size[1]

Sample Size	200	500	1000	4000
200	10 (6)	9 (5)	8 (5)	8 (5)
500	9 (5)	6 (3)	6 (2)	5 (2)
1000	8 (4)	6 (3)	5 (3)	4 (3)
4000	8 (4)	5 (3)	4 (2)	3 (2)

[1]Numbers outside parentheses apply to percentages near 50%. Numbers inside parentheses apply to percentages near 10% or 90%.

CHAPTER 3: INSTITUTIONAL INTERVIEW RESULTS

This chapter presents the results of 51 interviews with proprietary school directors, 3 interviews with chief executives of national school chains, and 14 interviews with officials of public or nonprofit schools. These interviews were conducted by AIR project staff using the revised interview form contained in Appendix E.

As previously mentioned, an attempt was made to set up interviews in 168 schools which had been identified as providing post-secondary vocational training in one of the designated occupational areas in the four designated cities. Thirty-seven initial contacts were aborted because the schools in question had gone out of business during the interval between the publication of the 1971 telephone classified section and the late November 1971 mailing of contact letters. An immediate subjective impression from perusal of the returned letters suggested that computer schools had fallen victim to insolvency far more frequently than schools offering training in the other three occupational areas. In order to verify this impression, an analysis of unreachable schools was performed to categorize them by city and type of course. This analysis is presented in Table 3.1. It may be seen that 27 of the 37 schools (or 73%) were involved, either entirely or in part, in training for computer-related occupations. Twenty-two later interviews with directors of schools still offering computer training revealed that they too were under considerable pressure because of the sparse job market for trained personnel in this area, especially those without a college diploma.

Table 3.1

Schools Out of Business Summarized by City and Type of Course Offered

City	Total out of Business	Type of Course					
		Office	Computer	Health	Technical	Combination	Unknown
Atlanta	14	1	6	2	0	5	0
Chicago	12	0	6	1	1	0	4
Rochester	6	1	5	0	0	0	0
San Francisco	5	0	5	0	0	0	0
Total	37	2	22	3	1	5[1]	4

[1]Of these five schools, four offered a combination of office and computer courses and one offered a computer-technical combination.

An interesting fact to be noted in Table 3.1 is the comparatively large number of schools which had gone out of business in Atlanta (38% of those schools originally contacted in that city). Another interesting fact not shown in Table 3.1 is that the directorship of one school in Atlanta changed six times during the course of project contacts with that school. These events may well be a result of Georgia's lack of licensing procedures regarding proprietary schools.

Nevertheless, it is sobering to contemplate the overall situation in which 37 out of 150 proprietary schools identified (about 25%) went out of business during a nine-month period. If this figure can be projected at all to represent the national failure rate, it is no mystery that proprietary schools have sometimes acquired a questionable reputation. It is not surprising, also, that directors of more stable proprietary institutions constantly voiced a desire for stronger state and/or federal licensing policies. Although existing accreditation and licensing policies are geared to encourage institutional stability, an analysis of whether those schools which had gone out of business or which did not participate in the survey were accredited and/or licensed was beyond the scope of the study.

Another fact that was obvious from initial attempts to set up interviews was the disproportionately large number of refusals to participate in the study which came from Chicago. It may be seen from Table 2.2 earlier in this report that while the participation rates for the other three cities ranged from 74% in San Francisco to 100% in Rochester (Atlanta's rate was 75%), only 52.5% (22 out of 42) eligible schools in Chicago elected to participate. Later interviews with school directors in Chicago indicated that they were experiencing considerable administrative distress due to new state regulations which had recently been instituted in Illinois. Many schools were busy revising their curricula, recruiting policies, advertising, and catalogs as a result of these new regulations, and, as a consequence, they were hard pressed to supply the time necessary to participate in this study. It is interesting to note that the only refusals by public colleges also occurred in Chicago, from two campuses of the City College system. Again, later interviews provided evidence to support the initial protestations of personnel in these schools that they were administratively overburdened.

Overview of Interview Results

Information obtained during interviews with school personnel was generally consistent with that later obtained from students and alumni. Proprietary and non-proprietary schools differed substantially in several ways, as did program offerings in the four occupational areas studied.

Proprietary schools are motivated primarily by the profit incentive and depend almost wholly on student fees for their income. In order to attract students, the schools must make a convincing case that their graduates can find good jobs related to the training provided. Proprietary schools are thus closely dependent upon the job market and must shape their

training programs accordingly. They tend to concentrate on preparing students for a few specific related jobs using the most efficient learning methods they can find for economy's sake.

About two-thirds of the non-proprietary schools studied are tax-supported community colleges and are less accountable to their own students for job success after graduation than proprietary schools, though perhaps no less interested in making their curriculum appropriate to the students' needs. Such schools are larger than proprietary schools and address a broader range of learning goals covering both vocational and academic areas. Non-proprietary schools appear to have a more stable financial base and are less subject to fluctuations of the job market than proprietary schools. Proprietary schools are typically much smaller than community colleges and have capacity for considerable expansion when the market permits. In the last nine months of 1971, approximately 25% of the proprietary schools in the four cities and four occupational areas under study went out of business. Most of these failures were in the computer area which was undergoing a rapidly worsening market for non-college-graduate job seekers. Change of ownership occurs fairly often in proprietary schools, many of which have been acquired by large corporations in recent years.

Many of the students enrolled in the schools surveyed get support for their schooling from federal funding under a variety of legislation. Non-proprietary school students appear to have access to a slightly greater range of such funding sources. Many proprietary school directors feel that standards of eligibility for funds should be applied more equally to proprietary and non-proprietary schools. They generally recommend tougher government regulation of all schools to enforce higher standards of educational practice and ethical business.

Educational facilities appear adequate in nearly all schools. Proprietary schools generally have better teacher-student ratios (fewer students per teacher). Their students spend more time in the laboratory (vs. classroom) and gain more experience with equipment used on the job than students in non-proprietary schools. Non-proprietary schools, on the other hand, offer more remedial training in academic areas and better library services. The length of training programs varies greatly within both types of schools (from 3 to 78 weeks), with non-proprietary school programs tending to be somewhat longer on the average and leading more often to an associate degree. In each of the four occupational areas studied, training programs vary greatly as to length and job target. Curricula in all four areas are modified frequently in response to changing market demands. Proprietary schools emphasize speed in getting the student placed on a training-related job through shorter, more concentrated training programs, more flexible starting times and placement services. In proprietary schools the teachers are younger and paid less than their non-proprietary colleagues, though they have an equal amount of prior teaching experience. Non-proprietary faculties have more tenure on the job and more formal degrees among their credentials. In both types of school, teachers and students are primarily female in the

Table 3.2

Summary of Occupational Areas Offered by City

	PROPRIETARY					NON-PROPRIETARY				
	Atlanta	Chicago	Rochester	San Francisco	Total	Atlanta	Chicago	Rochester	San Francisco	Total
Office only	2	1	5	2	10	1	0	0	0	1
Computer only	2	4	0	2	8	0	0	0	0	0
Health only	3	2	1	4	10	0	0	1	0	1
Technical only	2	3	1	2	8	0	1	0	1	2
Office/Health	1	1	0	1	3	0	0	0	0	0
Office/Computer	0	1	0	4	5	0	0	0	0	0
Office/Computer/ Health	2	1	1	1	5	0	0	0	0	0
Office/Health/ Technical	0	0	0	0	0	0	0	0	2	2
Office/Computer/ Technical	1	0	0	0	1	0	0	0	0	0
Computer/Health	0	1	0	0	1	0	0	0	0	0
Computer/Technical	0	0	0	0	0	0	0	0	0	0
Office/Computer/ Health/Technical	0	0	0	0	0	1	6	1	0	8
Total	13	14	8	16	51	2	7	2	3	14

office and health areas, whereas they are mostly male in the computer and technical areas. The number of minority students and faculty is increasing in the office and technical areas, but school personnel indicate that racial discrimination is still pronounced in the health job market, especially in the offices of doctors and dentists; and minorities are underrepresented in health training as a result.

The following sections describe in greater detail results of the school interviews, focusing in particular on school, program, and teacher characteristics; major changes, desired changes, and incentives for schools to change; and placement and follow-up of graduates.[1]

School Characteristics

Type(s) of training offered. Table 3.2 contains a summary by city of the occupational areas for which training was offered in the 65 schools where directors or administrators participated in the interviews. It may be seen that for proprietary schools an approximately even breakdown was obtained among the four sampled occupational areas. Only 15 out of the 51 participating proprietary schools (about 30%) offered courses in a combination of areas, and many of these were the office/computer combination where keypunching was taught in predominantly office occupation schools. On the other hand, 10 out of the 14 non-proprietary schools (over 70%) offered courses in combinations of areas, and eight schools had courses in all areas.

Age and ownership. The results of interview questions about school age and ownership status are contained in Tables 3.3 and 3.4. Mean, median, and range are provided for school age. Because the age of one or two very old schools considerably influences the mean in each city, the median is considered a better measure of central tendency in this case. Schools in Chicago and San Francisco tend to be considerably older than those in Rochester and Atlanta. However, in all cities the non-proprietary schools are considerably older than the proprietary schools, reflecting both the "established" quality of the former and the "transitory" nature of a certain proportion of the latter. Seventeen of the 49 proprietary schools providing data on school age (almost 35%) have opened their doors since January 1, 1969. In addition,

Table 3.3

Average Age of Schools in Years

	PROPRIETARY				NON-PROPRIETARY			
	N	Mean	Median	Range	N	Mean	Median	Range
Atlanta	11	12	3	<1-22	2	5	5	3-6
Chicago	14	16	7	<1-51	7	15	11	1-36
Rochester	8	18	2	<1-108	2	7	7	4-10
San Francisco	16	21	7	<1-108	2	39	39	36-41
Total	49	17	6	<1-108	13	15	10	1-41

[1]NOTE: Percentages on tables and figures were rounded to one decimal place; thus, when combined, they do not always total exactly 100%.

another 17 of these 49 schools indicated they had been under the present ownership only three years or less. Change of ownership status appears to be common among proprietary schools. Large numbers of privately-owned schools are being acquired by corporations, and corporate-owned schools seem to be moved from corporate fold to corporate fold with some frequency.

Table 3.4 provides a summary of the ownership status of schools surveyed. The majority of participating proprietary schools (28 schools or 55%) were either subsidiaries of other corporations or were members of a corporation-owned chain of schools when surveyed.[1] This does not include eight proprietary schools which had some connection with a national or regional franchising operation. Most of the independent schools were located in the west and south, while most of the schools in the east and midwest were corporate-owned and franchise schools.

Table 3.4

Ownership Status of Schools

Ownership Status	Atlanta	Chicago	Rochester	San Francisco	Total
PROPRIETARY					
Single Ownership	0	0	2	4	6
Independent Business Corporation	4	0	0	5	9
Franchise	1	3	2	2	8
Corporate Subsidiary	6	3	0	1	10
Member of Corporate Chain of Schools	2	8	4	4	18
Total	13	14	8	16	51
NON-PROPRIETARY					
Public Ownership	1	5	1	2	9
Private Tax-Exempt Corporation or Trust	1	2	1	1	5
Total	2	7	2	3	14

[1]Several schools either were purchased by corporations or were in the process of being purchased during the course of the study.

Accreditation. Seventeen of the 51 proprietary schools visited were accredited by agencies recognized by the United States Office of Education--ten by the Accrediting Commission of the National Association of Trade and Technical Schools (NATTS) and seven other schools by the Accrediting Commission for Business Schools (ACBS). Seven additional schools were in the process of seeking approval from the former and three from the latter. One school had its engineering technology course approved by the Engineers' Council for Professional Development (ECPD) and one was seeking such approval. Both were also NATTS accredited schools, pointing out a distinction between program accreditation offered by organizations such as ECPD and institutional accreditation offered by NATTS and ACBS.

All of the nine public institutions surveyed were accredited by regional associations (or the New York State Board of Regents for the school in Rochester). Selected programs within these institutions were approved by professional associations, including ECPD for engineering technology programs, and the American Medical Association, American Dental Association, and Accrediting Bureau for Medical Laboratory Schools for allied health programs. The five private non-proprietary schools were not regionally accredited, but generally had program accreditation for their major courses of study. Only one of these schools had neither program nor institutional accreditation.

Eligibility for federal and state programs. Table 3.5 summarizes school directors' reports of their eligibility status for various federal and state programs which provide full or partial student funding. For each program named, responses were divided into the percent who indicated: (a) their school was not eligible to receive funds; (b) their school was eligible but no students had been financed in any of the last three years; and (c) their school was eligible and some students had been financed in the previous three years. Directors were also given an opportunity to name any other programs for which they were eligible. Some interesting facts are portrayed in Table 3.5 with regard to what appears to be the relative unavailability of public monies to proprietary schools. Although the legislation establishing all of these programs provides for participation by proprietary schools, a higher percentage of non-proprietary than proprietary school officials reported that students were eligible for and have been financed by most of the cited programs. The largest discrepancies in the category "% Eligible and Financed" appear in the college work-study program (64% vs. 2%), the program of federally insured student loans (79% vs. 33%), and the poverty program (71% vs. 31%). A sizable discrepancy in favor of non-proprietary schools also occurs in eligibility and funding for the WIN program (79% vs. 59%) and for veterans under the G.I. Bill (93% vs. 69%). The non-proprietary school advantage in eligibility for V.A. funds may be due to the requirement, for proprietary schools only, that programs be in existence for at least two years prior to V.A. approval.

Table 3.5

School Eligibility and Financing of Student Training by Federal or State Government Programs During Last Three Years

	PROPRIETARY (N=51)			NON-PROPRIETARY (N=14)		
	% Not Eligible[1]	% Eligible But Not Financed	% Eligible and Financed	% Not Eligible[1]	% Eligible But Not Financed	% Eligible and Financed
Vocational Rehabilitation Programs for Disabled or Handicapped	13.7	5.9	80.3	7.1	14.3	78.6
Veterans Administration Programs (e.g., G.I. Bill)	31.4	-	68.6	7.1	-	92.9
Manpower Development and Training Programs	33.3	17.6	51.0	64.3	-	35.7
Poverty Program, such as, Job Corps, Community Action, Neighborhood Youth Groups (OEO)	49.0	19.6	31.4	14.3	14.3	71.4
Work Experience for Welfare Recipients Program (WIN)	23.5	17.6	58.8	14.3	7.1	78.6
Bureau of Indian Affairs Training Program	64.7	13.7	21.6	57.1	14.3	28.6
Immigration and Naturalization Service Program for Foreign Students	58.8	7.8	33.3	85.7	7.1	7.1
Federally Insured Loans (e.g., FISL, NDEA)	58.8	7.8	33.3	21.4	-	78.6
Work Study Programs	84.3	13.7	2.0	35.7	-	64.3
Other (e.g., Social Security, Model Cities-HUD, Educational Opportunity Grant)	31.4	-	68.6	-	-	100.0

[1] Includes schools which did not know whether or not they were eligible.

Areas where virtual parity in eligibility and financing have been achieved include federal vocational rehabilitation programs (usually administered by a state division of vocational rehabilitation or department of human resources) and Bureau of Indian Affairs training programs for American Indian students. Vocational rehabilitation is the most widely-used source of funding for students in proprietary schools; 80% of the directors reported that some students had been financed during the past three years (as compared to 79% of the non-proprietary school officials).

Interviews seemed to indicate an advantage among proprietary schools in eligibility for institutional training funds under terms of the Manpower Development and Training Act (MDTA), with about two-thirds of the proprietary schools eligible as compared to slightly over a third of the non-proprietary institutions. About a third of the proprietary school directors indicated they had foreign students attending classes under special agreement with the Immigration and Naturalization Service. None of the public nonprofit schools had such students; only one of the private nonprofit schools had such an agreement.

Enrollment and operating capacity. A summary of average current enrollment and estimated capacity is contained in Table 3.6. Although both means and medians are provided, the median is probably a more representative measure of central tendency because of the disproportionate influence on the mean of one or two very large or small schools in each city. Full- and part-time enrollments are combined in Table 3.6. Both proprietary and non-proprietary schools enroll large numbers of "part-time" students, or those students who maintain less than a full course schedule. The extent to which each type of school enrolls both kinds of students will be discussed in Chapter 4.

Although estimated capacity information for non-proprietary schools was often unavailable, Table 3.6 demonstrates the clear tendency for non-proprietary schools to enroll larger numbers of students than proprietary schools. The discrepancy in school size is even greater when considering total enrollments by school combining all four occupational areas, since non-proprietary schools generally offer at least two and often four of the programs surveyed, as well as other programs not included in the study.

In an effort to determine unused operating capacity, each of the school directors interviewed was asked to estimate the current operating capacity of his school without expanding facilities. Table 3.6 suggests that most of the schools surveyed were not operating at or near capacity. Proprietary schools tend to have large unused capacity; that is, they have the capacity for far more students than they enroll. Not directly apparent from Table 3.6 is the fact that, of the proprietary schools surveyed, only three were operating at or very near capacity, two of them in the office and one in the computer area. The existence of surplus capacity reflects both lower than "desired" enrollments and a constantly expressed willingness to "add new classes"

Table 3.6

Summary of Current Enrollment and Operating Capacity
by Occupational Area and City

	PROPRIETARY					NON-PROPRIETARY				
		Avg. Current Enrollment		Avg. Est. Capacity			Avg. Current Enrollment		Avg. Est. Capacity	
	N	Mean	Median	Mean	Median	N	Mean	Median	Mean	Median
OFFICE										
Atlanta	6	117	*17*	229	*150*	2	85	*85*	–	–
Chicago	4	96	*57*	166	*137*	6	1077	*295*	1160	*360*
Rochester	6	51	*12*	193	*102*	1	227	*227*	225	*225*
San Francisco	8	96	*27*	225	*55*	2	406	*406*	–	–
COMPUTER										
Atlanta	5	80	*57*	126	*122*	1	90	*90*	–	–
Chicago	6	256	*214*	362	*325*	5	112	*100*	267	*200*
Rochester	1	50	*50*	226	*226*	1	151	*151*	150	*150*
San Francisco	6	103	*70*	233	*180*	–	–	–	–	–
HEALTH										
Atlanta	6	63	*51*	185	*162*	1	160	*160*	–	–
Chicago	5	44	*31*	121	*100*	6	213	*89*	110	*110*
Rochester	2	28	*28*	127	*127*	2	147	*147*	258	*258*
San Francisco	6	50	*54*	126	*153*	2	303	*303*	–	–
TECHNICAL										
Atlanta	3	170	*25*	323	*100*	1	110	*110*	–	–
Chicago	3	995	*210*	1223	*400*	7	247	*280*	324	*350*
Rochester	1	42	*42*	60	*60*	1	279	*279*	500	*500*
San Francisco	2	188	*188*	312	*312*	3	194	*104*	162	*162*

[1] N = number of schools reporting current enrollment. Estimated capacity was frequently based on an N somewhat smaller since not all reporting schools provided capacity figures also. Where N = 1, the school's actual enrollment and capacity figures are provided in the mean and median columns.

Table 3.7

Summary of Full-time and Part-time Teachers per School by Occupational Area and City

	PROPRIETARY				NON-PROPRIETARY			
	Full-time		Part-time		Full-time		Part-time	
	N[1]	Mean # of tchrs.	N[1]	Mean # of tchrs.	N[1]	Mean # of tchrs.	N[1]	Mean # of tchrs.
OFFICE								
Atlanta	6	4.2	3	1.7	2	7.0	0	-
Chicago	3	3.3	3	4.0	6	11.5	3	10.3
Rochester	5	5.6	4	3.0	1	12.0	0	-
San Francisco	7	3.1	5	3.0	1	24.0	1	5.0
Total and Weighted Mean[2]	21	4.0	15	2.9	10	11.9	4	9.0
COMPUTER								
Atlanta	2	7.5	2	3.5	1	8.0	0	-
Chicago	7	9.1	6	3.2	4	3.5	2	4.0
Rochester	1	2.0	0	-	1	6.0	0	-
San Francisco	4	5.5	4	6.3	0	-	0	-
Total and Weighted Mean	14	7.3	12	4.3	6	4.7	2	4.0
HEALTH								
Atlanta	5	4.4	3	1.7	1	15.0	0	-
Chicago	2	3	2	3	4	13.0	4	6.8
Rochester	2	1.0	0	-	2	10.0	1	1.0
San Francisco	6	3.3	4	2.5	1	11.0	1	16.0
Total and Weighted Mean	15	3.3	9	2.3	8	12.3	6	7.4
TECHNICAL								
Atlanta	3	7.2	2	1.5	1	19.0	0	-
Chicago	3	17.0	3	3.1	7	4.7	5	11.4
Rochester	1	3.0	0	-	1	15.0	0	-
San Francisco	2	6.0	2	4.0	2	19.5	2	6.0
Total and Weighted Mean	9	9.7	7	2.9	11	9.6	7	9.9

[1]N=number of schools reporting data on number of faculty employed.

[2]Included in this row of figures are the total number of schools employing full and part-time teachers and weighted mean numbers of teachers per school across cities.

to take advantage of unused time and facilities. Although unused capacity is most often seen as a recruiting problem, many school directors, especially in the health areas where facilities are extremely costly, expressed a desire to "add afternoon and evening" classes of students to maximize return on investment.

Non-proprietary schools are apparently running closer to capacity than proprietary schools. However, only one community college in Rochester was operating at capacity in the office and computer areas, and one in San Francisco was operating near capacity in the office area. Occupational program administrators in some of these schools frequently expressed dismay at their impotence to expand classes to take advantage of existing facilities. The truculence of higher administrators and faculty was an often-cited reason for this impotence, along with restricted budgets and shortage of planning time.

Faculty size, student-teacher ratio, classroom vs. laboratory instruction. Table 3.7 contains a summary of the average numbers of full- and part-time faculty at the surveyed schools. With the exception of full-time computer and technical faculties, non-proprietary schools again tend to be considerably larger than proprietary schools. The similarity in the figures for these two course areas is mostly a result of several very large computer and technical schools in the city of Chicago.

Table 3.8 summarizes the average reported student to teacher ratio by occupational area. Proprietary school ratios tend to be much smaller in both classroom and laboratory situations for all areas except the technical occupations, where the ratios are virtually identical. It was anticipated, on

Table 3.8

Mean Student-Teacher Ratio in Classroom and Laboratory by Occupational Area

	PROPRIETARY			NON-PROPRIETARY		
	N	Class	Lab	N	Class	Lab
Office	21	15:1	16:1	7	24:1	23:1
Computer	17	15:1	14:1	4	28:1	19:1
Health	17	14:1	12:1	7	20:1	14:1
Technical	8	18:1	17:1	9	18:1	16:1

the basis of previous studies (e.g., Belitsky, 1969) that student to teacher ratios in the laboratory would be considerably smaller than in the classroom. There is no large difference between the average classroom and laboratory ratios except in the computer and health areas of non-proprietary schools, where in fact the average ratios are lower in the laboratory.

Related to this classroom/laboratory comparison is the issue of how students spend their time between the two learning situations. Table 3.9 illustrates the distribution of time spent by students in classrooms and laboratories in the four occupational areas. The office and computer students in the proprietary schools spend slightly over half of their time in classrooms. Their fellow students in the health and technical courses spend the majority of their time in the laboratory. Non-proprietary school students, particularly those in computer and technical areas, tend to spend a higher proportion of time in the classroom (and less in laboratory) than proprietary school students.

Table 3.9

Mean Percent Time Spent in Classroom and Laboratory by Occupational Area

	PROPRIETARY			NON-PROPRIETARY		
	N	% Classroom	% Laboratory	N	% Classroom	% Laboratory
Office	16	51.6	48.4	8	55.2	44.8
Computer	23	53.3	46.7	5	71.0	29.0
Health	16	44.8	55.2	8	53.8	46.2
Technical	13	40.1	59.9	9	54.0	46.0

Services provided. All directors and administrators interviewed were asked whether their schools provided a number of services sometimes offered by post-secondary vocational schools. The results of this series of questions are summarized in Table 3.10. Reported in this table are the number and percent of schools which reportedly did offer each service; and, for those so reporting, the mean estimated percentage of the entire student body which used the service. Several interesting facts are apparent from this table. A surprisingly large percent of proprietary schools (almost 15%) provide no catalogs or brochures describing courses or fees. A similar number (about 18%) provide catalogs or brochures which contain no mention of fees.

Table 3.10

Services Provided by Schools and Mean Percent of Students Using Each Service

Service	PROPRIETARY (N=51) # of Schools	%	Mean % of Students Using[1]	NON-PROPRIETARY (N=14) # of Schools	%	Mean % of Students Using[1]
Catalog or Brochure Fees Included	35	68.6	93.0	13	92.9	95.9
Catalog or Brochure No Fees Mentioned	9	17.6	93.0	1	7.1	95.9
Admission Counseling	42	82.4	87.6	13	92.9	86.3
Continuing Vocational Counseling	43	84.3	57.7	12	85.7	58.5
Counseling for Personal Problems	45	88.2	39.2	12	85.7	16.2
Organized Student Activities	18	35.3	68.0	11	78.6	34.7
Library[2]	36	70.6	51.1	13	92.9	58.6
On Premise Computer	14	27.5	93.5	6	42.9	67.7
Remedial Training in Academic Skills	31	60.8	44.3	13	92.9	51.4
Experience Working With Equipment Used on Jobs	51	100.0	100.0	14	100.0	92.4
Cafeteria or Other Food Service	12	23.5	81.8	9	64.3	79.3
Dormitory or Other School-Operated Housing	5	9.8	52.8	1	7.1	56.0
Student Financial Aid Center/Officer	18	35.3	53.9	11	78.6	21.8
Placement Service	50	98.0	77.8	9	64.3	77.9

[1]Based only on schools offering the service. (In some cases, one or two schools reported a service available but did not report what percent of students used the service. These schools were deleted from the N in calculating the average number of students using the service.)

[2]The mean library size of schools having libraries is 842 for proprietary schools (N=36) and 25,760 for non-proprietary schools (N=14) with ranges of 288-1394 and 3,100-40,000 respectively.

A high percent of all officials surveyed indicated their schools provide counseling services, both for applicants and for enrolled students. Figures on usage of these services are also roughly equivalent in proprietary and non-proprietary schools, with a high percent of applicants receiving counseling about selection of courses, a medium percent of students receiving vocational counseling, and a somewhat lower percent of students receiving counseling for personal problems. Proprietary schools seldom reported having professional counselors to perform these services, with administrative staff or faculty most often providing them. On the other hand, non-proprietary schools often have a staff of trained counselors to provide such services.

A much higher percent of non-proprietary schools than proprietary schools provide some kind of organized student activities (sports, student government, social activities, etc.) but a higher percentage of students participate in these activities in the proprietary schools where they are provided.

More non-proprietary schools also have libraries, and the discrepancy in size is even more pronounced, with a difference of 25,000 in mean number of books. This undoubtedly reflects the fact that large libraries are more of a necessity in schools which offer liberal arts courses, while predominantly vocational schools can function quite adequately with a smaller number of essential reference volumes. A similar situation holds for the provision of "remedial" training in the basic academic skills. Although a larger percentage of non-proprietary schools provide this training, this is thought to reflect the fact that most of these institutions have large established English and mathematics departments in which vocational students can take courses along with the academic students. On the other hand, interviews with school officials indicated that the proprietary schools which provide remedial courses establish them in response to specific observed needs in a portion of their student bodies.

All schools reported that students receive experience in actually working with the equipment used on the jobs for which they are being trained. In general, schools which provide data processing courses (as opposed to key-punching courses) also have a computer on the premises for student use. However, only 68% of the non-proprietary students (as opposed to 94% of the proprietary students) enrolled in data processing courses actually appear to use the computer. This was obviously a problem in several of the large public schools visited; project staff encountered students in some of the programming courses who were upset at having to wait several days for machine turn-around due to the necessity of running their programs on an off-campus computer, which had the necessary core storage to compile programs written in program languages they had learned.

Few of the surveyed schools have school-operated housing facilities, although many have "agreements" with apartments. Those few which do have housing facilities are reportedly losing money on them, and several directors indicated they have plans to close the operations. Few proprietary schools have enrollments large enough to support cafeterias; this is not the case with the non-proprietary schools, 64% of which have on-campus hot food service (most of these being the large public institutions).

Finally, a much larger percentage of non-proprietary schools reportedly have a student financial aid office or officer. However, almost all of the proprietary schools have some financial aid plan administered by admissions or placement officials, usually in the form of a no-interest, deferred payment option; few tuition scholarships are offered by proprietary schools, though many government-sponsored loan and aid plans are available to students, as discussed earlier.

Virtually all of the proprietary schools reportedly provide placement services to their students, as opposed to only 64% of the non-proprietary institutions. This discrepancy indicates an important philosophic distinction between these two types of schools, which will be discussed further later in this report.

Sources of income and major areas of expenditure. As mentioned previously, difficulty was continually encountered in attempting to gather data regarding school finances. In fact, 38 out of the 65 participating schools could provide no data in this area. Contrary to the pretest results, school personnel did not generally find questions regarding receipts and expenditures objectionable; rather the data were simply unavailable or indefinable in any consistent manner. This was particularly true for the large corporate-owned and public schools whose account records are centralized and logistically difficult to obtain. Certain general statements can nonetheless be made in this area.

Receipts in proprietary schools are almost exclusively from student fees, with a handful from government contracts such as institutional training grants under the Manpower Development and Training Act. Income from endowment and gifts from alumni or friends are virtually non-existent. On the other side of the ledger, the bulk of expenditures clearly goes to teacher and administrator salaries and benefits, the next largest categories being buildings, other capital costs, and advertising. Virtually nothing is expended on additions to endowment or reserves; financial aid to students is minimal; and for most reporting schools, relatively little if any money apparently goes to distributed profits. Whether it could be concluded from such limited data that proprietary schools are not very profitable is doubtful; however, school interviews indicated that profit margins currently tend to be low. This is especially true for the infant years of a school's existence, and many of the schools surveyed are relatively new.

Non-proprietary receipts are more evenly distributed between student tuition, government contracts or grants, and public monies (mostly state,

county, and city). Gifts from alumni and friends are often considerable, but small in comparison to the magnitude of overall receipts. Expenses are proportioned similarly to the proprietary schools, with three major exceptions. These schools spend little on "paid for" advertising and nothing on distributed profits and taxes.

Recruiting methods. Related to the issue of expenditures is the entire question of how vocational schools advertise and recruit students. Both proprietary and non-proprietary schools seek to inform the community at large and, in particular, potential students about the programs and services they offer. Both groups of schools must, in fact, attract and keep students if they are to continue to exist or, in the case of the community colleges, if they are to continue to justify public support for their vocational programs. However, the two groups of schools differ in the manner in which they recruit students.

Many proprietary schools employ full- and/or part-time "field representatives," expressly for the purpose of recruiting students. These persons are variously called field representatives, admissions representatives, or admissions counselors. They generally work on the school premises answering inquiries from potential students, and often visiting the homes of prospective enrollees. Although an image often associated with the success of private, profitable business is that of commissioned salesmen, only half the reporting proprietary schools employ field representatives; of these, 52% are paid by commissions, 12% by salary, and 36% by a combination of both. Several schools indicated that commission payment to field representatives was prorated according to the length of time the "recruited" student remained enrolled in the program--an apparent effort to reduce inappropriate and failure-bound enrollments. Table 3.11 provides a detailed summary of the number of field representatives employed by proprietary schools.

Table 3.11

Summary of Field Representatives Employed by Proprietary Schools

Number of Field Representatives Employed	Number of Schools	%
0	25	49.0
1	5	9.8
2	4	7.8
3-5	7	13.7
6-10	4	7.8
10 or more	5	9.8
Information Not Available	1	2.0
Total	51	100.0

Closer analysis of interview data reveals that the 26 schools which do employ field representatives are virtually all large schools, corporate subsidiaries, or chain school members; also, there is a positive relationship between the size of the school and the number of persons so employed. It is not surprising either that non-proprietary schools rarely employ recruiters (although one of the surveyed private nonprofit schools does employ a full-time, salaried person responsible for recruiting students).

Certainly other methods are utilized to recruit students besides employing specialized personnel. In fact, field people are largely dependent upon these other sources for leads. The non-proprietary schools also actively seek students, using similar advertising and recruiting techniques. Table 3.12 provides a detailed summary of recruiting methods used by proprietary and non-proprietary schools and the percentage of schools using each method. Methods appear in order of descending frequency of use by proprietary schools.

Table 3.12

Summary of Recruiting Methods Used

Recruiting Methods	PROPRIETARY (N=50) # of Schools Using	%	NON-PROPRIETARY (N=14) # of Schools Using	%
Newspaper Ads	46	92.0	5	35.7
Referrals (e.g., former students or employers of graduates)	43	86.0	6	42.9
Yellow Pages	41	82.0	2	14.3
Direct Mail or Solicitation	30	60.0	7	50.0
High School Presentations and Liaison Work	25	50.0	11	78.6
Television	25	50.0	2	14.3
Radio	18	36.0	2	14.3
Other [1]	18	36.0	6	42.9

[1] "Other" includes such methods as miscellaneous advertising (magazines, signs, etc.), government agency referrals, and press releases.

Newspaper and yellow pages advertisements and referrals by former students or employers of graduates are the most common recruiting methods reportedly used by proprietary schools. Coverage of community college offerings on television, radio, and newspaper is almost exclusively of the free public interest kind and is obtained by school public-relations efforts. As such, this coverage offers small contribution to the overall recruiting effort, which focuses more on high school presentations, coordination with high school counselors, and direct mailings to the community. Recruiting methods used by some of the private nonprofit schools are more similar to those used by proprietary schools since their budgets permit more direct advertising expenditures. The high percentage (36%) of non-proprietary schools advertising in newspapers largely represents these private nonprofit schools.

Methods mentioned in the "Other" category include magazine advertisements, bus and subway cards, drive-in movie signs, and poster displays. In addition both proprietary and non-proprietary schools frequently mentioned increased efforts to coordinate with state and local government agencies to encourage more individual enrollments of persons funded by government (e.g., Veterans Administration, Vocational Rehabilitation) as well as contracts for training groups of disadvantaged persons (e.g., MDTA, WIN).

Table 3.13 presents the relative effectiveness of recruiting methods as ranked by proprietary schools. (Similar information on non-proprietary schools was impossible to obtain.) Newspaper ads, referrals, and high school presentations are all frequently used by proprietary schools, and where used rank

Table 3.13

Relative Effectiveness of Recruiting Methods
Used by Proprietary Schools

Recruiting Method	% of Proprietary Schools Ranking Method Most or Second Most Effective (N=45)[1]
High School Presentations (including coordination with counselors)	48
Newspaper Advertising	37
Television Advertising	36
Referrals (e.g., former students, employers of graduates)	35
Direct Mail	27
Other (e.g., direct solicitation of government contracts)	22
Yellow Page Listings	17
Radio Advertising	17

[1]The percentages are based on the number of schools ranking the method as most or second-most effective, divided by the number of schools using the method.

high on effectiveness. Although only the larger schools tend to advertise on television because it is so costly, it is rated as effective when used. Interviews revealed considerable variability and flux in recruiting methods used within proprietary schools resulting from ongoing evaluation of their effectiveness. For example, several smaller schools, while admitting the effectiveness of television exposure, found the cost of television in excess of its benefits. Similarly, some schools experienced poor response from direct mail campaigns and subsequently ceased to recruit students in this manner. Schools seem careful not to waste their advertising money in fruitless channels. However, the range of promotional efforts is wide, indicating a willingness to experiment to find effective channels.

Program Characteristics

Appendix R provides detailed descriptive information on the programs offered in the proprietary and non-proprietary schools which participated in this study. Information therein was compiled from school interview records and descriptive catalogs and brochures. All course offerings are listed even if students are not currently enrolled in each program, a situation not uncommon in some schools where enrollments are below capacity. Tables are provided in Appendix R for the office, computer, health, and technical programs offered by proprietary and non-proprietary schools in each of the four cities surveyed.

The tables provide a detailed picture of program offerings, entry requirements, frequency of admission, course length, and costs. Although the number of schools surveyed is small, the scope of these tables is wide and likely represents the range of program offerings, and characteristics, available in proprietary and comparable non-proprietary schools across the country. Since the tables are so inclusive, the discussion below only summarizes important points. It is important to preface such discussion by saying that the very broad range of program offerings accounts in large part for parallel variations in the characteristics associated with each program, such as length of program and cost. It is also important to remember the distinction between proprietary and non-proprietary schools and between the two types of non-proprietary schools, the public community college and the private, non-profit school. The greatest number of non-proprietary schools are public community colleges, governed by state legislation and operated with public funds. The community colleges offer a wide variety of courses in many more areas than those surveyed in this study, including traditional academic courses. Proprietary and private nonprofit schools tend to concentrate on courses in one or two occupational areas, and must meet the needs of the marketplace to stay in business. This market is increasingly being modified by government support and regulation, and government-sponsored programs in proprietary schools are a growing trend. Contracts under such programs as WIN and MDTA pay proprietary schools to train disadvantaged or unemployed persons in various occupational skills, particularly in the office

and computer areas. In addition to having their course fees paid, students in most of these programs are paid an hourly wage. Courses established for such contracts are scattered throughout Appendix R. Course lengths and fees were frequently unavailable for use in computing average figures.

Range of program offerings. The 121 office programs offered by proprietary and non-proprietary schools are predominantly clerical. Approximately one-third of the programs train secretaries, and another fifth train typists or clerk-typists. The variety of other office programs offered is great and includes courses as general as accounting, and as specific as offset duplicating, speedwriting, and court reporting.

The 63 computer programs offered have a tremendous range in sophistication, e.g., from "office automation (data processing-secretarial)" to "comprehensive computer programming and executive management." However, a quarter of these programs focus on keypunching and another quarter on programming.

One hundred courses are offered in the health occupations, ranging from the clerical to the paraprofessional. Fully one-quarter of the courses train medical secretaries, receptionists, and typists, and as such might well be grouped with courses in the office area. Another quarter of the courses train medical or dental assistants. The remaining courses are highly varied and often very specialized, including courses for nurses' aide, operating room technician, inhalation therapist and orthopedic assistant.

The vast scope of technical programs offered reflects the technology explosion in the last twenty-five years. A third of the 111 courses offered in this area relate to electronics, engineering, or electrical occupations. Even among this third, the offerings are highly diverse. A quarter of the technical courses are in the drafting area, some general and some as specialized as architectural drafting and sheet-metal drafting. The diversity of technical offerings is a mirror of our time and the marketplace, and includes such courses as waste water technology, highway engineering, environmental control technology, and product design.

In comparing the proprietary with the non-proprietary school offerings, it becomes apparent that the proprietary schools tend to have a greater number and a greater variety of courses in the office and computer areas; in fact, San Francisco non-proprietary schools offer no computer courses per se. In the health area this trend begins to reverse. Although Atlanta and San Francisco proprietary schools offer more health courses than their non-proprietary counterparts, the reverse is true in Chicago and Rochester. In the technical area, the non-proprietary schools are clearly the leaders in diversity, innovativeness, and number of technical courses offered.

Entry requirements. Courses are categorized in Appendix R as having no entrance requirements, requiring some education but less than a high school diploma, requiring a high school diploma or Graduate Equivalency Diploma (G. E. D.), and requiring any type of test before entrance. It became

obvious during interviews that such entrance requirements are highly flexible and were often expressed in an "either. . .or" manner. For example, some schools require that the applicant complete "high school or pass aptitude test"; some school personnel stated that "requirements may be waived at the discretion of the school director." (For the purposes of compiling Appendix R, such courses were categorized as requiring less than high school.)

It was difficult to define and classify the purpose to which entrance examinations are directed. Tests were described variably as aptitude tests used for diagnostic and placement purposes and as screening devices used to accept or reject applicants. Not more than one or two of the proprietary school directors interviewed claimed to have rejected outright any student on the basis of such a test. However, many reported great value of such tests as potential trouble indicators, and counseling and placement tools. In fact, the variety of programs generally offered within any one school provides tremendous flexibility in terms of alternative placement and programs of study.

In spite of these qualifications, less than a third of all the courses surveyed require a high school diploma or an entrance examination. There are, however, noticeable differences among the occupational areas studied. A significantly higher percentage of the computer courses require high school graduation or the G.E.D. and an entrance examination. Well over half of the computer courses have these requirements. This probably reflects the large number of programming and computer technology courses which reputedly require mathematical abilities, strengthened by high school and diagnosed by aptitude tests. It is important to reiterate the flexibility of alternative program offerings found in most computer schools where courses range from computer operations to repairs to programming. Along similar lines, a significantly lower percentage of office and technical courses require high school graduation. Almost 90% of these courses do not require high school graduation. Reflected in this figure is a large number of drafting programs. Directors of these programs unanimously agreed that drafting skills were unique unto themselves and that a high school education was not a fair prerequisite.

Interestingly, the non-proprietary schools are clearly more flexible in their expressed entrance requirements. Overall, only 13% of the non-proprietary courses require high school diplomas or the G.E.D. as opposed to 44% of the proprietary courses. In addition, a much higher percentage of proprietary school courses require entrance examinations.

Frequency of admission. Courses were categorized according to how frequently they begin, ranging from continuous enrollment and admission at any time to admission less than quarterly, the latter primarily referring to the semester system. Courses that begin "throughout the year" are included in the "anytime" category; courses beginning every six weeks are included in the monthly category; and courses beginning every ten weeks or at "regularly scheduled intervals" are included in the quarterly category. In the non-proprietary schools all but ten of the 170 courses surveyed operate on a semester system. The proprietary schools are overwhelmingly more flexible

in this regard; almost three-quarters of the courses start either quarterly or monthly, and almost a quarter of the courses can begin any time a new student enrolls. This does not necessarily mean that the entire course begins at such frequent intervals, but rather that the course is designed so that students can begin it at varying intervals.

Length of program. It is immediately apparent from Appendix R that courses vary tremendously in length, as well as frequency of admission, entry requirements, and the like. An attempt was made to calculate the mean length of each course type even though schools reported these lengths in different units of time. To transform course lengths into weeks, calculations assumed 30 hours to a week of class time, four weeks to a month, twelve weeks to a quarter, and eighteen weeks to a semester.

Length of program is one of the variables on which proprietary and non-proprietary schools differ most dramatically. Programs are generally longer in the non-proprietary schools, but many offer the advantage of obtaining an associate degree which is only infrequently offered by proprietary schools. A more specific summary is contained below.

Office programs in both proprietary and non-proprietary schools range tremendously in length. Proprietary programs range from six-week courses in PBX/receptionist to a 72-week course in court reporting. Non-proprietary courses range from a three-week course in cashier/checker to a 78-week secretarial course. However, a smaller proportion of non-proprietary courses are less than 20 weeks in length , and similar courses in accounting and secretarial skills are typically longer than in proprietary schools. In addition, five proprietary office programs are individualized to the extent that they no longer even quote an average length of time for the program. (Such courses naturally could not be included in calculating mean course length.)

More than half of the computer programs in proprietary schools are 20 weeks or less in length, reflecting the large number of short keypunching courses offered; only about 10% are over 36 weeks in length. The picture is almost the reverse in non-proprietary schools with slightly less than a fifth of the computer programs 20 weeks or less in length, and a half over 36 weeks in length, reflecting the non-proprietary emphasis on two-year associate degree programs in computer science.

Differences are also great in the health area. About 80% of the proprietary health programs are divided equally between courses less than 20 weeks in length and courses over 36 weeks. The picture is quite different in the non-proprietary schools where less than 10% of the health programs are 20 weeks or less in length and almost 80% are over 36 weeks. The range of course length is much wider in proprietary schools, since almost all the health programs in non-proprietary schools are two-year associate degree programs.

Proprietary and non-proprietary school technical courses are much more comparable in length. Very few are 20 weeks or less in length (none in the

non-proprietary schools) and about 80% are over 36 weeks in length. Certainly, of the four areas surveyed, technical programs seem to demand the greatest amount of time. Still, in proprietary schools, programs range from a two-week course in blue-print reading to a 108-week associate degree program in electronics engineering technology.

Cost. Proprietary and non-proprietary school programs differ dramatically in cost. One great advantage of the non-proprietary schools is their low tuition, if they have tuition at all. Public community colleges in San Francisco are free, and those in Chicago have a very nominal service charge per semester. The public community college in Rochester does charge tuition and a typical two-year program costs over $1,000. A distinction must be made, however, between the public community colleges and the private, non-proprietary schools. The private schools consistently charge more for their courses than the community colleges, and in many cases, are comparable to the proprietary schools in terms of fees charged. Thus, average fees tabulated for non-proprietary school programs may be somewhat inflated by these private school fees.

Since fees are a function of the length of program, Appendix R presents average fees, where possible, in two ways: as a mean fee per month (calculated by dividing the total course fee by the length of the program in months, four weeks per month) and as a mean total fee (calculated by adding the fees for similar programs and dividing the sum by the number of programs). The mean fee per month is not shown for individualized courses where length is not specified, for public school programs whose fees are nominal, nor for those government-sponsored programs (e.g., WIN, MDTA) for which fee information was unavailable. Total fees for public and private non-proprietary schools are reported separately, the former as a per semester fee, the latter as a total. Average ranges are also presented to illustrate the broad pricing structure among programs.

In summary, the per month cost of proprietary computer courses in considerably higher than any of the other occupational areas, with almost 70% costing more than $200/month. Almost half the health courses fell in this category, but only 10% and 15% of the office and technical courses respectively cost as much on a monthly basis. These differences may be attributable to the higher capital-expense equipment costs in the health and computer areas; however, assessing the reasons for these differences was beyond the scope of the study. Total cost comparisons are somewhat different. Technical and health courses tend to be the most expensive with about half costing over $1500. To a large degree, this reflects the greater time required for completion of these courses. While computer courses cost considerably more per month than other courses, fully a quarter of these courses cost less than $500 in total and only 40% cost more than $1500; this distribution of costs reflects the large number of keypunch offerings. It is difficult to compare total or per month costs of non-proprietary school programs with those of proprietary schools beyond saying that the latter are considerably more expensive. More relevant comparison between the private proprietary

and private nonprofit is difficult to make because of the relatively small number of private nonprofit programs studied. Given a larger sample, these results would suggest that the cost of these programs would be comparable to the cost of similar programs in proprietary schools, or perhaps slightly less.

Proprietary school response to public school offerings. Before concluding this description on program offerings, it is important to look at the relationship between proprietary and non-proprietary course offerings within each city. This relationship sheds light on the question, "How do proprietary schools respond to public school offerings in establishing programs?" In other words, in terms of program offerings per se, do the proprietary schools have anything to offer that the non-proprietary schools do not or vice versa? In making summary statements, it is important to remember that not every eligible proprietary school participated in the survey, although representation in Atlanta and Rochester is excellent. Because of the high participation rate of non-proprietary schools, the investigators are satisfied that the public school offerings presented are complete. It is also important to mention that an analysis of the economic marketplace in each city is outside the scope of this particular discussion.

In all four cities the proprietary schools offer a greater number and variety of both general and highly specialized courses in the office and computer areas (except Rochester where computer courses are limited in both groups of schools). In the health and technical areas, the above trend is reversed. Although Atlanta public and private health offerings are similar, San Francisco, Chicago, and Rochester non-proprietary schools offer a much greater variety of specialized health programs than the proprietary schools. Proprietary schools tend to limit offerings to medical and dental assisting programs whereas non-proprietary programs include specialties such as X-ray, radiologic, inhalation, and dietetic technologies--virtually non-existent in proprietary schools anywhere. A similar situation is true for the technical offerings in all four cities. Whereas proprietary school offerings focus heavily on drafting and basic electronics, public schools offer a great variety of highly specialized courses. It would appear that in these areas, proprietary schools have not sought to compete with these specialized public school offerings, but rather to stress more general, flexible preparatory courses for occupations for which manpower needs are supposedly high. In fact, it appears that many offerings of proprietary and non-proprietary schools, within city and across occupational areas, are complementary rather than competing.

Teacher Characteristics

Data regarding teacher characteristics were collected for the teachers engaged in teaching the surveyed course areas in each school. Data regarding characteristics of full-time and part-time teachers are combined since it was difficult or impossible to gather data separately for full- and part-time staff. However, it is important to keep in mind that approximately 71%

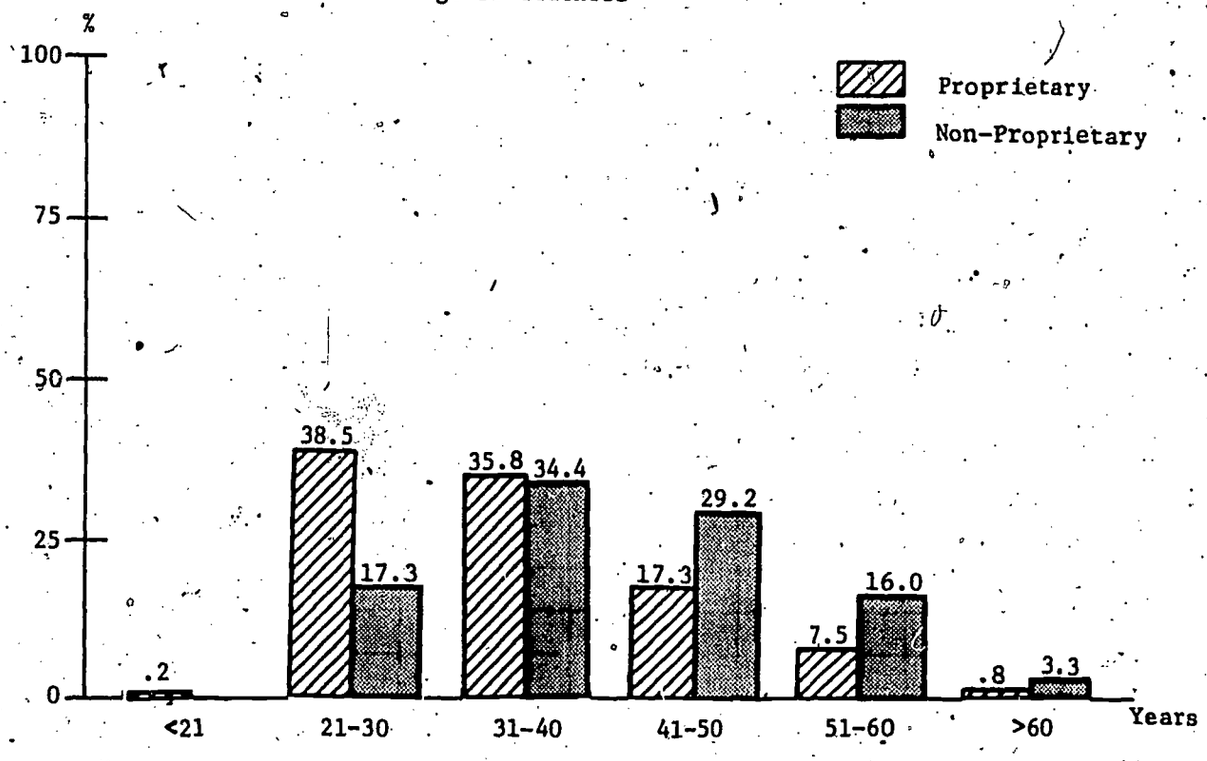
of all teachers in the surveyed schools are employed on a full-time basis and 29% part-time. The ratio between full- and part-time teachers is the same in the proprietary and non-proprietary schools. (Full-time and part-time were variably defined by both groups of schools. Generally, full-time includes those who work on a full-day schedule for at least 30 hours per week; part-time includes those who work nights only, teach only one or two courses, or lecture regularly, but do not teach courses.)

Teacher data were not gathered by occupational area but may be derived for those schools which offer courses in a single area. The graphs on the following pages which present results for each occupational area are based on those schools offering courses in only a single area. However, all schools (single- and multiple-areas offerings) are included in the graphs which compare all proprietary to all non-proprietary schools.

Age. Figure 3.1 displays the distribution of teachers by age group. The proprietary schools have a considerably higher percentage of teachers under 30 years of age than the non-proprietary schools. Almost half (49%) of the non-proprietary school teachers are over 40 as compared to only a quarter (26%) of the proprietary school teachers, indicating a clear tendency for the proprietary schools to employ younger teachers.

Figure 3.1

Age of Teachers

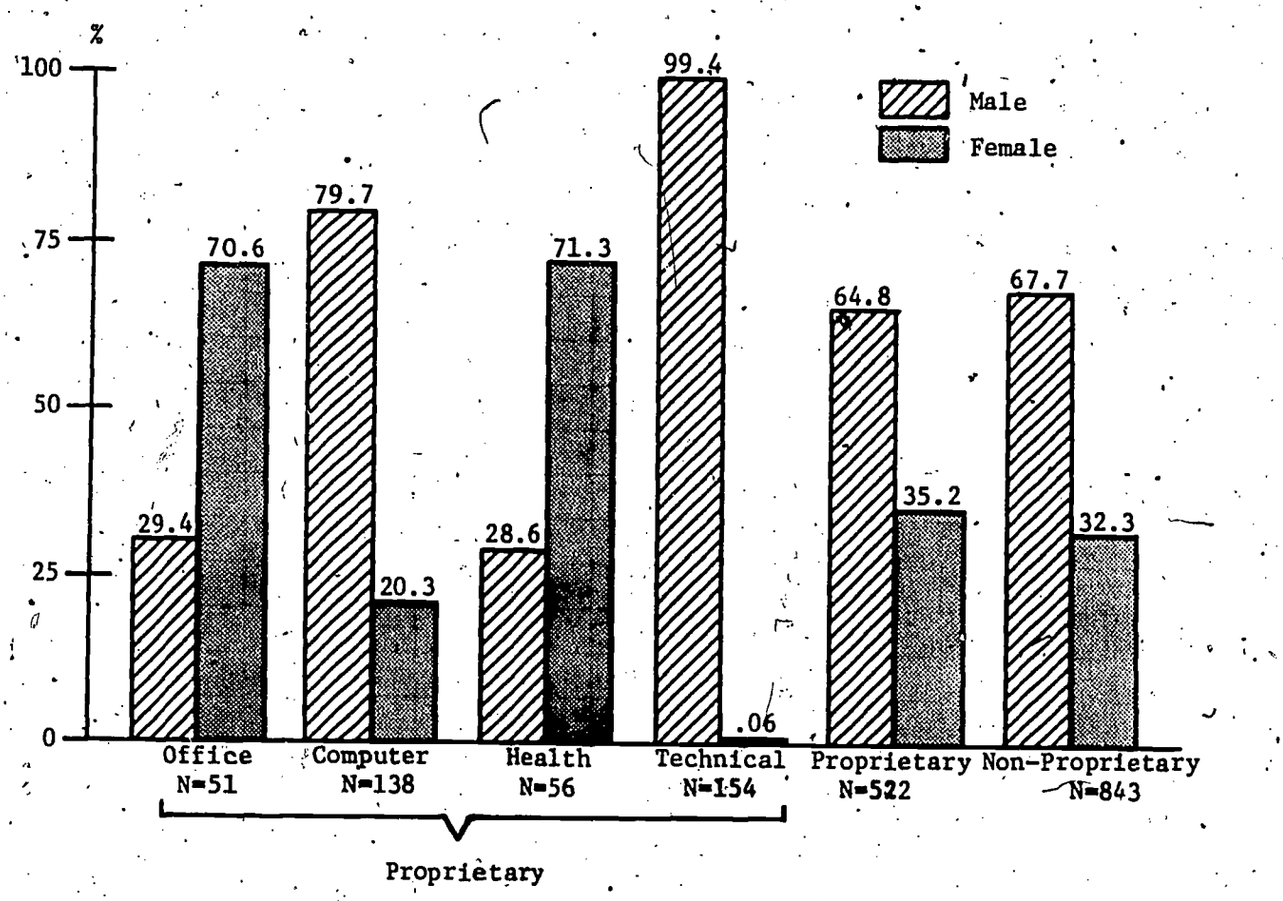


Although teacher salary information was not collected in this survey, several proprietary school directors commented that they could not afford to pay salaries as high as those paid in public schools and that the turnover rate for their teachers was high. In addition, proprietary schools do not operate on the tenured staff system found in public community colleges. These two factors may account for the tendency for non-proprietary school teachers to be older, and more likely to remain at their jobs for longer periods of time than proprietary school teachers.

Sex. Figure 3.2 illustrates the expected higher percentage of female teachers employed in the office and health fields (71% for both). Also as expected, a much larger percentage of males are teachers of computer and technical courses (80% and 99% respectively). Both the proprietary and non-proprietary schools studied employ about twice as many males as females. Because of this similarity and because of the traditional male/female roles displayed so well by the proprietary school breakdowns, there is little reason to expect a different sex breakdown by occupational area in the non-proprietary schools.

Figure 3.2

Sex of Teachers



Education. In comparing the education attained by teachers in different occupational areas, one should remember the variety of course offerings within each area. Although the office area contains mainly clerical courses, the technical area ranges from electronics and engineering technology to drafting. Similarly, the computer area ranges from keypunching to computer operation to programming; and the health area from medical secretaries and transcribers to medical and dental technicians. Within this wide spectrum, the educational background necessary for effective teaching will obviously vary among courses.

Figure 3.3 indicates that well over half the proprietary school teachers in each occupational area hold at least a bachelor's degree (from 59% in computer to 68% in health); in the office and technical areas, well over one-third of the teachers have completed some graduate work. Graduate degrees are held by a much higher percent of teachers in the health area than in other areas. This is accounted for in part by the large number of physicians and dentists employed as part-time lecturers in the health schools. Only four teachers (all in the technical area) have less than a high school education, and most all teachers have had some education beyond high school.

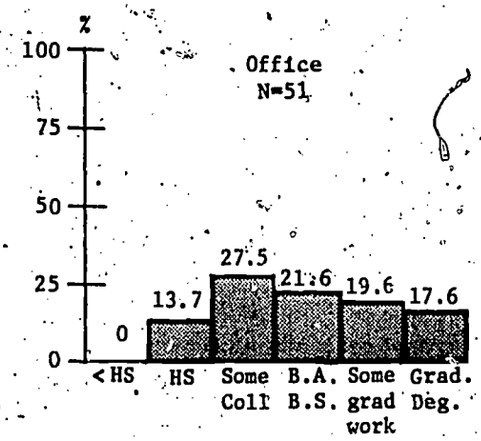
Comparing all the proprietary with the non-proprietary schools, teachers in the latter have attained a significantly higher level of education. At the graduate degree level, 60% of the non-proprietary teachers hold graduate degrees, compared with 20% of all proprietary school teachers. The percentage of teachers holding at least a bachelor's degree is not as dramatically different. The higher level of education achieved by non-proprietary school teachers reflects differences in philosophy between community colleges and proprietary schools. Courses in proprietary schools are specifically career-oriented, with the terminal goal of job placement. Most of the non-proprietary schools studied are community colleges. These colleges are viewed by academia, and view themselves, as providing within their vocational programs the option of credit transferability to four-year colleges or universities. Academic courses are also provided as part of vocational training in community colleges, whereas proprietary schools teach occupational skills almost exclusively.

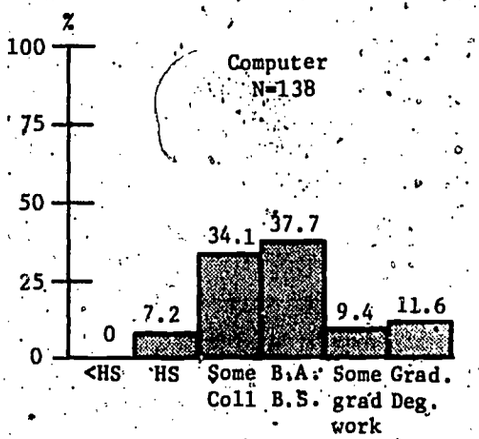
Interviews revealed that terminal certificate and diploma courses are a relatively new phenomenon in community colleges. Traditionally these colleges offered two year associate degree programs and tended to hire teachers with graduate degree training. In fact state law in California still requires community college teachers to be credentialed and therefore to hold at least a bachelor's degree. In contrast state licensing requirements for proprietary schools permit teachers to qualify with highly variable combinations of education and experience.

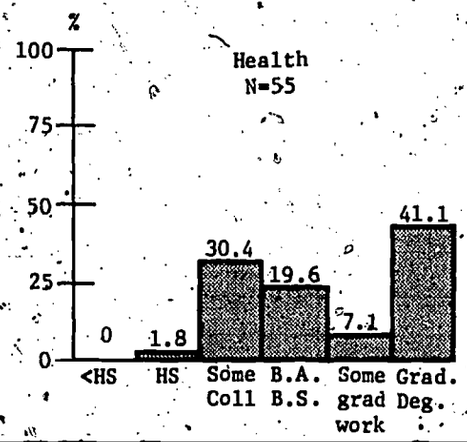
Figure 3.3

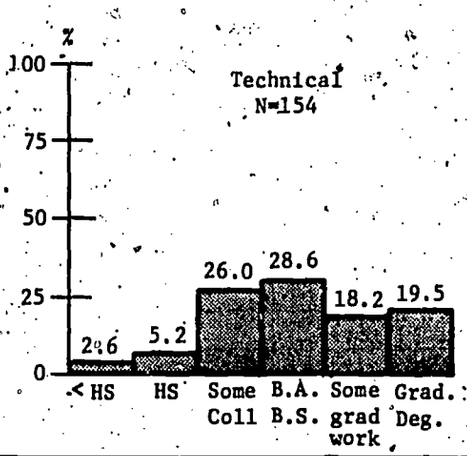
Level of Education of Teachers

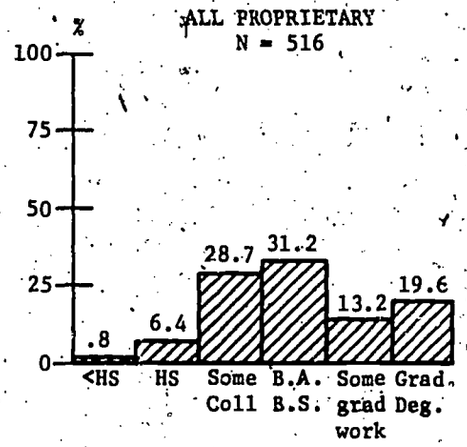
PROPRIETARY

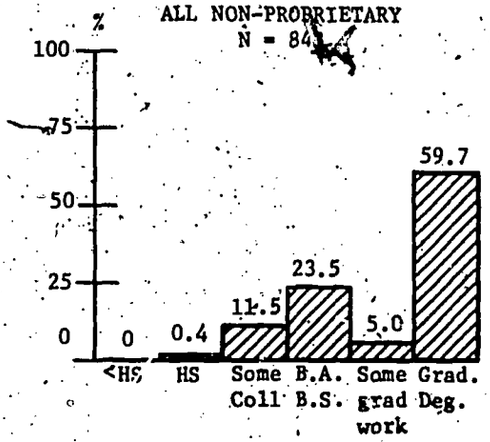












State certification. Additional inquiry was made as to whether teachers in surveyed schools were credentialed by their state to teach in public schools. Standard teacher certification for proprietary schools is not a requirement by any of the states surveyed so one might expect a reasonably small percentage of proprietary school teachers to be certified to teach in public schools. As expected, only about 20% of proprietary school teachers have or are attempting to obtain state teaching credentials, whereas almost 50% of non-proprietary school teachers hold credentials. Most teachers in the private nonprofit schools are uncredentialed, as are many of the teachers in the public schools in Atlanta, Chicago, and Rochester. In San Francisco, however, all teaching staff in the public community colleges surveyed are credentialed in accordance with state law. It is interesting to note that the new State of Illinois "Rules and Regulations for Private Business and Vocational Schools" requires that, effective September 1972, all new private school faculty not possessing a teacher's certificate "provide evidence of successful completion of an approved course in methods of teaching." Private school licensing laws in California, Illinois, and New York permit alternative combinations of experience and education to satisfy teaching requirements. School directors interviewed felt these open-ended licensing laws were appropriate and conducive to selecting staff according to individual qualifications. Many expressed the desire to employ people with more practical work or teaching experience and thought academic education less important. In fact, it seems reasonable to question whether the level of teacher certification held by vocational school teachers is related to the quality and effectiveness of teaching.

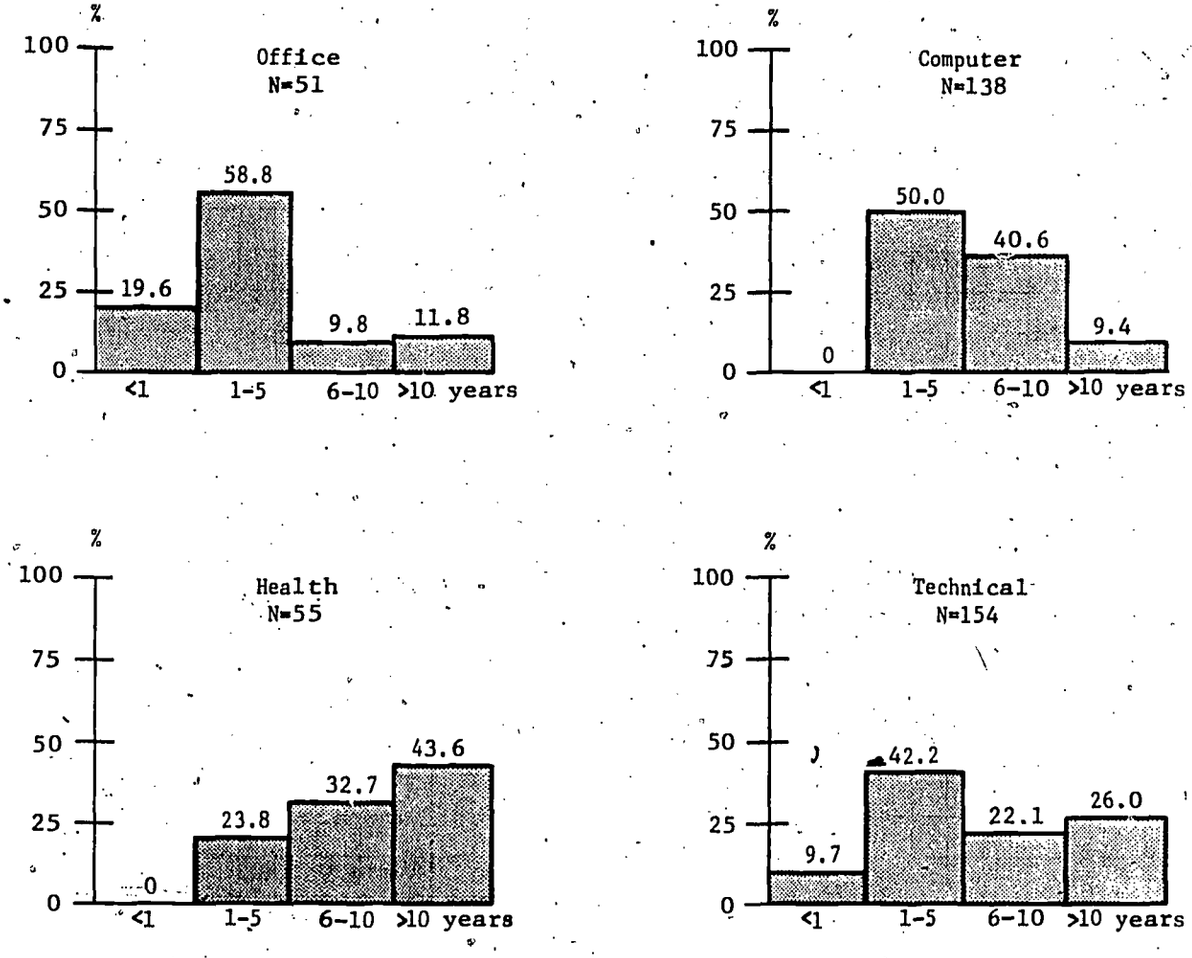
Teaching experience. Figure 3.4 illustrates the prior teaching experience of teachers. As shown, only a small percentage of proprietary school teachers in each occupational area have been teaching less than one year. A higher but still small percentage have taught for more than ten years, which is not surprising in light of the relatively young age of proprietary school teachers. More than two-thirds of the office and health teachers have less than six years of teaching experience, whereas about half the computer and technical teachers have had more than six years of experience. It is interesting to note that although over half the teachers in the health area have from one to five years of experience, almost a quarter have more than ten years' experience in the classroom. Because such a small percentage of proprietary school teachers are credentialed to teach in public schools, it is probable that prior teaching experience was gained in private and proprietary schools similar to those in which they are currently employed.

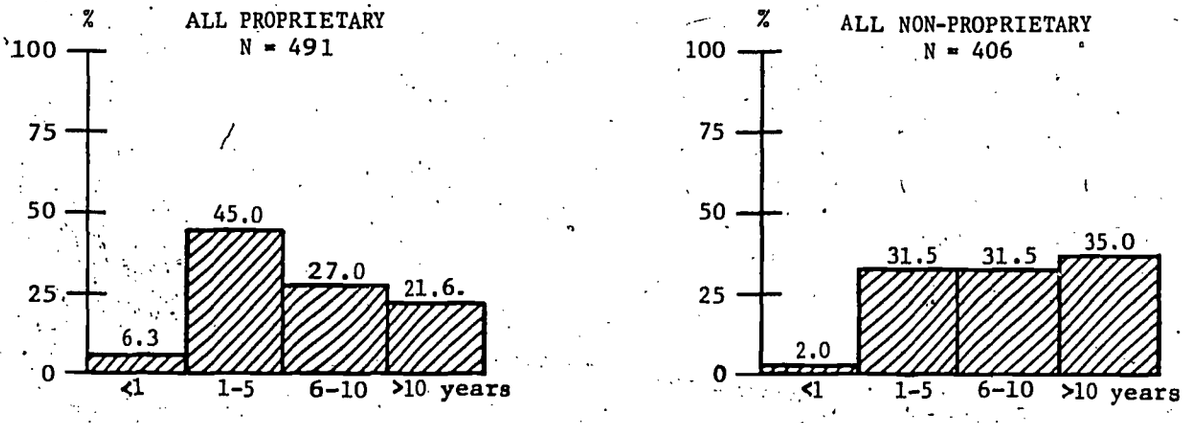
Despite the fact that non-proprietary school teachers tend to be older and more highly educated than proprietary school teachers, there is no comparable difference in the amount of prior teaching experience between the two groups. In fact, the experience profiles for the two groups are almost identical, and the largest difference in any category is 5%. As with the proprietary schools, the largest group of teachers in the non-proprietary schools has from one to five years' experience (42%). The non-proprietary schools attract a slightly larger percentage of persons with six or more years of teaching experience.

Figure 3.5

Prior Non-Teaching Work Experience of Teachers

PROPRIETARY





Non-teaching work experience. Given the expressed emphasis in proprietary school hiring practices on "related work experience" and the fact that a large percentage of teachers are employed on a part-time basis, it is important to look at the prior non-teaching work experience of teachers in the schools surveyed. Figure 3.5 illustrates this experience for teachers in both proprietary and non-proprietary schools. Profiles for the office and computer areas resemble those generated by data on prior teaching experience (see Figure 3.4); that is, at least half the teachers in the office and computer areas have from one to five years' work experience. In addition, a far greater percentage have more than six years' experience in the computer area than in the office fields (50% and 22% respectively). In fact a surprisingly high percentage of teachers in the office area (20%) have little or no work experience, compared to 10% in the technical area and none in the computer and health areas. Although more than half the teachers in the technical area have fewer than five years of experience, more than a quarter have over ten years. More than three-quarters of the teachers in the health fields have over six years of experience, with an impressive 47% having more than ten years. Although the sample is small, combined data indicate that a greater percentage of health teachers than teachers in other areas are at the upper extremes of educational attainment, and prior teaching and work experience.

Whereas differences between all proprietary and non-proprietary schools are small with regard to prior teaching experience, they are considerably greater in the area of non-teaching work experience. The non-proprietary schools seem to employ a greater proportion of teachers with six or more years of work experience than proprietary schools (67% and 49% respectively). Fully 35% of the non-proprietary staff has over ten years' experience as compared to 22% of the proprietary school teachers. This finding is not surprising in view of the generally greater age of non-proprietary school teachers, and in view of the fact that almost a third of these teachers teach only part-time and are probably gaining work experience at the same time they gain teaching experience.

Policies and provisions for staff development. It appears that both proprietary and non-proprietary schools typically employ teachers who are well qualified in terms of education, prior teaching and other work experience. It appears also that both kinds of schools are concerned about the continued professional development of staff members already employed.

As indicated in Table 3.14, over 80% of proprietary schools and over 90% of non-proprietary schools reportedly make some provisions for professional staff development. Admittedly, the fairly large percentage of schools

Table 3.14

Policies and Provisions for Professional Staff Development

Policies and Provisions	PROPRIETARY (N=48) # of Schools	%	NON-PROPRIETARY (N=14) # of Schools	%
No Policies or Provisions	9	18.8	1	7.1
Encourage Staff to Pursue Professional Development During Free Time	31	64.6	10	71.4
Pay Cost of Journal Subscriptions	26	54.2	5	35.7
Pay Cost of Dues	25	52.1	4	28.6
Pay Expenses at Professional Meetings and Conventions	32	66.7	12	85.7
Provide Tuition Reimbursement for Approved Courses	25	52.1	4	28.6
Provide Leave with Part-pay for Professional Development Activities	10	20.8	0	0.0
Provide Leave with Full-pay for Professional Development Activities	14	29.2	8	57.1
Provide In-Service Training Programs	17	35.4	2	14.3

stating they "encourage staff to pursue professional development during free time" includes some schools which report no other provisions. However, it is still fair to say that well over half of both proprietary and non-proprietary schools report explicit provisions for encouraging employees to further their professional capabilities.

The data suggest that somewhat more than half of the proprietary schools surveyed reimburse employees for most staff development expenses incurred except leave with pay. The large number of part-time staff and the tight staffing schedules under which such schools operate probably account for

their reluctance to support paid leave activities. Nevertheless, more than a third of the schools provide some in-service training of their own--e.g., workshops, seminars, and self-instructional materials.

The non-proprietary schools report very low in-service efforts, but more than half provide leave with pay, reflecting the sabbatical policies of the public community colleges. The non-proprietary schools appear to limit further support to staff attendance at professional meetings. Several of the community college administrators interviewed expressed the view that staff should share in professional development expenses.

Major School Changes

School directors and administrators were asked to describe major changes that have occurred during the last three years (1968-71) in curriculum, faculty, and student body characteristics. Major changes were defined as those involving more than minor additions or deletions of content from curricula, routine personnel turnover, and seasonal student body fluctuations. In the event a director indicated some major changes had taken place, he or she was then asked to describe his or her subjective opinion of the reason for the change. Although a great variety of responses was obtained, several trends emerged consistently from city to city, and in proprietary and non-proprietary schools alike. These will be described by occupational area below. Distinctions between proprietary and non-proprietary schools will be noted, where they exist.

Office occupations. Reported changes in the curriculum in this area were minor. Several proprietary and non-proprietary directors mentioned the addition of electric typewriters, remedial business English and math, and personal grooming courses.

The most widely reported changes for this area were in the characteristics of faculty and students. The percentages of racial minority enrollees (mostly Blacks) and high school dropouts were often reported to have increased greatly, especially in Atlanta and Chicago. As a result of this, more minority teachers have been hired, more remedial instruction is being offered to help compensate for the generally poor secondary education of these enrollees, high school equivalency examination courses have been added, and graduation or certification standards have sometimes been reduced. Interviewees attributed these changes to more government funding programs to assist in training the disadvantaged, improved public transportation facilities, rising levels of self-concept and aspiration among minority group members, and a constantly improving job market for well-trained or even trainable minority graduates. Only in Chicago did interviewees report overt difficulty in placing employable Black secretarial graduates, while several interviewees in San Francisco reported they were unable to fill the demand for such graduates.

One large national chain of proprietary business schools has instituted an individualized curriculum which is divided into learning "modules" complete with self-instructional materials and periodic skill tests to check

mastery level before passing on to the next module. Several other proprietary schools reported increasing use of similar individualized instructional techniques. Overall, interviews indicated a general trend towards the utilization of innovative educational techniques among proprietary schools, especially those with considerable capital backing.

Three proprietary schools have consolidated their medical, legal and dental secretarial programs into a "core" curriculum for all three areas; directors claim more efficiency in training and very little demand among the professional employers for the specialized training formerly associated with each of these programs. On the other hand, one non-proprietary school reportedly has added separate specialized training in these professional areas following a common core of general secretarial courses.

Computer occupations. Changes are probably more extensive in the computer area than in any of the other three. Of course, the most obvious change is the diminished number of proprietary computer schools, the result of a disturbingly high percentage of recent business "failures." Those schools still in operation are generally owned by larger corporations which have computer manufacturing or data processing subsidiaries. Curriculum changes have reflected a drastic diminution in demand for graduates in the computer programming profession who do not possess a college diploma. The emphasis is now on courses for which some general demand still exists, e.g., keypunching, computer operations, and computer repair. Several major well-established business schools and public two-year colleges which formerly offered data processing and computer operations courses have been forced to drop them altogether, even after major attempts to update equipment (for example, going from an IBM 1401 to an IBM System/360 and from a System/360 to a more recent vintage IBM System/3). Schools which do not have IBM computer hardware on site and offer training on competing equipment (i.e., Honeywell and Control Data) have found it necessary to add more courses in IBM computer languages (e.g., 360 Basic Assembly Language) and operations (e.g., System/360) in order to permit wider employability of graduates in an IBM-dominated market. Almost all schools report that course content in the operation on unit-record equipment (punched-card processing machines) has been reduced or eliminated, due to an almost universal switchover in industry to the magnetic tape and disk media. All predominantly keypunch operation schools reportedly have acquired the new generation IBM keypunch and verifying equipment to keep pace with market demands.

Administrators of computer schools or programs universally report that their faculties are more qualified now, in terms of both formal education and experience, due to the general "availability" of college-trained and highly experienced computer personnel. Moreover, one school director noted that his teaching personnel salaries were lower than a year ago.

Health occupations. Courses in the allied health fields showed the greatest influence of professional accrediting bodies in terms of general "upgrading" changes, no doubt due to the fact that the accrediting bodies

concerned (e.g., American Medical Association, American Dental Association) are quite closely related to the ultimate professional employers of graduates. Generally this "upgrading" involves stiffer admission requirements, lengthening of the courses, improvement in the academic credentials of faculty, and the addition of more "practicum" experience in the field for students. Schools exhibited considerable variation in the modernity of equipment and facilities, although all schools offering training in the areas of medical and dental technology and assisting have reportedly invested considerable sums in acquiring up-to-date equipment of the trade.

Few changes in faculty characteristics, other than generally improved academic credentials (most schools had at least one M.D. or D.D.S. as a consultant or a faculty member), were reported. Fewer minority student gains were described than in other occupational areas; in fact, most directors reported that de facto racial discrimination still existed most strongly in the markets for their graduates, especially offices of doctors and dentists. The "I'm not prejudiced, but my patients might not like it" phenomenon was cited in virtually every proprietary health school visited. Most student bodies were heavily female, but a few directors indicated they foresaw a slight trend toward more males in the allied health areas.

Technical occupations. The direction of changes in both proprietary and non-proprietary schools has been toward expanding curricula which parallel college engineering programs but which are much less rigorous than college programs in terms of mathematics/physical science requirements. School directors reported that despite continued softness in the job market for graduate engineers, engineering technicians are immediately employable in industrial positions which require more applied skills. In fact, technical schools were the only proprietary schools visited where directors reported that corporations still send recruiting teams to the school to interview graduates.

Recent specific changes among all schools include a general commitment to remedial courses in basic mathematics and physical sciences. School directors and program administrators in the public schools were unanimous in deploring the lack of basic skills among most entering students. Other major reported curriculum changes in the last three years have included the addition of courses and course content related to solid state devices, integrated circuits, color television, computer technology, and electro-mechanical technology (a multi-disciplinary curriculum).

Directors of many technical schools reported a higher percentage of racial minority and disadvantaged enrollees during the past several years. As a consequence, one large school chain has established group sessions for instructors aimed at improving communications and relationships with Black students. Also, several technical schools, particularly in Chicago, have experienced increased enrollment of foreign students. Most of these students require remedial courses in order to meet entry requirements for even the lower level technical courses. Some schools have added special "technical English" courses to help break down the communications gap between foreign students and instructors.

Several technical school directors reported increased enrollment of Vietnam war veterans, and speculated that they may come to technical schools in particular to polish up on skills acquired in the service and to take advantage of the G.I. Bill benefits. Some proprietary school directors reported veterans were highly motivated but were often troubled by the red tape and delay associated with receiving their VA checks.

Incentives for Schools to Change

Both proprietary and non-proprietary schools appear to be making continuous efforts to maintain qualified faculty, attract interested students, and keep curricula up to date in terms of current occupational and industrial requirements. The incentives which motivate such changes are somewhat different for proprietary and non-proprietary schools. Proprietary school incentives will be considered first.

If the changes reportedly accomplished by the proprietary schools surveyed are typical of proprietary schools in general, it is clear that change in the areas of curriculum, method, management, and enrollment is an ongoing and deliberate process. According to school directors, the reasons or incentives for change are based primarily on profit. Proprietary schools are in fact wholly dependent on income derived from their student bodies and must therefore depend on maintaining at least minimum enrollment levels to remain solvent. To maintain enrollments, the schools must always attract new students, which presumably requires that the schools keep their students enrolled and happy and make their graduates marketable in the areas for which they are trained. In face of this challenge, proprietary schools are additionally motivated to have cost effective management policies which protect and nourish their investment.

What implications does this model of a market-determined enterprise have on the character of proprietary schools and on the kind of education they provide their students? On the basis of interview data, the effects of this market incentive system on the quality and potential effectiveness of the education provided appear to be favorable. Some of the major factors will now be explored further.

Labor market conditions and industrial requirements. The factors most often cited by school directors as responsible for curricular and program changes were current labor market conditions and industrial requirements. That is to say, most schools reportedly respond to market conditions and industrial needs through constant contact with potential employers of graduates, evaluation of manpower reports and projections issued by the government (e.g., U.S. Department of Labor), and by ongoing efforts to place graduating students. Some larger corporate schools have reportedly performed "market surveys" to improve the effectiveness of their training and placement efforts. The results of such efforts have led many schools to change course requirements and content rather extensively and add or drop whole programs in hopes their students will be better prepared to find work in the current marketplace. In view of admitted inadequacies in existing programs, many school

officials cited the need to revise present courses, eliminate training in little-used skills and concentrate on skills that are currently necessary to employers. For instance, a number of persons said that clerk-typists and nurses' aides were difficult to place. They would like to upgrade their courses to graduate stenographer-typists and licensed vocational nurses, for which a greater demand exists. Directors were also looking ahead to new and expanding occupations, such as physician's assistant, and hoped to add programs to train students for positions in such new areas. Many persons also cited the need for expanding the practical, job-related orientation of courses through the use of paid or for-credit internships. In short, it appears that proprietary school directors were primarily concerned with curriculum improvements to meet the needs of the business community and to facilitate the placement of students in jobs.

Increased enrollment. Another motivator is the ever-present desire to increase enrollment. As stated earlier, most proprietary schools surveyed are operating well under capacity, and are willing to expand capacity if the demand existed. A potential source of enrollees is the large population of economically and educationally disadvantaged persons. In fact, schools are enrolling more of these students as a result of increased government funding programs (e.g., MDTA, WIN, FISL), increased awareness and rising aspirations of the disadvantaged, and an improving job market (especially in the office area) for members of minority groups. In addition, most of the surveyed schools were located by design in the center of large metropolitan areas which are becoming more and more the residence of minority groups. Several proprietary school directors pointed out that in order to remain in business "as usual," they had to either move their schools to the suburbs or begin to solicit the business of, and tailor their programs to meet the needs of, their minority group neighbors. Although schools may enroll persons less qualified from the standpoint of prior educational background, they apparently recognize the need for making the curricular changes necessary to prepare all enrollees for vocational training--hence the addition of remedial and basic skills programs in many of the schools surveyed. In addition, proprietary school people also expressed interest in adding minority members to their faculties to meet the needs of increasing minority enrollments.

Cost effectiveness. Still another incentive is the desire to train as many students in as cost-effective a way as possible. Since giving many students the same training is more efficient than providing a wider variety of courses with fewer students in each, proprietary schools tend to be single-purposed, concentrating efforts on preparing graduates for a few specific jobs. They have flexible operation policies which meet student needs; for example, courses are generally short, have frequent starting points, operate all year, day and night. Teachers are not tenured and are reportedly evaluated by their teaching ability. Finally, instructional technology is geared towards cost-effective teaching; innovative methods such as individualized modules or units of work and audio-visual aids are not uncommon. Despite the economic nature of these incentives, change can often benefit students as well as protect the school's financial investment. For example, innovative approaches such as individualized instruction are welcomed, at least in theory, by educators everywhere as potentially more effective for learning than traditional classroom techniques.

The need to provide training in as cost-effective a way as possible, combined with the prospects of profit, has led to the increased involvement of large corporations in proprietary education. Several corporate officials interviewed claimed that the extensive financial and managerial resources of large corporations enhance the effectiveness of vocational training from the standpoint of the school and graduate alike. However, as will be shown later, no significant relationships emerge between the effectiveness of training, from the graduate's standpoint, and the corporate status of the school.

Requirements of government and accreditation. Another major incentive to which proprietary schools respond is requirements for licensing, accreditation, and eligibility for student aid--all of which help schools to attract students. To be licensed by a state, approved by government for special funds, or accredited by an association such as NATTS or ACBS, schools must meet numerous requirements relating to curriculum, faculty and administrative qualifications, facilities, advertising and refund policies, and the like; and schools must periodically undergo the scrutiny of such regulatory bodies in order to maintain their approved status. Although accreditation is essentially voluntary, state approval of most proprietary institutions is mandatory in California, Illinois, and New York (not in Georgia). Schools seeking approval or accreditation must ostensibly make the changes needed to satisfy the relevant requirements, and schools must make additional changes to meet any changes made in various regulatory requirements. For example, the Illinois Office of the Superintendent of Public Instruction recently revised and tightened the licensing requirements for private business and vocational schools. Chicago school directors surveyed generally lauded the stricter regulations, and many were deeply involved in the process of policy change needed to comply with the new requirements. It might be mentioned here that the extent to which varied accreditation or government regulations are actually enforced, or enforceable, is not known, such an assessment being beyond the scope of this study.

Non-proprietary school incentives. By definition, non-proprietary schools are not motivated by a desire for profits. Nor do they appear to compete with proprietary schools; they seem rather unconcerned at the very existence of proprietary education. Economic motivators in general are of less concern to public community colleges (which constitute 9 of 14 non-proprietary schools surveyed) than they are to proprietary schools.

Private non-proprietary schools, however, are probably more similar to proprietary schools with regard to economic incentives for change. Although they are not profit-oriented, their funds are limited to student fees and limited endowments or trust funds; thus they tend to concentrate their resources on fairly specific training objectives, on producing marketable graduates, and on establishing generally cost-effective policies. They tend to maintain active advisory boards in a change-agent capacity with responsibility for evaluating policy recommendations.

Public community colleges, on the other hand, derive support from the political process, and need to be responsive to market mechanisms only insofar

as the electorate demands. They are owned by the public and are governed by publicly appointed or elected boards. The community colleges surveyed are not dependent upon student fees for sustenance, and they ostensibly do not see the placement of their graduates in training-related jobs as their primary responsibility. By virtue of their public governance, they are less directly accountable to their students and graduates than proprietary schools for providing the kinds of training, job placement services, quality teaching, or flexible operations that students might desire or demand. Despite this, the success of their graduates equals or surpasses that of proprietary school graduates, as will be discussed in later chapters.

Aside from economic and market incentives, the interview data indicate that non-proprietary schools are as interested in change and self-improvement as are the proprietary schools. Although the main motivator is not profit, public schools seem to be very interested in the marketability of their vocational graduates, even if they are not directly involved in placement efforts. As with the proprietary schools, they claim to respond to the marketplace in establishing and altering curricula. Non-proprietary school directors tend to be more interested in methodological modifications rather than curriculum changes per se. Specifically, many expressed the desire and need to individualize instruction to a much greater extent, and to use criterion-referenced tests to pass entering students out of courses they do not need. They were also quite interested, as were proprietary school personnel, in increasing the on-the-job training for students, either through work-study programs or internships to be taken after course work is completed. Non-proprietary schools often keep abreast of marketplace needs by establishing advisory boards composed of representatives of local industry and experts in the jobs for which training is being offered. Advisory boards in some public schools were frankly acknowledged to be non-functional, while in others they appeared to be very active in both prescribing content and teaching methods for new curricula or changes in existing curricula and in paving the way for employment of graduates of these revised programs. A faculty committee in a San Francisco community college, for example, researched and confirmed the demand for electro-mechanical engineering technicians and selected an Industry Advisors Board which was instrumental in planning and establishing a new curriculum. (It is likely that the effectiveness of such boards as change agents is dependent to a large degree on the motivation and expertise of the administrator and other personnel involved.) In summary, although non-proprietary schools are not motivated by profit, they are reportedly as interested and active as proprietary schools in maintaining and/or changing curricula and teaching methods to better meet the needs of their students.

Although most school directors interviewed cited numerous examples of accomplished and desired change, virtually no one attributed change to the alterations made in the curricula, techniques, or policies of other schools. Proprietary school directors were certainly cognizant and sometimes critical of the major role played by public schools in vocational training; however, they never mentioned changes in public school offerings as an incentive for changing their own programs. Similarly, non-proprietary school directors

did not appear to be influenced by the activities of proprietary schools. Several directors from both groups of schools, however, expressed the feeling that both kinds of schools serve valuable manpower training services, and that consequently greater coordination between the two kinds of schools in establishing complementary curricula would encourage the maximum utilization and effectiveness of both training resources. Regardless of a lack of expressed coordination among these schools, it seems likely that indirect incentives within the public sector are at work in motivating proprietary schools. Even though extensive community college systems do not exist in all four cities surveyed, each city has at least one large public institution which offers training comparable to proprietary school offerings at a considerably lower cost to students. Proprietary schools must respond to the competitive challenge of public schools if they are to stay in business. It appears that this challenge is met, not by responding to changes per se in the public sector, but essentially by developing and maintaining the characteristics which make proprietary schools distinctive, such as those described earlier: offering courses which are shorter, more concentrated on job skills with more frequent starting points, and emphasizing terminal job skills and placement.

Desired Change in Government Policy and Legislation

School directors were asked to identify changes they would like to see in government policies on post-secondary vocational education in general and on proprietary schools in particular. Their suggestions are discussed below separately for proprietary and non-proprietary schools.

Proprietary schools. Almost every proprietary school director responded at some length to the question of desired legislative and/or attitude change by government (state and federal) in terms of policies that would influence the status or operation of private vocational schools. Overall, directors demonstrated a clear tendency to advocate stricter regulatory controls for private schools. The source and nature of suggested controls varied more than the general opinion that such controls should exist, the greatest concern being the need to sort out the reputable, effective schools from those which are not, particularly the evanescent "fly-by-night" schools that are free to operate in many parts of the country. A large number of school directors cited the need for a clearer definition of, and greater consistency in, implementing government policies relating to proprietary schools. This lack of consistency is particularly evident in the administration of various federal funds. For example, requirements for receiving funds for vocational rehabilitation are left to the discretion of the states, and the states interpret these regulations differently. Several directors criticized the administration of veterans' benefits as well, and recommended overall revision and standardization of eligibility requirements for all federally funded programs. In light of such variations, a large number of the proprietary school directors interviewed suggested some form of federally coordinated review or licensing of proprietary schools. Many specified further that such regulation take the form of "tough, objective, and knowledgeable" government inspection on a continuous basis. Several directors emphasized special need

for strict regulations on advertising and refund policies. Many suggested that similar review and/or regulations and refund policies be applied to non-proprietary schools as well as to proprietary schools. The view was frequently expressed that public institutions are currently not, but should be, subject to the same regulatory scrutiny to which proprietary schools are subject, and that public attitudes are similarly discriminatory.

Along this line, several directors cited the need for standardized procedures for the accreditation and eligibility for funds of proprietary and non-proprietary schools alike. Several school directors decried the fact that public schools which are accredited by regional associations are eligible for direct government assistance (e.g., higher education funds for construction, teacher training, curriculum development; donations of surplus equipment), whereas proprietary schools are not. Other persons interviewed did not feel it appropriate for proprietary schools to seek direct government subsidies. Several persons mentioned other instances of "discrimination" against private schools in terms of accreditation procedures; for example, directors frequently asked why private school accreditation involved assessment of school placement records while regional public school accreditation did not. Several directors complained also that accreditation by nationally recognized organizations such as NATTS and ACBS requires too much time and money and that the lack of such accreditation generated unduly critical connotations. The requirement that a school be in business for at least two years before being eligible for accreditation was particularly irritating to three directors of newly established branches of chain schools already accredited elsewhere. Several persons suggested that the inconsistencies and biases described above be eliminated through the establishment of a national accrediting agency (probably operated from the United States Office of Education), which would have regulatory responsibility for proprietary and non-proprietary schools alike. On the reverse side of the coin, a few directors felt that federal and/or state controls should be more relaxed and that government recognize the regulatory responsibilities of self-policing bodies such as NATTS and ACBS. This principle is essentially what many Atlanta area school directors are currently working to obtain. Since Georgia currently has no private school licensing laws at all, the Georgia Private Schools Association is advocating licensing laws which would be regulated by representatives of the private schools themselves. In summary, although the range of opinions relating to accreditation was varied, the majority of proprietary school administrators interviewed advocated some sort of accreditation through stronger, more uniform procedures than currently exist.

The proprietary schools feel the need for government support, not only for regulatory purposes, as described above, but for funds. Directors would especially like to see an expansion in the federally guaranteed loan programs for students. Proprietary school students are at a disadvantage in obtaining monies under the FISL and Work Study programs, and non-accredited proprietary schools are not eligible to have students funded under these programs at all. Two school directors suggested a different form of aid through a "voucher system" whereby students would have a certain amount of money (derived in

part from local taxes which currently support community colleges) which they could spend in the school of their choice, public or private. Directors also indicated a desire to participate in federal training programs for economically, educationally, and physically disadvantaged persons. However, they feel that proprietary schools are currently at a disadvantage in the competition with non-proprietary schools for federal funds in general. Several directors also would welcome increased government (state or federal) assistance in determining labor market conditions and in making adequate labor market projections. One director of a computer school was irate at the fact that many computer schools were established on the basis of long-term but currently overestimated projections of the need for computer personnel. He in essence accused the government of being an accomplice to the placement problems and business woes his school was currently experiencing. Several other directors suggested government assistance in the form of guaranteed jobs in government for those students supported by federal programs. Finally, although the proprietary schools feel the need for increased federal support and regulation, a number of directors voiced the need for less red tape and bureaucratic delays in the administration of federal programs.

A number of proprietary school directors cited another area of "discrimination" that favored non-proprietary schools--that is, the difficulty or impossibility of transferring proprietary school credits to public schools. One chain of schools in fact established a bachelor's degree program precisely because of the inability of its associate degree graduates to transfer to four-year colleges. As a possible remedy to this situation, one proprietary school director in Chicago suggested industry-wide (and nation-wide) performance standards be established for graduates. This would enable a graduate of a particular type of course in any school in the country to take a criterion-referenced test. Upon passing the test, he could be "certified" in his field with the assurance that certification meant the same performance for all schools in all parts of the country.

In summary, a large number of proprietary school directors would welcome increased regulatory coordination, funding, and even licensing at both federal and state levels of government. In addition, school personnel stressed the concern that such regulatory controls be enforced by firm, objective, and uniform inspection programs applied to proprietary and non-proprietary schools alike.

Non-proprietary schools. Non-proprietary school personnel were not as vocal on the issue of desired legislative and policy change. Generally, they were unconcerned about either the existence of or potential "competition" from proprietary schools. Although one director expressed concern about the "profiteering" of proprietary schools, two others suggested making more money available to them in order to expand the resources of vocational education in general. A few non-proprietary school directors complained about government red tape and delay in administering funds, e.g. veterans' benefits, but most seemed to accept the submission of forms, applications, and subsequent delays as a way of life. The need for increased federal and state funds for

vocational and remedial programs was voiced by almost all public school directors. Several directors suggested that government and private foundations discriminated against two-year post-secondary vocational education programs in allocating most monies to four-year academic institutions. In particular, public school administrators advocated increased government aid in the areas of student loans, teacher training, curriculum-materials development, and research and development in general.

Placement and Follow-up of Graduates

One important criterion of effectiveness of vocational schools is the extent to which graduates are placed in training-related jobs soon after completing their course of study. Related criteria include the extent to which students who enroll in a program complete the prescribed training, the extent to which former students persist in training-related jobs, salary growth, and occupational satisfaction. Extensive data regarding these measures of effectiveness were gathered through the alumni survey, the results of which form the main basis for conclusions reached in this report, as discussed in later chapters.

To obtain supplementary information on placement, school personnel interviewed were asked to provide enrollment, graduation, and placement data on students enrolled at the institution in each occupational area during 1971. Mainly they were asked to provide (1) the number enrolled in 1971 excluding students currently enrolled, (2) the percentage who completed the course of study (receiving a diploma, certificate, or actual job placement), (3) the percentage of graduates placed in training-related jobs within three months after completing the course of study, and (4) the average starting monthly pay of persons placed in training-related jobs.

Availability of placement and follow-up information. Results from this data collection effort were disappointing. Although virtually every proprietary school provides a placement service for its students and reports that a sizable majority of its graduating students use the service, a disappointingly small percentage of schools was able to provide data on 1971 graduates and placements. Only a portion of these data are based on actual placement records. Table 3.15 provides a detailed breakdown by occupational area of the availability and source of placement data obtained from both proprietary and non-proprietary schools.

There appears to be no appreciable difference across occupational areas in the availability and nature of data provided by proprietary schools. Approximately one-third of the schools provided no usable data at all, although three of the eight schools not reporting data for office occupations were too newly established to have placement figures. Another one-third of the schools provided figures based on estimates only. Barely one-third of the proprietary schools surveyed provided figures based on records of any kind.

Data from non-proprietary schools were even more scarce. On the average, only about one-third of the schools were able to provide usable data. This

Table 3.15

Availability and Source of Placement Data by Occupational Area

	No Data Provided		Actual Data Provided		Estimated Data Provided		Total	
	# of Schools	%	# of Schools	%	# of Schools	%	# of Schools	%
PROPRIETARY								
Office	9	37.5	7	29.2	8	33.3	24	100.0
Computer	6	30.0	7	35.0	7	35.0	20	100.0
Health	5	26.3	5	26.3	9	47.4	19	100.0
Technical	2	22.2	4	44.4	3	33.3	9	100.0
NON-PROPRIETARY								
Office	8	72.7	3	27.3	0	0	11	100.0
Computer	7	87.5	1	12.5	0	0	8	100.0
Health	7	63.6	2	18.2	2	18.2	11	100.0
Technical	8	66.7	2	16.7	2	16.7	12	100.0

is not surprising in the light of the relatively small number of public community colleges which provide placement services. At the same time, data which were provided by publicly-supported institutions were always based on actual records; the estimated figures in the health and technical areas represent several private nonprofit schools surveyed. It seems that those public schools which do stress placement activities also stress the maintenance of accurate placement records. Whether these activities result from extra staff capabilities, need for accountability to the public sector, or the like, is not known.

Still, it is important to emphasize that the percentage of non-proprietary schools reporting placement data is noticeably smaller than that of proprietary schools. Perhaps this is because proprietary schools, on the whole, seem to be more accountable than non-proprietary schools to both students and evaluators (e.g., accrediting and government agencies), on the issue of placements, as described in an earlier section on incentives for change.

School personnel were also asked whether they had conducted any follow-up studies on students who completed training prior to 1971. Those who had conducted such follow-up were requested to provide information resulting from

Table 3.16

Summary of Follow-up Studies Done Prior to 1971
by Occupational Area

	No Follow-up Done		Follow-up Done But No Data Provided		Follow-up Done and Meaningful Data Provided		Total	
	# of Schools	%	# of Schools	%	# of Schools	%	# of Schools	%
PROPRIETARY								
Office	23	95.8	1	4.2	0	-	24	100.0
Computer	13	65.0	7	35.0	0	-	20	100.0
Health	18	94.7	1	5.3	0	-	19	100.0
Technical	5	55.6	3	33.3	1	11.1	9	100.0
NON-PROPRIETARY								
Office	8	72.7	2	18.2	1	9.1	11	100.0
Computer	6	75.0	1	12.5	1	12.5	8	100.0
Health	7	63.6	2	18.2	2[1]	18.2	11	100.0
Technical	6	50.0	4	33.3	2[1]	16.7	12	100.0

[1]One of these follow-up studies actually focused on a very small group of 1971 graduates, but could not be considered as an index of 1971 placements.

such study. Table 3.16 provides a detailed breakdown by occupational area of the scope of such follow-up effort and the availability of meaningful data. It is immediately obvious that information on graduates prior to 1971 is almost non-existent for both proprietary and non-proprietary schools. From 50% to 96% of the schools offering training in all occupational areas reported that no follow-up study had been done. (Admittedly, several schools, particularly in the office area, were too newly established to conduct follow-up studies.) Only one proprietary technical school and two public community colleges offering courses in several areas provided any hard follow-up data--too small a number to be summarized in a meaningful way. The remaining schools reportedly conducted informal telephone or mail surveys yielding no usable information or failed to provide project staff the results from studies reportedly done. It is likely that some of these schools did in fact conduct follow-ups, but were unable to provide results at institutional interviews. This was particularly true for corporate chain schools whose records are maintained centrally. Further investigation of these efforts was beyond the scope of this study.

The placement data provided by institutions was so sparse, on the whole, that further discussion of it seems unwarranted here. The results of the analysis of the data are presented in Appendix S for the interested reader. Generally they are consistent with the more adequate data on placement obtained from alumni.

CHAPTER 4: STUDENT SURVEY RESULTS

This section presents the results of the questionnaire survey administered to students enrolled in participating schools during January and February, 1972. Procedures involved in developing, administering, and analyzing the questionnaires have been discussed in Chapter 2, and a copy of the questionnaire appears as Appendix B. The reader is urged to refer to Appendices N, O, and P for the data referenced and discussed below.

Overview of Student Results

Generally, the proprietary and non-proprietary students surveyed are similar in background and motivational characteristics. Most students surveyed are young high school graduates who are enrolled full-time in a vocational course with the primary goal of obtaining job entry skills in a particular occupational area. A sizable proportion (30%-42%) of the students belong to minority groups, the majority of these students being black. The office and health course areas draw primarily women while the computer and technical areas attract mostly male students. Learning practical skills and knowledge about an occupation is a major source of satisfaction for most students, so it is evident that most students perceive their school experience as relevant to their reasons for enrolling. Most students have worked, at least part-time, for a year or two before beginning their training, and most have at least part-time employment during their training. Nearly all students expect to get better paying full-time jobs as a result of their training.

Students in proprietary schools are somewhat less interested in academic and cultural benefits than those in non-proprietary schools, and more interested in acquiring the practical skills necessary for a job as quickly as possible, even though the cost of the program may be greater. In a similar vein, more proprietary school students expect to work full-time immediately after training than non-proprietary students, although the latter have somewhat higher salary expectations. All of these distinctions, of course, represent group averages, and there are wide individual differences within each group of students.

The following sections describe in greater detail results of the student survey, focusing in particular on student background characteristics (e.g., sex, age, education), goals and motivations, and problems and satisfactions involved in the training programs. Only those group differences which are educationally as well as statistically significant will be discussed below.

Characteristics of Training Programs and Schools

Before summarizing the information obtained from students regarding their schools and training programs, it is worthwhile to review briefly general characteristics of the surveyed schools, and in particular the differences between proprietary and non-proprietary schools. Earlier discussion of school characteristics, supported by correlations among school variables, show proprietary schools to be relatively smaller, and less often accredited, than their non-proprietary counterparts. In addition, proprietary schools are characterized by offering smaller classes; more placement services; and fewer, shorter, and more costly courses than non-proprietary schools. This suggests that the cost of a program is not necessarily related to its length, and indeed this is confirmed by a low correlation between the two variables (r=.27).[1] Few strong relationships exist between specific course offerings and school characteristics, except for the tendency for schools offering technical (and longer) programs to be larger. There is some tendency also for accredited schools to offer more computer and technical courses and for chain schools to enroll a high percentage of computer students. Similarly, but within the spectrum of proprietary schools alone, accredited schools tend to be larger, offer and enroll more students in computer courses, and offer longer and more costly programs than non-accredited proprietary schools.

Information obtained from students about the schools and programs offered is quite consistent with information obtained in the institutional interviews. In particular, both data sources indicate the wide range in program lengths and costs for courses in each of the four occupational areas surveyed. (Compare program summaries in Appendix R with cross-tabulations in Appendix N.) Students in both proprietary and non-proprietary schools are reportedly enrolled in programs of from less than one month to over two years in length at costs of from less than $200 to more than $2500. Non-proprietary school programs overall tend to be longer than proprietary school programs, since many are associate degree programs. Whereas almost 60% of the proprietary school students are enrolled in programs normally lasting one year or less, only about 30% of the non-proprietary school students fall into this category. Conversely, only about 20% of the proprietary school students are enrolled in programs lasting more than eighteen months, while almost 60% of the non-proprietary school students are so enrolled. Proprietary school health programs seem to be the shortest--about half the enrollees reporting programs less than six months in length, the other half, between six and twelve months. Most non-proprietary health programs last well over a year. Technical programs in all schools tend to be the longest, over 80% of the enrolled students reporting programs requiring more than a year's time.

Data from the student survey regarding school costs essentially match data gathered from school directors and discussed earlier in Chapter 3. Students in proprietary schools report much higher costs for tuition, fees, and books than students in non-proprietary schools. Almost all of the public community colleges (and one area technical school) charge only nominal fees, though private nonprofit school fees are more comparable to proprietary school fees. Although the range of costs is large, only about 15% of

[1] The notation r=__ is hereafter used to denote the correlation coefficient obtained between two variables.

the students in proprietary schools report costs of $1000 or less, while more than 75% of the students in non-proprietary schools report costs within this range and almost half report costs under $200. Over half the proprietary school students report costs of $2000 or more, but fewer than 5% of the non-proprietary school students report costs this high. The difference is particularly large for proprietary school technical students, 90% of whom report costs of over $2000. This difference is particularly dramatic in light of the fact that 85% of the technical students in non-proprietary schools are in programs of more than eighteen months' duration, while only 45% of the proprietary school technical students are in this category. The overall correlation between cost and length of program is only +.27.

Students were asked to report what services were provided by their schools and the extent to which such services were used by them. Well over half the students in both proprietary and non-proprietary schools report that their schools provide course counseling, job counseling, job placement services, aid in financing, a library, and a cafeteria or food service. More non-proprietary school students report the existence and use of libraries, remedial training courses, organized activities and food services. On the other hand, more proprietary school students report the existence of job placement services (83% vs. 53%), financial aid services (73% vs. 53%), and school operated housing (31% vs. 7%).

In general a greater proportion of non-proprietary than proprietary school students report the provision and use of various services provided by their schools. However, less than half of the non-proprietary students reporting the existence of counseling, placement, and financial aid services actually use these services. Overall, about half the proprietary school students who reported the existence of a service said they had used the service.

Perhaps the most striking finding was the large percentage of students, particularly in non-proprietary schools, who do not know whether certain services are available--especially personal counseling, job placement, and financial aid services. This, of course, is due in part to the fact that many of the students surveyed were newly enrolled in school and as yet unfamiliar with the services offered. It is nonetheless apparent from the relatively low percentages of students actually using services that schools do not adequately inform and/or encourage students to take advantage of the many services available. It appears also that students surveyed reported the existence and use of various services less frequently than school directors interviewed reported the provision of such services. One might ask why a discrepancy exists between the perceptions of school administrators and students regarding the existence and use of "services," particularly in potentially ambiguous areas such as counseling, job placement, and remedial training. One might attribute this difference to the desire of school personnel to present favorable profiles of their schools and the services they offer, or, perhaps more likely, to the not uncommon failure of communications between school administrations and student bodies.

Student Background

As suggested earlier, proprietary and non-proprietary school students are quite similar in terms of such characteristics as sex, age, education and parent background. The following sections present descriptive and comparative information relating to these background factors, focusing throughout on similarities and differences between proprietary and non-proprietary school students.

Sex, age, and marital status. Of the proprietary school students surveyed, about 56% are men and 44% women as opposed to a somewhat reversed ratio of 46% to 54% in non-proprietary schools. Proprietary school percent distributions by city reveal striking differences from these overall percentages in that 90% of all students surveyed in Rochester were female as opposed to only 26% in Chicago. However, these differences between proprietary and non-proprietary schools and among cities are essentially dependent upon the kinds of occupational programs offered. In all schools, the vast majority of office and health students are female, whereas the vast majority in the computer and technical areas are male. Similarly, over 80% of all females surveyed are in the office and health fields, and over 80% of all males are in the computer and technical areas. The above city differences are accounted for by the large number of office students surveyed in Rochester and of computer and technical students in Chicago. Non-proprietary schools surveyed seem to have a slightly higher percentage of females in the computer area and males in the health area, possibly reflecting the uniformly coeducational status of all non-proprietary institutions.

Ninety percent of all students in the proprietary schools studied are under 30; they are split almost evenly between the under-20 and the 20-29 year age groups. Non-proprietary school students follow a similar age pattern, but there is a slight tendency for older students to attend non-proprietary schools. Following these generally low age figures, more than two-thirds of all students are unmarried.

Race. Students were asked whether they belonged to the following racial minority groups: Black, American Indian, Oriental, or Spanish surname. About 30% of the proprietary and 42% of the non-proprietary school students belong to one of these groups, and most of them are Black (about 20% and 26% respectively). Relatively small percents of all students are Oriental, Spanish surname, or Indian: 8%, 5%, and 1%, respectively. About 10% of the sample surveyed either omitted the question or said the information was confidential. Although an analysis of the ethnic makeup of the four cities surveyed was beyond the scope of this study, it is interesting to compare the high minority enrollment in the surveyed schools with minority enrollment in higher education nationally. The 1971 census indicated that minority or non-white enrollment in four-year colleges was only about 14% and in two-year community colleges about 13%.

The geographical distribution of minority students not surprisingly follows general population figures. Black students are most heavily concentrated in Atlanta and in low-cost non-proprietary schools in Chicago, and

Oriental students are almost exclusively in San Francisco. American Indian and Spanish surname students are more evenly distributed among the four cities with a somewhat heavier concentration of the latter in San Francisco. Overall minority enrollments are not related distinctively to any of the cities except Rochester, whose schools tend not to enroll as large a proportion of minority group members.

Black students are concentrated most heavily in the office area where more than 40% of them are enrolled. Similarly, almost a third of all office students are Black. With regard to the relatively small percentage of other minority students, American Indians tend to concentrate in the technical occupations, and Oriental students in the office and technical areas; Spanish surname students are more evenly divided among the four areas.

Residence. As expected from earlier studies and school interviews, non-proprietary schools attract more local students than proprietary schools. Community colleges are locally supported, non-residential institutions aimed at a local population for whom tuition is free or nominal. Proprietary schools, on the other hand, do not limit recruitment efforts to the local community, though they also are essentially non-residential. Proprietary schools in Atlanta and San Francisco, in particular, attract more non-local students than those in Chicago and Rochester. Atlanta especially seems to be a "hub" of the South and attracts a greater proportion of students from outside its environs.

Overall about two-thirds of the non-proprietary school students surveyed attended high school in the same city in which they are currently attending school. Only about 13% attended high school in a different state. In contrast, only one-third of the proprietary school students attended high school in the same city, the remaining two-thirds divided almost equally between those who went to high school elsewhere in the same state and those who came from another state. The majority of proprietary school students who come from out of state are men. Because of these differences in origins, it is not surprising that a greater percentage of non-proprietary school students reside at home with their parents (54% vs. 43%). Still, about 40% of each group resides separate from their family; this seems to suggest a fairly large proportion or relatively self-supporting students enrolled in both types of schools.

Educational background. Almost a third of all students have been out of high school a year or less, and slightly more than a quarter of them have been out of school for six years or more. Practically all (about 95%) of both proprietary and non-proprietary school students reported they had earned high school diplomas or G.E.D. certificates (about 90% and 5% respectively). About 30% of all students had begun a college or junior college program (other than the one in which currently enrolled, in the case of community college students). About ten percent had actually completed such a program--a rather high percentage considering the fact that these students had re-enrolled in vocationally-related programs. Almost 10% of all computer students had completed a four-year college program. Proprietary and non-proprietary school students have almost identical profiles in terms of the type of high school program pursued and the average grades received. About 40% had been enrolled in academic programs, 20% in general programs and 40%

in commercial and vocational programs of one sort or another. Slightly more than half the students had attained grade point averages in the "B" range, and another 35% in the "C" or average range. They were on the whole neither unusually successful nor unsuccessful students. The indirect evidence provided by high school grades and diplomas earned suggests no difference between proprietary and non-proprietary students in academic abilities or general achievement levels.

It is interesting to compare these educational profiles with the entry requirements prescribed for many of the training programs offered by the surveyed schools (see Institutional Interview chapter on "Program Characteristics"). It is apparent that students in both proprietary and non-proprietary schools are more educationally qualified than they need to be for entry and probable success in the respective programs. This finding essentially matches Belitsky's (1969) finding that a large proportion of proprietary school students were "over-educated" as a result of such factors as mis-counseling, parental and/or social pressures, or adverse labor market conditions. It also suggests that educationally disadvantaged persons such as high school dropouts are not taking full advantage of an important post-secondary vocational training resource. This inference is supported by the acknowledged existence in society of large numbers of high school dropouts (particularly in the inner city) and by the unused training capacity reported by the surveyed schools, particularly of the proprietary type. It is fair to note, however, that the role of these schools in training educationally disadvantaged persons is increasing as evidenced by the increasing numbers of inner-city minority persons enrolled and the increase in government-funded programs aimed at training these persons.

A limited amount of data were gathered from students regarding their parents' educational and work background. Response patterns for proprietary and non-proprietary students were almost identical. Roughly half the students reported both parents had at least graduated from high school, and almost a quarter reported parents having had some additional education in occupational schools or colleges. Less than 10% of the students said that either parent had bachelor's or graduate degrees, though fathers tended to have more education than mothers. About 10% of the students did not know how much education their parents had. In terms of parent occupation, about a quarter of the fathers were in the skilled crafts/technician categories, another quarter in the semi-skilled/laborer/farmer categories, and almost a fifth in the professional/educator/manager categories. Almost half of the mothers (41%) were homemakers, almost a fifth in clerical/sales or service occupations, and only about 8% were in the professional/educator/ manager categories.

Work experience. Information provided on prior work experience also revealed essentially similar profiles for proprietary and non-proprietary school students. About two-thirds of all students were employed immediately before they entered their training programs, a somewhat higher percentage of non-proprietary school students having worked part-time and a higher

percentage of men than women having worked at all. Only about 3% of the students had entered school immediately after serving in the armed forces. Most of the previously employed students worked in jobs completely unrelated or only slightly related to their current training programs. Salaries reported were low, especially for women, in part because many students worked only part-time. Approximately a quarter of the students reported earnings of $250 a month or less on jobs held before beginning a training program; another 20% earned between $251 and $400 per month. Fewer than 10% reportedly had earned $701 or more per month. Total prior work experience averaged two years or less for more than half of the students surveyed; less than 10% reportedly had eleven or more years' experience. These results are not surprising in light of the relatively young age of most students surveyed.

Summary of student background. Proprietary and non-proprietary students overall have very similar background profiles. These similarities, found in the cross-tabulations, are verified in the intercorrelations. Students enrolled in different course areas do show certain background differences, however, the most striking being the sex distribution: male--computer/technical, female--office/health. Persons enrolled in office and health programs (mostly women) tend to have less education than those enrolled in the computer and technical areas, and office students tend to invest less time and money in their current training. In addition, proprietary school women and persons having had less education and lower high school grades tended to enroll more in non-accredited rather than accredited proprietary schools.

Background variables of special interest to the study include minority status, prior educational attainment, and parent education and occupation. The investigators were interested in answering the question of whether minority and/or disadvantaged students attended certain kinds of schools. The non-proprietary school population surveyed contains about 12% more minority group members than the proprietary group surveyed--a difference which probably results from the cost advantages of attending public schools. As one might expect, student traits associated with social, educational, and economic advantages intercorrelate among themselves more than with school types. Interestingly, no significant relationship exists between dropping out of high school and having had lower high school grades; other variables seem to have a greater effect on educational attainment than prior educational success per se. Parent education is positively related to prior student education, in particular to students' having already completed two- or four-year college programs.

Why Students Enroll

Given the above background profiles, it is interesting to explore the incentives and goals which attract students to certain schools and training programs.

Proprietary and non-proprietary school students appear to have essentially the same primary goals in selecting their training programs. About

80% of all students expressed goals related to job skills as their "most important goal." More specifically, over half want to acquire basic job entry skills and another quarter want to acquire skills to change jobs or be promoted. A somewhat greater proportion of non-proprietary school students expressed the desire for skills that would enable them to be promoted from present job responsibilities. A very small proportion of students seek primarily general personal improvement objectives such as "developing personality" and "become more cultured-person." These objectives are rather expressed as secondary incentives and satisfactions among some of the students surveyed, particularly students in non-proprietary schools. No important differences in principal goals are observed among students in the four occupational areas except a slightly greater tendency for computer students to want to acquire skills to change jobs.

Students were asked to assess the importance of various sources of information used in selecting the schools they attended. No one source emerges for either proprietary or non-proprietary school students. In fact, men tended not to identify any outside information source as having been very important in their selection of schools. Overall, more than half of all students said that family advice influenced their selection of schools. Over a third stated that pre-enrollment talks with faculty or staff had influenced their decisions; this may suggest the potential value of pre-admission interviews required or recommended by many proprietary schools in attracting students. A somewhat larger proportion of non-proprietary than proprietary school students (34% vs. 24%) attributed their choice to the advice of high school counselors, perhaps supporting the notion that high school personnel may be more likely to recommend and/or be familiar with public school rather than proprietary school offerings. A correlation of -.42 between counselor influence and parental education also suggests that counselors may be assuming the advisor role usually assumed by parents when the need exists. Finally, a significantly higher percentage of proprietary than non-proprietary school students were influenced by contacts with field (or sales) representatives and/or media advertisements--not surprising in view of the earlier comparison of recruiting methods utilized by these two groups of schools. The influence of field representatives is additionally correlated to proprietary chain schools, higher cost programs, and relatively younger students enrolled on a full-time basis.

Students were also asked to assess the importance of various institutional characteristics in their selection of a school. The most prominent factor cited by over 75% of the students in all schools was "special curriculum I wanted"; similarly about half of all students cited "more opportunity to combine work and study" as a factor influencing their choice of school. These findings are consistent with the large percentage of students whose expressed goals related primarily to acquiring job skills. At the same time, a greater proportion of proprietary than non-proprietary school students cited "did not want to take a regular academic program" (58% vs. 38%) or "more emphasis on practical job skills" (67% vs. 46%), reflecting the more academic influences apparent in public community colleges. Finally,

proprietary school students more frequently cited "shorter training program" (55% vs. 30%) and "more flexible about when you start" (48% vs. 33%) as reasons for attending, whereas non-proprietary school students more often cited "low cost" (82% vs. 33%) and "desirable (i.e., closer) location" (72% vs. 55%). It may be noted here that low cost as a major reason for selecting a school intercorrelates highly with non-proprietary school status (r=.78) and consequently with student enrollment in lower cost programs (r=.65).

Related to the issue of general goals and motivations is the issue of student expectations in terms of future job, salary, and education. Virtually all (95%) of the students surveyed expect to work after completing their training, and most of them expect to work full-time. However, proprietary school students more often tend to expect to obtain full-time work immediately after training than do non-proprietary students. The majority of all students expect to work in jobs which are highly related or identical to what they are being trained to do. Fewer than 4% expect to have the same job they had just before beginning their training. Similarly, expected monthly earnings are higher than earnings from earlier jobs, in part because of the transition from part-time to full-time employment. Salary expectations for proprietary and non-proprietary students are similar, although students in larger schools and non-proprietary schools tend to expect slightly higher salaries than other students. About half of all students expect to earn between $401 and $700 a month, while fewer than one-fourth earned salaries in this range before they began their training. Fewer than 5% expect to earn less than $250 per month, while 25% or more earned salaries in this range before they entered school. About 30% expect to earn more than $700 per month (fewer than 10% earned that much in their last job), and almost half of this 30% expect more than $850. Salary expectation differences among occupational areas are greater. Computer and technical students have significantly higher salary expectations than office and health students. Most computer and technical students are men, and, by virtue of both their occupational goal and sex, can realistically expect to earn more in today's job market, as verified by the alumni survey results.

Proprietary and non-proprietary school students differ somewhat more in their educational aspirations. Approximately half of all students expect at the most to complete the currently attended program and/or a two-year degree. Within this group it is natural that a higher percentage of non-proprietary school students (32% vs. 15%) expect to obtain an associate degree since the degree is an integral part of the program selected by most community college students. Non-proprietary schools also attract a somewhat higher proportion of persons who expect to acquire a bachelor's degree or more (47% vs. 39%). As with salary expectations, computer and technical students (particularly the latter) have higher educational goals than students in other areas. It follows then, that men have higher educational aspirations than women in all schools, almost 60% of them expecting to obtain at least a bachelor's degree as compared to 28% of the women.

Overall expectations of students (across occupational areas and sex) for better paying, training-related job opportunities are consistent with the practical job skills orientation of students reflected throughout these data. The extent to which these student goals and expectations are realistic and obtainable will be explored in subsequent analyses of alumni data.

Inspection of intercorrelations among the variables thus far discussed seems to indicate stronger relationships between student background and motivational traits than between motivational traits and school characteristics. Particularly significant, though not surprising, are the relationships among sex, training program, prior and expected educational and occupational attainment. In addition to office students tending to be women with lower salary and educational aspirations, they tend to have fewer high school diplomas and less work experience prior to training and enroll in courses primarily to acquire job skills; the special curriculum offered by the school is not necessarily a major factor in the selection of office programs. Similar relationships exist in health programs, in which students have lower aspirations and are mostly women. However, lack of a high school education or prior work experience bears no relationship to enrollment in health programs, although selection of a school because of its special curriculum appears to be significant. In contrast, computer students tend more to have already completed two- or four-year college programs and technical students to be somewhat less oriented to securing job skills per se although they tend to be employed while attending school.

Positive relationships are found among pre-training employment, employment during training, and high salary expectations after training (all of which also relate to accredited schools). Similar relationships are found among age, pre-training education and expectations for both educational achievement and salary. Interestingly, although significant positive correlations exist among non-minority status and parent educational/occupational level, these characteristics seem to have no bearing on the expectation level of students in terms of education and salary. In addition, this complex of background variables appears not to be related to whether or not persons expect to work full-time immediately after training. Expecting to work full-time rather is related to attending proprietary and chain schools, enrolling in costlier though shorter programs, and having been influenced to select a school by a sales representative. Students expecting to work full-time tend to use job placement services to fulfill immediate employment goals. These related factors seem to suggest a practical determination to seek a direct return on investment in vocational education through employment.

Problems and Satisfactions

Students were given a list of characteristics and asked to identify those which were like or not like their school. Students in proprietary and non-proprietary schools characterized their schools similarly on a number of variables. At least 80% of all students said their schools provide good job training, practical skills emphasis, good teaching, and equipment needed for learning. However, about 30% of the students felt they were to some degree "treated like numbers" in school. As suggested by responses regarding school services, a smaller percentage of proprietary than non-proprietary school students characterized their schools as having good library facilities (about 40% vs. 75%) or offering organized activities or an active social life (33% vs. almost 60%).

Although most students expressed a fair degree of confidence in their ability to finance their programs, financial worry was still cited as the most common problem faced by both proprietary and non-proprietary school students, despite the strikingly different costs between the two kinds of schools. Half the proprietary school students and about 40% of the non-proprietary school students reported this as a minor problem, and about 17% of all students reported it as a major problem. Students reportedly depend on a variety of sources for financing their training. Although school directors reported eligibility for and dissemination to students of a broad variety of aid funds (as indicated in Table 3.5), student reports indicate dependence on many sources beyond those offered in conjunction with the schools themselves. The most common source mentioned by large numbers of students was full- or part-time work. About two-thirds of the students in proprietary schools and three-quarters of the students in non-proprietary schools reportedly work to support their schooling; many have full-time jobs. Parental aid or gifts was the next most common source of funds, cited by over 40% of all students. Women cited parental aid as a source more than men, whereas more men cited current work earnings. In addition, the tendency to hold jobs while in school is particularly prominent in schools enrolling a high proportion of technical and/or part-time students. Savings from earlier work was cited by over 30% of all students. Loans (federally insured loans, school loans, deferred tuition, or other repayable loans) were a major source of funds for over half the proprietary school students, though fewer than 20% of the non-proprietary school students reportedly had loans. Very few students cited scholarships, G.I. benefits, spouse's earnings, work-study programs, or Social Security benefits. It is probable that most students, particularly proprietary school students whose costs are higher, use a combination of funds derived from work, savings, parents, and/or loans to finance their schooling.

Almost a third of all students said that working while attending school presented a problem of time shortage; more than 10% judged this a major problem. This is not surprising since over 70% of all students surveyed claimed to be enrolled in school on a full-time basis (i.e., generally a 5-6 hour daily schedule). Although working seems to present problems of a similar degree to proprietary and non-proprietary school students, significantly more of the former claim to maintain full-time school schedules (83% vs. 61%). The office and computer areas tend to attract a higher percentage of part-time students, especially in the non-proprietary schools where less than half attend full-time. (Only 25% of the non-proprietary students in Chicago attend full-time.) These figures seem to suggest that fairly large numbers of public school students are enrolled for only one or two courses, particularly in the office skills and data processing areas. (Non-proprietary school officials interviewed did not support this suggestion, since they classified most students as "full-time"; however, they admitted difficulty in providing enrollment figures broken down by part- or full-time status.) As indicated during interviews, there is a close correspondence between full-time/part-time and day/evening attendance schedules. Percentages of students attending classes "day only" and "night only" practically duplicate

the full-time and part-time percentages discussed above. It is probably fair to say that virtually all full-time students attend school during daytime hours, and some attend both day and evening sessions. Part-time students avail themselves of flexible class hours, both day and night, but certainly they comprise most of the evening students. It is interesting to note the higher proportion of non-proprietary part-time and evening students. It appears that public community colleges and nonprofit vocational schools are at least as flexible as proprietary schools in terms of scheduling class hours, allowing students to assume variable class loads, and maximally utilizing facilities.

In addition to problems of finances and time, students cited problems including courses being too hard, excessive family obligations, and lack of basic academic skills. Few persons cited deficiences in school offerings. Approximately 25% of all students made use of remedial training services to correct basic skills deficiencies. Use of remedial services is correlated positively with enrollment in office courses, full-time status; minority group membership, and vocational skills orientation; and negatively with age, parent education and occupation, and prior employment.

Students in proprietary and non-proprietary schools also reported similar satisfactions arising from their training programs. About 90% of all students said that "learning the practical skills required for an occupation" was a source of satisfaction; 72% called it a major satisfaction. Correlations reveal positive relationships between deriving major satisfaction from learning practical skills and proprietary status, small school size, enrollment in health courses, orientation to securing job skills and seeking specialized curricula, and expecting to work full-time after training.

Other sources of satisfaction reported by a large majority of students included "learning theoretical or background knowledge about an occupation" and associating with other students and faculty. Participating in activities related to social problems, in organized social or athletic activities and in extra-curricular cultural activities were reported as minor satisfactions by about a quarter of the students, somewhat more by non-proprietary students. In summary, there appears to be a close correspondence between the major goals and the major satisfactions expressed by students, and they largely relate to developing basic job skills.

Regional Differences

Cross-tabulations of item response distributions by city appear in Appendix P. Inspection of this appendix reveals relatively few meaningful regional differences or relationships among school and student variables. The most notable differences appear in occupational enrollment distributions across cities; for example, proprietary schools in Rochester enroll a preponderance of office students and few technical students, and in Chicago a majority of technical students. Consequently proprietary school students in Rochester are enrolled in generally shorter programs than students in

other cities because of the lack of technical offerings; the reverse is true in Chicago where a high proportion of proprietary school students are enrolled in lengthy technical courses. In addition, Atlanta non-proprietary students tend to take shorter programs than non-proprietary students in other cities because the one public school there is an area technical school rather than a community college emphasizing two-year degree programs.

Additional evidence indicating minimal regional distinctions may be found in the correlational analysis results (see Appendix L.) Intercorrelations by school between city and other school and student characteristics reveal little of interest in terms of regional variations. Major points of interest are limited to a slight tendency for students in Chicago schools to have relatively higher educational and salary expectations, to be working while going to school, and to gain satisfaction from gaining practical skills. Conversely, Rochester schools tend to enroll students who do not expect to obtain a bachelor's degree or earn more than $850 per month. Rochester students also tend to be young, female, and of neither minority nor out-of-state origin.

In summary, one of the more consistent findings of this study is the fairly extensive commonality among students in each of the four occupational areas across the four geographical areas surveyed. In view of this, it seems reasonable to conclude that the four cities comprise a fairly representative sample of the proprietary and non-proprietary schools which would be found across the country.

CHAPTER 5: ALUMNI SURVEY RESULTS

This chapter presents the results of the questionnaire survey sent to recent graduates of participating schools in February 1972. Procedures involved in developing, administering and analyzing the questionnaires have been discussed in Chapter 2. A copy of the Alumni Questionnaire, the item response percent distributions, and the correlation matrix appear in Appendices D, Q, and M respectively.

Overview of Alumni Results

Results from the alumni survey present a generally favorable picture of vocational programs as a source of manpower training. Post-secondary vocational students are oriented towards obtaining practical job skills and obtaining and improving their position in the world of work. About 78% of the graduates sought training-related jobs and three-quarters of these persons did in fact find related jobs. However, less than 20% of the proprietary alumni and only 13% of the non-proprietary alumni obtained jobs through the school placement service, a surprising result especially for proprietary schools, virtually all of which offer placement assistance. Most graduates expressed satisfaction with their current job status. However, many, particularly proprietary alumni, felt the training was not worth its cost. Considering only those alumni currently employed, about 34% of the proprietary and 12% of the non-proprietary group felt the training was definitely not worth the money. In addition, comparing the expectations of students currently enrolled in comparable training programs with the accomplishments of their graduate counterparts reveals a moderate discrepancy between expectations and reality. Most alumni report increases in salary from before to after training, but the average post-training salary does not live up to current student expectations. Higher pay, in and of itself, is associated with men, technical training, more years out of school, and additional schooling since training.

Cost-benefit measures indicate that the investment in vocational training was well worthwhile for all occupational groups except the computer trainees in proprietary schools. Graduates from the computer field have been less successful than others in getting and maintaining computer-related jobs, in feeling their training was worthwhile, and in achieving their aspirations generally. This may reflect the job market more than the training, however, as discussed later.

As with the student survey, virtually no significant relationships were found between alumni characteristics and the location of their schools in different cities. This finding is contrary to what one might expect given normal regional variations in labor market and cost-of-living conditions across the country.

Non-proprietary school graduates have an advantage over proprietary school graduates in cost-benefit measures and in salary gain from before training to the first job after training. This advantage is due largely to the fact that non-proprietary alumni overall earned less before training than proprietary graduates. Thus, although both groups made substantial gains and earned similar salaries in the first job after training, the gain from before to after training is greater for non-proprietary alumni because their pre-training salaries were lower. In addition, when all alumni from the two types of schools are compared, the non-proprietary advantages in job success (as reflected in cost-benefit measures and satisfaction with training) are inflated by the fact that a higher proportion of proprietary alumni are in the computer area, which currently suffers a poor job market.

A related finding is that more graduates of non-accredited than accredited proprietary schools find related jobs after training and evaluate school training and placement services favorably. This finding suggests that although current accreditation procedures for proprietary schools may insure certain operational standards, they do not insure superior output standards and, in fact, are not particularly designed to do so. The implications of these findings will be discussed further in the final chapter.

Alumni Background

Since the alumni survey focused on measuring the effectiveness of vocational training programs, only limited information was gathered on alumni background characteristics.

Alumni sex breakdowns follow patterns essentially identical to those found in the student survey. The population was split approximately evenly between males and females, the preponderance of office and health alumni being female, while technical alumni were mostly male. Computer graduates were more evenly divided, particularly from non-proprietary schools where more than half the surveyed population was female. As found in the student survey, non-proprietary schools tend to have a more even proportion of the sexes in all programs, particularly in the health and computer areas.

About 80% of the proprietary school alumni are under thirty years of age; almost 60% are under twenty-five. Non-proprietary alumni are somewhat younger, about 90% being under thirty years and almost 80% under twenty-five. About a third of all the surveyed graduates have been out of school one year or less, about 10%, more than three years. Proprietary alumni have been out of school slightly longer than non-proprietary alumni. The men surveyed, technical students in particular, tend to have been out of school longer than the women and students in other occupational areas.

About 17% of the proprietary and 31% of the non-proprietary alumni surveyed are black, American Indian, Oriental, or Spanish surname; the majority of these persons are black. Distribution of minority group members across occupational areas is different for the alumni group surveyed than for students; for example, proprietary school black graduates come largely from the

health rather than the office area, although non-proprietary black graduates are heavily drawn from the computer and office areas. More minority graduates tend to be female than male, and more tend to have enrolled in lower cost non-proprietary programs. Overall, a smaller proportion of alumni belong to minority groups than do students surveyed (17% vs. 30% proprietary; 31% vs. 42% non-proprietary). This difference may reflect the reportedly increasing enrollment of minority and disadvantaged students--increases not yet reflected in alumni populations--or conversely, a high minority dropout rate reflected in the alumni but not the student population. (Data on comparative dropout rates are not available).

Proprietary and non-proprietary school graduates reported similar pre-training work experiences; profiles also resembled those reported by students surveyed. (See Table 5.2 below.) About 20% of the alumni had never worked and 15% reported student, military, or housewife status before training. Almost half had worked in jobs unrelated to their training, and the remaining 15% in related jobs, full- or part-time. A higher proportion of computer and technical graduates (mostly male) had prior work experience. However, a greater proportion of proprietary office graduates (mostly female) had prior training-related experience than graduates in other subgroups.

Measures of School Effectiveness

The main purpose of the alumni survey was to compare the effectiveness of the proprietary vs. non-proprietary vocational training programs under study. The following section presents these evaluative data, focusing particularly on the issues of placement, persistence, and progress in training-related jobs; monetary benefits; and job and training satisfaction.

Placement, persistence, and progress in training-related jobs. It is consistent with student goals and expectations previously discussed that most (over 75%) of the graduates surveyed reported looking for full-time (or part-time) training-related jobs, as they terminated their schooling. (See Table 5.1 below.) Part of the 20+% who stated they did not seek jobs felt unqualified or thought no jobs were avilable. Others already had related jobs which they intended to keep after training.

A number of alumni apparently did not seek jobs because they planned to continue their schooling elsewhere. Overall, about 25% of the proprietary and 34% of the non-proprietary alumni have attended some kind of school or college since completing their vocational training program. Many of these persons have attended a public two-year college or other school on a part-time course basis only and still sought training-related jobs. However, almost 5% of the proprietary and 14% of the non-proprietary alumni have attended four-year colleges; this is particulary true of non-proprietary technical graduates, 22% of whom have enrolled in four-year schools. The correlations reveal that those who attend other schools after graduation tend to be males, be from non-proprietary schools, be technical graduates, have prior work experience, have been out of school longer, and not be seeking a training-related job after training. These relationships are consistent with the expectations expressed by students

currently enrolled in the surveyed schools, in that non-proprietary, male, and technical students all tend to have higher educational aspirations than their proprietary, female, and non-technical counterparts. Overall, both occupational and educational aspirations expressed by students in various subgroups seem consistent with the job-seeking behaviors reported by graduates in the same subgroups.

Placement percentages for proprietary and non-proprietary graduates are similar. Just under 60% of all alumni actually found jobs in their field (full- or part-time), and an additional 5% remained in related jobs they had before training began. About three-quarters of those who actively sought related jobs did in fact obtain them after completing their training program. Non-proprietary school graduates fared slightly better than proprietary school graduates in this regard. As Table 5.1 indicates, about 13% of all alumni obtained new unrelated jobs, about 5% remained in unrelated jobs, and 11% were unemployed after training.

Table 5.1

Summary of Alumni Placements (in Percents)[1]

	PROPRIETARY	NON-PROPRIETARY	ALL SCHOOLS
Job Seeking			
Did not seek job	20.4	22.1	20.7
Sought training-related job			
Full-time	76.0	72.6	75.4
Part-time	2.4	4.4	2.8
Total	78.4	77.0	78.2
Placements			
Training-related job			
Full-time	53.6	55.6	54.0
Part-time	4.5	5.0	4.6
Total	58.1	60.6	58.6
Unrelated job	12.9	12.5	12.8
Student/military/housewife	4.0	8.6	4.9
Did not get a job	11.9	8.8	11.3
Remained in same job:			
Full-time related	5.0	3.7	4.4
Part-time related	.2	1.0	.4
Unrelated	6.0	3.0	5.4
Student/military/housewife	.1	.5	.2

[1]Percentages do not total 100% because of rounding and because a small percentage of alumni (<2%) who did not provide relevant information are not included in the table.

A more detailed presentation of data by occupational area may be found in Appendix Q (Items 4 and 8). A brief summary of these occupational data is in order here. Although uniformly high proportions (in the 75-80% range) of persons in most occupational areas (except proprietary office and non-proprietary technical) sought related jobs, a significantly lower proportion of computer graduates in both proprietary and non-proprietary schools actually found jobs in the computer field (about 40% as compared to over 60% in all other areas). In other words, only half of the 82% of computer graduates who sought related jobs actually obtained them. One might expect from this that more computer graduates settled for jobs not related to their field of training, and this is in fact the case in both proprietary and non-proprietary schools. Compared to graduates from other programs, computer graduates also took longer to find jobs, and reported placement services as not having been very helpful.

Graduates from accredited proprietary schools found placement services to be less helpful than graduates from non-accredited proprietary schools ($r=-.44$), and in fact fewer obtained related jobs ($r=-.34$), contrary to the usual expectation that accreditation goes with better service. However, more computer schools and fewer office schools tend to be accredited, and this, rather than accreditation itself, may account for the relationship. No significant difference was found between training-related placements of proprietary chain and non-chain school graduates.

The above placement ratios are generally in line with the limited (and often estimated) placement data obtained during institutional interviews, and discussed in Appendix S. Proprietary school personnel reported placement ratios, based on the number of persons requesting assistance, in the 68-82% range. Non-proprietary school ratios ranged higher (85-95%) but were based on an extremely small number of schools. (See Appendix S.)

In seeking jobs, about 61% of the proprietary and 37% of the non-proprietary alumni reported using their school placement service; 22% and 21% respectively, said the service was "very helpful" in finding them jobs. Thus, considering only those persons who used school placement services, about 57% of the non-proprietary alumni found the service helpful, as compared to only 37% of the proprietary alumni. Broken down by occupational areas, the percentages are approximately as follows:

	Proprietary	Non-proprietary
Office	44%	68%
Computer	25%	34%
Technical	46%	53%
Health	38%	67%

It is also worth noting that although virtually all proprietary schools reportedly provide and emphasize placement assistance, less than a fifth of the proprietary graduates surveyed report actually finding jobs as a result of school placement assistance. Only 13% of the non-proprietary alumni found jobs through the placement service, but fewer non-proprietary schools offer placement assistance in the first place.

Proprietary and non-proprietary graduates found jobs from a number of sources besides placement services: over 30% found jobs on their own; more than 10% remained with the same employer (about half in related jobs); and small percentages reported the assistance of employment agencies, parents or relatives, friends, instructors, or counselors. Most of those persons who found jobs after training found them within three months after completing school.

In addition to considering job placement directly after training, it is important to look at the present job status of alumni in order to determine the extent to which graduates persist in training-related or unrelated jobs. Table 5.2 traces, by occupational area, alumni job status from before training, to immediately after training, to the present.

Table 5.2 reflects the marked increase of persons in training-related jobs from before to the first job after training. From just after training to the present, however, it reflects a decrease in persons in related jobs and a simultaneous increase in persons in unrelated jobs. Non-proprietary alumni by and large persist in training-related jobs from the first job after training to the present. A sizable percentage of proprietary alumni (11%), on the other hand, are no longer in the related jobs they had directly after training. Although some of these persons, particularly in the office and health areas, enter the "no job" or "military/student/housewife" category, some of them doubtless move to unrelated jobs. The increase of alumni in unrelated jobs from first job after training to the present occurs in all occupational areas and both school types, but the increases are much greater among proprietary than non-proprietary alumni (10% vs. 3%). Regardless of the relatedness of jobs, the data also indicate that alumni do not persist for long in the same job. Only about a third of all graduates (32% proprietary, 38% non-proprietary) who presently have jobs hold the same job they had immediately after training (most often training-related), only one or two years before. It is important to note that most alumni have been out of school less than two years, and that the persistence in training-related (or non-related) jobs is likely to be even less over longer time periods. Since young adults in general have hard-to-predict career patterns, perhaps the finding that over half the graduates persist in training-related jobs for only a year or two should not be viewed with dismay. In addition, alumni may have found or been promoted into higher paying and more satisfying jobs not directly related to their training. The extent to which this occurred cannot be ascertained from available data.

A separate measure of "job progress" was designed for the correlational analysis and defined as "progressing from no job or an unrelated job before training to a related job currently." No significant relationship between school type (proprietary/non-proprietary) and job progress was found. Job progress, not surprisingly, is positively related to the helpfulness of school placement services (r=.71), finding a job quickly (r=.48), salary progress (r=.66), and satisfaction with training (r=.57) and job (r=.68).

To further clarify changes in job status over time, the job status of individual alumni was traced from before training to the first job after training to the present. A count of the percent of alumni in each resulting pattern of job transition, classified by school type and occupational area,

Table 5.2

Percent of Alumni in Each Job Status Before Training, 1st Job After Training, and Presently by Occupational Area

JOB STATUS	PROPRIETARY					NON-PROPRIETARY					ALL SCHOOLS
	Office	Comp.	Tech.	Health	All Areas	Office	Comp.	Tech.	Health	All Areas	All Areas
NO JOB:											
Before Training	26.5	15.7	8.7	29.3	19.7	28.4	23.8	13.8	21.4	21.1	19.9
1st Job After Training	8.9	15.6	8.2	14.1	11.9	7.6	11.9	11.8	3.8	8.8	11.3
Present Job	13.3	13.2	7.4	18.6	13.2	8.5	6.1	9.1	6.5	7.9	12.1
FULL-TIME RELATED JOB:											
Before Training	21.2	8.7	17.7	5.6	12.8	6.2	2.4	13.2	11.1	9.2	12.1
1st Job After Training	64.9	41.6	67.5	63.4	58.6	71.8	34.8	49.6	74.1	59.3	58.8
Present Job	49.2	35.9	60.0	44.9	47.1	67.8	33.5	49.9	68.2	56.8	49.0
PART-TIME RELATED JOB:											
Before Training	9.6	0.5	3.1	3.9	3.9	12.2	2.7	4.4	7.6	7.1	4.6
1st Job After Training	5.6	2.1	3.8	7.9	4.7	5.2	5.2	4.7	9.4	6.0	5.0
Present Job	4.1	0.4	2.8	4.0	2.7	2.4	1.2	3.2	8.2	3.9	2.9
UNRELATED JOB:											
Before Training	28.7	58.3	51.7	43.3	46.5	35.8	57.6	53.0	39.4	45.6	46.3
1st Job After Training	14.3	34.4	13.8	10.6	18.9	9.6	35.4	19.3	4.7	15.5	18.2
Present Job	19.0	45.5	20.7	23.3	28.0	11.5	40.2	21.0	9.3	18.3	26.1
MILITARY/STUDENT/HOUSEWIFE											
Before Training	10.8	16.7	17.2	13.9	14.9	15.8	12.8	14.3	20.1	15.9	15.1
1st Job After Training	4.5	4.8	4.7	2.4	4.1	5.7	12.5	12.9	5.4	9.1	5.1
Present Job	11.3	4.9	8.4	8.5	8.1	9.3	18.6	16.1	7.4	12.5	8.9

appears as Appendix T. Out of one hundred twenty-five possible patterns of job transition, five emerged as the most common, comprising more than half of the alumni population. These patterns and the percentage of alumni following each are presented in Table 5.3, by occupational area and school type.

Table 5.3

Percent of Alumni Making the Five Most Common Job Transitions

	Job Transition				
Before:	No Job	Unrelated	Mil/Stud/HW	Full-time Rel.	Unrelated
1st Job After:	Full-time Rel.	Full-time Rel.	Full-time Rel.	Full-time Rel.	Unrelated
Present:	Full-time Rel.	Full-time Rel.	Full-time Rel.	Full-time Rel.	Unrelated
PROPRIETARY					
Office	10.6	11.0	4.6	13.7	4.2
Computer	5.9	15.9	4.9	4.6	20.1
Technical	5.0	25.4	9.3	13.9	9.0
Health	15.7	17.2	4.8	2.5	5.1
All Areas	9.1	17.6	5.9	8.3	10.2
NON-PROPRIETARY					
Office	14.7	22.3	11.3	3.9	2.9
Computer	3.4	19.4	1.9	2.2	15.1
Technical	4.3	17.4	4.6	11.4	11.8
Health	13.1	23.3	12.8	8.3	2.8
All Areas	9.1	20.4	8.0	7.2	7.7

[1]This table is abstracted from a complete table of alumni job transitions, including N's, in Appendix T.

The most typical patterns followed by alumni as a whole involved full-time related jobs after training and at present. From about a quarter to more than half of the alumni in each subgroup followed this kind of pattern. The only other common pattern was persistence in an unrelated job. The preponderance of persons in this category were alumni from the computer area. Many other transitional patterns, of course, exist and comprise mostly alumni who have not persisted in one job status since completing training. However, the patterns which emerge strongly in this analysis support earlier suggestions that the proportion of graduates who find and persist in training-related jobs is sizable and that the school and student goals of placement in training-related jobs are in large part accomplished.

Monetary benefit. Information was gathered from alumni regarding their pre-training, post-training, and current salary. Income distributions at all three points in time may be seen in detail in Appendix Q (Items 10-12). Table 5.4 presents mean salaries of alumni, by occupational area, before training and in the first job after training. Since alumni have been out of school for from about one to three years and since current salaries are so much a function of the time since completing training, they are not presented in Table 5.4 though their distribution may be seen in Appendix Q. (Correlations

Table 5.4

Mean Monthly Salaries ($) of Alumni
Before Training (B) and 1st Job After Training (A)[1]

	All Alumni[2]		Full-time, Related Jobs		Part-time Related Jobs[3]		Unrelated Jobs[4]	
	B	A	B	A	B	A	B	A
PROPRIETARY								
Office	235 (711)	370 (709)	475 (141)	460 (435)	220 (53)	265 (54)	355 (237)	370 (117)
Computer	340 (1047)	370 (1038)	520 (64)	490 (466)	355 (13)	415 (28)	445 (604)	415 (351)
Technical	340 (1191)	475 (1177)	550 (169)	565 (736)	295 (45)	265 (35)	385 (662)	445 (231)
Health	175 (1039)	280 (1041)	310 (52)	340 (643)	190 (35)	265 (74)	295 (457)	250 (140)
All Areas[5]	280 (3995)	370 (3972)	490 (426)	460 (2284)	235 (146)	295 (191)	385 (1963)	400 (839)
NON-PROPRIETARY								
Office	158 (380)	385 (381)	340 (19)	445 (279)	235 (61)	310 (26)	250 (126)	445 (40)
Computer	220 (189)	325 (191)	595 (8)	520 (72)	310 (8)	385 (10)	325 (104)	325 (62)
Technical	310 (468)	445 (465)	580 (61)	580 (245)	280 (21)	415 (17)	370 (239)	475 (96)
Health	175 (352)	415 (348)	355 (48)	460 (266)	265 (29)	370 (32)	250 (148)	415 (19)
All Areas[5]	220 (1397)	400 (1393)	475 (137)	490 (865)	250 (121)	370 (85)	310 (620)	415 (219)
ALL SCHOOLS	265 (5392)	385 (5365)	490 (563)	475 (3149)	235 (267)	310 (276)	370 (2583)	400 (1058)

[1]Means are based on respondent and non-respondent data and are therefore weighted. Unweighted N's are also presented in parentheses below each mean to provide an indication of the reliability of the data. N's include only those alumni who provided salary data on the appropriate alumni questionnaire items (Items 10 and 11). The midpoint of the range in each salary response option was used in calculating means. In order to equate the intervals between midpoints, the values chosen for the end options were as follows: A response of $1-250 was represented by $175, and a response of "more than $1000" was represented by $1075.

[2]"All Alumni" include persons without jobs whose income is "0" as well as persons employed. Included in the means are unrelated as well as related jobs and part-time as well as full-time salaries.

[3]Means represent all part-time related job salaries, irrespective of number of hours worked per month.

[4]Unrelated jobs do not include persons in the military, student, or housewife status. They do include, however, other unrelated jobs irrespective of number of hours worked per month.

[5]N's and means are based on alumni from all four occupational areas plus, in some cases, a small number of alumni who did not indicate which occupational area they studied.

in fact revealed an expected positive relationship, r=.68, between current pay and the number of years since completing training.) Salaries are presented in Table 5.4 for all alumni combined (including those without jobs) and for holders of full-time related jobs, part-time related jobs, and unrelated jobs. Mean salaries for all alumni combined are included in order to show the average income of graduates regardless of job status. The salaries of full-time related job holders are provided to show the actual average salaries of trainees who in fact obtained the full-time related jobs they planned to get after training. The salaries for part-time related job holders and unrelated job holders are presented primarily for reference; it is difficult to use them for comparative purposes since they represent salaries for variable numbers of hours worked.

The mean salary of all alumni before training was low and reflects the fact that almost a third of all alumni reported no prior income, and more than half the remainder reported incomes under $400 irrespective of occupational area. Persons in the higher income ranges before training tended to be male graduates in the computer and technical areas. Pre-training incomes also tended to be higher for proprietary than non-proprietary alumni; however, these differences may be due, at least in part, to the fact that somewhat more non-proprietary than proprietary alumni had either part-time jobs or no jobs at all before training. Salaries of all alumni after training were naturally higher than before, if only because fewer persons were unemployed or employed on a part-time basis. Considering all alumni, non-proprietary gains from before to after are greater than proprietary alumni gains, largely because non-proprietary salaries before training were lower to begin with.

Another way to look at the data is to consider the salaries only of those persons who had full-time training related jobs before and after training. However, this would have represented very small numbers of alumni and would have precluded presentation of the large majority of alumni surveyed. About 12% of the alumni before training and 59% of the alumni after training had full-time related jobs. Because of this difference, it was decided to present mean salaries of all persons in full-time related jobs both before and after training. Thus the figures in Table 5.4 represent different groups of people before and after training in the full-time related job category. Table 5.4 indicates that mean salary after training was lower than mean salary before. This does not suggest that the average alumnus made a lower salary after training than before. Rather, the after-training group consists largely of persons in their first full-time training-related job, who likely start at lower salaries than persons already experienced in the field.

The data presented on full-time related job salaries are nonetheless useful for comparisons among occupational areas and between school types. Again, these salaries are consistently higher in the computer and technical areas. Non-proprietary salaries before training are higher in all areas except office. Post-training salaries for proprietary and non-proprietary alumni holding full-time related jobs are very similar in all areas except health, where non-proprietary salaries were substantially higher.

It is interesting at this point to compare the salary expectations of students currently enrolled in the surveyed training programs with the salaries actually obtained by their alumni counterparts who obtained full-time related jobs. Actual post-training salaries across all areas are not as high as salaries expected by current students. Whereas 30% of both proprietary and non-proprietary students expect to earn more than $700 monthly immediately after completing their training, only 6% of job holders reported post-training salaries in this range. Discrepancies between expectations and accomplishments occurred in all occupational groups. Part of these differences may be accounted for by the fact that only 2% of the students surveyed did not expect to work after training, as compared to 15% of the alumni who did not obtain jobs. Other contributing factors may include inflation and the fact that the expectations and accomplishments of two distinct populations are being compared. Whatever these effects may be, it seems reasonable to conclude that the high salary expectations of students currently enrolled in vocational programs are not likely to be met in jobs immediately after training, if market conditions remain similar.

Higher pay in general, before and after training and currently, is consistently associated with men, technical training, prior work experience, years out of school, and additional schooling since training. A relationship between higher pay and higher training cost (r=.44 for first pay after training and .41 for current pay) likely results from the fact that technical, and to a lesser extent computer, training is more costly and reaps higher salary benefits after training.

In the correlation analysis "salary progress" was defined as the difference between pre-training and current income. On the whole, relationships between salary progress and other variables are similar to those for salary itself. In particular, more salary progress is associated with attending non-proprietary schools (r=.42), going from unrelated to related jobs (r=.66), and more years out of school (r=.41). (The relationship between salary progress and non-proprietary schools arises at least in part from the higher salaries of proprietary alumni before training.) In addition, all salary variables, but particularly salary progress, are highly related to alumni satisfaction with training (r=.69) and with present job (r=.79).

Salary progress measures the difference between current salary and salary before training. The time interval since graduation varies considerably among alumni, so another index of monetary benefit is the difference between salary on the first job after training and salary before training, defined in the following analysis as "annual benefit" (A). This index was not computed for each individual school as was salary progress. (Correlations were based on mean values for each school.) Rather, the percentage of alumni for whom A was positive (meaning pay was higher after training than before) was calculated for proprietary, non-proprietary, and all schools combined and for each occupational group within school type. It should be noted that that small actual increases in salary are not detected by the Alumni Questionnaire which groups all salaries into intervals of $1800 per year ($150 per month). Thus, a positive A (A>0) here means that salary increased enough to advance into the next $1800 per year interval, or farther.

The percentages of alumni for whom A is positive are indicated in the next to last column in Table 5.5. Among the eight subgroups, percentages range from a low of 45% for proprietary computer graduates to a high of 79% for non-proprietary office graduates. As found throughout the data, fewer computer graduates receive a monetary return on investment than graduates of other areas. The parity apparent on this variable between non-proprietary computer and technical graduates is no doubt accounted for by the sizable proportion of technical graduates included in these analyses who do not seek jobs but rather continue their schooling. The proportion of non-proprietary graduates receiving a higher salary after training than before substantially exceeds that of proprietary graduates in the office, computer and health areas; however, the percentages are virtually identical in the technical area.

A more sophisticated cost-benefit index takes into account the costs associated with training (including salary foregone) and the interest which could have been earned on this investment. An index of this type commonly used is the economic indicator called "internal rate of return." The internal rate of return (r*) can be defined as the rate of interest one would have to earn on the training investment (I) in order for the investment-plus-interest at retirement to equal the benefits from the training. (The benefits include the income difference plus interest obtained by reinvesting the difference each year at the rate r*.) The measure r* has the following economic interpretation: if the rate of return is higher than one could expect to earn on a savings account, stocks, bonds or other investment (perhaps 5% to 15%), then the training can be considered to have been "cost-beneficial." Internal rate of return has been computed for other types of education (e.g., higher education) and can be compared to rates derived from alumni data. Note that this rate of return refers only to monetary benefits; non-monetary benefits such as job satisfaction are also important and will be discussed below. In addition, this index deals only with personal costs and benefits, and does not at all address the issue of the costs incurred by, and benefits accrued to, society as a result of the training programs.

The internal rate of return may be defined mathematically as the unique value of r* satisfying the following equation:

$$I = \sum_{t=1}^{T} \frac{A}{(1+r^*)^t}$$

where

I = student investment (foregone earnings plus training cost);[1]
A = annual benefit (annual earnings after training minus annual earnings before training), assumed to be constant over time; and
T = number of years of employment after training (65 minus student's age when training ended).

Detailed specifications for deriving the above variables from available alumni data may be found in Appendix U.

[1]When investment (I) is incurred over a period of more than one year, a more accurate formula is available which includes the second year interest on the first year funds invested. Although a proportion of the alumni surveyed spent between one and two years in training, the change in r* which results from including this interest is estimated to be small. Therefore the simpler formula, which assumes I is incurred in one year, is utilized for all r* analyses.

Initially, project staff had the choice of calculating r* for each alumnus or for groups of alumni defined by school type and occupational area (e.g., proprietary - computer). The above formula breaks down and r* cannot be computed if A is zero or negative, and of course if any data are missing. These limits would have excluded a sizable proportion of alumni from the analysis if r* were computed for each alumnus, since many individuals had no salary gain ($A \leq 0$) and since other data were occasionally missing. To omit these alumni would likely have seriously biased the results since the omitted alumni would tend to be those for whom training was least cost-beneficial.

Therefore, a more sensible procedure seemed to be first to compute mean values of I, A, and T for a subgroup, then compute an average r* for the subgroup based on these values. All r* analyses reported here followed this procedure, and computations were based on respondent and non-respondent data combined and weighted as described in Chapter 2. Although calculations included those persons for whom $A \leq 0$, it was necessary to delete from these analyses those cases from which essential data were missing and could not be retrieved. (Of 5215 respondent and 340 non-respondent cases available, 336 and 54 respectively, were deleted, thereby leaving 5165 analyzable cases.) Mean values of I, A, T, and r* are presented in Table 5.5 below. Mean values of secondary variables used in computing I, A, and T appear in Appendix U.

Table 5.5

Summary of Cost-Benefit Analyses[1]

	Unweighted Number of Alumni	Investment (I) $	Annual Benefit (A) $	Years of Employment (T)	r* %	A>0 %	$B=\frac{3A}{C}$
PROPRIETARY							
Office	666	3086	1677	39.8	54	56	6.4
Computer	1012	4821	256	39.2	4	45	0.5
Technical	1156	8527	1732	41.3	20	60	2.5
Health	1003	2149	1173	41.9	55	53	3.7
All Areas	3844	4471	1153	40.5	26	53	2.4
NON-PROPRIETARY							
Office	344	2251	2696	44.3	120	79	15.2
Computer	179	3131	1403	42.9	45	61	8.4
Technical	454	6657	1568	41.3	24	60	5.4
Health	337	4527	2966	42.1	66	77	12.9
All Areas	1321	3971	2181	42.5	55	69	9.6
ALL SCHOOLS							
Office	1010	3081	1917	40.8	62	61	7.9
Computer	1191	4872	386	39.7	7	46	0.7
Technical	1610	8047	1690	41.3	21	60	2.8
Health	1340	2949	1526	41.9	52	58	5.1
All Areas	5165	4705	1359	40.9	29	56	3.2

[1]Values shown for each variable are means for all alumni within each subgroup; alumni reporting "no job" were considered as having "0" income.

It may be helpful to use a 5% bank rate of interest as a reference point in interpreting the r* values for each subgroup. The 29% rate of return calculated for all alumni indicates that the vocational training programs surveyed are clearly effective, from a cost-benefit standpoint, the rate of return being almost six times the return which would have been obtained from having invested similar money in a bank over a similar number of years.

Office and health programs yield a greater return on investment than technical and computer programs. It is likely that women receive a higher return on investment than men, by virtue of their disproportionate enrollment in the more cost-effective programs; this implication is interesting in light of the higher salary expectations expressed by the male computer and technical students surveyed. Proprietary computer graduates received a return of only 4%, indicating that during the time period of this study the training for this group was not cost-effective. The low return is accounted for mostly by the higher pre-training salaries of this group which caused the annual benefit (A) to be quite small. A comparison of Tables 5.4 and 5.5 shows that proprietary computer graduates getting full-time training-related jobs did not have lower salaries than graduates from other areas; in fact, salaries correspond fairly closely to training investment (I).

As indicated by other monetary measures such as salary, salary progress, and percent with positive A, non-proprietary school programs yield a significantly greater return than proprietary school programs. Part of this difference is due to the greater proportion of computer graduates in the proprietary alumni sample. The difference is also due to training costs to the student being one-third higher in proprietary schools. Taxpayers bear part of the cost of non-proprietary community college training, and from society's standpoint (not the student's) it would be fairer to include this cost in training investment. However, training costs are a relatively small part of the investment and making this adjustment would reduce the difference in r* between proprietary and non-proprietary schools only slightly. Furthermore, salary gain (A) is the largest factor in the r* analysis, and A is almost twice as large for non-proprietary as for proprietary alumni, accounted for largely by the higher pre-training salaries of proprietary alumni as stated before.

The internal rates of return found here (29% overall) correspond roughly with estimates of the cost-benefit of vocational training found in other studies, considering the wide variety of training and cost-benefit data involved. As cited in the literature review, Dupree (1968) calculated a 35% return to the student for two-year technical programs provided in eight post-secondary institutions. Carroll and Ihnen (1966) calculated a 22% personal rate of return for post-secondary technical education and concluded that post-secondary education was more cost-beneficial than comparable secondary school programs. Stromsdorfer (1972) summarized rates of return for comparable secondary and post-secondary MDTA training programs and found average return rates for both kinds of training to be around 20%. It is interesting to compare these rates of return for vocational education (in the 20-35% range) with the rates which Hansen (1963) calculated for two- and four-year college training: around 9.4% and 11.5% respectively.

The preceding analyses focus on long-term monetary benefits. Simpler, shorter-term indices might be used to assess the economic benefits of training. For example, one might take the position that if a program is to make economic sense the increased salary benefits after training must make it possible to recover costs of training within a relatively short period of time--say three years. Thus, one can compute an index of benefits (B) from the following formula: $B = \frac{3A}{C}$, where A=Annual benefit and C=Cost of training, not including foregone income. When B>1, the training program pays for itself in three years or less. The last column in Table 5.5 presents the computation of this benefit index for each of the subgroups under study.

The results of this analysis echo the results of previously discussed analyses. It is apparent from the B's computed that it is possible to recover the costs of training within three years with increased salary benefits accrued in all subgroups except proprietary computer. The fact that such a large proportion of computer graduates do not find jobs at all accounts in large part for the inability of graduates in these groups to repay quickly the high costs of training. Compared to r*, this benefit measure is determined more by the highly variable cost of training than by annual benefit, which is accrued over only three years; thus, office and health programs would be paid for more quickly and would yield a higher rate of return on investment than more costly computer and technical programs even if the latter did result in higher annual benefits. Similarly, the lower cost of non-proprietary school training would be easier to repay and would yield higher rates of return generally than the higher cost of proprietary school programs, regardless of benefit.

It is worth reiterating at this point that all of these monetary indices are basic, perhaps crude, measures of economic benefits only, and are based on very simple cost and benefit data provided by the alumni surveyed. They take into account only money earned and spent, ignoring non-financial costs and benefits as noted earlier. They are in large part a function of whether an alumnus got a job and do not consider adverse economic conditions or unusual or unfair hiring practices which do not at all relate to the quality of the training obtained. The analyses do not take into account the cost of publicly-supported occupational training programs to the community at large--a cost covered mostly by public revenues, as compared to the coverage of proprietary school costs by student fees. Similarly, these analyses deal strictly with the economic returns to graduates of vocational training programs. The economic, and for that matter the non-economic, benefits to the community at large are not considered. Although it would in fact be extremely difficult to assess and compare the social costs and benefits of proprietary and non-proprietary school training programs, such an assessment would significantly enhance the meaningfulness of the results described in this report.

Although internal rate of return (r*) takes into account more relevant factors than other indicators of monetary benefit, it has weaknesses besides those just discussed. First, the scale of salary gain does not discriminate small gains or losses and estimates of training costs are rough approximations. Second, the formula for r* is based on the rather uncertain assumption

that salary difference (A) will on the average be a constant difference for the remainder of the graduate's working life (e.g., that if the graduate earns $300 per month more after training, he will continue to earn an average of $300 a month more than he would have without the training). In their study of post-secondary and secondary technical education, Carroll and Ihnen (1966) found that post-secondary graduates initially had only a small advantage over high school graduates ($11 per month), but this advantage increased over four years to $107 per month, in addition to fringe benefits and non-monetary advantages. Whether this increasing advantage continues, stabilizes or even declines eventually is not known. Even if such an advantage does persist, it may be compensated for by the salary increase which would be expected during the training time interval among persons without training. Such a salary increase is reasonable and is not included in the formula for r*.

Non-monetary benefits: satisfaction with training and job. Although the economic measures discussed above are important measures of training effectiveness, they do not provide a thorough assessment of training benefits. Non-monetary rewards such as training and job satisfaction, status, or improved self-concept may result from vocational training and may in fact be more important to an individual than financial benefits. Although such indicators are much less tangible than quantitative economic ones, several items aimed at gathering pertinent subjective data were included in the alumni questionnaire.

First alumni were asked whether they felt their training program "was worth the money in terms of preparing (them) for the work required on (their) present job." Responses to this item were, to a large degree, a function of 1) whether the alumnus was currently employed at all, 2) whether he was employed in a training-related job, and 3) what the job paid. There were positive correlations between favorable responses to training and finding a job after training quickly (r=.42), finding (r=.67) and maintaining (r=.77) training-related jobs, obtaining higher salaries (r=.56) and salary gains (r=.69), being out of school longer (r=.44), and liking their current job (r=.73).

Graduates of non-proprietary school programs and graduates who are currently employed in training-related jobs evaluate their training programs more favorably than other graduates. Considering only those alumni currently employed (85% of the sample), almost 60% of the non-proprietary alumni thought their training was definitely worth the money, as compared to 33% of the proprietary alumni; similarly, only 12% of the employed non-proprietary alumni felt their training was definitely not worth the money, as compared to fully 34% of the proprietary alumni. Among proprietary school graduates, favorable evaluations came somewhat more often from those who attended non-accredited than accredited schools (r=.39). There was no overall difference between the evaluations of chain and non-chain school graduates. However, computer graduates from all schools were clearly the group least satisfied with their training, followed by proprietary school health graduates, many of whom are currently employed in unrelated jobs. This finding accounts largely for the overall disparity in satisfaction between proprietary and non-proprietary alumni, since a much higher proportion of proprietary than non-proprietary alumni were in the computer area, and since non-proprietary health graduates were generally satisfied with their training.

Alumni were also asked to evaluate how well they like their present jobs. Job satisfaction is a less direct evaluation of vocational schools than is program evaluation, since many factors other than training influence job satisfaction. Considering only those persons currently employed, over half stated they like their jobs "very much," and only 8% clearly dislike their jobs. As expected, job satisfaction is associated with finding and maintaining related jobs, having higher salaries, achieving job and salary progress, and feeling the training was worthwhile. Responses of proprietary and non-proprietary school graduates to this item were much more similar to one another than were program evaluations. Non-proprietary alumni reported liking their jobs "very much" about 4% more often than proprietary alumni.

In addition to the limited evaluative data discussed above, informal evidence regarding the non-monetary benefits of training came to light in a series of letters received from over 300 of the surveyed alumni. Alumni were invited to write comments directly to project staff if they felt the questionnaire did not adequately cover any aspect of the training they had received. One-third of the letters received contained expanded answers to the questionnaire, suggestions for improving the survey, or additional information about the respondents such as the fact that they had not actually completed a training program. More than 200 letters contained comments evaluating training. Although the absolute number of such letters represents only a small segment of the total sample (<2%), it is important to note that all but eleven (95%) of these evaluative comments were from graduates of proprietary schools, and only 14% of them all were favorable.

Table 5.6 summarizes the number and type of comments received from alumni in each of the four occupational areas.

Table 5.6

Evaluative Letters Received from Vocational School Alumni

	No. Letters Received				
Type of Comment	Office	Computer	Technical	Health	Total
Favorable	11	3	7	8	29
Not favorable:					
Placement	8	23	8	28	67
Training	16	15	14	32	77
Other	11	7	8	6	32
Subtotal	35	45	30	66	176
Total No. Letters	46	48	37	74	205

Most of the twenty-nine favorable letters received contained very general statements to the effect that the respondents had enjoyed their training and believed the school they attended adequately prepared them to enter the world of work. A higher proportion of office and technical graduates sent letters of this type than graduates from other programs.

It is not surprising that the bulk of letters received contained complaints from alumni regarding their schools' training or placement services, since voluntary reactions are often of this nature. The relatively small number of dissatisfied alumni who have written letters cannot be taken to represent the entire population surveyed, but are rather discussed in order to ascertain the nature of existing dissatisfaction.

Graduates from computer and health programs were the most vocal in registering complaints. Complaints from these areas are consistent with the occupational data regarding training-related placements and training and job satisfaction earlier discussed. Almost half the letters from graduates of computer training programs related to difficulties in finding work. Some of these persons were never able to find work in the computer field, and others complained about the lack of placement assistance from their schools. Many of these persons had graduated from large corporate chain schools. Letters frequently complained that employers were not interested in vocational school graduates who had no college degree, and several alumni felt they had been misled into believing they would be qualified for positions which actually required more training than they had received. Criticisms of computer courses most frequently related to the quantity and type of equipment used in training. Several graduates who had found jobs commented that they were unfamiliar with the equipment they encountered at work, or that they were trained to use a type of equipment rarely used in the business world.

Complaints from graduates in the health area were similar. Letters made frequent reference to the high cost of health training, and many alumni commented that the training was not worth what they paid. Several persons indicated that although they had been unable to find health-related work and were working at low-paying jobs in factories and retail stores, they would be making high monthly payments to their vocational school for several years. Many of these persons felt badly misled by recruiters. Virtually all those who complained about the placement service at their schools said they had received no placement help at all. Many also commented that hospitals and doctors were unwilling to hire people who had had no actual work experience. Some of these alumni were reportedly told by prospective employers familiar with their school's training program that it was inadequate.

Complaints from office and technical graduates were fewer in number, but were similar in nature to those discussed above. In summary, almost all complaints came from alumni who have had difficulty in finding work or are still unemployed. Many who complained about placement stated they were unable to find work because there were no jobs available in their vocational area, at least for persons with no prior experience; this complaint was most frequently expressed by graduates of health and computer training programs. Others stated they could not find work because of personal characteristics, (race, height, weight, age, etc.), and felt that their schools should have known and warned them about the problems they would face. Although a few of these negative letters seemed irrationally angry, most letter-writers appeared to have legitimate grievances. Their complaints were echoed by many of the dissatisfied alumni interviewed by telephone during the intensive follow-up of non-respondents. The implications of these findings will be discussed further in the final chapter.

Labor Market

Although a thorough analysis of labor market conditions is beyond the scope of this report, a brief look at current and projected conditions is warranted in order to assess the extent to which problems in placement and alumni dissatisfaction are related to the schools themselves or to temporary market conditions. An examination of relevant occupational profiles in the last three editions of the U. S. Department of Labor's Occupational Outlook Handbook (1967, 1969, 1971) provided the data for the following discussion.

The four occupational areas surveyed were selected on the basis of Labor Department projections that workers skilled in these areas would be in great demand throughout the 1970's. The Occupational Outlook Handbook reports consistently support these earlier general projections, which are based on assumptions that relatively high levels of employment will exist and no cataclysmic events will occur. Additional information in the Handbooks sheds light on trends in job qualifications and hiring practices, and, by inference, on the role vocational schools can expect to play in preparing skilled persons to obtain the projected large number of jobs available in the surveyed fields. The outlooks for each occupational area are discussed below.

Office. Job titles, qualifications, and projected demand for persons skilled in the office area seem to be closely suited to training opportunities available in the surveyed proprietary schools. Demand for secretaries, typists, receptionists, and clerks is expected to continue due to economic expansion and retirements; job entry qualifications for most jobs include graduation from high school with business training or post-high school business training. Although about one-third of the office students surveyed had obtained a business high school diploma, the remainder did not and would appear to require additional training in order to qualify for most entry level jobs in the secretarial category. Criteria for hiring in the office area appear to be more objective and skills-based than criteria for hiring in other areas. Many jobs require specific levels of competency in shorthand and/or typing. Beginning salaries reported by the office graduates surveyed are very similar to beginning Civil Service salaries for secretaries and are substantially higher than beginning typist or receptionist salaries. Although post-secondary training is not essential in acquiring prerequisite skills, it appears that such training, particularly of the short-term proprietary school type, is currently and will continue to be a useful manpower training resource.

Technical. A similarly favorable evaluation is in order for the technical programs surveyed. The Handbooks offer very favorable projections for job opportunities in virtually all of the surveyed technical occupations: draftsmen and technicians in engineering, science, and electronics. In addition, desired qualifications include graduation from a public or private technical school or a lengthy post-secondary apprenticeship. Positions as engineering or science technicians specify that graduates of specialized post-secondary training courses will have the best opportunities for jobs. Salaries reported by technical graduates surveyed are fairly consistent with beginning Civil Service salaries, though beginning industrial salaries for associate degree holders are somewhat higher than those reported by non-proprietary school technical graduates.

Although these favorable projections are predicated upon continued industrial growth, the projections are consistent with current reports of technical school personnel and with the expectations and the placement experiences of the students and alumni surveyed for this study. It thus seems reasonable to conclude that the technical programs currently offered in both proprietary and non-proprietary schools are serving and will continue to serve as a valuable manpower training resource.

Health. The overall profile for proprietary school health programs is similar. In terms of projected labor needs across all of the health categories surveyed, opportunities are expected to be from good to excellent. In addition, a proliferation of new occupations in the allied health area for which high demand is forecast (e.g., radiologic technicians, inhalation and occupational therapists) is matched by the development of new training programs to meet market needs in many of the community colleges surveyed. Proprietary schools do not appear to be developing similar programs because entry jobs require more extensive technical training than proprietary schools generally offer or have the resources to offer.

A trend seems to be emerging towards increased entry qualifications for some allied health jobs for which proprietary schools do currently offer training. For example, most persons employed as dental assistants in 1970 were trained on-the-job. In the future, however, graduates of one- and two-year post-secondary programs accredited by the dental profession will be preferred to persons without such training. The many four- to six-month programs in dental assistance offered by proprietary schools are not professionally accredited. Ironically, the current transition from no prerequisite training to graduation from an accredited training program may challenge the viability of short-term dental assistance programs and the marketability of their graduates. However, overall the market is favorable and may in fact absorb most persons desiring to enter the field. A similar trend toward requiring accredited one- to two-year training programs also exists in the dental and medical laboratory technician fields. It is encouraging that many of the school personnel interviewed recognize the need to upgrade training programs in order to meet marketplace needs.

Computer. The outlook in the computer area is somewhat like that in the health field. Whereas a severe recession in the computer industry, paralleling weaknesses in the economy as a whole, occurred early in 1970 and has continued almost to the present, employment projections for the remainder of the 1970's are largely favorable. However, the computer industry is an extremely dynamic one, requiring that vocational education respond rapidly to ever-changing conditions in the industry. The fact that many proprietary computer schools have gone out of business or changed hands in recent years likely reflects both recessionary economic conditions and an inability of schools to respond quickly to the changing needs of the industry.

Three major occupational areas in the computer field were surveyed: computer programming, operations, and repairs (technology). Examination of the outlook for each field and the implications of this outlook for proprietary schools is in order. First, the qualifications required for entering

programming jobs depend on the nature of the problems to be dealt with on the job. Organizations which use computers for science and engineering employ college graduates having degrees in engineering, physical science, math, or computer science. All jobs classified as "programming" by the federal government in fact require college degrees. On the other hand, employers who use computers to process business records may not require programmers to have technical college training. However, many such employers have a policy of promoting from within the organization and offering on-the-job training in the necessary programming skills. When such employers hire from outside, they do prefer applicants who have some post-secondary technical training. The Occupational Outlook Handbook, nevertheless, stresses that post-secondary instruction does not eliminate the need for on-the-job training, since the technology changes continually and each new computer system has unique specifications. This suggests a relatively narrow market for graduates of the computer programming courses surveyed. Additionally narrowing this market is the fact that despite the projected demand for programmers, advances in technology are causing the elimination of routine programming work--precisely the kind of work the short-term proprietary and non-proprietary programs are preparing their graduates to do. As a consequence, academically trained and experienced personnel qualified to handle both programming and systems analysis are likely to be increasingly in demand. As mentioned in an earlier discussion of major school changes, at least one of the community colleges surveyed and a few well established proprietary business schools which formerly offered data processing courses have responded in a dramatic way to market conditions by dropping their computer curricula altogether. In contrast, none of the specialized proprietary computer schools which have managed in fact to survive these adverse conditions has initiated so drastic a change, though school directors spoke openly about placement difficulties in the programming area and cited a shifting emphasis toward courses in computer operations and repair.

The computer operations and repair (or technology) areas appear to provide a more promising market for vocational school graduates. However, even in the operations area, employers often fill positions from within the company; in addition a college education or its equivalent is either required or preferred by public or private employers for computer console operators. Overall, computer technology (repair), often classified as an electronics technician occupation, seems to offer the brightest prospects for graduates of post-secondary vocational programs in the computer area.

Data gathered from graduates of computer courses support the projections described above. The placement and persistence in training-related jobs of computer graduates from both proprietary and non-proprietary schools are clearly not as extensive as in the other areas surveyed. In addition, average starting salaries reported by graduates who did get jobs are considerably lower than entry salaries cited in the Handbook, which in fact more closely match the expectations of students currently enrolled in computer training programs. There is no doubt that these data reflect the recently unstable and weak conditions in the computer industry and business in general. However, there is good reason to question the continued existence of high-cost vocational training programs in the computer area which are clearly no longer consistent with long-term occupational requirements and projections published in ostensibly reliable and respected Labor Department publications.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Although there are differences among the proprietary and non-proprietary vocational programs surveyed, the programs are generally effective in producing graduates with marketable skills. Students find the training in line with their practical, job-oriented aims, and about three-fourths of those who seek jobs after training do find jobs related to their training. The salaries earned by graduates are typically not as high as current students expect to get after they graduate, but this may reflect current market conditions more than any aspect of the training programs. Salaries are high enough to establish that training is cost-beneficial in all occupational areas for both proprietary and non-proprietary schools, with the one exception of proprietary computer alumni. The estimated rate of return (r*) on the training investment for all graduates combined is 29%, meaning that students would have to earn 29% annual interest on the same amount of money invested in training in order for lifetime monetary benefits to match the increased salary gained as a result of training. Since investing the money in stocks, bonds, or savings could not be expected to yield more than 5% to 15% annual interest, the training is clearly worth its cost economically.

2. The four occupational areas surveyed differ markedly in cost-benefit of training, clientele, and types of programs offered. The mean salary of alumni in their first full-time training-related job varies among occupational areas from $340 (proprietary school health graduates) to $580 (non-proprietary school technical graduates) per month. Salaries of graduates in full-time related jobs tend to be highest in the computer and technical areas in both school types. A quite different comparison among occupational areas emerges when the cost of training and success in finding a job are considered as well. Such a cost-benefit analysis indicates that the office and health areas, in which most trainees are women, provide the greatest economic benefits to their graduates, primarily because their pre-training salaries were lower, so gains are greater.

Most graduates in the technical and computer areas are men. Training in the technical area in both proprietary and non-proprietary schools is cost-effective from an economic standpoint, though less so than office and health, as far as can be estimated by job experience in the first years immediately after training. Technical graduates had the highest mean salaries, but their investment in training was also high. Training in the computer area was cost-effective for non-proprietary school graduates (r* = 43%), but clearly not so for proprietary school graduates (r* = 4%). Fewer of this group obtained training-related jobs, even though their investment in training was larger than that of either office or health trainees.

3. Non-proprietary school graduates have realized greater economic gains from training than proprietary school graduates. The difference is accounted for mainly by the fact that proprietary trainees were earning more before training, so at any given salary after training they gain less than non-proprietary trainees. Mean salaries after training are only $30 per month higher for non-proprietary alumni overall. In the health area the difference is larger, but the training given by non-proprietary schools is correspondingly longer and costlier. Thus, although estimates of cost-benefit based on salary gain are higher for non-proprietary graduates, job success since training is nearly equivalent for the two types of schools.

The advantage shown for non-proprietary schools might have been larger had all schools been able to participate in the study. Of the total population of proprietary schools which existed in the four target cities at the start of the study, 25% went out of business and 30% refused to participate in the study. Only 13% of the non-proprietary schools refused to participate, on the other hand, and none eliminated their vocational programs. It is reasonable to hypothesize that the schools which refused to participate or went out of business had poorer achievement records than those which participated. If this is the case, the results overestimate the effectiveness of proprietary schools.

The opinions of the alumni themselves were more favorable toward non-proprietary schools. A substantially larger percentage of alumni from non-proprietary schools thought the training was worth the cost than did alumni from proprietary schools. Satisfaction with current job was slightly (4%) higher among non-proprietary alumni than among proprietary alumni.

Examination of the training process itself provides no indication of a difference in quality of training between proprietary and non-proprietary schools. The staff, equipment, and teaching techniques used in proprietary schools surveyed seem at least as appropriate as those in the non-proprietary schools. This is consistent with the finding that subsequent job success is nearly equivalent for proprietary and non-proprietary graduates.

4. Accredited schools and chain schools surveyed are no more effective in placing graduates than unaccredited and non-chain schools. Analyses of accreditation (and corporate status) were not primary aims of this study, but the limited amount of data obtained provides no basis for public policies favoring one type of school over another. Again, results from schools which went out of business or refused to participate might have been different, so this conclusion is limited to the population of surviving, cooperating schools.

5. Proprietary and non-proprietary schools differ substantially in their operations and program offerings; however, the students enrolled in both types of schools are very similar in terms of background and motivational characteristics. Proprietary schools are motivated primarily by the profit incentive and depend almost wholly on student fees for their income. They therefore have more urgent pressures for immediate results than do tax-supported community colleges, and are more closely dependent upon job market

conditions. In light of these pressures, proprietary schools have undergone changes in ownership, many having been acquired by large corporations in recent years. In addition, proprietary schools offer programs which are generally shorter, more costly, and focused more narrowly on practical job skills than programs in non-proprietary schools. However, within both types of schools and within each occupational area, the length and cost of training programs vary widely according to the specific type of job targeted. Curricula in all areas are modified frequently in response to changing market demands, even in non-proprietary schools which are less subject to market mechanisms.

Most of the students in both proprietary and non-proprietary schools are young high school graduates enrolled in full-time programs with the goal of obtaining full-time related jobs after training. The office and health areas draw primarily women, while the technical and computer areas attract men. A sizable proportion of the students (30% proprietary, 42% non-proprietary) belong to minority ethnic groups. Proprietary school students are somewhat less interested in academic and cultural benefits than non-proprietary students; however, these differences pale beside the strong similarities in primary occupational goals. Within each group of students, of course, great diversity is found. Overall, however, the proprietary and non-proprietary vocational programs surveyed attract very similar kinds of students.

Recommendations

The great need for more and better post-secondary vocational education is nationally recognized. The vocational schools surveyed in this study are, on the average, adequately preparing their students to obtain appropriate jobs. In view of this and the more specific findings discussed earlier, the following recommendations for federal action are made:

Recommendation 1. Eligibility for federal funds to schools and their students should be contingent on the school's provision of auditable evidence of the benefits and costs to students of training. Specifically, the evidence should objectively assess:

(a) Post-graduation job experience of all graduates, or, degree of mastery by all graduates of critical skills needed in jobs for which training is provided;

(b) Student selection and dropout rates, with records on every applicant, trainee, and graduate which are sufficient to permit follow-up contacts;

(c) Costs incurred by students in training.

The above data are essential for performance accountability and could be audited by existing licensing and accreditation agencies, by federal agencies, or by other sources. There is no need to require that schools exceed certain standards of cost-benefit according to the above criteria. If sound data on cost-benefit are disseminated, the natural market mechanism will tend to reward those schools which are more effective. Furthermore, some students may attend certain schools partly for non-economic benefits such as personal development, and schools should not be denied the right to serve such purposes.

Present procedures of accreditation and licensing do not provide criteria of accountability for outcomes of training and are not intended to do so. They tend to examine inputs to the training process rather than outputs such as marketable skills of graduates. To rely on input measures for evaluation of schools implies that we know fairly well which inputs produce better outcomes. This is not the case. Too little is known about techniques of effective learning to justify requiring certain inputs, be they staff credentials, facilities, or materials. The output is the payoff and that should be the main criterion for public support. If vocational trainers are free to seek out effective methods of training in open competition and are held accountable for results, the eventual result will probably be better training programs.

Eligibility for federal funds should not be based on input criteria such as facilities, staff, and materials. Therefore accreditation and licensing in their present form should not be required in order for a school to receive federal funds.

Recommendation 2. Guidelines on how to assess and interpret trainee performance and costs objectively should be developed, with federal funds if necessary. The main users of these guidelines would be vocational schools and regulatory agencies, so these institutions should participate in the development. Such accountability guidelines would help accreditation and licensing agencies to focus on outcomes rather than inputs, thus making their evaluations more useful to potential students, counselors, and government funding agencies.

Several states have legislation enacted or pending to make public elementary and high school education accountable to its constituents in terms of learning outcomes. The need for accountability is no less in vocational schools, whether public or private. Two kinds of outcomes for which vocational schools could be accountable are skills learned and job success. Both kinds have advantages and disadvantages.

To use measured skills as criteria for evaluating schools requires a great deal more development than does use of job placement and progress records. Although efforts have been made to identify critical skills which generalize to a family of related jobs, as well as specific job skills (e.g., Altman, 1966; Bond, 1972; Finley, 1972), the number of occupations for which such job analyses would be needed is very large. The cost of defining critical skills for most job areas would therefore be large, but might be worth it in terms of defining clear objectives for vocational education at all levels. It would also facilitate transfer by students among schools, regardless of type school, in that objective descriptions of skill mastery levels would be the common basis for credit. Once skill outcomes are identified, good measures of the outcomes need to be developed and applied in such a way as to avoid "teaching the test" by trainers too eager to make a good showing. Two ways to avoid this difficulty are: (1) make the test very similar to the actual performance required on the job, so that teaching the test amounts to accomplishing the intended learning outcome; (2) for subtests which are not like job performance, have an accrediting or licensing agency, or some other public trust, administer the tests.

The advantages of the skills approach are that it provides greater flexibility in adapting to changing job definitions. Skills are probably more stable over time than are job definitions. Another advantage is that skills are more within the control of schools than are jobs, which depend on fortuitous changes in the job market. However, schools deserve credit for anticipating job market changes and adapting training programs to them, and the job success criterion takes this into account. Ultimately, job success is a more important criterion both to graduates and to society in that the main justification for learning vocational skills is their application to successful performance in a job. Furthermore, identification of critical occupational skills is still in an early stage of development, so that the job success criterion is probably the more feasible and economical alternative at present.

Recommendation 3. Regulations regarding ethical standards of schools in advertising, recruiting, refunding, and general conduct of a business should be strict. Evaluation of enforcement of current regulations in this area was beyond the scope of this study. School directors and alumni both cited problems of this type, however, and a more intensive study of enforcement of ethical standards is recommended, perhaps under the auspices of the Federal Trade Commission.

Recommendation 4. The same standards of accountability should be enforced for all vocational training programs, regardless of whether they are part of the public or private sector. No institution should be discriminated against on the basis of ownership status. The same standards should apply to proprietary and public schools, corporate (chain) and individually owned schools, accredited and non-accredited schools. All such schools should be subject to the same rules of ethical practice and accountability for results.

Recommendation 5. Information on each vocational school should be disseminated to high schools, vocational counselors, and libraries through a regular information system which is constantly updated as new information is added. The information should include evidence of performance of graduates, selection and dropout rates, costs, and ethical violations. Licensing and accreditation agencies could serve as an efficient source of such information if their procedures were revised as recommended above. Effective methods of getting counselors and students to make use of such information should be developed and implemented.

Recommendation 6. Support for vocational training programs for the disadvantaged should be continued and expanded where effective. Job availability is the heart of equal opportunity.

Recommendation 7. Funds should be made available over a period of many years for research and demonstration projects to:

(a) Identify critical skills requirements for occupations in which a favorable job market is projected;

(b) Determine optimal teaching/learning techniques for acquisition of critical vocational skills;

(c) Help vocational schools use this information in program planning and curriculum revision.

REFERENCES

The Accrediting Commission for Business Schools of the United Business Schools Association. Directory of accredited institutions. Washington, D. C.: ACBS, 1971.

Altman, J. W. Research on general vocational capabilities (skills and knowledges). Final report to the Ford Foundation. Pittsburgh: American Institutes for Research, 1966.

American College Testing Program. College student profiles. Iowa City, Iowa: ACTP, Inc., 1970.

American College Testing Program. 1970 survey of college seniors. Iowa City, Iowa: ACTP, Inc., 1970.

American Council on Education. Student information form. Washington, D. C.: American Council on Education, 1965.

Astin, A. W. & Panos, R. J. A national research data bank for higher education. The Educational Record, 1966, 47 (1), 5-17.

Astin, A. W., Panos, R. J. & Creager, J. A. A program of longitudinal research on the higher educational system. Research Reports Vol. 1, No. 1. Washington, D. C.: American Council on Education, 1966.

Baird, L. L., Richards, J. M., Jr., & Shevel, L. R. A description of graduates of two-year colleges. ACT Research Report No. 28. Iowa City: American College Testing Program, Research and Development Division, 1969.

Belitsky, A. H. Private vocational schools and their students: Limited objectives, unlimited opportunities. Cambridge, Mass.: Schenkman Publishing Co., 1969.

Belitsky, A. H. Private vocational schools. Their emerging role in post-secondary education. Kalamazoo, Mich.: The W. E. Upjohn Institute for Employment Research, 1970.

Bernstein, C. Hard sell on job training, Career Schools: Promises at a price. The Washington Post, July 12, 1971.

Bernstein, C. The "real money": Signing up students. The Washington Post, July 13, 1971.

Bernstein, C. "Deceptive" career school ads cited by FTC. The Washington Post, July 14, 1971.

Bond, R. A. The development of exercises to measure generally useful skills in career and occupational development. Final report to National Assessment of Educational Progress. Palo Alto: American Institutes for Research, August, 1972.

Brandon, G. L. Vocational and technical education. In R. L. Ebel (Ed.) Encyclopedia of educational research. (4th ed.) New York: Macmillan, 1969.

Bureau of Social Science Research. Study of community colleges and vocational-technical centers, 1970 student questionnaire. Washington, D. C.: BSSR, 1970.

Bureau of Social Science Research. Study of community colleges and vocational-technical centers, 1970 graduate questionnaire. Washington, D. C.: BSSR, 1970.

Bureau of Social Science Research. Study of community colleges and vocational-technical centers, 1970 institutional data form. Washington, D. C.: BSSR, 1970.

Carroll, A. B. & Ihnen, L. A. Costs and returns of technical education: A pilot study. Raleigh, North Carolina: Department of Economics, North Carolina State University, July, 1966.

Center for Vocational and Technical Education. Review and synthesis of research on the economics of vocational education. Columbus, Ohio: Ohio State University, 1968.

Cross, K. P. Occupationally oriented students. Junior College Research Review, 1970, 5, (3).

Dellenback, J. Report on proprietary vocational schools. Congressional Record, August 12, 1970.

Dupree, R. L. A cost-benefit study of post-high school technical education in Oklahoma. Masters thesis, Oklahoma State University, 1968.

Eninger, M. U. The process and product of T & I high school level vocational education in the United States. Pittsburgh: American Institutes for Research, 1965.

Enns, A., Neasham, E. R., & Swanson, J. C. Education in the privately owned vocational schools in Alameda and Contra Costa Counties. Report No. 1967-2, Berkeley: University of California, School of Education, 1967.

Federal Trade Commission. Proposed guides for private vocational and home study schools. Press release of July 7, 1970.

Finley, C. J., Ferris, M. J., Michaels, D., Norris, E. L. & Campeau, P. L. Development of career and occupational development (COD) job-specific assessment packages. Final report to National Assessment of Educational Progress. Palo Alto, California: American Institutes for Research, July, 1972.

Ford, G. R. Address in Congressional Record, August 12, 1970.

Fulton, R. A. Proprietary schools. In R. L. Ebel (Ed.) Encyclopedia of educational research. (4th ed.) New York: Macmillan, 1969.

Gleazer, E. J., Jr. American junior colleges. Washington, D. C.: American Council on Education, 1967.

Hansen, W. L. Total and private rates of return to investment in schooling. Journal of Political Economy, 1963, 71, 128-140.

Hawkridge, D. G. A study of selected programs for vocational education in secondary schools. Palo Alto, California: American Institutes for Research, 1970.

Hoyt, D. P. Description and prediction of diversity among junior colleges. Personnel and Guidance Journal, 1968, 46, 997-1004.

Hoyt, K. B. Specialty oriented student research program. First year follow-up of former students. College Park, Md.: University of Maryland. (n.d.)

Hoyt, K. B. The specialty oriented student research program: A five year report. Vocational Guidance Quarterly, 1968, 16, 169-176.

Hoyt, K. B. Specialty oriented student research program. Resident student blank - form D. College Park, Md.: University of Maryland, 1969.

Hoyt, K. B. Students in public versus private trade, technical and business schools: A second look. Paper presented at the 10th annual meeting of Participating Research Schools in the Specialty Oriented Student Research Program, May 6, 1971.

Hoyt, K. B. The vanishing American. Delta Pi Epsilon Journal, 1967, 9, 1-8.

Johnson, E. L. A descriptive survey of teachers in private trade and technical schools associated with the National Association of Trade and Technical Schools. Unpublished doctoral dissertation, George Washington University, 1967.

Kaufman, J. J. Cost-effectiveness analysis as a method for the evaluation of vocational and technical education. Paper presented at the meeting of the American Vocational Association, Dallas, 1968.

Little, J. K. Review and synthesis of research on the placement and follow-up of vocational students. Columbus, Ohio: Ohio State University, The Center for Vocational and Technical Education, 1970.

Miller, J. W. The independent business school in American education. New York: McGraw-Hill, 1964.

Moses, S. The learning force: An approach to the politics of education. Syracuse, N.Y.: Educational Policy Research Center, 1970.

Muirhead, P. P., Associate Commissioner for Higher Education. Office of Education's comments regarding the proposed guides for private vocational and home study schools. Memo to Chief, Division of Industry Guides, Bureau of Industrial Guidance, Federal Trade Commission, November 9, 1970.

National Advisory Council on Vocational Education. Annual report. Washington, D. C.: NACVE, July, 1969.

National Association of Trade and Technical Schools. Directory of accredited private trade and technical schools. Washington, D. C.: NATTS, 1971-72.

National Center for Educational Statistics. Education directory 1970-1971--Higher education. Washington, D. C.: U. S. Government Printing Office, 1971.

Oklahoma State Department of Vocational and Technical Education. OTIS project report shows higher salaries for private school graduates. The Compass, July, 1970, 3 and 8.

Podesta, E. A. Supply and demand factors affecting vocational education planning. Menlo Park, California: Stanford Research Institute, 1966.

Richards, J. M., Jr., Rand, L. M. & Rand, L. P. Description of junior colleges. Journal of Educational Psychology. 1966, 57, 207-214.

Richards, J. M., Jr., Rand, L. M. & Rand, L. P. Regional differences in junior colleges. Personnel and Guidance Journal, 1967, 45, 987-992.

Richards, J. M., Jr. & Braskamp. L. A. Who goes where to junior college? ACT Research Report No. 20. Iowa City: American College Testing Program, Research and Development Division, 1967.

State of Illinois, Office of Superintendent of Public Instruction. Rules and regulations - Private business and vocational schools. Springfield, Illinois: Department of Higher and Continuing Education. (n.d.)

Stromsdorfer, E. W. Review and synthesis of cost-effectiveness studies of vocational and technical education. Columbus, Ohio: Ohio State University, The Center for Vocational and Technical Education, January, 1972.

United States Bureau of the Census. Undergraduate enrollment in two-year and four-year colleges: October 1971. Current Population Reports, Series P-20, No. 236. Washington, D. C.: U. S. Government Printing Office, 1972.

United States Civil Service Commission. Junior federal assistant. Announcement No. 406. Washington, D. C.: USCSC, 1967.

United States Department of Health, Education, and Welfare. Eligible institutions guaranteed student loan program. Washington, D. C.: U. S. Government Printing Office, 1971.

United States Department of Labor. Dictionary of occupational titles, Vol. II. Washington, D. C.: U. S. Government Printing Office, 1965.

United States Department of Labor. Occupational outlook handbook--1972-73 edition. Washington, D. C.: U. S. Government Printing Office, 1971.

United States Department of Labor. Occupational outlook handbook--1970-71 edition. Washington, D. C.: U. S. Government Printing Office, 1969.

United States Department of Labor. Occupational outlook handbook--1968-69 edition. Washington, D. C.: U. S. Government Printing Office, 1967.

Ward, C. F. (Ed.) Perspectives on accreditation of postsecondary occupational education. Center Monograph No. 5. Raleigh, North Carolina: Center for Occupational Education, North Carolina State University, 1970.