

**California
Regional Occupational Centers and Programs
(ROCP)**

**2006 Longitudinal Study
Technical Report**



Douglas E. Mitchell
School Improvement Research Group
University of California, Riverside

October 2006
Funded by the California Department of Education

**California Regional Occupational
Centers and Programs**

Accountability Research Study

2006 Technical Report

U.C. Riverside
Dr. Doug Mitchell

Executive Summary

The study reported here documents important conclusions regarding the operation and impact of California's Regional Occupational Centers and Programs (ROCPs). Data supporting these conclusions were drawn from three sources:

- 1) transcripts and other file data for 4,352 high school students (2,602 ROCP graduates and 1,750 of their high school peers from 28 ROCPs throughout California),
- 2) telephone follow-up interviews with 2,881 of these students (or immediate family members who could provide information), and
- 3) High School Satisfaction Surveys of 3,357 ROCP and non-ROCP high school students. The sample of 3,357 students from 129 high schools in 30 ROCPs (two of which participated only in this part of the study) completed the High School Student Satisfaction Surveys (98 of these were incomplete and not used in the data analysis). This survey assesses the extent to which ROCP students, and their comparison group counterparts, have found their educational experiences to be meaningful and supportive of their occupational and life goals.

This comprehensive data system triangulates perspectives on ROCP accountability, showing that these important programs are contributing significantly to the economic and civic development of a broad range of this State's young adults.

Briefly, the six key conclusions are:

- 1. ROCP students improve their high school grade point averages at a greater rate than comparison students.** ROCP students represent a challenging target for educators seeking to facilitate their successful entry into the labor market and positions of civic responsibility. On average, these students enter ROCP training programs with academic records that are well below those of a Comparison Group of their high school peers. Nevertheless, as they move through high school they raise their grade point averages by about one-third of a grade – significantly more

than that of the Comparison Group of similar students who did not take ROCP courses.

- 2. ROCP students enroll in post-secondary education in large numbers.** In addition to their greater success in the labor market at the time of graduation, ROCP graduates report continuing on to post-secondary educational programs at rates comparable to those of the Comparison Group in this study. Though the Comparison Group attends 4-year colleges at a somewhat higher rate, about half of both groups report continuing their education through Community College enrollment (51% for ROCP graduates, 46% for others). Less than 4% of each group are neither in school nor working.
- 3. ROCP students earn higher wages than comparison group peers.** In telephone follow-up interviews, ROCP students report employment in jobs that pay significantly higher wages than those held by a comparison group of their peers. With the average salary for all groups running in the \$7 to \$13 per hour range, the ROCP graduates report earning about \$1.57 per hour more. This is despite the fact that ROCP students were initially lower achieving and lower socio-economic than the comparison group. It is particularly important to note that ROCP training leads to higher and more equal wage rates for all gender and ethnic sub-groups within this study. ROCP females earn more than comparison females. Likewise, ROCP students of all ethnic backgrounds make more than comparison group white males.
- 4. ROCP students have more success in securing raises and promotions on the job.** In addition to commanding higher hourly wages, ROCP graduates generally report pay raises and job promotion rates higher than other high school graduates (about 5% more frequent raises and promotions).
- 5. ROCP students prefer ROCP classes over other subjects.** In responding to a High School Satisfaction Survey, ROCP students report a modest level of enthusiasm for their current school experiences; more than half indicate that they “Very much” like their ROCP course work. When asked to indicate how well they like various academic and non-academic high school classes, the ROCP students report the lowest level of appreciation for Mathematics classes, and not much more appreciation for Science and Social Studies courses. Only English Language Arts and Music/Art/Drama classes come close to matching their enthusiasm for ROCP course work.
- 6. ROCP students question the value and relevance of many of their high school courses.** ROCP students report significant disappointment with their high school classes. They generally report that “Only a few” are relevant to getting jobs or preparing them for other aspects of adult life, and there is a similar assessment regarding whether the classes are enjoyable experiences.

OBSERVATIONS

Judging by the initial gap in GPAs between ROCP students and comparison students, to a significant degree, high schools are utilizing ROCP to help address the needs of students who are lower in achievement and more at-risk than other non-college preparatory students in their schools. Despite initially lower levels of achievement, ROCP students have substantially less growth in absenteeism between the 10th and 12th grade when compared with the higher achieving Comparison Group. This is an important finding because the later job successes of these previously lower achieving students demonstrate that ROCP can be an effective intervention for a broad range of high school students, including those that confront significant challenges to their success – significantly improving employment prospects. Data on the relationships among gender, ethnicity, and hourly wage rates for ROCP students and their Comparison Group peers indicate that this type of career/technical training is very helpful to young women and to members of all ethnic groups as they enter the labor market. ROCP graduates report significantly higher wage rates in all categories, indicating that these students are receiving training in high-demand career/technical programs. Combined with the fact that ROCP students report high satisfaction with their ROCP coursework, the satisfaction survey data from this study paint a picture of ROCP students who are improving their academic achievement, going on to post-secondary instruction, increasing their employability skills, obtaining higher wage jobs, and having a positive view of their ROCP experiences. It is recommended that further research be conducted to examine larger numbers of ROCP students in order to see if this achievement and work success profile remains constant.

While these typically lower achieving students are clearly learning the skills needed to be successful in the job market, further study is needed to ascertain how best to improve their pursuit of reading, mathematics, and other academic standards without jeopardizing the development of social responsibility and workplace discipline that is leading to workplace desirable outcomes.

California's ROCPs provide a meaningful educational experience to a broad range of students. They are providing these students with experiences that these students prefer over their other high school training experiences. ROCP training provides students, on average, with both successful entry into the job market and continuing education opportunities after leaving high school.

A delivery system such as ROCP, not only provides students with employability skills, but also reinforces academic skills and can be a useful strategy for helping to raise overall high school graduation rates. It can provide strong support for numbers of students pursuing post-secondary schooling. One major goal of both the federal "No Child Left Behind" legislation and California's "High Performance High Schools" initiative is supporting successful transition to post-secondary schooling and careers for all children. In a state where "approximately 1/3 of all California high school students drop out of school" (ConnectEd 2006), ROCP programs are playing an important role in supporting these efforts to keep kids in school.

In a recent statewide survey of California 9th and 10th graders, Peter Hart Research Associates (2006) found that 61% of these students had a less than positive view of their high school

experience. However, 89% of the students surveyed would prefer a school environment “where they could take courses that they need for college but also have more opportunity to acquire skill and knowledge relevant to future careers.” The results of the foregoing 2006 study would indicate that ROCP curricula, when offered in close partnership with the students’ academic course work, could keep students motivated to stay in school, and assist them in developing a powerful set of tools that would lead to success in both college and the workplace.

These and other important findings from this ROCP 2006 study are detailed in the body of this report. The data collection methods and the data analysis techniques used for the preparation of this technical report could easily be developed into an ongoing data system capable of documenting longitudinal outcomes and of identifying strengths and weaknesses in particular ROCP programs and services. Not only have the costs for this feasibility study been modest, data gathering instruments developed for this study can be scaled-up for statewide use. The study has produced an electronic database that could easily serve as the template for full implementation.

TABLE OF CONTENTS

	Page
Executive Summary	i
Figures and Tables	vi
Introduction	1
Overview of the ROCP Delivery System	1
Common Features of the ROCP courses included in this study	2
Career/Technical Education is Important to Public Education	2
Aims of the Study	3
The Study Design and Execution	4
Advances beyond the 2004 Technical Report	5
Instrumentation	6
Data Presented in this Report	6
A Profile of the Study Sample	8
Academic Performance and School Attendance Findings	16
Employment and Education Findings from the Telephone Follow-Up Sample	25
Education Findings from the Telephone Follow-Up Sample	31
Findings from the High School Satisfaction Survey	32
Conclusions	33
Observations	35
References	37
Appendices	38

Figures and Tables

Data from student transcripts, follow-up interviews and High School Satisfaction Surveys are presented in the following 30 graphs and tables:

	Page
I. Characteristics of ROCP Study Sample	
1. Transcript data counts by participating ROCP	8
2. Counts of telephone follow-up reports by participating ROCP	9
3. Counts of High School Satisfaction Survey responses by participating ROCP	10
4. Transcript record counts by ROCP program enrollment	11
5. Proportion of males and females by ROCP program	12
6. ROCP program enrollment by ethnicity	13
7. Proportion of ROCP Program participants receiving free/reduced price lunches	14
8. Language status of ROCP participants by ROCP career cluster	15
II. Academic Performance Comparisons	
9. Grade Point Averages (GPAs) for Grades 10, 11 & 12 by ROCP participation	16
10. GPA gains from grade 10 to grade 12 by ROCP participation	18
11. GPA gains by ROCP career cluster	19
12. California STAR Test: Reading and math score percentile comparisons	20
13. Rate of Absenteeism by ROCP program and grade level	22
14. Percent of students taking high school computer courses	23
15. Rating of ROCP experience by career cluster participation	24
III. Employment Comparisons	
16. Two group comparison (ROCP Students vs. Comparison Group) wage rates	25
17. Comparing hourly wage rates by ROCP career cluster and Comparison Group	26
18. Estimated wage rates for ROCP and Comparison Group graduates by gender	27
19. Estimated wage rates for ROCP and Comparison Group graduates by ethnicity	28
20. Percent of graduates receiving pay raises by ROCP and Comparison Group	29
21. Percent of graduates promoted in the first year by ROCP and Comparison Group	30
IV. Educational Comparisons	
22. Continuing education of ROCP and Comparison Group graduates	31
V. Satisfaction Survey Responses	
23. How much classes and school are liked	32
Appendices	
A. Student Transcript Data Collection Form	38
B. Telephone Follow-Up Survey Instrument	40
C. High School Satisfaction Survey Instrument	43
D. Sample Screens from the Electronic Database	47
E. Supplementary Data Analyses	50
E1. Scale score reading and math scores from STAR testing program	51
E2. Grade levels at which Algebra I was taken	52
E3. Absence increases from grade 10 to 12 by ROCP program	53
E4. Students' reported school experiences	54
E5 and E6. Parents education levels by ROCP and Comparison Groups	55
Barchart Graphs for all High School Satisfaction Survey Responses	57

**California Regional Occupational
Centers and Programs**

Accountability Research Study

2006 Technical Report

Douglas E. Mitchell
University of California, Riverside

Introduction

Accountability for results is an important theme in California educational policymaking and school program evaluation. As economic and political globalization put pressure on schools to raise both academic achievement and technical skills, it is even more important for all school programs to demonstrate that they are able to provide students with a quality education – one that supports effective participation in both the world of work, and post-secondary education. Career/technical education programs are no exception to this important evaluation principle. Thus, with resources provided by the California Department of Education, the California Regional Occupational Centers and Programs are engaged in a continuing review of the effectiveness of these programs. Under the leadership of the East San Gabriel Valley and Baldy View Regional Occupational Programs, a multi-dimensional research project began in the 2001-2002 academic year to study the impact of Regional Occupational Centers and Programs (ROCPs) on current participants and recent graduates from a broad cross-section of occupational groups. This important study is continuing the analysis of ROCP effectiveness; utilizing valuable new data which were gathered and analyzed during 2003 and 2004 (see Mitchell, 2004).

Overview of the ROCP Delivery System

California's Regional Occupational Centers and Programs (ROCPs) were established by the California Legislature in 1967. Forty-three years after passage of the initial legislation, ROCPs are now serving about half a million California high school students and adults each year. The primary purpose of ROCPs is to provide career preparation that includes both the technical skills and related preparation for meeting statewide academic standards that enable students to:

- 1) Be employed in upwardly mobile careers and
- 2) successfully continue into post-secondary education (CA Education Code).

More than 100 different ROCP career/technical areas are addressed in courses offered throughout the state, in 15 industry sectors such as business, agriculture, computer technologies, construction, manufacturing, health care, automotive and other transportation technologies, child development and teaching occupations, public service occupations, and marketing. By state law, ROCPs must only offer courses that are based upon actual labor market demand. Over 18,000 business and industry representatives are involved in the development and monitoring of ROCP curriculum in California. In addition to business involvement in course development, according to CAROCP (2006), over 35,000 businesses throughout California offer work-based internships to students who are training in the particular business' occupational field.

According to the California Department of Education, between 2002 and 2005, there has been a steady statewide increase of high school student ROCP enrollments, and a concurrent decrease in adult ROCP enrollments – 366,132 high school and 216,932 adults in 2002, vs. 375,462 high school and 143,559 adults in 2005 (CDE 2006).

Common Features of the ROCP courses included in this study

In addition to the career/technical skills taught in the various training areas, the ROCP courses included in this study had several common elements that distinguish ROCP courses (regardless of training area) from traditional 9-12 educational programs. These are:

- Yearly labor market analysis that updates each course's content to keep it current with industry demand
- A Business Advisory Committee for each course, the majority of which consist of businesses that hire individuals who possess the career-specific skills taught by the ROCP classes
- Inclusion of the academic standards that are necessary for success in the career/technical area being taught
- Student involvement in real-life practice of the employability skills through experiences in business internships and/or industry state-of-the-art labs.

Career/Technical Education is Important to Public Education

Career/Technical education courses are typical components of public high school programs throughout the U. S. public school system. A recent study reveals that more than 95 percent of all high school students take at least one career/technical preparation course before graduating from high school (Levesque & Hudson, 2003). In a recent survey of 150 educational leaders throughout California (MPR 2005), there was general consensus that CTE, including ROCP, could play an important role in school improvement. The study goes on to emphasize that educational pathways need to prepare students for both college and career – not one or the other. Follow-up on students for this 2006 study, indicate that this dual pathway is not only a desirable goal, but an attainable one for all secondary ROCP students.

In a March 5, 2004 statement, California State Superintendent of Public Instruction, Jack O'Connell, highlighted the importance of integrating academic and career/technical educational course work. National support for this integration is reported in the Levesque & Hudson (2003) study which shows that typical high school graduates in 1998 were earning just over 25 course credits – about four in vocational/technical areas and more than 18 in academic areas. Integrating career/technical education with hands-on work experience is vital. According to these authors, “About one-third of 1998 public high school graduates took at least some work-based learning courses.”

In a recent statewide survey of California 9th and 10th graders, Peter Hart Research Associates (2006) found that 61% of these students had a less than positive view of their high school experience. However, 89% of the students surveyed would prefer a school environment “where they could take courses that they need for college but also have more opportunity to acquire skill and knowledge relevant to future careers.” The results of this 2006 study would indicate that ROCP curricula, when offered in context with the students' academic course work, could keep students motivated to stay in school, and assist the student in developing a powerful set of tools that can lead to success in both college and the workplace.

Aims of this Study

This research project is aimed at documenting the overall educational effectiveness of California's Regional Occupational Centers and Program (ROCPs) by comparing students who were enrolled in ROCP programs with a demographically similar group of students who have not participated in these programs. The study is designed to assess the impact of ROCP programs on participating students in seven outcome domains:

1. Cumulative high school grade point averages
2. Reading and Mathematics subtests of the California STAR testing program – the student achievement measure mandated for all California's public school students
3. Rates of attendance during the last three years of students' high school enrollment
4. Job placement during the students' first year after leaving high school
5. Wages, wage raises and job promotions during the students' first year after leaving high school
6. Rates of admission to post-secondary education, including an analysis of the extent of military or technical training, community college, 4-year college, and university enrollment
7. Satisfaction with high school courses and ROCP training experiences.

ROCP students in the 11th and 12th grades during the 2003-2004 school year who were not in the University of California a-g course track and were not in Special Day Classes, were targeted for this study. A comparison group of students were selected to, as closely as possible, match ROCP students with regard to gender, age, ethnicity, socio-economic status, English language fluency, prior school attendance, and 10th grade high school grade point averages. The Comparison Group students were selected at random from students enrolled in the same high schools, and who were: a) not on track for admission to the University of California (i. e., not taking the UC a-g course requirements) and b) not certified for Special Day Class special education services. As described more fully in the body of this report, the Comparison Group of students was drawn from a somewhat higher performing and more socio-economically advantaged segment of their high school student bodies.

ROCP experiences across a diverse group of career/technical programs were targeted for study. Demographic and academic history information was collected from student files. Attitudes toward ROCP and high school instructional experiences were solicited through an original High School Satisfaction Survey, and post-high school education and work experience data were sought through telephone follow-up interviews.

The Study Design and Execution

Data were collected from twenty-eight ROCPs who volunteered to fully participate in the study. The participating ROCPs represent large and small programs, in urban and non-urban settings, as well as all geographic areas of the state. Data on student background and participation were gathered on a sample of students enrolled in fifteen different industry sectors provided by these ROCPs during the 2003-2005 academic years. Data for both the ROCP students and the Comparison Group students were collected from student information files kept by the students' home high schools.

Schools were asked to provide complete demographic and academic history data from their student information systems, and complete records of the students' California STAR testing program results. Additionally, high schools were asked to allow the research project to collect student RSP special education program assignment if any, attendance, and disciplinary referral records.

Telephone interviews were utilized to determine students' occupational experiences among recent ROCP and comparison group graduates. The telephone survey collected work experience data by job type, hours worked, job persistence, and whether students received wage increases or promotions. Post-secondary educational experiences and plans were also sought during the telephone interviews.

Additionally, a sample of 3,357 students from 129 high schools in 30 ROCPs (two of which participated only in this part of the study) completed the High School Student Satisfaction Surveys (98 of these were incomplete and not used in the data analysis). This survey assesses the extent to which ROCP students, and their comparison group counterparts, have found their educational experiences to be meaningful and supportive of their occupational and life goals.

Advances Beyond the 2004 Technical Report

From its inception in 2001, this study has been intent upon producing definitive documentation of the nature and extent of ROCP services and showing the extent to which ROCPs are fully accountable for producing the results expected of them. The first round of data collection in 2002 demonstrated that neither the ROCPs nor local school district data systems could fully support cost-efficient monitoring of educational service delivery, student performance, and occupational outcome data. School districts are appropriately concerned about the confidentiality of student records. Even when they become comfortable with sharing data in the interest of research, they find that the data are hard to retrieve and difficult to integrate across time and across educational agencies. Students who move from one school to another during their high school careers are lost to this kind of study because they cannot be traced to either their new or their old high schools to seek needed records.

Additionally, to collect meaningful data on the relationship between high school level academic and ROCP experiences and subsequent student occupational and further education experience, it is necessary to develop longitudinal data management systems. Such longitudinal data are largely unavailable from public school student records and exist in only short-term follow-up form in most ROCPs. Where longitudinal data tracking is feasible, it would be necessary to maintain the type of data collection system used in this study for at least three years to have minimally effective documentation of the relationships between high school experiences and post-high school educational and labor market successes.

The evaluation results analyzed in this report have moved toward overcoming these limitations, but there is still a ways to go before all of the goals of this project are fully realized. The 2002 study demonstrated the feasibility of establishing and maintaining an effective ROCP accountability system – one which has not existed in the past and which could be monitored on an ongoing basis to provide guidance for ROCP program improvement. The data collected in 2003-04 substantially expanded the representativeness of the study sample (tripling the number of ROCPs, doubling the number of career/technical programs studied and involving ROCPs from all geographic areas of the state). The new data gathered for this report again substantially expands coverage of ROCP programs (from 21 to 30), creating sample sizes that provide for the important statistical analyses presented in the body of this report. But it must be remembered that data collection difficulties may still be introducing selection biases and leave some important ROCP programs and career pathways unexamined.

Instrumentation

Four original data collection and management instruments were developed for this study. First, a Student Transcript Data Collection Form was developed to secure consistent data from students' high school records. This form, shown in Appendix A, was used to gather basic demographic data – gender, ethnicity, date of birth, date entering school district, special education status, language status, career/technical education beyond ROCP participation, the timing of Algebra I enrollment, exposure to computer coursework, and required ROCP reporting data on barriers to student success. The most important data collected on this form were student academic achievement indicators in the form of high school GPAs for 10th, 11th, and 12th grades, and 10th and 11th grade STAR test results in reading, mathematics, and language. Additionally, the form was used to gather the necessary contact information follow-up contact interviews.

Second, a Telephone Follow-Up Survey for 2003-2004 12th Graders was developed to establish standardized follow-up data collection for students who had completed their ROCP and high school training. This form, shown in Appendix B, provides for recording both educational and work experience following ROCP and high school exit. The educational follow-up section monitors high school graduation (or reasons for failing to graduate), current and planned post-high school educational experiences, and the students' overall evaluations of their ROCP and high school educational experiences. The employment follow-up section tracks the number and types of jobs held by students, their wage and promotion histories, and their overall job satisfaction level.

Third, as shown in Appendix C, a 76-item High School Student Satisfaction survey was used with students still attending high school at the time of the study. This survey solicits students' attitudes about schooling, grades, course enjoyment, future educational aspirations, experiences of peer, educator, and parental support for education and exposure to a variety of specialized educational programs, together with some basic demographic data about employment while in school, family income and educational levels, and student gender and ethnicity.

Fourth, an original integrative, relational database capable of merging data from all of the separate sources into a single data model was created. This database, developed using Microsoft Corporation's Access© database development system, is designed to allow ROCP staff to prepare data electronically at each ROCP site and seamlessly integrate local data into the overall project data system. Three screen images from this database are included in Appendix D.

Data Presented in this Report

The research project reported here is aimed at documenting the overall educational effectiveness of California's Regional Occupational Centers and Program (ROCPs) by comparing students who were enrolled in ROCP programs with a demographically similar group of students who have not participated in these programs. The study

assesses the impact of ROCP programs on participating students in the seven critical outcome domains described above: grade point averages, California STAR test scores, attendance rates, job placement, wage rates and promotion opportunities, post-secondary education, and high school satisfaction.

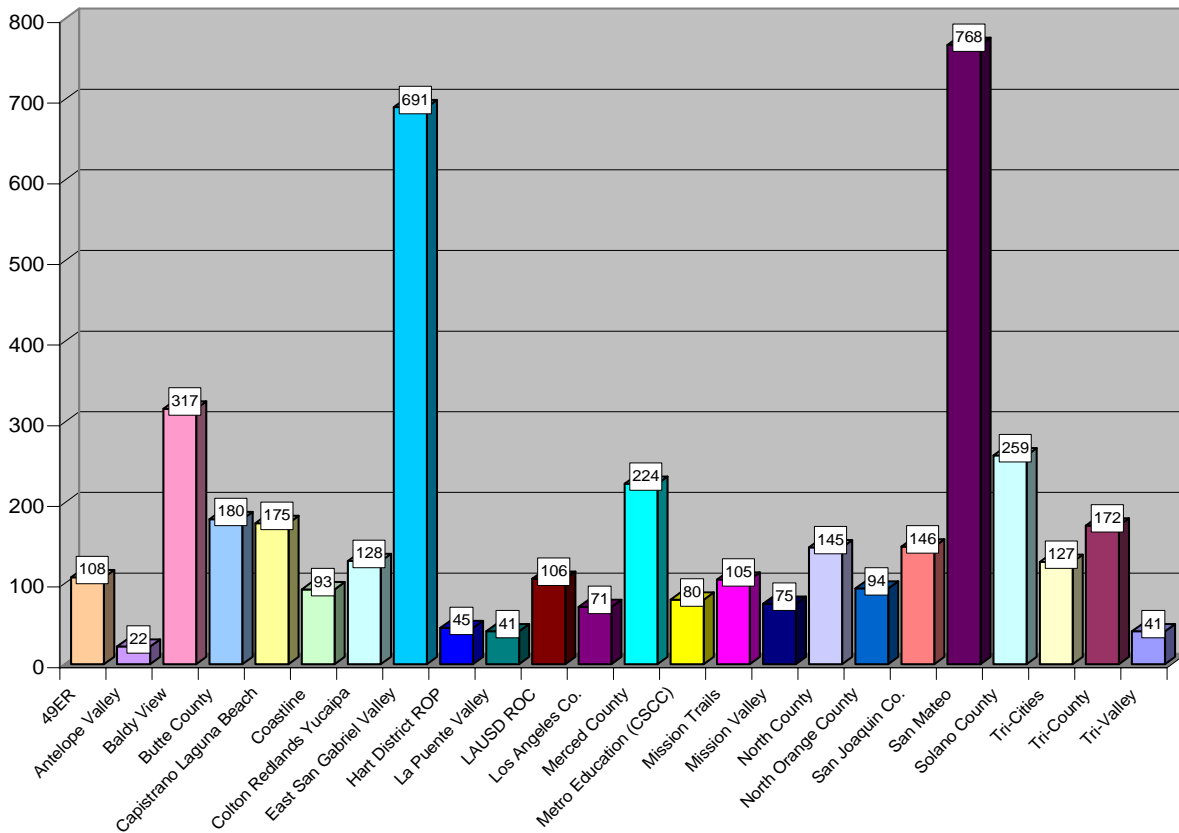
Current and recent ROCP students from the high school graduating classes of 2003 and 2004 are the focus of this 2006 Accountability Research Study. Transcript data were gathered for 2,401 ROCP students from fifteen different industry sectors receiving training in twenty-eight different ROCPs across the state. This file also contains transcript information on 1,750 students with similar academic and demographic characteristics who were not enrolled in ROCP programs. The comparison group of students was selected to, as closely as possible, match ROCP students with regard to gender, age, ethnicity, socio-economic status, English language fluency, prior school attendance and 10th grade high school grade point averages. The comparison or “control” group students were selected at random from among students enrolled in the same high schools, and who, like the ROCP students, were not on track for admission to the University of California and not certified for Special Day Class special education services, and were not taking ROCP or a high school sequence of CTE courses. Demographic differences between the ROCP and Comparison Group students are discussed below.

A Profile of the Study Sample

Data analysis begins with a review of the composition of the study samples drawn for this round of analysis. The student representation from the participating ROCPs, their career emphases and the gender and ethnic composition of the resulting sample are detailed in Figures 1 through 5, below.

Figure 1.

Transcript Data Count by Participating ROCP
Maximum = 768; Minimum = 22; Average = 176 transcript records



By investing very substantial staff time and effort, the 24 ROCPs shown in the graph above were able to collect high school transcript data on 4,213 students from 92 different high schools throughout the state.

Participating ROCPs included northern and southern California programs, urban and rural programs, large and small programs, and programs operated by County Offices of Education, single school districts and those organized as joint powers agreements among school district consortia.

While only a small fraction of the students participating in ROCP programs are represented, and the sample represents data from 30 of 72 ROCPs, it is large enough and

diverse enough to be relied upon to provide a reasonably good estimate of the general condition of ROCP students across the state.

Figure 2

**Count of Follow-Up Reports by 24 Participating ROCPs
(Maximum = 442; Minimum = 18; Average = 120 phone interviews)**

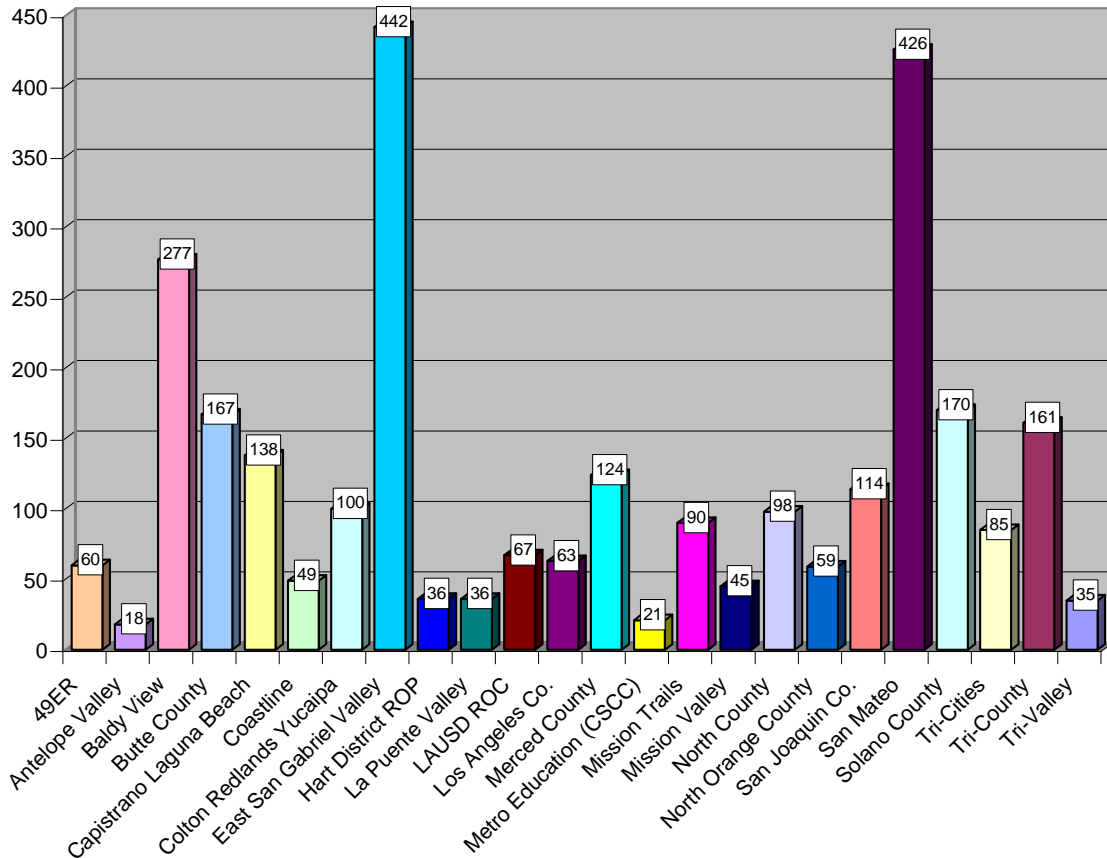


Figure 2 reports the distribution of the 2,881 students who were successfully contacted for follow-up interviews and who provided employment and continuing education information. These 2,881 contacts cover 1,546 ROCP graduates and 1,335 members of the Comparison Group.

The substantial variation in the number of follow-up interviews provided for each ROCP is due in large part to the differences in ROCP size, and does not represent undue bias in response rates across operating agencies. Students from all of the participating ROCPs were contacted and all students from all 28 ROCPs are included in the follow-up.

Figure 3

Count of Satisfaction Surveys from 28 Participating ROCPs
Maximum = 426; Minimum = 1; Average = 176 completed surveys

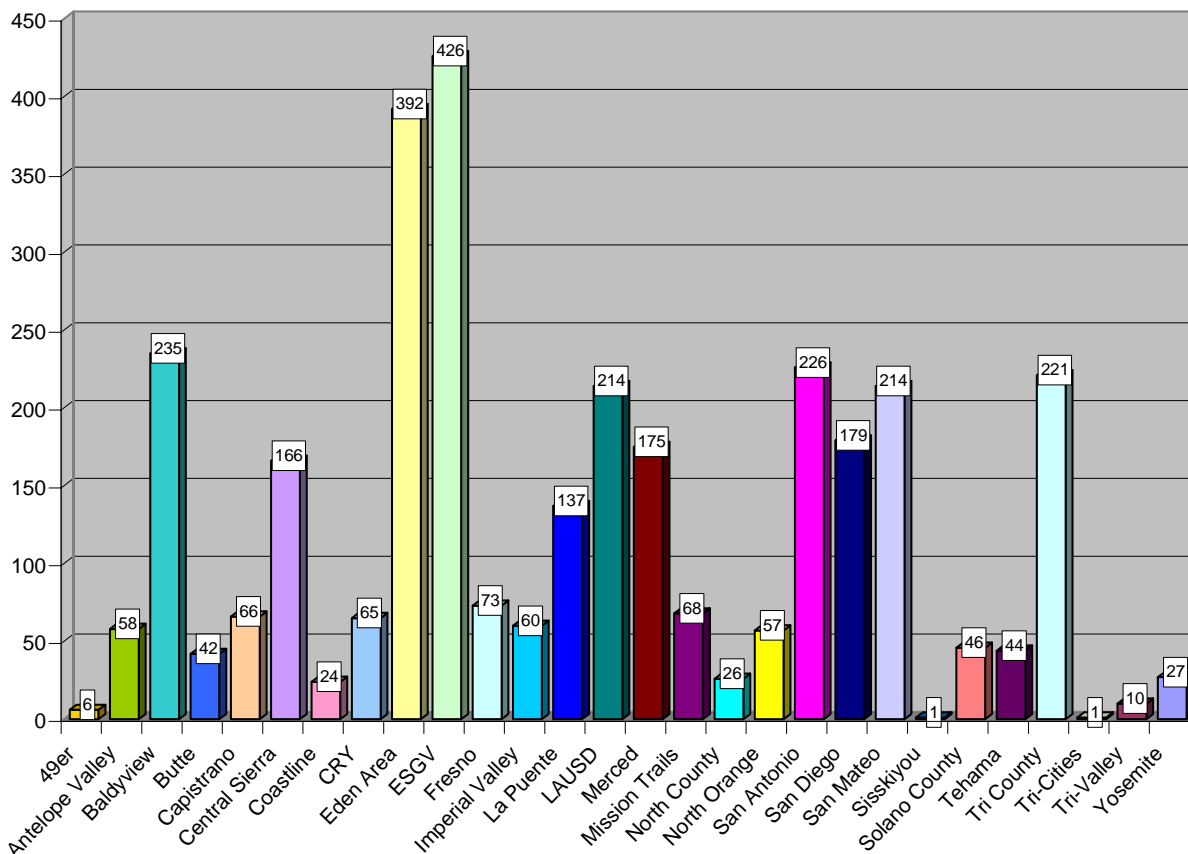


Figure 3 reports where the High School Satisfaction surveys were collected (an additional 98 surveys were collected, but missing data made it impossible to use them for data analysis). These survey responses were primarily from students graduating from high school in 2003 and 2004 and generally represent the same group of students from whom transcript and follow-up data were collected.

While there are some statistical differences in this larger sample, comparison with data from the 2002 and 2004 technical report indicate that the views of this group of students is representative of ROCP students generally and not substantially different from the earlier rounds of student surveying.

Figure 4

Transcript Records by ROCP Program Enrollment
Maximum = 448; Minimum = 3; Average = 160; Total = 2,401
Comparison Groups Count = 1,750 (not shown)

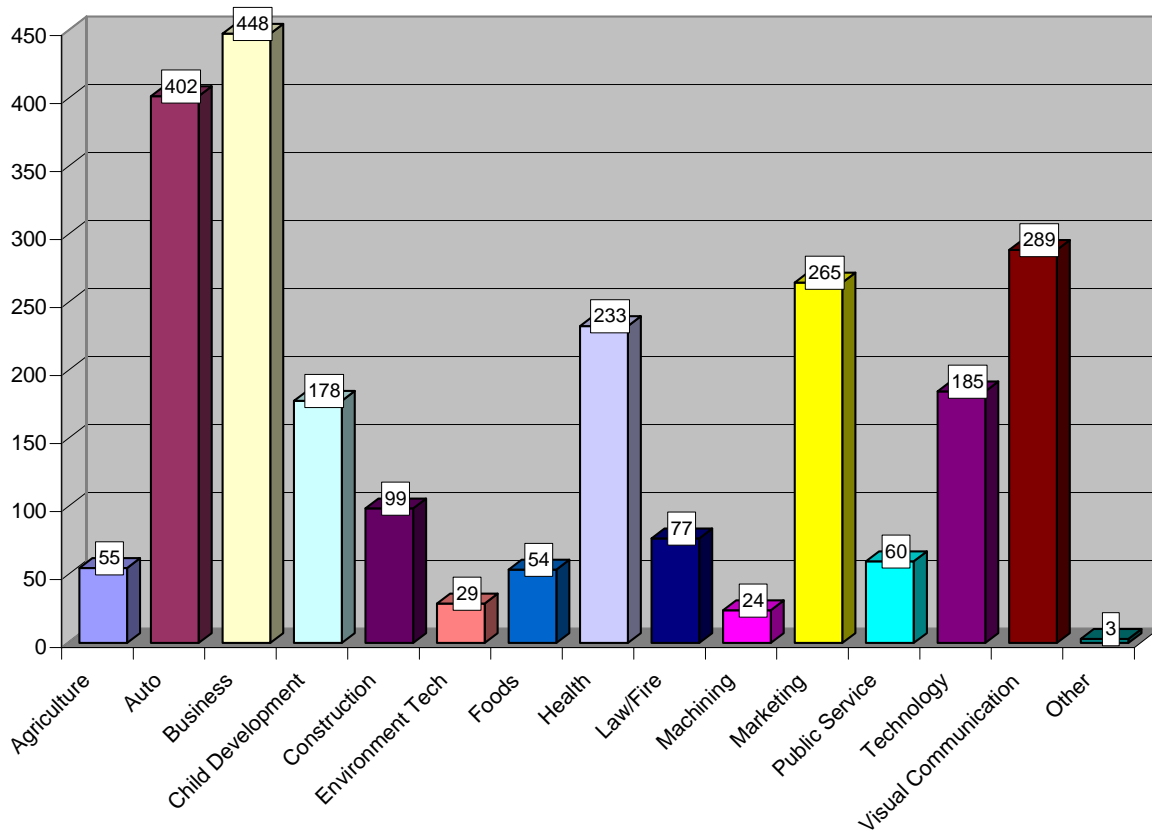


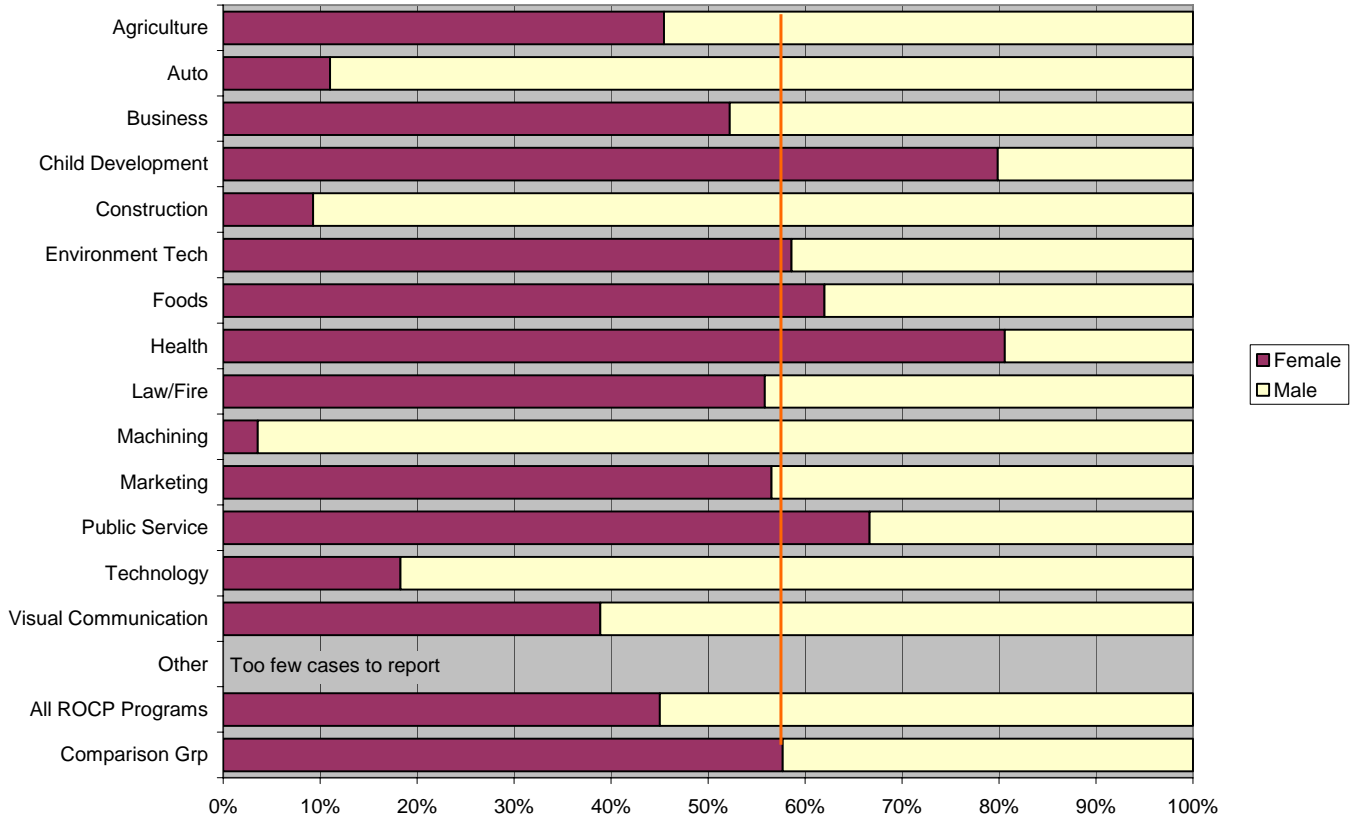
Figure 4 breaks down the transcript record data according to the ROCP industry sectors in which the participants were enrolled. (The large Comparison Group – 1,750 students – is not represented by a bar on the graph). Primary emphasis was given to securing data on students in programs with significant enrollments, so smaller and more specialized ROCP programs are generally under-represented in this data set.

Two programs (Auto and Business) provided more than 400 transcript records each. Five other programs (Child Development, Health, Marketing, Technology and Visual Communication) are represented by more than 100 students.

The “Other” category includes just three students, each enrolled in a different career/technical program.

Figure 5

Proportion of Males and Females by ROCP Program
ROCP Total = 2,394: 55% male; 45% female
Comparison Groups = 1,758: 42% male; 58% female

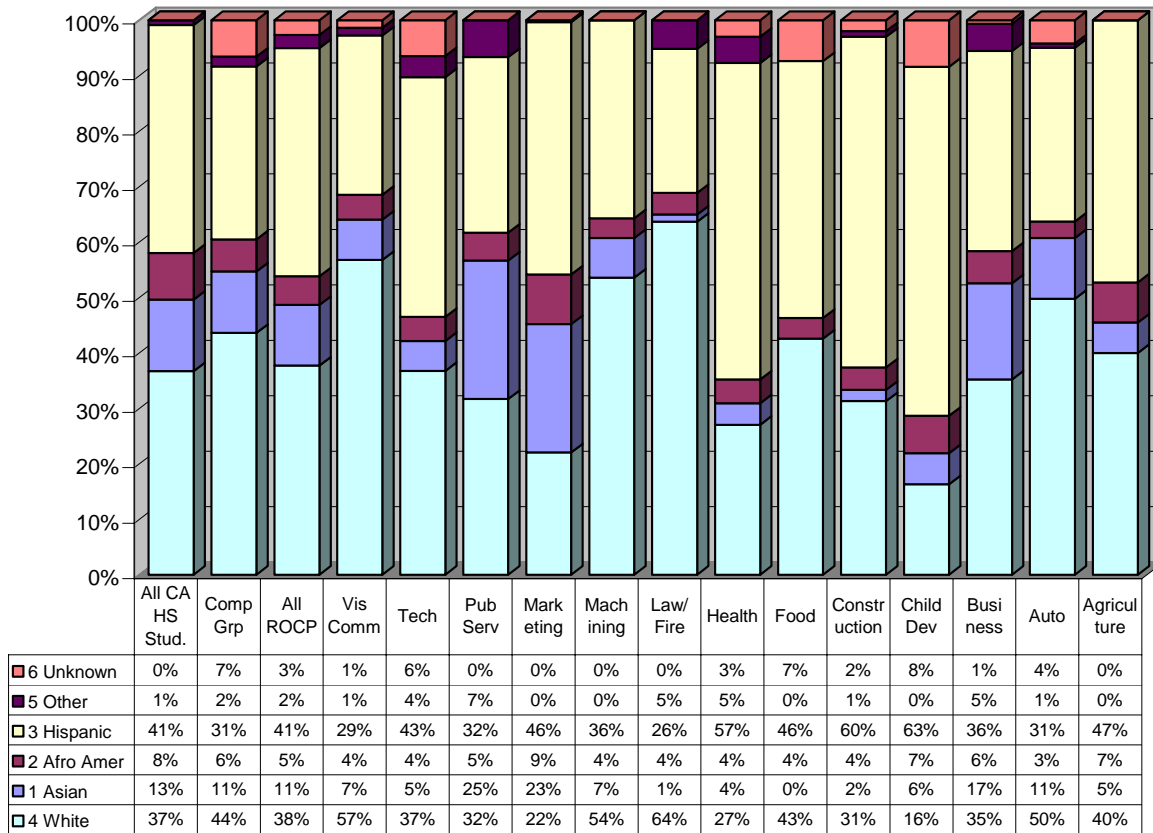


The gender composition of the ROCP programs differs modestly from that of the Comparison Group students who are not participating in these career/technical education programs. As shown in Figure 5, the Comparison Group is 58% female while the ROCP students 55% male and only 45% female.

As the graphic indicates, however, there is great variation across the reporting ROCP programs. The auto, machining, construction and technology programs have more than 80% male enrollment while the health and child development programs have more than 75% female participation. This composition is quite similar to that reported in the 2002 and 2004 technical reports.

Figure 6

Proportional Ethnic Composition by ROCP Program
(Too few cases reported in Environmental Tech and Other Programs)
(All CA HS Stud. = 2004 CBEDS Report for Grades 10, 11 and 12 at start of study)



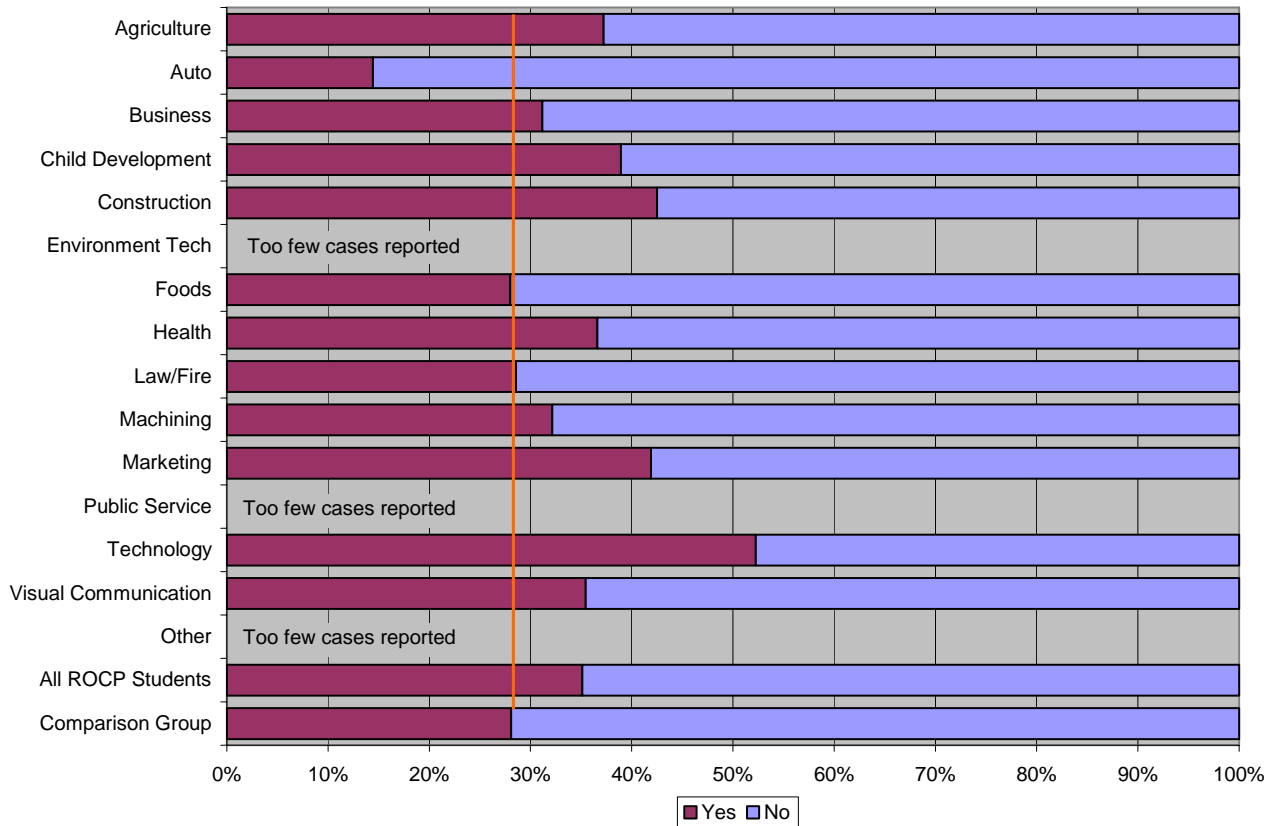
The ethnic composition of the ROCP programs sample closely resembles that of the California’s total high school population as reported in the 2004 CBEDS School Information File. The largest deviation is a 3% under representation of African Americans in the ROCP sample. The Comparison Group drawn from the same high schools differs somewhat from the total high school population. There are 7% more Caucasians and 10% fewer Hispanics than in the total population. These differences may be the result of the fact that some ethnicity data are missing in both the Comparison Group and the ROCP samples.

Additionally, as shown in Figure 6, there are very large differences in the ethnic composition of the various ROCP programs – e.g., Child Development is 63% Hispanic while the Auto, Law/Fire, Visual Communication and Machining are 50% or more Caucasian.

Figure 7

Proportion of ROCP Program Participants Receiving Free/Reduced Lunchs

ROCP Students average 35%; Comparison Group 28%; All but Auto Program equal to or greater than Comparison Students



The ROCP participants are significantly more likely to be drawn from poorer families as indicated by the frequency with which they qualify for the National School Lunch Program.

Overall, 35% of ROCP students qualify for free or reduced price lunch while 28% of the Comparison Group qualify. There is, as expected, significant variation across ROCP career clusters – but only the Auto cluster has fewer poor students than the Comparison Group. The Technology cluster, with 52% has the largest proportion of low income participants. However, all of these percentages might be understating low income levels, since CDE reports that there is a significant drop off at the secondary level in the proportion of eligible families signing up for free and reduced lunches.

Figure 8

Proportion English Only, Limited English, Fluent English by ROCP Program

ROCP Participants are 65% English Only and 12% Limited English Proficient

Comparison Group students are 76% English Only and 6% Limited English Proficient

All ROCP Programs but Auto and Law/Fire have more non-native English participants than the Comparison Group

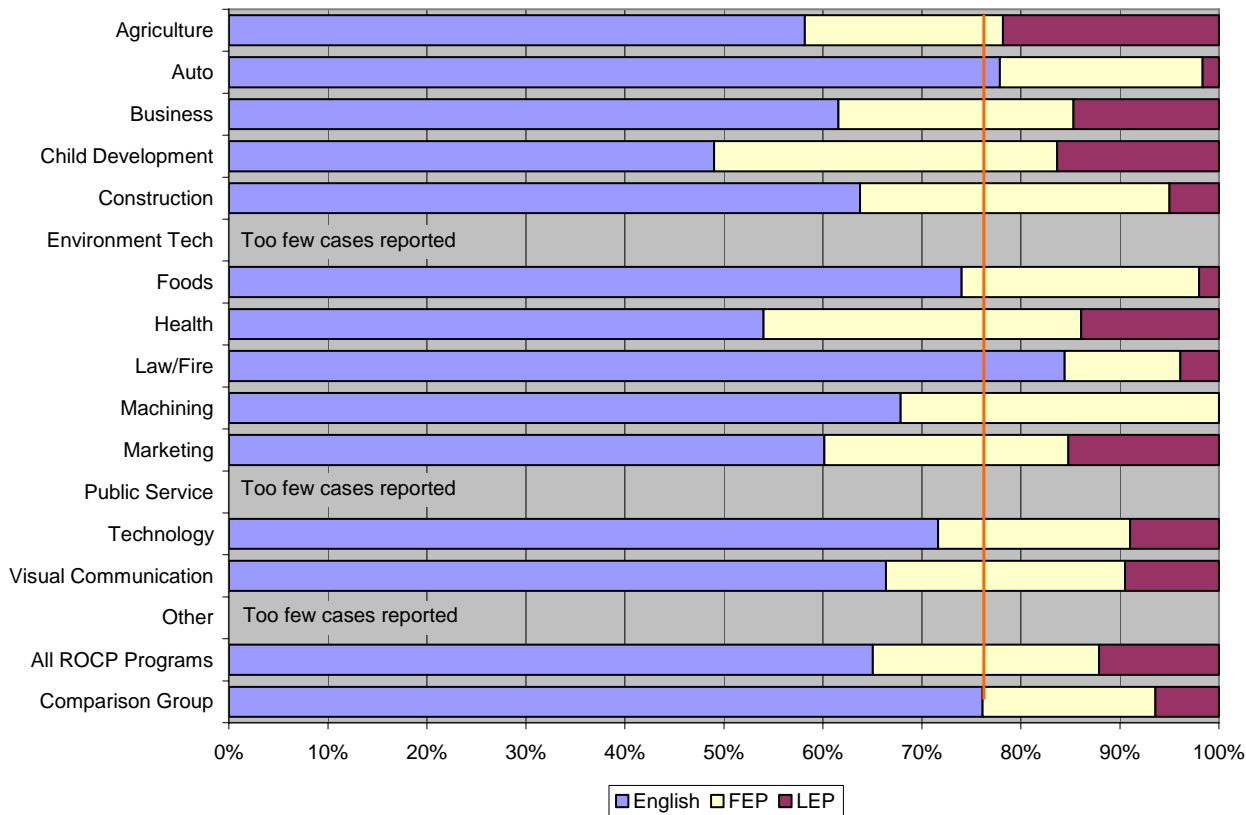


Figure 8 reveals that the ROCP students are significantly more likely than the Comparison Group to be serving English language learners (ELL students). While the Law/Fire and the Auto career clusters have a somewhat larger proportion of English Only students, all the other course clusters in the current round of study have more ELL students than the Comparison Group. Some career clusters (e.g., Machining and Construction) are attracting relatively larger numbers of ELL students who have been redesignated as Fluent English Proficient (FEP).

Academic Performance Findings

Figures 9 through 12 summarize the available data on ROCP and Comparison Group academic performance.

Figure 9

10th, 11th and 12th Grade Academic Grade Point Average for ROCP and Comparison Group Students

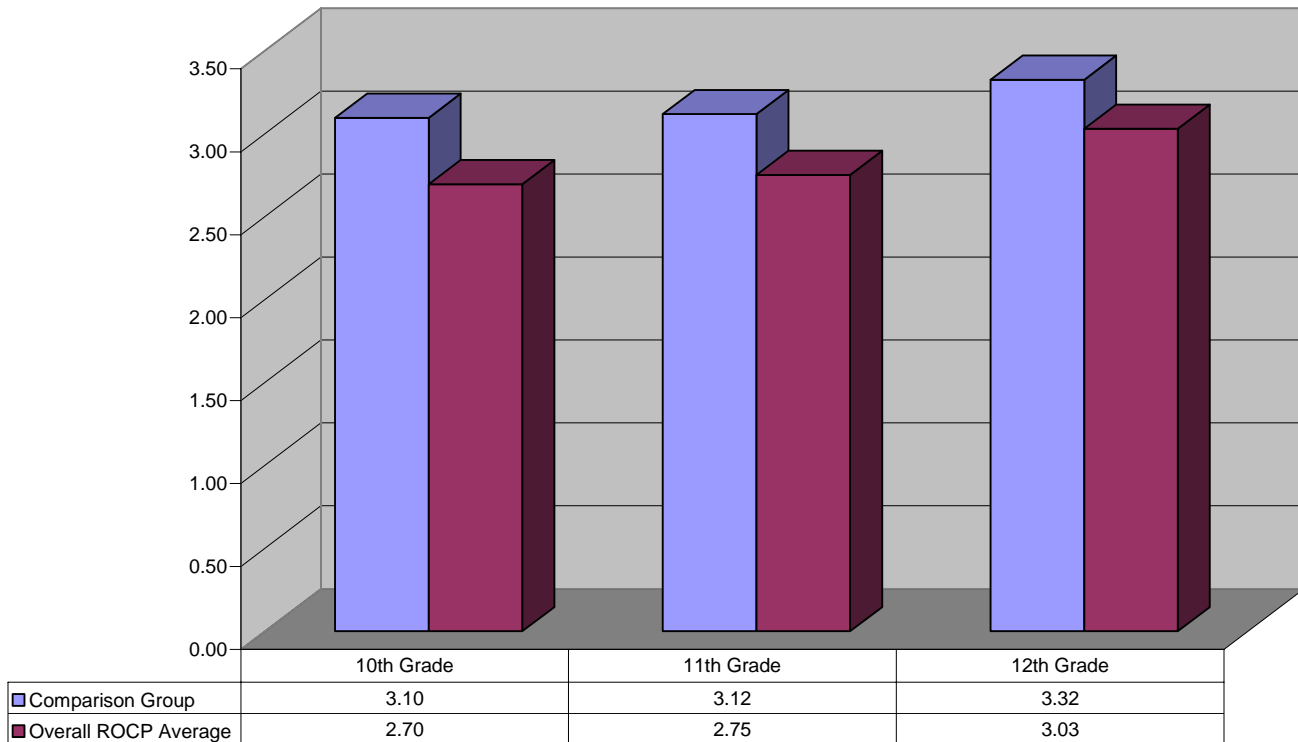


Figure 9 compares the academic Grade Point Averages (GPAs) of ROCP and Comparison Group students during their 10th, 11th and 12th grade years. The ROCP students are consistently below the Comparison Group (four-tenths of a grade-point during their 10th grade year, before enrolling in the ROCP programs).

Note, however, that the ROCP students tend to close the gap each year after enrolling in ROCP courses. The gap drops from 0.40 to 0.37 during the eleventh grade year, and drops more dramatically to 0.29 by the end of the 12th grade. This closing of the gap during the 12th grade year is at odds with experience of our 2004 cohort (but similar to that found in the 2002 study sample). The 2002 study, however, consisted of only seven ROCPs. In most cases, those ROCPs who volunteered to be in the first statewide study were ROCPs who were already infusing academic skills into their ROCP coursework. The 2004 (2002 graduates) and 2006 (primarily 2004 graduates) study samples were much larger, and more evenly spread through the state. One possible contributor to the

larger academic gain of the 2006 over the 2004 students could be a combination of: 1) the increasing number of ROCP courses that have been approved for UC a to g admission credit, 2) increased Tech-Prep articulation agreements between ROCP coursework and two-year community college programs and 3) increased articulation of ROCP coursework with four-year post-secondary institutions. California Department of Education reports (CDE 101 E2 and Form DP) support that between 2002 and 2004 ROCP courses approved for UC a to g admission requirements increased from 202 to 344 courses. Prior to 2002, there were only small numbers of ROCP courses approved for UC a-g statewide. During that same time period the numbers of reported ROCP courses approved for articulation to two-year community colleges increased from 28% to 38% of all ROCP programs offered. Additionally, there is a modest but important trend toward tying ROCP course competencies to rigorous academic standards indicated by the reported increase from 1% to 2.5% of ROCP courses articulated with four-year post-secondary institutions. While a direct cause and effect cannot be asserted, these data indicate that ROCP programs are increasingly bringing the rigor of both technical course content and academic skill level into line with the requirements of outside standard setters such as the UC a to g course approval system, and other college and university articulation requirements. Additionally, CDE reports indicate that in 2003, 65 ROCPs offered 1870 ROCP courses that supported math academic standards, 1933 ROCP courses that met language arts academic standards, and 1381 ROCP courses that supported science academic standards. It is recommended that CDE continue to gather this type of data to see if this trend continues. This is especially important information to gather, since the numbers of high school students enrolled in ROCP coursework is steadily increasing.

High school students are referred to ROCP classes by a high school counselor. While ROCP courses are serving a wide range of students, judging by the initial gap in GPAs between the ROCP students and the Comparison Group, high schools appear to be utilizing the ROCP programs to address the needs of many students who are, by their 10th grade year, lower in academic achievement and more at-risk than other non-college preparatory students. This finding is important because the later job successes of these previously lower achieving students demonstrate that ROCP courses are effective interventions for at-risk students – significantly improving their employment success after high school. It is recommended that further research be conducted to examine larger numbers of ROCP students, with follow up data over a longer period, to test whether this achievement and work success profile remains constant.

Overall GPA Gains from Grade 10 to Grade 12

Figure 10

**10th to 12th Grade Gain in Academic Grade Point Averages
for ROCP and Comparison Group Students**

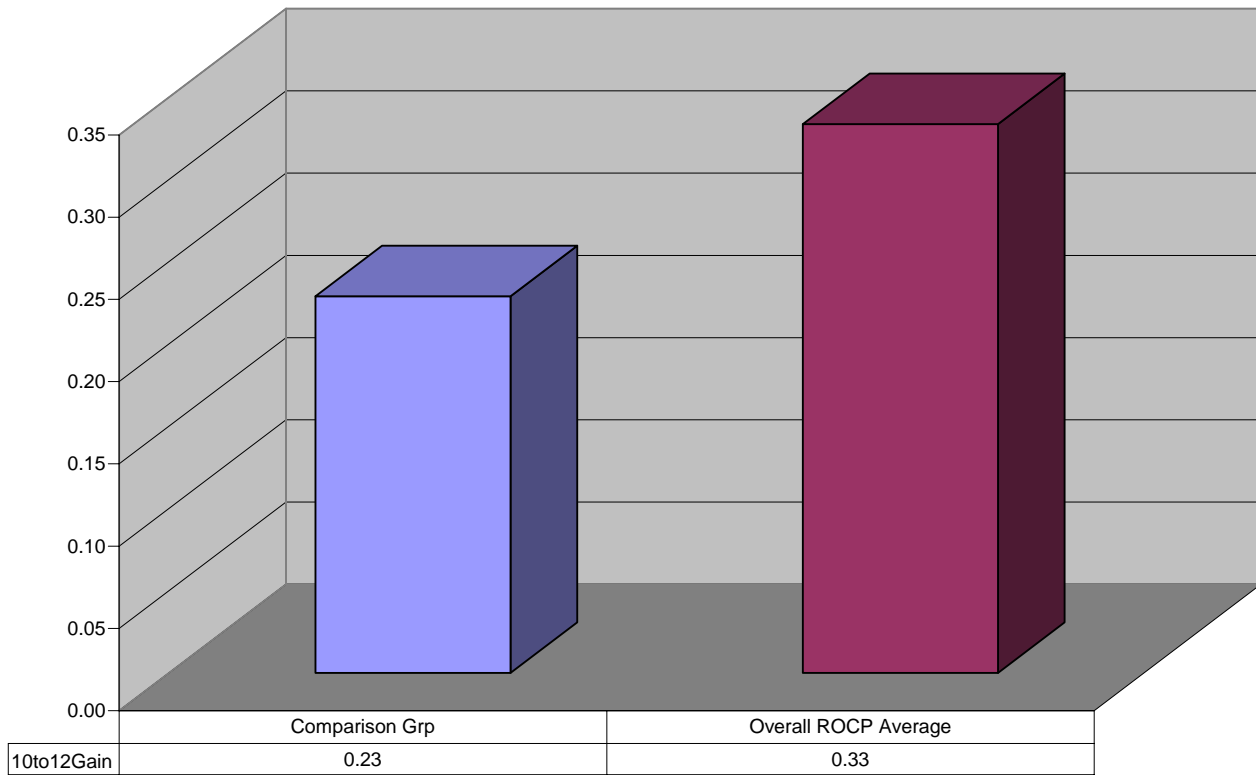


Figure 10 reports the GPA gain between 10th and 12th grades for the two student groups under study. As shown in the graph, ROCP students not only gained a full third of grade point between their pre-ROCP 10th grade and their 12th grade achievement scores, this gain was a full tenth of a GPA point more than the comparison group during their ROCP enrollment period. This is statistically too large of a gain to be produced by the ROCP grades alone and reflects improvement in other course work also. While a direct cause and effect between concurrent enrollments in ROCP/Academic coursework and greater grade point average growth, cannot be absolutely asserted, it is clear that engaging students in ROCP activities for a significant part of their school day, does not negatively effect their academic achievement. Instead, it might be a positive contributor.

Variation across ROCP Industry Sectors

Figure 11

10th to 12th Grade GPA Gains by ROCP Program

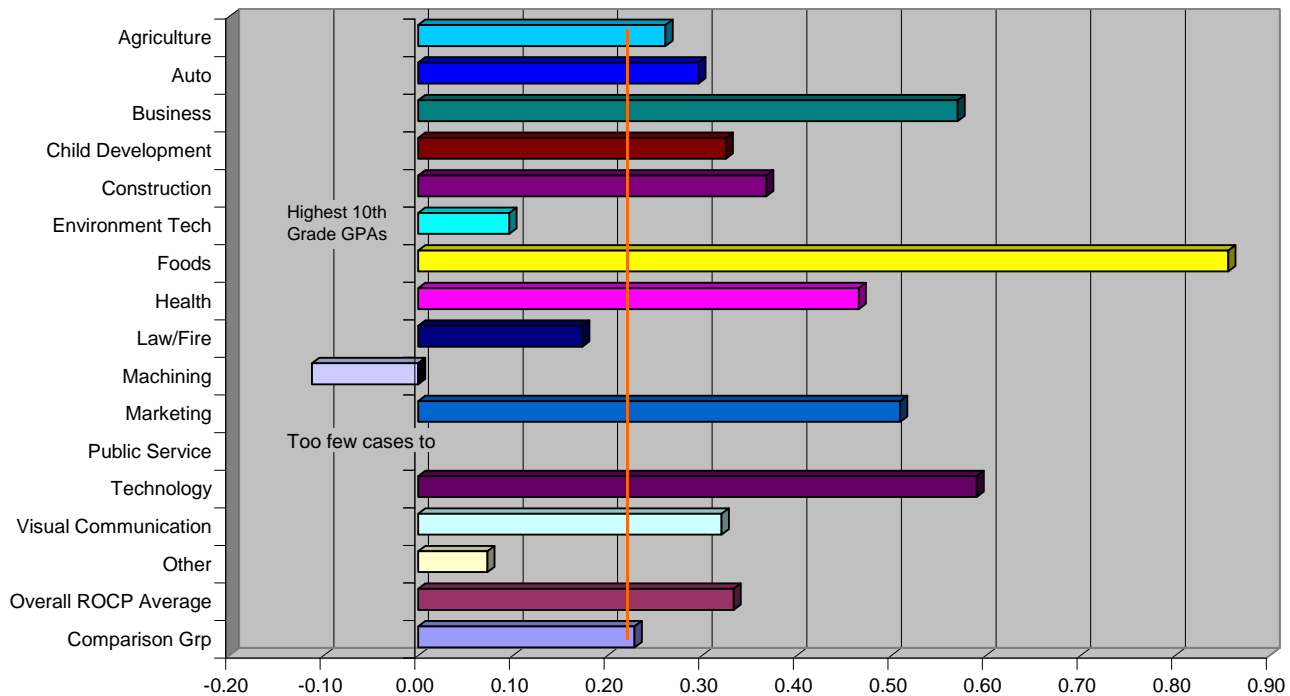


Figure 11 depicts the variation in GPA gains among the fifteen ROCP Industry Sectors with sufficient reported GPAs to evaluate. This figure reveals that there are significant differences in academic performance improvement across the various ROCP programs. The Environmental Technology program had the highest GPA for all three years – substantially exceeding the achievement levels of the Comparison Group in each of the three years. Hence it is not surprising that students in this sector had relatively modest GPA gain between the 10th and 12th grades. Students in Machining were the only group to have a lower 12th grade GPA. Students in the Foods sector started out with the lowest GPAs in the 10th grade, but they also had the largest gain between 10th and 12th grades.

Even with the variation in GPAs among the different training sectors, overwhelmingly, students who were enrolled concurrently in academic and ROCP courses increased their GPAs between the 10th and 12th grades. This again demonstrates that concurrent ROCP enrollment, with its emphasis on technical skills and reinforcement of academic skills, does not erode students' academic performance. Rather, it appears that these students are benefiting academically, while at the same time increasing their employability skills.

Figure 12

10th and 11th Grade Reading and Math Scores on STAR Test for ROCP and Comparison Group Students in the Eleven Programs Reporting Percentile Scores

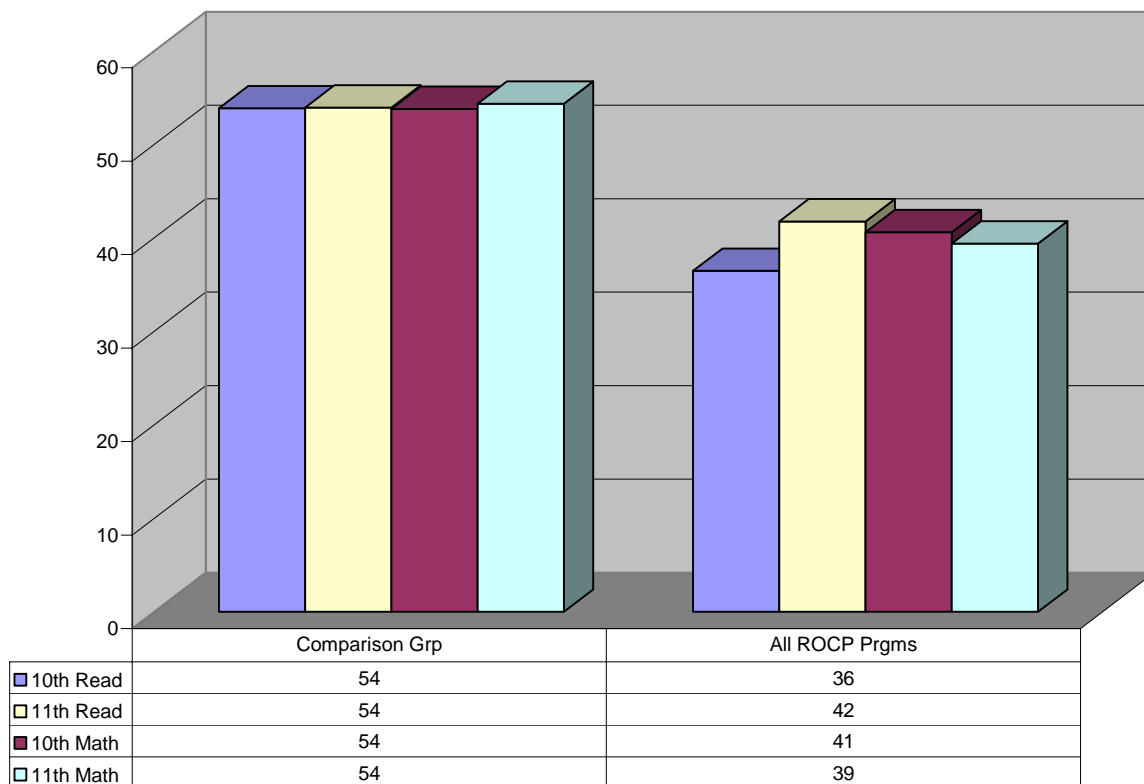


Figure 12 shows the reading and mathematics performance of ROCP and Comparison Group students on California’s mandated STAR tests. This figure summarizes the data for students in the 11 ROCP cluster groups that reported their test scores using the National Percentile Rank scale. Figure E1 in Appendix E displays the same data for the nine ROCP clusters that reported test data using standard Scale Scores. These data show that, consistent with their GPA averages, the ROCP students perform somewhat below their peers on both reading and mathematics test batteries during both testing years that took place prior to their enrollment in ROCP.

The above baseline data puts the ROCP student follow-up results in an even more impressive position. The baseline GPA and STAR score data on the ROCP students demonstrate that they were performing academically below the comparison group prior to enrollment in ROCP. Nonetheless, the student transcript data and the follow-up surveys show that ROCP students close the academic achievement gap, go on to post-secondary at rates comparable to the higher achieving comparison group, while at the same time earning higher salaries in after high school employment.

While the differences between the groups are large enough to reach statistical significance (at the $p < .05$ level), they are no larger than the differences usually found between middle class and lower socio-economic students or between those who come from English speaking homes and those whose native language is not English (see, Mitchell, 2001).

Performance for the Comparison Group students is generally flat from one year to the next [except for math scores for the group reporting Scale Scores (Figure 14)]. The performances of the ROCP groups are inconsistent. Reading went up modestly and math down very slightly for the Percentile Rank reporting group (Figure 13) and both subjects declined for the Scale Score reporting group (Figure 14).

Overall, while ROCP participation produced a clear increase in GPA performance, the significant difference in STAR scores between the two groups, is consistent with the difference in the two groups' 10th grade GPAs, offering additional evidence that ROCP students, on average, are lower achieving in their 10th grade year than the comparison group.

Figure 13

**Average Days Absent ROCP and Comparison Group Students
(Grades 10, 11 and 12 and Grade 10 to 12 Growth)**
ROCP Students had 16% higher absence rate in 10th grade, but only 5% higher rate in 12th grade

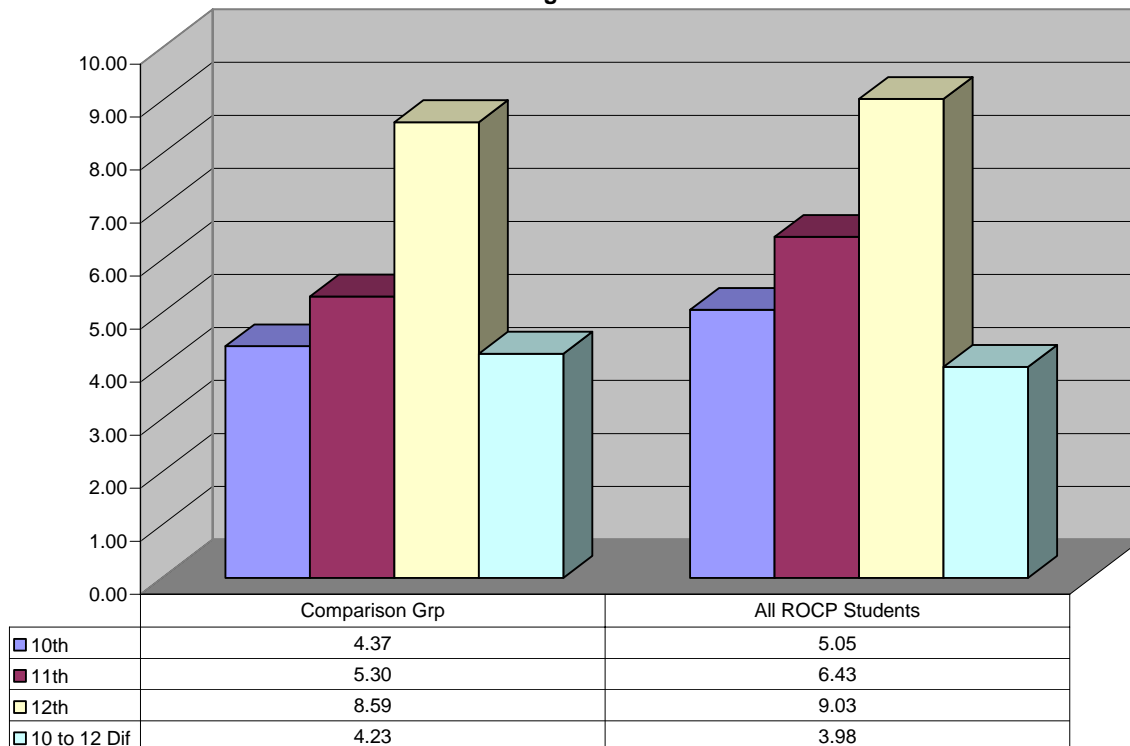


Figure 13 analyzes absenteeism, comparing the two groups of students. This figure shows recorded absences in the 10th, 11th, and 12th grade and the difference between 10th and 12th grade absentee rates for both the Comparison Group and the ROCP students. As is clearly evident, for both groups absenteeism rose fairly sharply (about 80% to 90%) across the three years under study. The bar at the right side of each graph cluster depicts the increase across these three years (an average 4.23 more days per year for the Comparison Group and 3.98 more days per year for the ROCP students). On average, ROCP students had worse attendance records during their 10th grade year (averaging 5.05 days to 4.37 for the Comparison Group). They curtailed their absenteeism, sufficiently in their 12th grade year to significantly reduce the gap between the two groups.

Figure 14

Percent of Students Who Have Taken Any Computer Classes

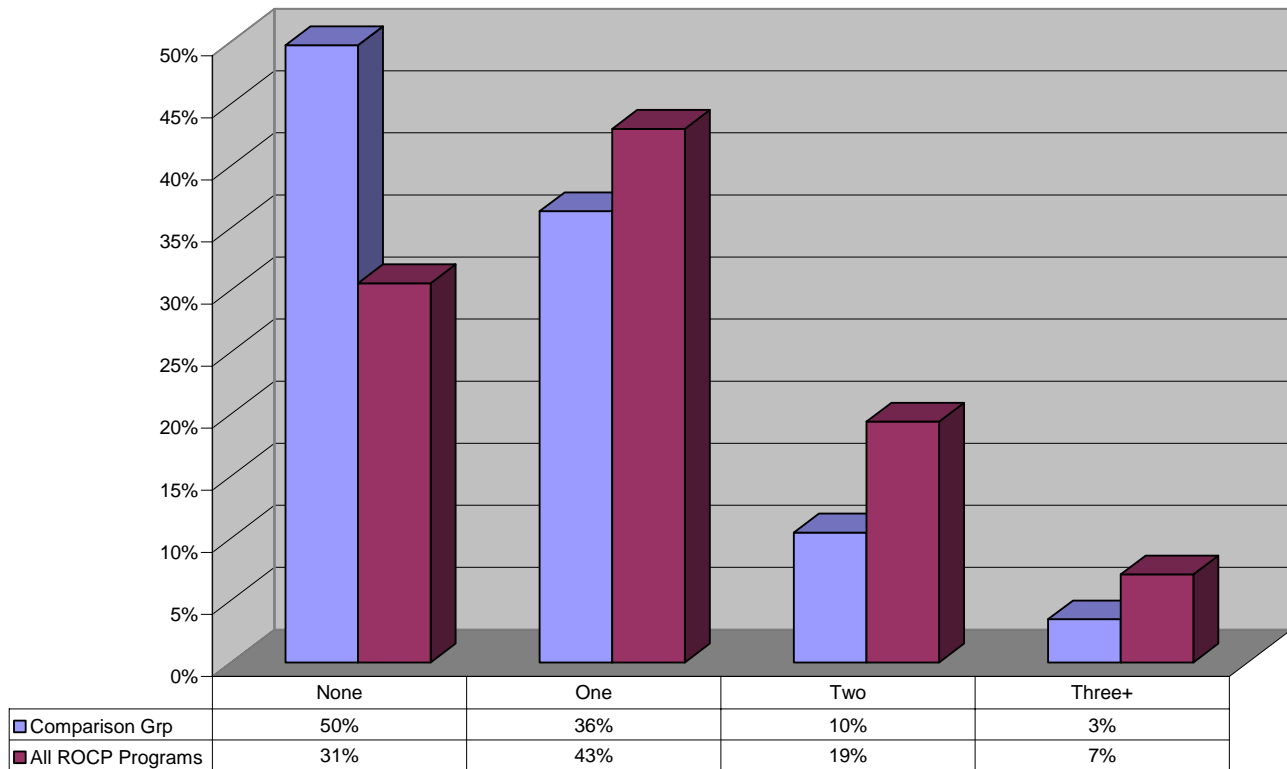


Figure 14 shows that ROCP students are much more likely to report taking one or more computer classes than their Comparison Group peers. Only 50% of the Comparison Group reported taking any computer courses – nearly 70% of the ROCP students had taken computer courses and fully a quarter had taken more than one such course. This difference is probably due to the numbers of ROCP students taking computer instruction within their ROCP courses.

How the students evaluate their ROCP experience

Beginning with Figure 15, we turn our attention to the follow-up data derived from telephone interviews with ROCP graduates and Comparison Group members approximately one year after they left high school.

Figure 15

Overall Rating of ROCP Program
 Measured on a 4 point scale: 1=Poor; 2=Fair; 3=Good; 4=Excellent
 Child Development highest at 3.76; Public Service lowest at 3.26

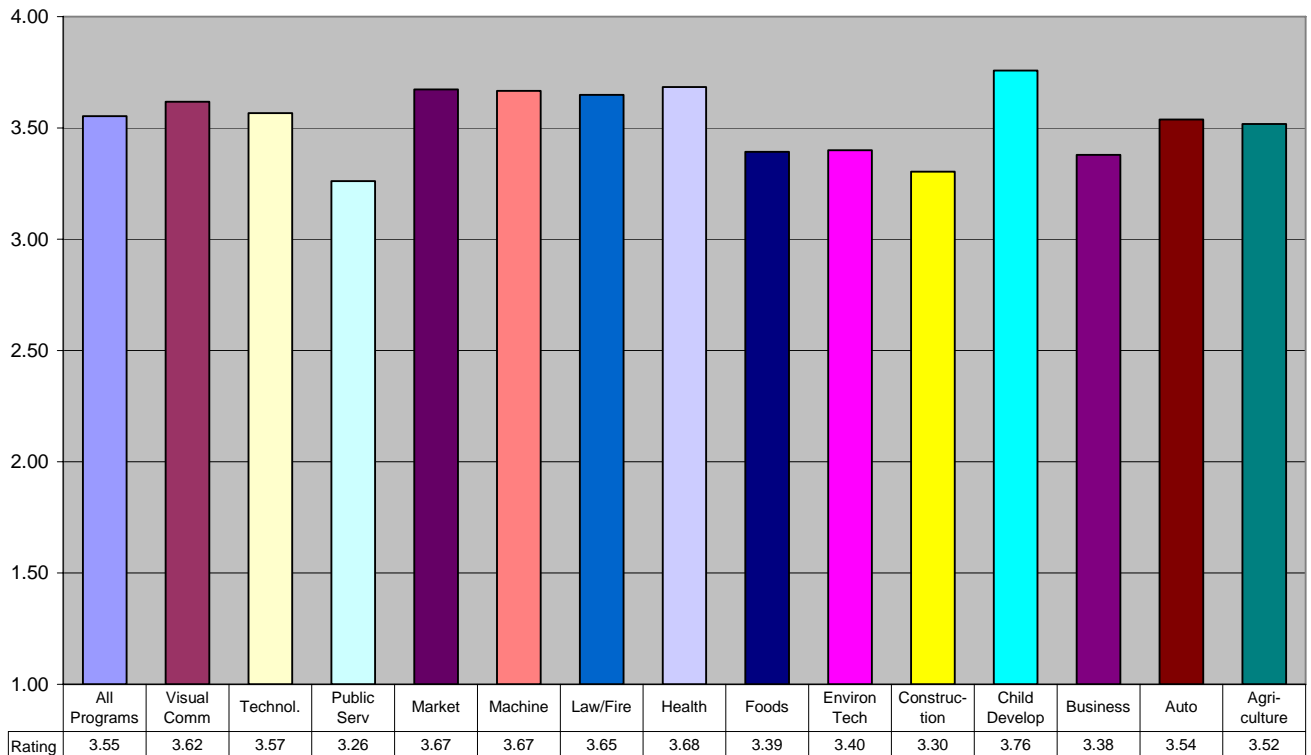


Figure 15 reports the ROCP rating data organized according to the industry sector in which the students were enrolled. The highest rated cluster was the Child Development cluster with an average of 3.76 – just a quarter of a point below the highest possible score of 4.0. Even the lowest rated cluster, Public Service, was given a rating a quarter of a point above the “Good” rating.

Thus, ROCP students demonstrate high satisfaction with their ROCP coursework. The subjective data from the satisfaction surveys, when combined with the student transcript data, and the follow-up surveys, paint a picture of ROCP students who are improving their academic achievement, going on to post-secondary instruction, increasing their employability skills, obtaining higher wage employment, and having a positive view of their ROCP experiences.

Employment Comparisons

Figures 16 through 21 report on the employment experiences reported during follow-up interviews with students or their parents approximately one year after leaving high school. These data provide the most concrete evidence that California's ROCPs are fulfilling their primary mission of preparing students for successful entry into the world of work.

Figure 16

Average Hourly Wage Rates for Comparison Group and All ROCP Students

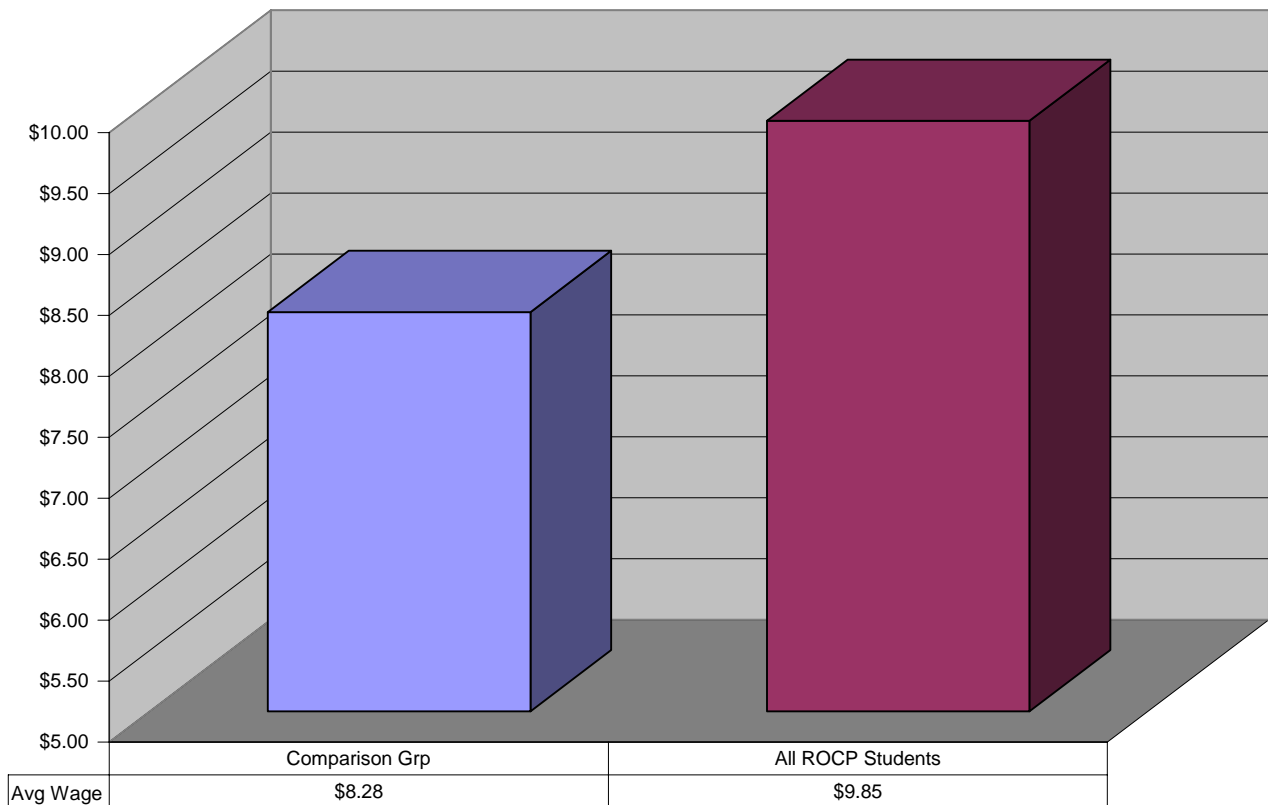


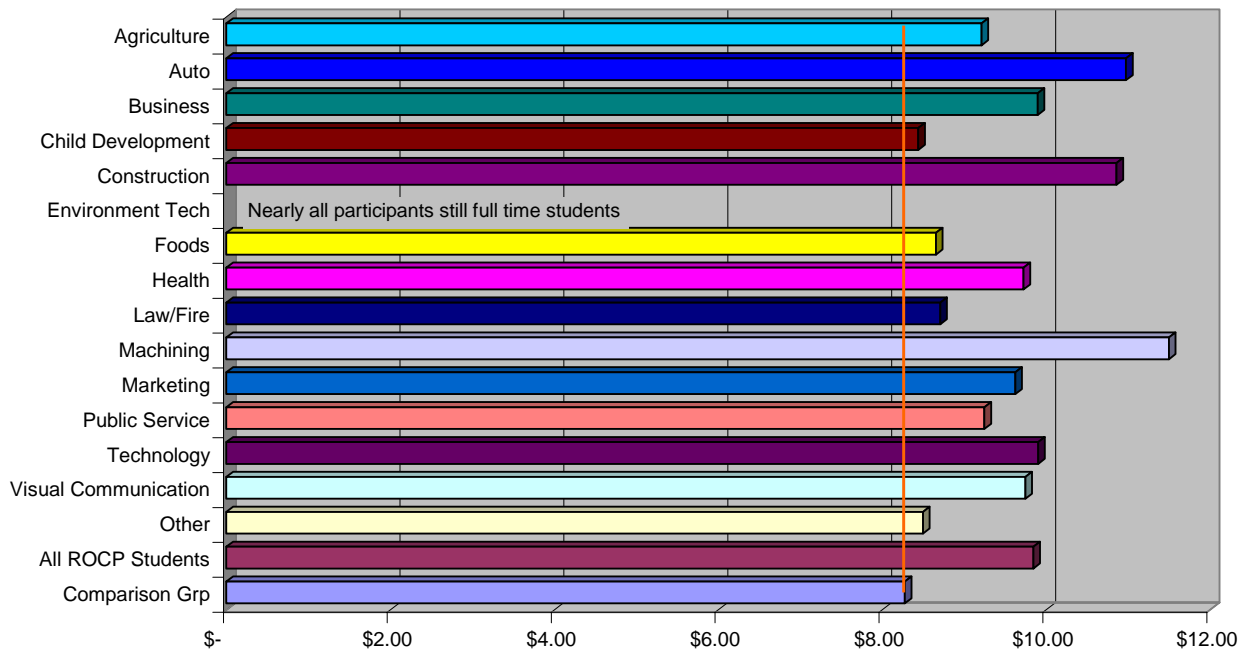
Figure 16 shows the approximate hourly wage reported by ROCP graduates and members of the Comparison Group who were employed at the time of the follow-up interview (the wage rates are approximate because they were reported in \$3.00 increments and then averaged across the participant groups, rather than being reported exactly). On average, the ROCP graduates reported earning \$9.85 per hour, \$1.57 more than the \$8.28 per hour reported by members of the Comparison Group. Considering that ROCP students enter the 10th grade with substantially lower GPAs than the comparison group, the higher salaries one year out of high school is impressive. Poor academic performance is one of the strongest predictors of dropping out of school (Gaustaud, 1991; Alexander, et al., 2001; National Center for Educational Statistics, 1987). ROCP can facilitate retention of lower achieving students while teaching them important career/technical and academic skills. This is a useful strategy for helping to raise overall high

school completion rates, as well as for increasing the number of students pursuing post-secondary schooling. There is currently a large mismatch between the high skilled technical jobs available and the lack of sufficient numbers of individuals leaving schools with the needed skills (O’Connell, 2004). The even higher salary levels of former ROCP students who studied technology careers and auto (also a highly technical trade) indicate that ROCPs can, in partnership with high school academic programs, help close the gap.

Figure 17 breaks the hourly wage reports along ROCP career clusters. As this graph shows, graduates from each of the ROCP career cluster groups reported earning more, on average, than the Comparison Group. The Environmental Technology cluster is a special case because all but three of these students were still in school at the time of the follow-up interviews.

Figure 17

Average Hourly Wage by ROCP Program
All ROCP Programs above Comparison
Highest wages are Machining (\$11.50/hr); Auto (\$10.98/hr) and Construction (\$10.86/hr)



The ROCP program with the lowest wage rate was the Child Development program, but even this group outpaced the Comparison Group by a small amount. Moreover, ROCP officials report that many of these program participants go on to become teachers earning substantially higher salaries than commanded by those working in their first year after graduation. It is recommended that further study be conducted to determine the numbers of ROCP Child Development graduates that go on to become public teachers at the K-12 level.

Figure 18

Approximate Wage Rates by Gender by ROCP Participation
ROCP Students have an average \$1.53 higher wage;
Males average \$1.57 higher; Females average \$1.30 higher than same sex comparison group

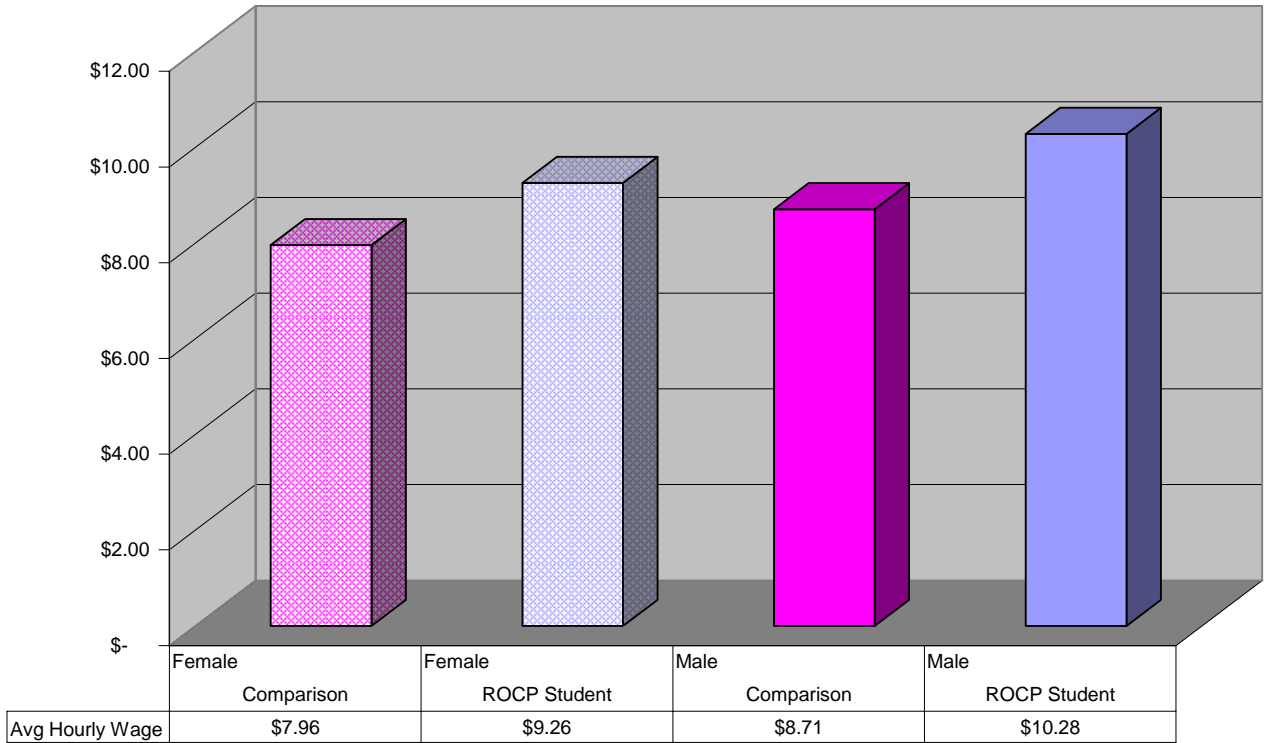


Figure 18 shows the wage rates for ROCP graduates and Comparison Group members broken down by gender. As this figure shows, the average wage rate for males graduating from ROCP programs was higher than all other groups (about \$10.28 per hour). Importantly, however, females with ROCP training earned more than either gender group in the Comparison Group. These young women made, on average, about 55 cents per hour more than the young men in the Comparison Group, and \$1.30 per hour more than the comparison women. Thus, ROCP training is an effective strategy for improving labor market entry among young women – at least during their first year in the labor force. Young men do even better – the male ROCP graduates earn about 111% as much as the female graduates while Comparison Group males earn about 109% as much as the comparison females.

Figure 19

Average Hourly Wage Differential for ROCP Training by Ethnic Group Membership
All ROCP groups outperform all Comparison Groups; Afro Amer ROCP group has highest wage
Benefit ranges from \$1.09 per hour for Unknown group to \$2.40 for Other/Mixed group

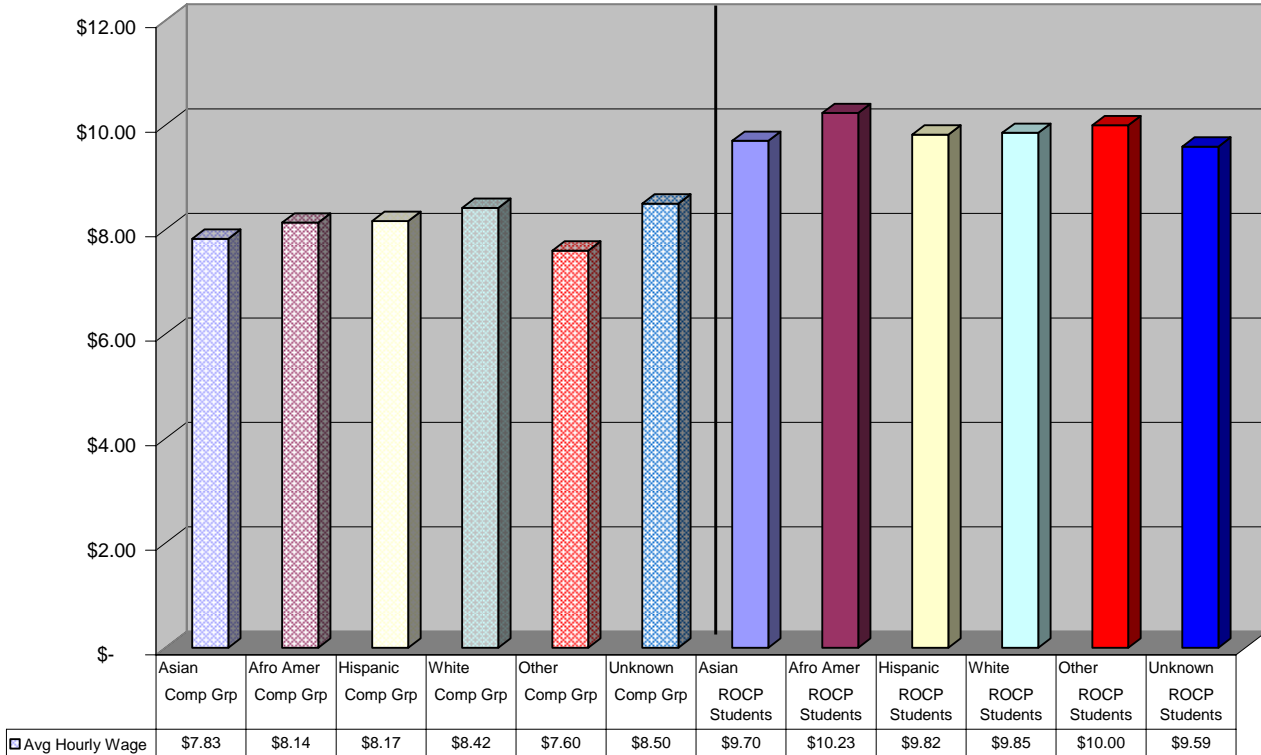


Figure 19 presents the wage rate comparison between ROCP graduates and the Comparison Group students broken down by ethnicity. As with the gender groups discussed above, income advantages gained by participation in ROCP training are distributed across all ethnic sub-groups. Not only does each of the ethnic groups with ROCP training have higher average wage rates than their Comparison Group peers, the ROCP graduates in all ethnic groups reported average wage rates higher than those of *any* of the ethnic sub-groups in the Comparison Group. Within the study sample, the African American sub-group has an unusually strong showing among ROCP graduates.

Most notable, African American, Hispanic and Asian students with ROCP training reported salary rates more than 20% higher than their counterparts without this training. Additionally, these groups all commanded higher salaries than the whites in the Comparison Group. Thus, across the diversity of ethnic groups graduating from ROCP programs, wages were not only raised, they became substantially equalized across sub-groups.

This is a particularly encouraging finding. MPR (2005) reports that “as many as 50 percent of entering high school freshmen are not completing high school on time. Most of these young people, overwhelmingly African American and Hispanic, never obtain a high school diploma or even a GED.” This assessment is supported by research conducted out of

Harvard University which found that only 55 percent of African-American youth and 57 percent of Latino 9th graders in California will complete the 12th grade (Orfield, Losen, Wald, Swanson, 2004).

Figure 20

Percent of Each Group that Received One or More Wage Increases in the First Year of Work
ROCP Students slightly more likely to receive wage increases
most increases went to Marketing, Machining, fewest to Foods program graduates

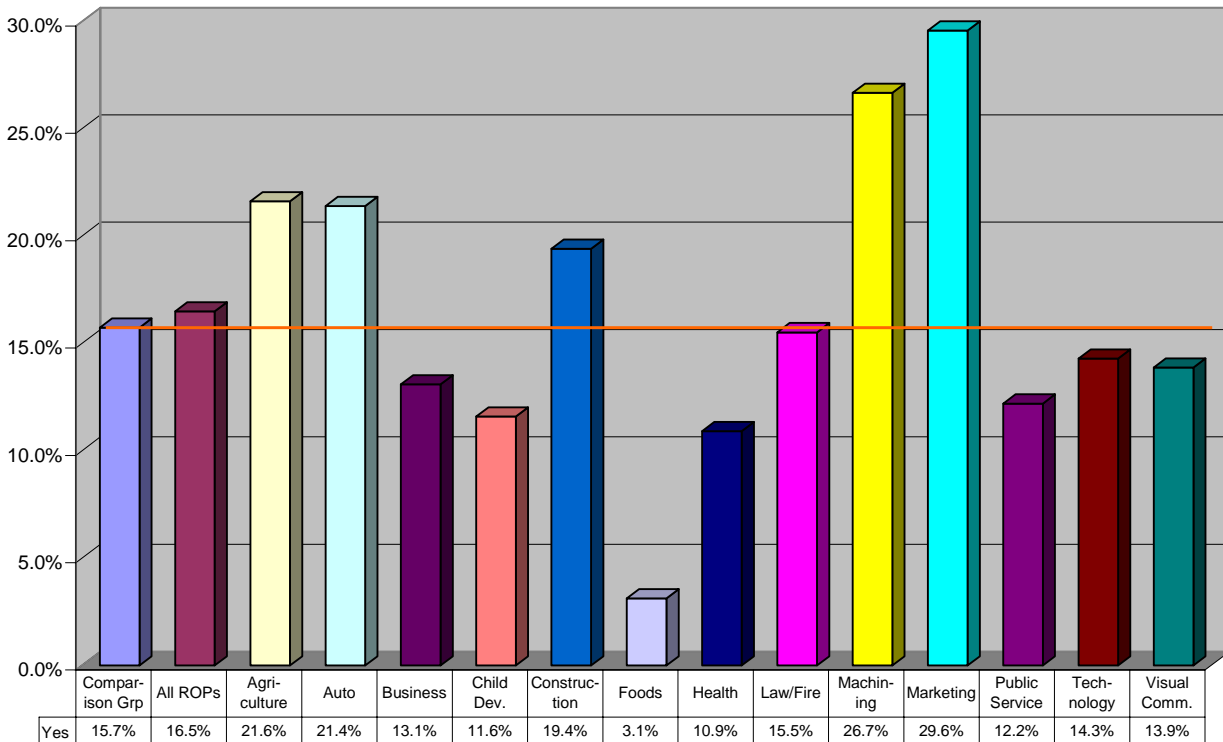


Figure 20 shows that ROCP graduates, in addition to earning more, are somewhat more likely than Comparison Group students to receive a pay raise during their first year on the job.

While 15.7% of the Comparison Group reported pay raises, 16.5% of the ROCP students reported pay raises (approximately a 5% better success rate).

Marketing, Machining, Agriculture, Auto and Construction graduates were substantially more likely than Comparison Group graduates to get salary raises. While Auto, Business and Environmental Tech student were less likely to get raises, their starting salaries were higher and their continuing wage rates remained, on average, higher than those of the Comparison Group. While Business, Child Development, Foods, Health, Public Service, Technology and Visual Communication graduates were less likely to get raises they all were receiving higher hourly wages than the Comparison Group at the time of the follow-up interviews. However, to receive a higher salary in a business, child development,

health, public service, technology or visual communication position frequently requires completion of additional post-secondary instruction and sometimes a college degree. Thus, it is not surprising that skilled jobs that require less post-secondary instruction initially pay higher salaries than jobs in sectors that require substantial post-secondary instruction to receive higher salaries.

Figure 21

Proportion of Graduates Promoted in the First Year
18% of ROCP Students Promoted; 17% of Comparison Group, not significantly different
Highest rates of promotion in Marketing (30%) and Machining (27%)

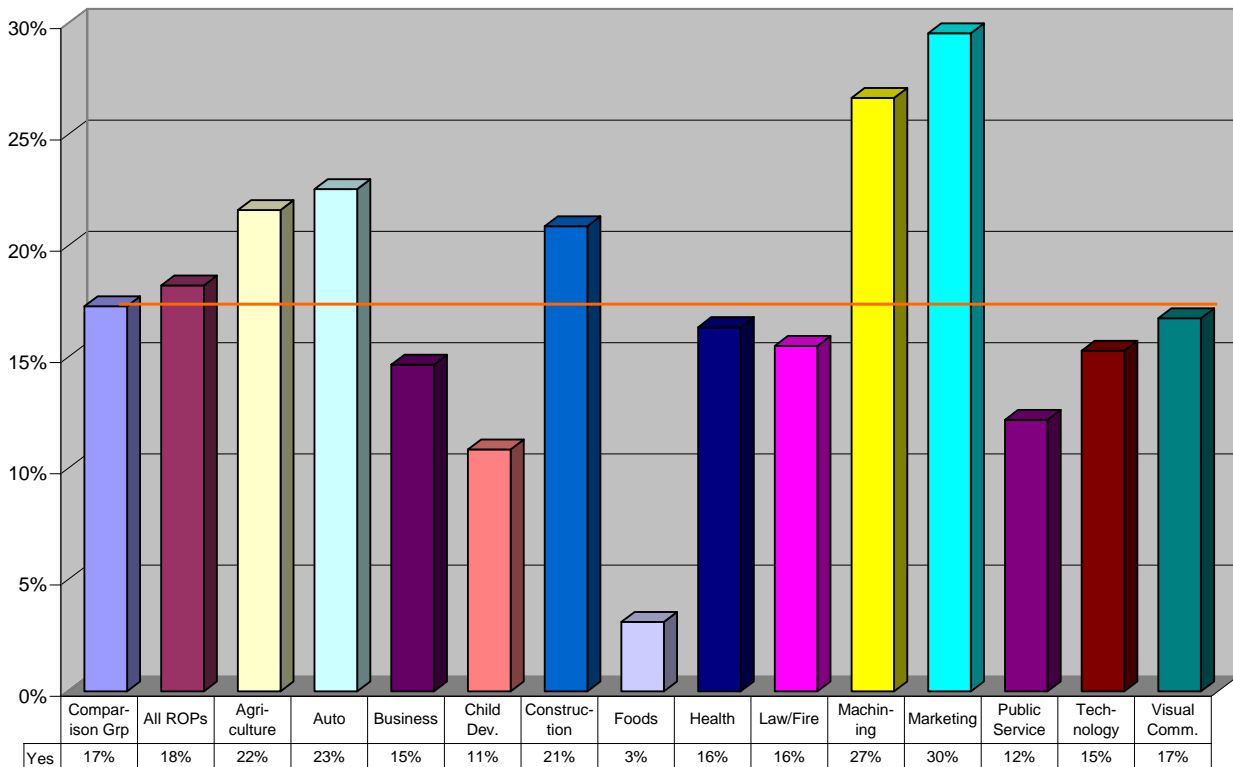


Figure 21 shows that ROCP graduates were somewhat more likely to receive a promotion during their first year (18% compared to 17% for the Comparison Group).

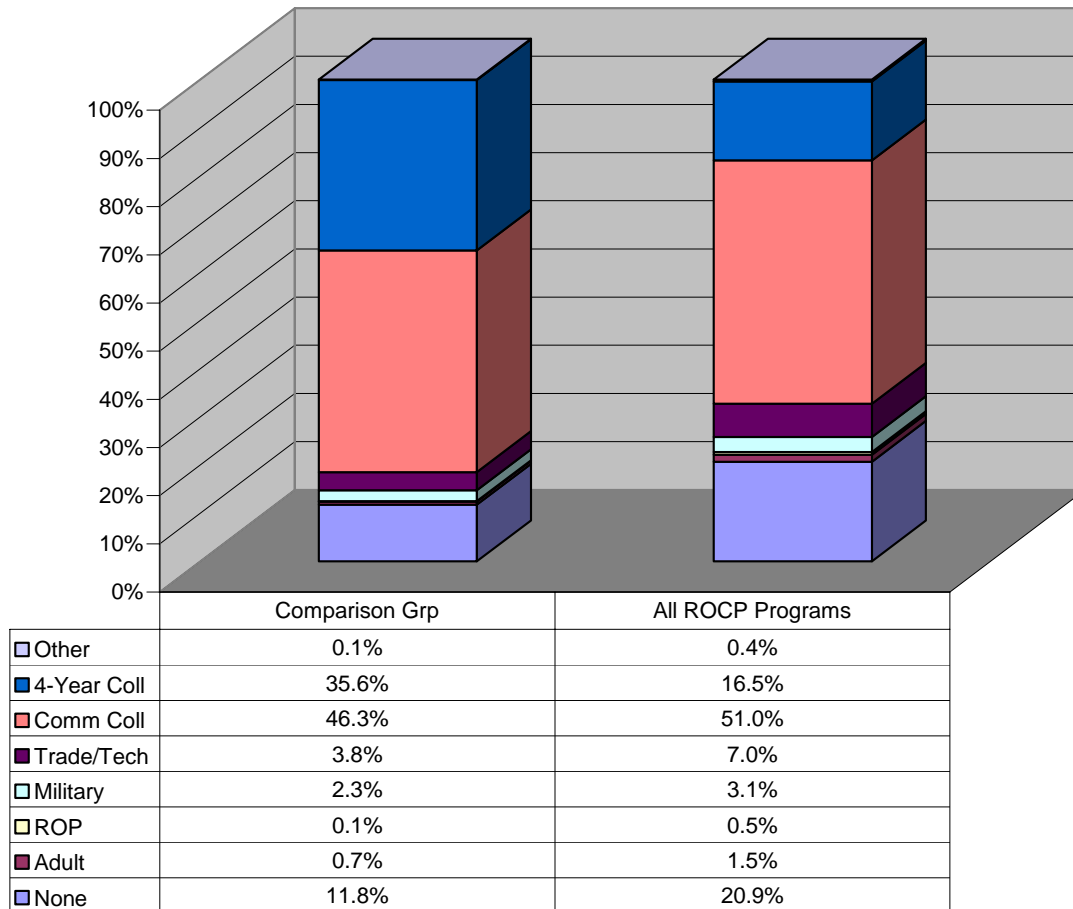
As with other outcomes, these outcomes varied substantially by ROCP program. The Marketing program students were most likely to get promotions (at 30%, nearly twice the promotion rate of the Comparison Group). Machining students were second most likely to get promotions (nearly 60% more likely than the Comparison Group). Agriculture, auto and construction graduates were also more likely to receive promotions. A number of the industry sectors that had fewer promotions, such as business, child development health, law enforcement, fire public service and technology, are also those sectors where students are more likely to need more post-secondary education and sometimes college degrees to get promotions beyond entry level.

Educational Comparisons

Turning to the education follow-up data, Figure 22 further confirms that the ROCP programs are having a significant positive impact on their students' future success.

Figure 22

Continuing Education of ROCP and Comparison Group Graduates



Even though the ROCP students had significantly lower high school grade point averages, they are entering post-secondary education at a rate comparable with members of the comparison group. More than half (51%) of all ROCP graduates reported being enrolled in a community college degree pathway, or having completed a community college certificate program within the first year after leaving high school. Another 16.5% of ROCP graduates were attending 4-Year colleges. In fact all but 20.9% of these graduates were enrolled in or had completed some kind of advanced training. (A very small group of respondents reported unspecified “other” continuing education – probably on-the-job training programs).

The ROCP graduates had a somewhat larger group not in school. However, most of those who are not in school are working full time. Only 4% of each group was unemployed at the time of the follow-up contacts. ROCP students are remarkably competitive for a group starting out with much lower academic attainment.

One major goal of both the federal “No Child Left Behind” legislation and California’s “High Performance High Schools” initiative is supporting successful transition to post-secondary schooling and careers for all children. ROCP programs appear to be playing an important role in supporting these efforts. ROCP participants are developing the skills and the motivation to participate in post-secondary education at nearly the same rates as the higher achieving comparison group students. This result is encouraging not only for its own sake, but for the economy of California as well. The U. S. Census Bureau reports a difference of over \$15,000 per year in earnings separating those who don’t finish high school from those who complete at least two years of post-secondary schooling – over half a million dollars in earnings over their active working lifetime (U. S. Census Bureau, 2002).

Figure 23

How much classes and school are liked
 (on a 5-point scale: 1=Not at all; 2=Very little; 3=Somewhat; 4=Quite a bit; 5=Very much)

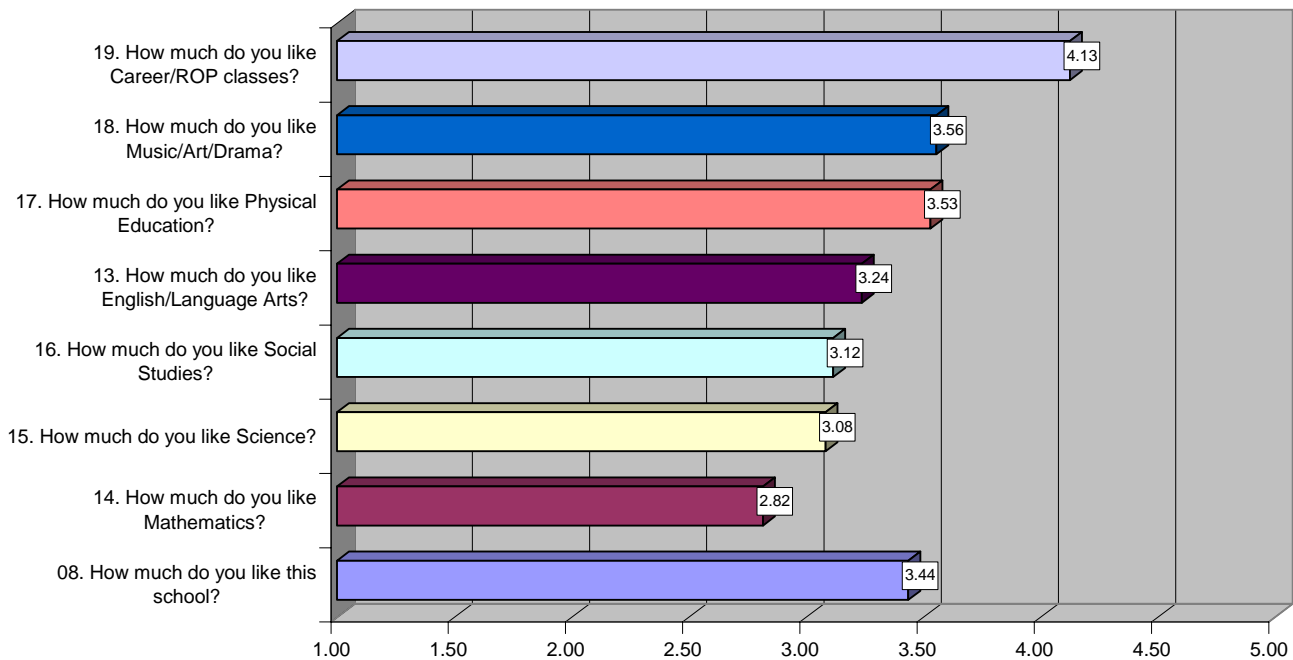


Figure 30 depicts the extent to which ROCP students reported on the High School Satisfaction survey that they liked their various high school subjects. As shown in this graph, only the ROCP programs are rated above a 4.0 on the 5-point scale used for rating each of the subject areas. Mathematics is enjoyed the least (with an average rating of 2.82, below the 3.0 mid-point on the rating scale). These students ranked their schools below their enthusiasm for the ROCP career/technical training programs and slightly behind their enthusiasm for Music/Art/Drama and Physical Education classes.

CONCLUSIONS

The study reported here documents important conclusions regarding the operation and impact of California's Regional Occupational Centers and Programs (ROCPs). Data supporting these conclusions were drawn from three sources:

- 1) transcripts and other file data for 4,352 high school students (2,602 ROCP graduates and 1,750 of their high school peers),
- 2) telephone follow-up interviews with 2,881 of these students (or immediate family members who could provide information), and
- 3) High School Satisfaction surveys of 3,357 ROCP and non-ROCP high school students.

This comprehensive data system triangulates perspectives on ROCP accountability, showing that these important programs are contributing significantly to the economic and civic development of a broad range of this State's young adults.

Briefly, the six key conclusions are:

- 1. ROCP students improve their high school grade point averages at a greater rate than comparison students.** ROCP students represent a challenging target for educators seeking to facilitate their successful entry into the labor market and positions of civic responsibility. On average, these students enter ROCP training programs with academic records that are well below those of a Comparison Group of their high school peers. Nevertheless, as they move through high school they raise their grade point averages by about one-third of a grade – significantly more than that of the Comparison Group of similar students who did not take ROCP courses.
- 2. ROCP students enroll in post-secondary education in large numbers.** In addition to their greater success in the labor market at the time of graduation, ROCP graduates report continuing on to post-secondary educational programs at rates comparable to those of the Comparison Group in this study. Though the Comparison Group attends 4-year colleges at a somewhat higher rate, about half of both groups report continuing their education through Community College enrollment (51% for ROCP graduates, 46% for others). Less than 4% of each group is neither in school nor working.

- 3. ROCP students earn higher wages than comparison group peers.** In telephone follow-up interviews, ROCP students report employment in jobs that pay significantly higher wages than those held by a comparison group of their peers. With the average salary for all groups running in the \$7 to \$13 per hour range, the ROCP graduates report earning about \$1.57 per hour more. This is despite the fact that ROCP students were initially lower achieving and lower socio-economic than the comparison group. It is particularly important to note that ROCP training leads to higher and more equal wage rates for all gender and ethnic sub-groups within this study. ROCP females earn more than comparison females. Likewise, ROCP students of all ethnic backgrounds make more than comparison group white males.
- 4. ROCP students have more success in securing raises and promotions on the job.** In addition to commanding higher hourly wages, ROCP graduates generally report pay raises and job promotion rates higher than other high school graduates (about 5% more frequent raises and promotions).
- 5. ROCP students prefer ROCP classes over other subjects.** In responding to a High School Satisfaction Survey, ROCP students report a modest level of enthusiasm for their current school experiences; more than half indicate that they “Very much” like their ROCP course work. When asked to indicate how well they like various academic and non-academic high school classes, the ROCP students report the lowest level of appreciation for Mathematics classes, and not much more appreciation for Science and Social Studies courses. Only English Language Arts and Music/Art/Drama classes come close to matching their enthusiasm for ROCP course work.
- 6. ROCP students question the value and relevance of many of their high school courses.** ROCP students report significant disappointment with their high school classes. They generally report that “Only a few” are relevant to getting jobs or preparing them for other aspects of adult life, and there is a similar assessment regarding whether the classes are enjoyable experiences.

OBSERVATIONS

Judging by the initial gap in GPAs between ROCP students and comparison students, to a significant degree, high schools are utilizing ROCP to help address the needs of students who are lower in achievement and more at-risk than other non-college preparatory students in their schools. Despite initially lower levels of achievement, ROCP students have substantially less growth in absenteeism between the 10th and 12th grade when compared with the higher achieving Comparison Group. This is an important finding because the later job successes of these previously lower achieving students demonstrate that ROCP can be an effective intervention for a broad range of high school students, including those that confront significant challenges to their success – significantly improving employment prospects. Data on the relationships among gender, ethnicity and hourly wage rates for ROCP students and their comparison group peers indicate that this type of career/technical training is very helpful to young women and to members of all ethnic groups as they enter the labor market. ROCP graduates report significantly higher wage rates in all categories, indicating that these students are receiving training in high-demand career/technical programs. Combined with the fact that ROCP students report high satisfaction with their ROCP coursework, the satisfaction survey data from this study paint a picture of ROCP students who are improving their academic achievement, going on to post-secondary instruction, increasing their employability skills, obtaining higher wage jobs, and having a positive view of their ROCP experiences. It is recommended that further research be conducted to examine larger numbers of ROCP students in order to see if this achievement and work success profile remains constant.

While these typically lower achieving students are clearly learning the skills needed to be successful in the job market, further study is needed to ascertain how best to improve their pursuit of reading, mathematics and other academic standards without jeopardizing the development of social responsibility and workplace discipline that are leading to workplace desirable outcomes.

California's ROCPs provide a meaningful educational experience to a broad range of students not following a traditional higher education pathway during their high school years. They are providing these students with meaningful educational experiences – experiences that these students prefer over their other high school training experiences. ROCP training provides students, on average, with both successful entry into the job market and continuing education opportunities after leaving high school.

A delivery system such as ROCP, not only provides students with employability skills, but also reinforces academic skills and can be a useful strategy for helping to raise overall high school graduation rates. It can provide strong support for numbers of students pursuing post-secondary schooling. One major goal of both the federal “No Child Left Behind” legislation and California's “High Performance High Schools” initiative is supporting successful transition to post-secondary schooling and careers for all children. In a state where “approximately 1/3 of all California high school students drop out of school” (ConnectEd 2006), ROCP programs are playing an important role in supporting these efforts to keep kids in school.

In a recent statewide survey of California 9th and 10th graders, Peter Hart Research Associates (2006) found that 61% of these students had a less than positive view of their high school experience. However, 89% of the students surveyed would prefer a school environment “where they could take courses that they need for college but also have more opportunity to acquire skill and knowledge relevant to future careers.” The results of the foregoing 2006 study would indicate that ROCP curricula, when offered in close partnership with the students’ academic course work, could keep students motivated to stay in school, and assist them in developing a powerful set of tools that lead to success in both college and the workplace.

These and other important findings from this ROCP 2006 study are detailed in the body of this report. The data collection methods and the data analysis techniques used for the preparation of this technical report could easily be developed into an ongoing data system capable of documenting longitudinal outcomes and of identifying strengths and weaknesses in particular ROCP programs and services. Not only have the costs for this feasibility study been modest, data gathering instruments developed for this study can be scaled-up for statewide use. The study has produced an electronic database that could easily serve as the template for full implementation.

References

- Alexander, Karl L., Doris Entwisle, and Nadar Kabbani. "The Dropout Process in Life Course Perspective: Early Risk Factors at Home and School." *Teachers College Record* V103(5):pp. 760-822, 2001.
- Barro, Stephen M. "Who Drops Out of High School? Finds from High School and Beyond." National Center for Educational Statistics 87397:May 1987.
- Delci, Mario and David Stern. "Who Participates in New Vocational Programs? A Preliminary Analysis of Student Data from NLSY97." ERIC ED436646:1999.
- Gaustad, Joan "Potential Dropouts" ERIC ED339092:1991.
- Hart, Peter D – Research Associates "Report Findings Based on a Survey Among California Ninth and Tenth Graders." Washington DC:April 5, 2006
- Mitchell, Ross E. "Class Size Reduction Policy: Evaluating the Impact on Student Achievement in California." Doctoral Dissertation, University of California, Riverside:2001.
- MPR, Associates "Youth Program – Establishing a California Center for Career and Technical Education." 2005.
- Levesque, Karen and Lisa Hudson. "Trends in High School Vocational/Technical Coursetaking, 1982-1998. Statistical Analysis Report." National Center for Educational Statistics:ERIC ED480005:2003.
- Means, B. and M. S. Knapp. "Cognitive Approaches to Teaching Advanced Skills to Educationally Disadvantaged Students." *Phi Delta Kappan* 73(4) 282-289:1991.
- O'Connell, Jack. "High Performance High School Initiative: A White Paper on Improving Student Achievement in California's High Schools." California State Dept. of Education:2004.
- Orfield, Gary, Daniel Losen, Johanna Wald, and Christopher B. Swanson. "Losing Our Future: How Minority Youth are Being Left Behind by the Graduation Rate Crisis." MA:The Civil Rights Project at Harvard University, Appendix 4 pp. 83-89:2004.

Appendices

Appendix A. Student Transcript Data Collection Form

Student Name (Last, First)		School Name:	
Student Permanent ID Number		Today's Date:	____/____/____
Graduation Year		Student Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Date of Birth	____/____/____	Date entered district:	____/____/____
ROP Program :	<input type="checkbox"/> None (Control Group) <input type="checkbox"/> Auto <input type="checkbox"/> Child Development <input type="checkbox"/> Health <input type="checkbox"/> Marketing	Student Ethnicity:	<input type="checkbox"/> Amer Ind/ Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/Afro American <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> White <input type="checkbox"/> Other/Unknown
Is student in Special Education (Do not include SDC students)	<input type="checkbox"/> No. <input type="checkbox"/> RSP Program <input type="checkbox"/> DIS Services <input type="checkbox"/> GATE Program	What is student's language status?	<input type="checkbox"/> English Only <input type="checkbox"/> English Learner (LEP/ELL) <input type="checkbox"/> English Fluent (FEP/Redesign) <input type="checkbox"/> Unknown
Does student qualify for free or reduced lunch?	<input type="checkbox"/> No. <input type="checkbox"/> Reduced Lunch <input type="checkbox"/> Free Lunch <input type="checkbox"/> Unknown	Does student have any of these barriers?	<input type="checkbox"/> Parent/expecting child <input type="checkbox"/> Single parent family <input type="checkbox"/> Displaced Homemakers <input type="checkbox"/> Other Barrier <input type="checkbox"/> No known barriers.
If student has taken vocational or career training in other than ROC programs, which one(s)?	<input type="checkbox"/> None. <input type="checkbox"/> Adult Education <input type="checkbox"/> Continuation School <input type="checkbox"/> Tech-Prep	If student is in identifiable 'career path' program, what is the emphasis?	<input type="checkbox"/> Not in career path. <input type="checkbox"/> Health related <input type="checkbox"/> Technology related <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown
If taken, in what grade did student take Algebra I?	<input type="checkbox"/> Not Taken <input type="checkbox"/> 7 th <input type="checkbox"/> 8 th <input type="checkbox"/> 9 th <input type="checkbox"/> 10 th <input type="checkbox"/> 11 th <input type="checkbox"/> 12 th	Has student taken any of the lab sciences listed?	<input type="checkbox"/> Biology <input type="checkbox"/> Chemistry <input type="checkbox"/> Earth sci <input type="checkbox"/> Life sci <input type="checkbox"/> Physics <input type="checkbox"/> Other <input type="checkbox"/> None
Has student taken computer courses?	<input type="checkbox"/> No. <input type="checkbox"/> Yes – 1 <input type="checkbox"/> Yes – 2 <input type="checkbox"/> Yes – 3 or more.	Enter student GPA for each year:	10 th Grade _____.____ <input type="checkbox"/> N/A 11 th Grade _____.____ <input type="checkbox"/> N/A 12 th Grade _____.____ <input type="checkbox"/> N/A
If 10 th Grade SAT-9 Scores are available, enter scores:	<input type="checkbox"/> Not available Total Reading _____ Total Math _____ Language _____	If 11 th Grade SAT-9 Scores are available, enter scores:	<input type="checkbox"/> Not available Total Reading _____ Total Math _____ Language _____
Address & Phone for follow-up		Who is at this location?	<input type="checkbox"/> student <input type="checkbox"/> Immediate family <input type="checkbox"/> Other relative <input type="checkbox"/> Other _____
Your initials: _____			

Appendix B. Telephone Follow-Up Survey Instrument

ROCP Accountability Study

Telephone Follow-Up Survey for 2001-2002 12th Graders

<p>1. Student Enrollment Information:</p> <p>First Name: _____ MI: ____</p> <p>Last Name: _____</p> <p>ROCP Attended: <input type="checkbox"/> 49er <input type="checkbox"/> Baldy View <input type="checkbox"/> ESGV <input type="checkbox"/> La Puente <input type="checkbox"/> Los Angeles Co. <input type="checkbox"/> Riverside Co. <input type="checkbox"/> San Diego Co. <input type="checkbox"/> San Joaquin Co.</p> <p>ROCP Program: <input type="checkbox"/> None <Control > <input type="checkbox"/> Auto <input type="checkbox"/> Business <input type="checkbox"/> Child Develop. <input type="checkbox"/> Health <input type="checkbox"/> Marketing</p>	<p>_____</p> <p>High School</p> <p>_____</p> <p>District</p> <p>2. Basic Demographic Data:</p> <p>School Permanent ID: _____</p> <p>Social Security Number: _____ - _____ - _____</p> <p>Date of Birth: ____/____/_____</p> <p>Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>Ethnicity: <input type="checkbox"/> Amer Indian/Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/Afro American <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> White <input type="checkbox"/> Other/Unknown</p>
<p>3. Follow Up Information Provider:</p> <p>Intended contact: _____ (from contact record)</p> <p>Address: _____</p> <p>City, State Zip: _____</p> <p>Phone: _____</p> <p>Actual contact: _____ (name of person reached)</p> <p>Relation to Student: <input type="checkbox"/> Self <input type="checkbox"/> Parent <input type="checkbox"/> Grand Parent <input type="checkbox"/> Other family <input type="checkbox"/> Friend <input type="checkbox"/> Other</p>	

Education Follow-Up

4. In what year did you graduate from high school? _____

if not graduated, What KEPT YOU from graduating?

- | | |
|--|---|
| <input type="checkbox"/> Got expelled | <input type="checkbox"/> Moved & quit |
| <input type="checkbox"/> Lost interest in school | <input type="checkbox"/> Trouble with the law |
| <input type="checkbox"/> Was afraid of gangs | <input type="checkbox"/> Behind and gave up |
| <input type="checkbox"/> Needed money, got job | <input type="checkbox"/> Drug/alcohol probs. |
| <input type="checkbox"/> Accident or illness | <input type="checkbox"/> Got pregnant/baby |
| <input type="checkbox"/> Care for family member | <input type="checkbox"/> Other (specify) |
- _____

5. Have you been involved in higher training or education since high school?

Highest level completed since high school:

- | | |
|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Adult school |
| <input type="checkbox"/> ROP | <input type="checkbox"/> Military |
| <input type="checkbox"/> Trade/Tech sch. | <input type="checkbox"/> Community college |
| <input type="checkbox"/> 4-year coll/univ | <input type="checkbox"/> Other |

Level currently enrolled in:

- | | |
|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Adult school |
| <input type="checkbox"/> ROP | <input type="checkbox"/> Military |
| <input type="checkbox"/> Trade/Tech sch. | <input type="checkbox"/> Community college |
| <input type="checkbox"/> 4-year coll/univ | <input type="checkbox"/> Other |

If enrolled currently, are you fulltime part time
Area of study? _____

Do you plan further education in the FUTURE?

- | | |
|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Adult school |
| <input type="checkbox"/> ROP | <input type="checkbox"/> Military |
| <input type="checkbox"/> Trade/Tech sch. | <input type="checkbox"/> Community college |
| <input type="checkbox"/> 4-year coll/univ | <input type="checkbox"/> Other |

6. If continuing education, What about your high school or ROP training influenced you to CONTINUE your education?

- No influence to cont.
- The skills I learned at ROP classes
- Involvement in ROCP extra-curricular activities
- A high school teacher
- An ROCP teacher
- Working with people at job site
- College credit for ROCP classes.
- Other influences (describe)

7. Overall, how would you rate your ROP training?

- Excellent
- Good
- Fair
- Poor

Employment Follow-Up

8. About how many different JOBS have you held since High School? _____

Tell me about your first job after your ROP training—

HOW LONG after ROP training did you get your
FIRST JOB? (mos/yrs) ____/____

By Dec 31st were you. . .

- | | |
|--|--|
| <input type="checkbox"/> Working | <input type="checkbox"/> In military |
| <input type="checkbox"/> further Schooling | <input type="checkbox"/> None of above |

9. In what type of company was your first job after ROP training?

What is the SIC code for this job? _____

- Were skills taught in ROP used in this job?
- Were you hired by a company where you did ROP training?

10. How much are you currently working?

- Not working
- Part time
- Full time
- More than full time
 - More than 1 job?

10a. (If not working) What type of work are you looking for?

SIC Code for this kind of job: _____

10b. (If not working) What barriers do you face in trying to get a job?

- Full time homemaker, caring for child
- Currently full time student
- Would lose welfare or unemployment benefits
- Disabled, unable to work
- Not qualified for the job I want
- No jobs available requiring the skills I have
- Don't have skills needed to get a job
- Don't know how to get a job
- Other (specify)

11. (If working) Could you tell me about your current employment—

What is your current JOB TITLE (primary job if working more than one)?

CBEDS code for this job title: _____

Current job is first job described above.

In what type of BUSINESS do you work (describe)?

SIC Code for current work: _____

Is current work related to ROP training? Yes No

Approximately how much is your hourly wage?

How HAPPY are you with the TYPE OF WORK you are now doing?

- | | | | | | |
|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Very Unhappy | Unhappy | Neither Happy nor Unhappy | Happy | Very Happy | Don't know/no opinion |

Is your current job related to your ULTIMATE occupational goal? Yes No Don't know

12. Have you ever been promoted to a new job?

- No Yes

If yes, did any promotion include:

- Change in job title.
- Job description change.
- Pay raise.

Does your current job offer an opportunity for advancement? Yes No Don't Know

Notes:

Appendix C. High School Satisfaction Surey

Regional Occupational Centers and Programs

High School Student Satisfaction Survey

<p>We'd like to know about your experiences as a student in order to make every student's experience at your school the best possible.</p> <p style="text-align: center;"><i>All of your answers will be kept confidential and will not be shared with anyone; no one will know what answers you gave to any question. You may choose not to participate at any time.</i></p> <p>Please answer each question carefully and thoughtfully.</p>	<ul style="list-style-type: none"> Please fill in the bubble next to each answer you select completely – (like this ●, not ○, ⊙, or ⊗). There are no right or wrong answers to any questions, only you know the best answer for you
<p>Thank you, for your time and effort in helping us better understand the needs, strengths and goals of the students in your school.</p>	

	1. Not at all	2. Very little	3. Somewhat	4. Quite a bit	5. Very much	6. Don't know No opinion
Thinking about the classes you've taken in high school, what you've learned from class sessions and homework. . .						
1. How helpful are your classes in meeting your educational goals?	①	②	③	④	⑤	⑥
2. How well are you being prepared for your future job?	①	②	③	④	⑤	⑥
3. How well are you being prepared for life in general?	①	②	③	④	⑤	⑥
4. In general, do you enjoy your classes?	①	②	③	④	⑤	⑥
5. How much would you say you have control over your life?	①	②	③	④	⑤	⑥
6. Does your future happiness depend on getting a good job?	①	②	③	④	⑤	⑥
7. How important is it that you get good grades in school?	①	②	③	④	⑤	⑥
8. How much do you like going to this school?	①	②	③	④	⑤	⑥
9. How much will your current school work help you as an adult?	①	②	③	④	⑤	⑥
10. How disappointed are you when you get a bad grade?	①	②	③	④	⑤	⑥
11. How disappointed are your parents when you get a bad grade?	①	②	③	④	⑤	⑥
12. How disappointed are your close friends if they get bad grades?	①	②	③	④	⑤	⑥
13. How much do you like English or language arts ?	①	②	③	④	⑤	⑥
14. How much do you like mathematics ?	①	②	③	④	⑤	⑥
15. How much do you like science ?	①	②	③	④	⑤	⑥
16. How much do you like social studies ?	①	②	③	④	⑤	⑥
17. How much do you like physical education (PE) ?	①	②	③	④	⑤	⑥
18. How much do you like music, art or drama classes?	①	②	③	④	⑤	⑥
19. How much do you like career classes (like ROP)?	①	②	③	④	⑤	⑥

	1. Never	2. Not very often	3. Sometimes	4. Frequently	5. Very often	6. Don't know No opinion	
How often do the following statements describe your overall high school experience. . .							
20. My teachers connect what we learn in class to the "real world".	①	②	③	④	⑤	⑥	
21. My teachers help me solve everyday real-life problems.	①	②	③	④	⑤	⑥	
22. My teachers adjust lessons so that I can learn at my own pace.	①	②	③	④	⑤	⑥	
23. My school program brings me into contact with business or community people from outside the school.	①	②	③	④	⑤	⑥	
24. I use a computer for classroom lessons, assignments or research.	①	②	③	④	⑤	⑥	
25. My class work is very confusing.	①	②	③	④	⑤	⑥	
26. My teachers use grading standards that I fully understand.	①	②	③	④	⑤	⑥	
27. My classes are interesting and enjoyable.	①	②	③	④	⑤	⑥	
28. My classes are boring.	①	②	③	④	⑤	⑥	
29. I feel like I would like to drop out of school without graduating.	①	②	③	④	⑤	⑥	
30. I feel my courses are preparing me to be a successful adult.	①	②	③	④	⑤	⑥	
31. I feel like the best part of school is being with my friends.	①	②	③	④	⑤	⑥	
32. I feel like the best part of school is the after-school activities (clubs, sports, drama, etc.)	①	②	③	④	⑤	⑥	
33. I feel that there is too much emphasis on grades.	①	②	③	④	⑤	⑥	
34. I feel I could get much better grades if I tried harder.	①	②	③	④	⑤	⑥	
35. I feel that my teachers really care about my success in school.	①	②	③	④	⑤	⑥	
36. I feel that my teachers really care about my success as an adult.	①	②	③	④	⑤	⑥	
37. I feel that my career decisions are made for me by other people.	①	②	③	④	⑤	⑥	
38. I feel that I just can't make up my mind what I want to do when I leave school.	①	②	③	④	⑤	⑥	
39. I feel that I am in control of my life and will reach my goals.	①	②	③	④	⑤	⑥	
40. I feel I know just what I want to do with my life.	①	②	③	④	⑤	⑥	
	1. High school	2. Military training	3. Trade/tech or business sch.	4. Community college	5. 4-year college or university	6. Advanced/Professional deg	7. Don't know No opinion
Thinking about your long range educational goals. . .							
41. Realistically, how far will you go in school?	①	②	③	④	⑤	⑥	⑦
42. How far do your parents/guardians expect you to go?	①	②	③	④	⑤	⑥	⑦
43. How far do your teachers expect you to go?	①	②	③	④	⑤	⑥	⑦
44. How far do your counselors expect you to go?	①	②	③	④	⑤	⑥	⑦
45. How far would you like to go if you could?	①	②	③	④	⑤	⑥	⑦

	1. All As	2. As and Bs	3. Bs and Cs	4. Cs and Ds	5. All Ds & Fs	6. Don't know
Thinking about your grades in school. . .						
46. What kind of grades do you usually get?	①	②	③	④	⑤	⑥
47. What grades could you get if you really tried ?	①	②	③	④	⑤	⑥
48. What kind of grades did you get this year ?	①	②	③	④	⑤	⑥
49. What kind of grades do you think your closest friends get?	①	②	③	④	⑤	⑥
	1. None	2. Only 1 or 2	3. A few	4. Many of them	5. Nearly all of them	6. Don't know
Thinking about your closest friends in high school. . .						
50. How many care how well they do in school?	①	②	③	④	⑤	⑥
51. How many have dropped out of high school?	①	②	③	④	⑤	⑥
52. How many will go to a trade or technical school after high school?	①	②	③	④	⑤	⑥
53. How many will go to a community college?	①	②	③	④	⑤	⑥
54. How many will go to a 4-year college or university?	①	②	③	④	⑤	⑥
Thinking about the classes you've taken in school. . .						
55. How many are important to getting the job you would like to have?	①	②	③	④	⑤	⑥
56. How many are important in preparing you for your future life?	①	②	③	④	⑤	⑥
57. How many have you enjoyed taking?	①	②	③	④	⑤	⑥
	1. Yes	2. No	3. Don't know			
Have you. . .						
58. Successfully completed a semester of Algebra I before the 9 th grade?	①	②	③			
59. Participated in a work-based internship?	①	②	③			
60. Attended summer school to complete requirements for a class?	①	②	③			
61. Gotten tutoring or other help through a program at your school?	①	②	③			
62. Enrolled in "college prep" courses (taking the University of California (a) to (g) requirements)	①	②	③			
63. Participated in a "job-shadowing" or apprenticeship program?	①	②	③			
64. A computer in your home that you can personally use regularly?	①	②	③			
65. Successfully completed an "Advanced Placement" class?	①	②	③			
66. Participated in any of DECA FBLA, FHA, HOSA, Skills USA or VICA programs?	①	②	③			
67. Participated in an AVID program?	①	②	③			
68. Been enrolled in an "academy" program in your high school?	①	②	③			

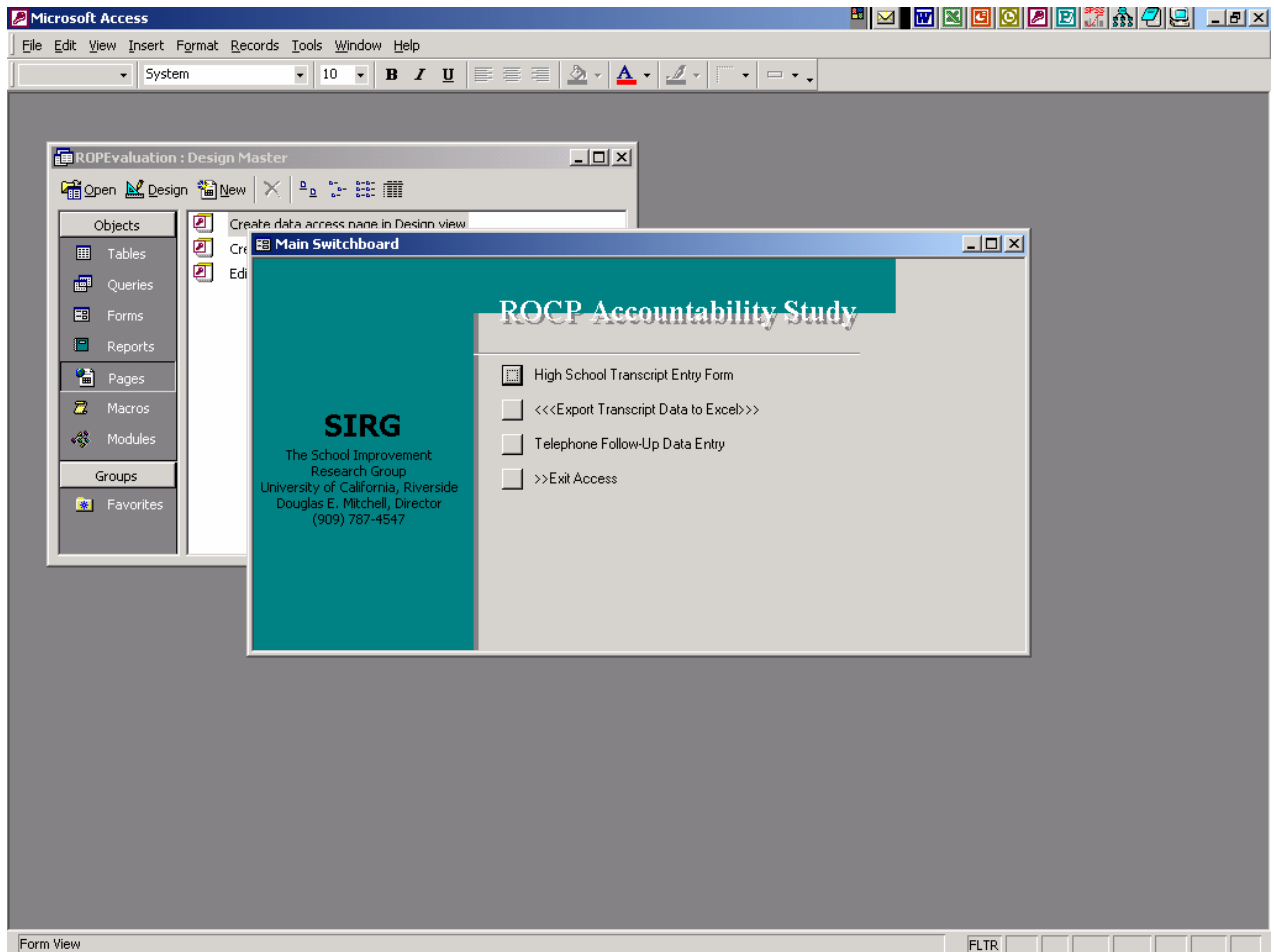
<p>71. What is the highest level of education of your mother or female guardian?</p> <ul style="list-style-type: none"> <input type="radio"/> Not high school graduate <input type="radio"/> High school graduate <input type="radio"/> Some college or trade school <input type="radio"/> College or trade school graduate <input type="radio"/> Advanced degree (beyond college) 	<p>72. What is the highest level of education of your father or male guardian?</p> <ul style="list-style-type: none"> <input type="radio"/> Not high school graduate <input type="radio"/> High school graduate <input type="radio"/> Some college or trade school <input type="radio"/> College or trade school graduate <input type="radio"/> Advanced degree (beyond college) 															
<p>69. If employed, how many hours per week do you typically work?</p> <ul style="list-style-type: none"> <input type="radio"/> Not employed <input type="radio"/> 1 to 5 hours per week <input type="radio"/> 6 to 15 hours per week <input type="radio"/> 16 to 20 hours per week <input type="radio"/> More than 20 hours. 	<p>70. Counting this year, how many years have you been at this school?</p> <ul style="list-style-type: none"> <input type="radio"/> One <input type="radio"/> Two <input type="radio"/> Three <input type="radio"/> Four or more 															
<p>73. What is the approximate yearly income of your family?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than \$15,000 <input type="radio"/> \$15,000 to \$24,999 <input type="radio"/> \$25,000 to \$39,999 <input type="radio"/> \$40,000 to \$60,000 <input type="radio"/> More than \$60,000 	<p>74. To which ethnic group do you belong?</p> <ul style="list-style-type: none"> <input type="radio"/> African American <input type="radio"/> Asian American, Pacific Islander <input type="radio"/> Latino/Hispanic <input type="radio"/> Native American <input type="radio"/> White/Caucasian <input type="radio"/> Other, More than one 															
<p>75. Are you. . .</p> <ul style="list-style-type: none"> <input type="radio"/> Male <input type="radio"/> Female 	<p>76. What is your date of birth?</p> <p>_____ / _____ / _____</p> <p>Month Day Year</p>															
<p>77. If you were enrolled in a Regional Occupational Program (ROP) in the 11th grade, what career area did you study?</p> <table style="width: 100%; border: none;"> <tr> <td><input type="radio"/> I was not in an ROP program</td> <td><input type="radio"/> Auto</td> <td><input type="radio"/> Business</td> </tr> <tr> <td><input type="radio"/> Child Development</td> <td><input type="radio"/> Health</td> <td><input type="radio"/> Marketing</td> </tr> <tr> <td><input type="radio"/> Health</td> <td><input type="radio"/> Foods</td> <td><input type="radio"/> Agriculture</td> </tr> <tr> <td><input type="radio"/> Law/Fire</td> <td><input type="radio"/> Environmental Tech</td> <td><input type="radio"/> Machining</td> </tr> <tr> <td></td> <td></td> <td><input type="radio"/> Other</td> </tr> </table>		<input type="radio"/> I was not in an ROP program	<input type="radio"/> Auto	<input type="radio"/> Business	<input type="radio"/> Child Development	<input type="radio"/> Health	<input type="radio"/> Marketing	<input type="radio"/> Health	<input type="radio"/> Foods	<input type="radio"/> Agriculture	<input type="radio"/> Law/Fire	<input type="radio"/> Environmental Tech	<input type="radio"/> Machining			<input type="radio"/> Other
<input type="radio"/> I was not in an ROP program	<input type="radio"/> Auto	<input type="radio"/> Business														
<input type="radio"/> Child Development	<input type="radio"/> Health	<input type="radio"/> Marketing														
<input type="radio"/> Health	<input type="radio"/> Foods	<input type="radio"/> Agriculture														
<input type="radio"/> Law/Fire	<input type="radio"/> Environmental Tech	<input type="radio"/> Machining														
		<input type="radio"/> Other														

Thank you! That completes the survey.

If you have additional comments about your high school or career education program, please write them here:

ROCP:	Student ID# or Name
High School:	

Appendix D. Sample Screen Images from Electronic Database



Microsoft Access

File Edit View Insert Format Records Tools Window Help

MS Sans Serif 8 B I U

ROPEvaluation StudentRecords

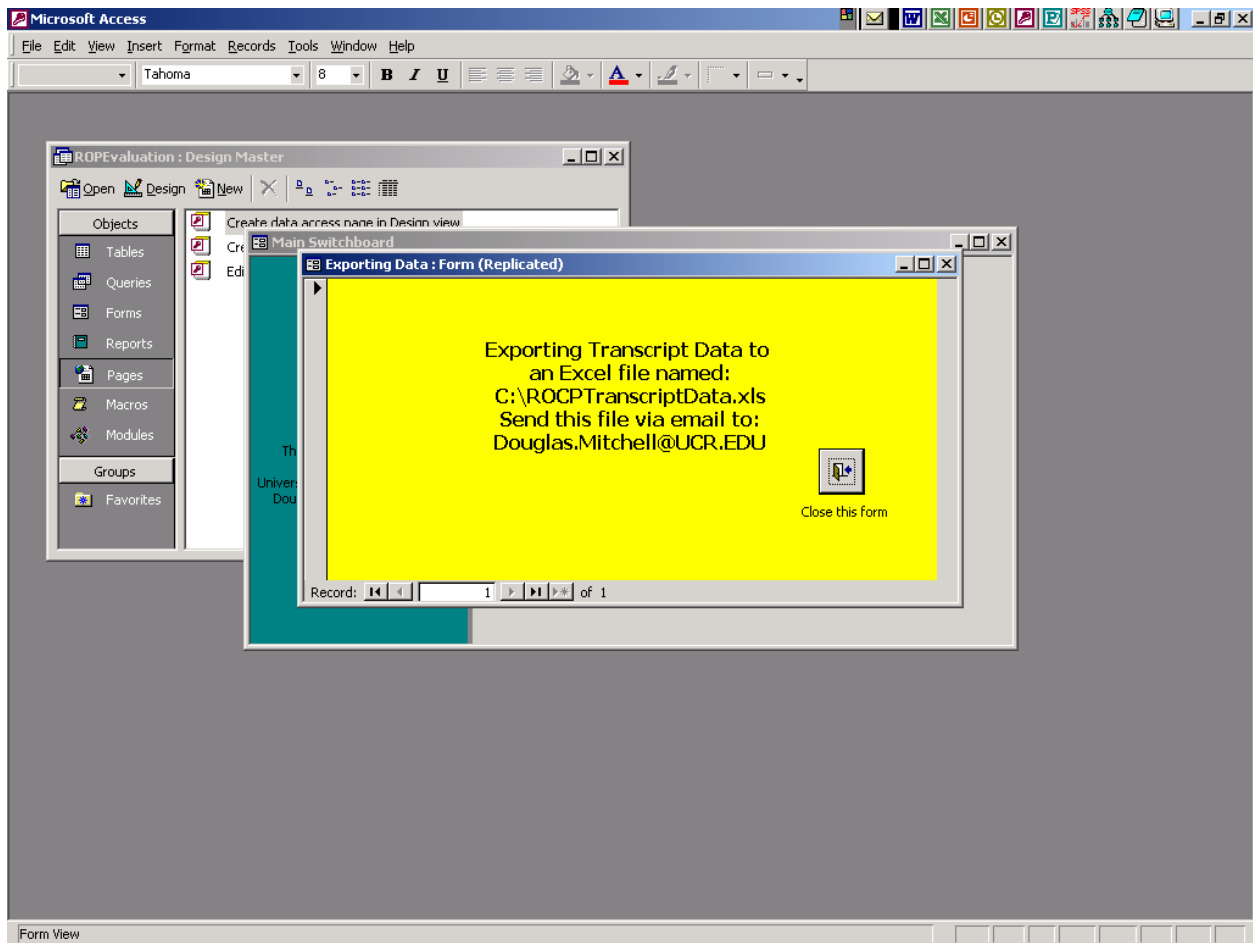
ROPC Accountability Study: Transcript Data Entry Screen

Identification Information: LastName: <input type="text"/> FirstName: <input type="text"/> ROCP: <input type="text" value="Baldy View"/> ROCP Program: <input type="text" value="0"/>		School Enrollment Data: Select ROCP before looking up school name School Name: <input type="text"/> Permanent ID: <input type="text" value="0"/> Date Entered DST: <input type="text"/> Graduation Year: <input type="text" value="0"/>	
Demographic Data: Date Of Birth: <input type="text"/> Gender: <input type="text"/> Ethnicity: <input type="text"/> Free Lunch: <input type="text"/> Language Status: <input type="text"/> Special Educ: <input type="text"/> Vocational Educ: <input type="text"/> Barriers: <input type="text"/>		School Participation Data: Algebra I: <input type="text"/> Computer Courses: <input type="text"/> <input type="checkbox"/> Absence data available? 10th grade absences: <input type="text" value="0"/> 11th grade absences: <input type="text" value="0"/> 12th grade absences: <input type="text" value="0"/> <input type="checkbox"/> Suspension/Expulsion data available? 10th grade suspensions/expulsions: <input type="text" value="0"/> 11th grade suspensions/expulsions: <input type="text" value="0"/> 12th grade suspensions/expulsions: <input type="text" value="0"/>	
Follow-Up Information Name: <input type="text"/> Phone: <input type="text"/> Alternate Phone: <input type="text"/> Address: <input type="text"/> City, State Zip: <input type="text"/> Relation to Student: <input type="text"/>		Achievement Data: GPA10th: <input type="text" value="0"/> GPA11th: <input type="text" value="0"/> GPA12th: <input type="text" value="0"/> <input type="checkbox"/> 10th grade SAT-9's are available? SAT10Read: <input type="text" value="0"/> SAT10Math: <input type="text" value="0"/> SAT10Lang: <input type="text" value="0"/> <input type="checkbox"/> 11th grade SAT-9's are available? SAT11Read: <input type="text" value="0"/> SAT11Math: <input type="text" value="0"/> SAT11Lang: <input type="text" value="0"/>	

Data Date: ID of data entry person:

Record: 1 of 1

Student Last Name



Appendix E

Supplementary Data Analyses

The following tables present supplementary information that supports and elaborates information data presented in the body of this report.

Figure E1.

10th and 11th Grade Reading and Math Scores on STAR Tests for Nine Programs Reporting in Scale Scores

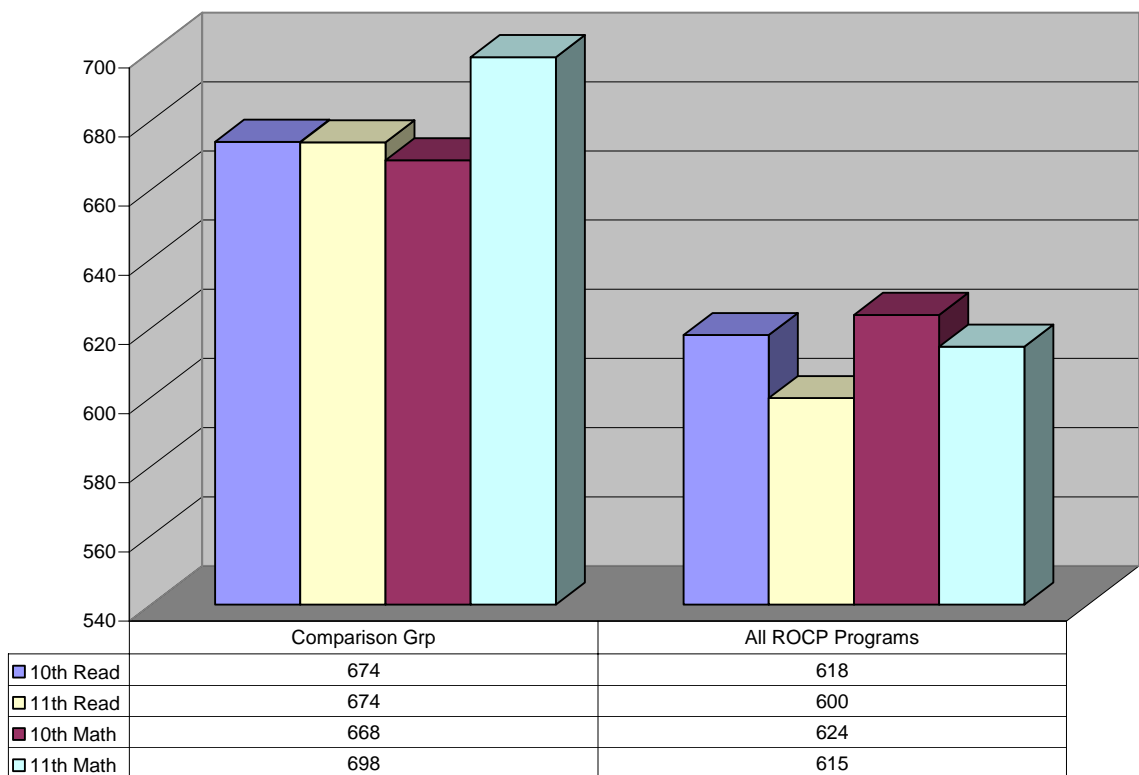


Figure E1 corroborates the data presented in Figure 13 in the main body of this report. The pattern of achievement among the nine ROCP programs reporting their STAR test results in Scale Score format display the same achievement differentials favoring the Comparison Group students as were found for the eleven programs reporting test scores as percentiles. For a fuller discussion see pages 20 and 21 in the body of this report.

Figure E2.

Grade Level at which Algebra I was Taken

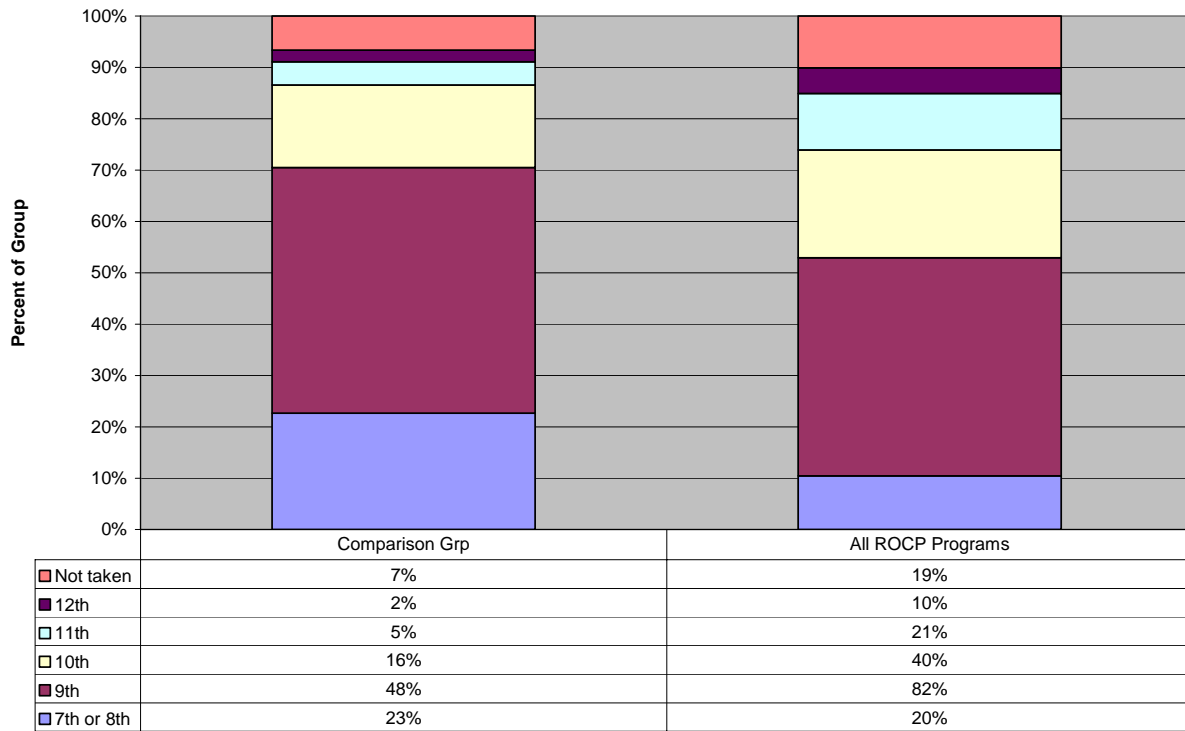
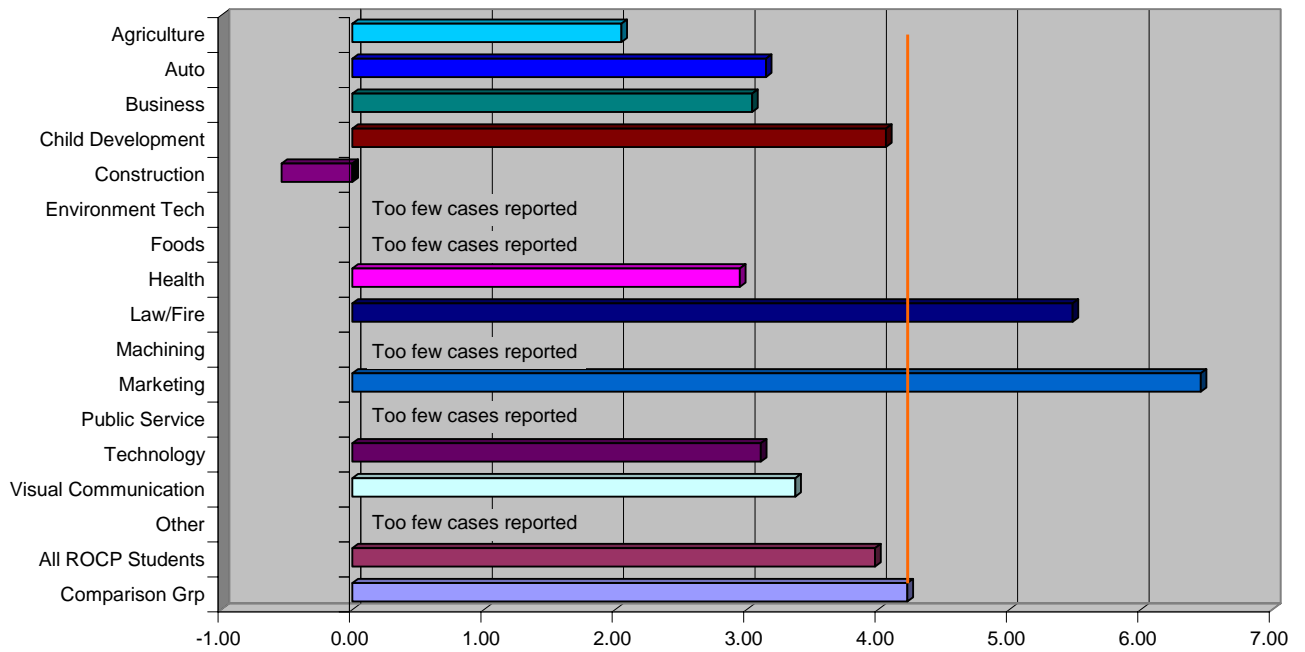


Figure E2 shows the grade at which students first succeeded in passing an Algebra I course. About 70% of the Comparison Group and 52% of the ROCP students passed algebra by the end of the 9th grade. In most ROCP career clusters more students never passed Algebra I, though exceptions include Law/Fire, Machining and Visual Communications). On average, about 9% of the students studied never passed Algebra I by the completion of 12th grade.

Figure E3.

Absence Increase from 10th to 12th Grades
Missing data might change the ROCP/Comparison Group relationship
(Only Marketing and Law/Fire had higher increase in absenteeism than Comparison Group)



As in many of the variables examined in this report, there are large variations across the nine ROCP career clusters with regard to their attendance regularity. As shown in Figure E3, most ROCP career clusters had substantially less growth in absenteeism between the 10th and 12th grades when compared with the Comparison Group. The Construction group actually improved its attendance record over the three years and cut an average of more than half a day off their absentee rate in the 12th grade. Two of the programs had worse loss in attendance than the Comparison Group (the Law/Fire cluster and the Marketing cluster).

While the data indicate that ROCPs are able to help control absenteeism, the data in 2006 provide less dramatic evidence of this effect than that reported in 2004. More study of this issue is needed.

Figure E4.

Percent of Students Responding to Satisfaction Survey with Various Experiences

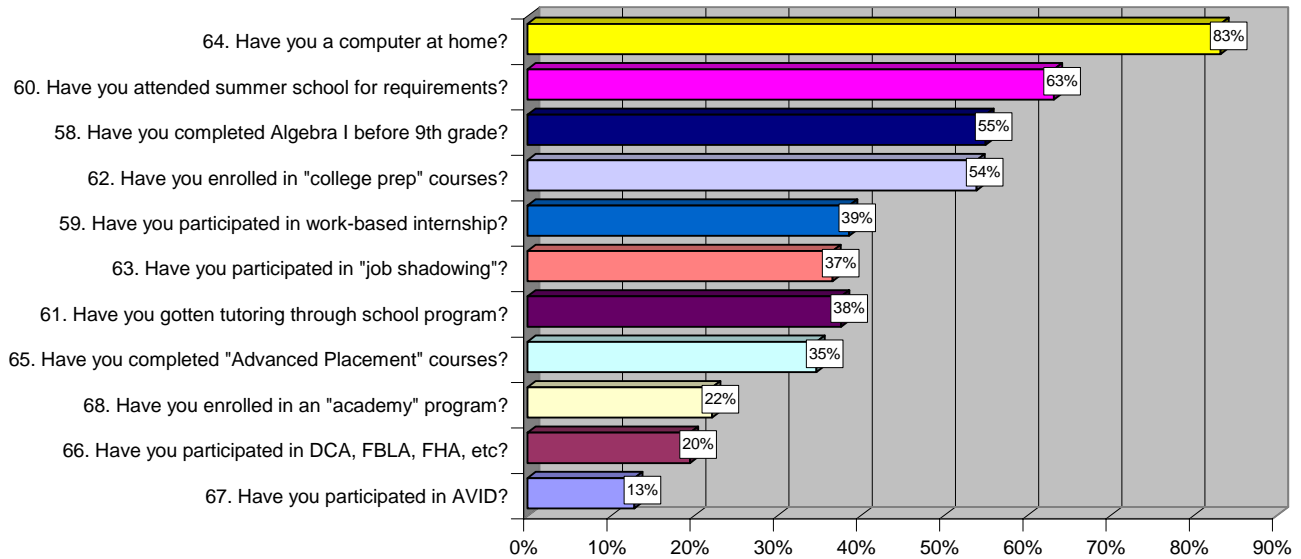


Figure E4 depicts the rate of participation in a variety of school programs by ROCP students. Strikingly, 83% of the respondents to the High School Satisfaction survey reported having a computer in their home available for their personal use.

A large proportion of the ROCP students (63%) also reported having to take summer school classes to complete high school requirements. A quarter to a third of the ROCP students avail themselves of nearly all of the various educational support services available in their schools (except for the special programs covered in survey questions #66 and #67 which involve smaller numbers of students).

Figure E5.

Fathers Education Level by ROCP vs Comparison Group Students

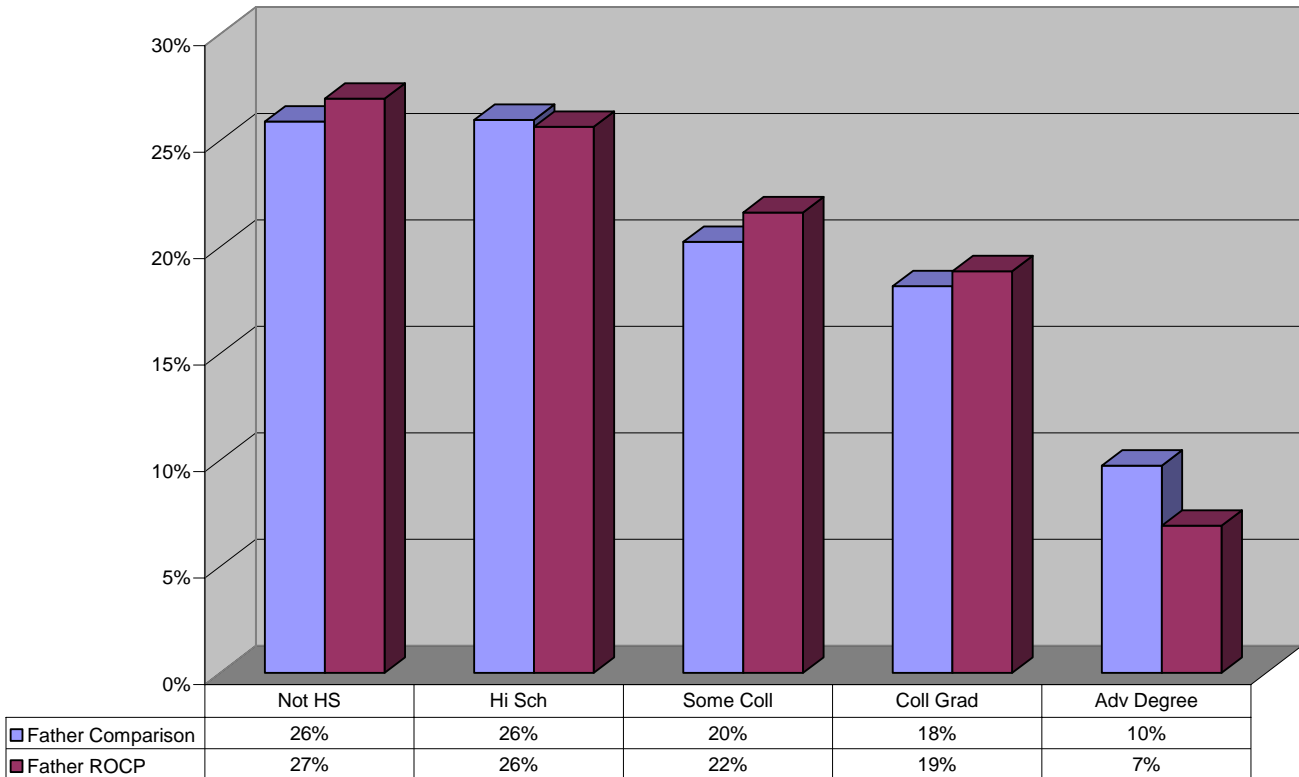
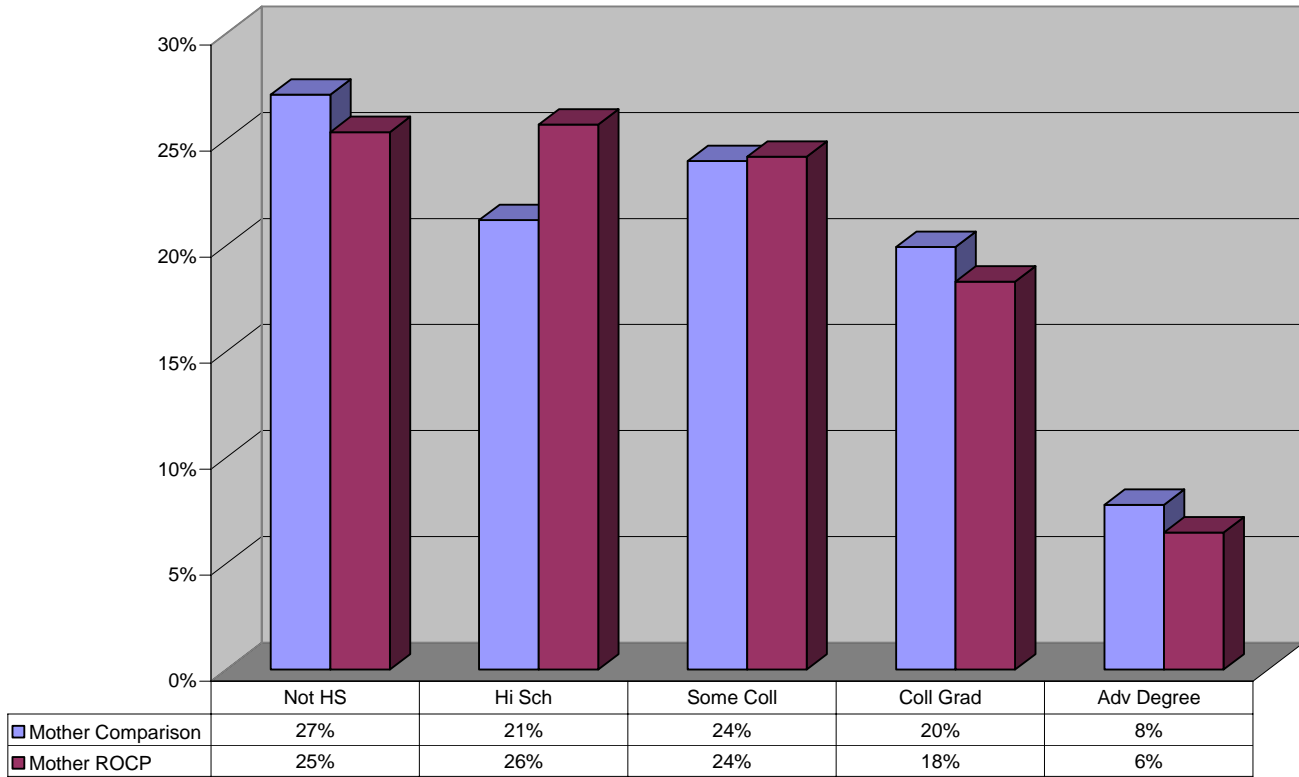


Figure E5 displays the educational attainment level of the fathers or male guardians of ROCP and Comparison Group students taking the High School Satisfaction survey. The fathers or male guardians of the ROCP students have, on average, just about as well educated as those of the Comparison Group. These fathers are a little more likely to have not graduated from high school, and significantly less likely to be holding advanced degrees. But they are more likely to have some college or have graduated from college.

Figure E6.

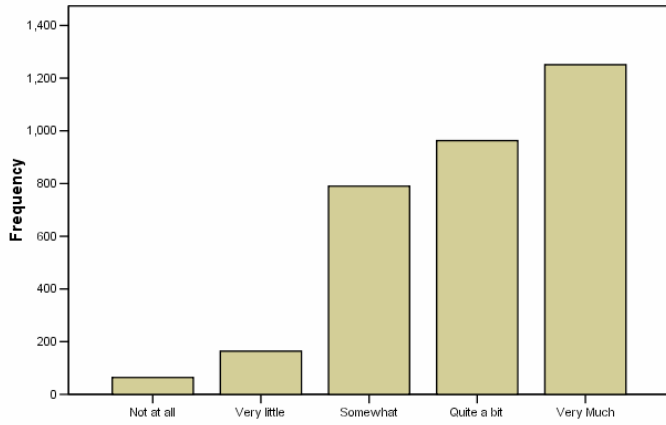
Mothers Education Level by ROCP vs Comparison Group Students



As shown in Figure E6, the pattern for mothers and female guardians is similar to that for the fathers/male guardians. The mothers of ROCP graduates are more likely to hold high school diplomas, but a little less likely to have not completed high school or to have graduated from college. The prevalence of high school only education level for the mother figures is more pronounced than for the fathers.

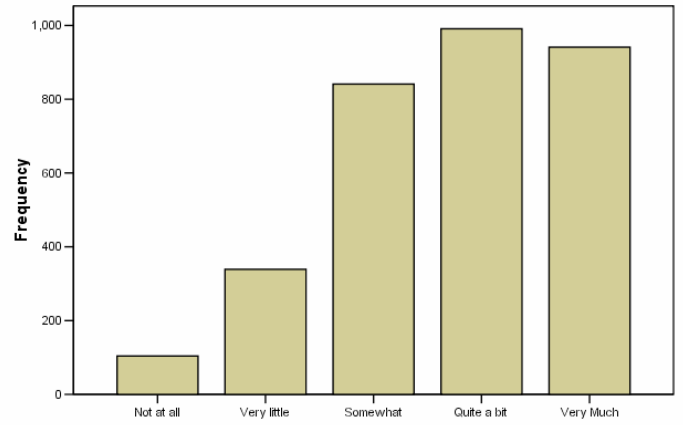
**The Remaining Pages of this Report Present
Barchart Graphs of for all Items in the
High School Satisfaction Survey**

01. How helpful were classes in meeting educational goals?



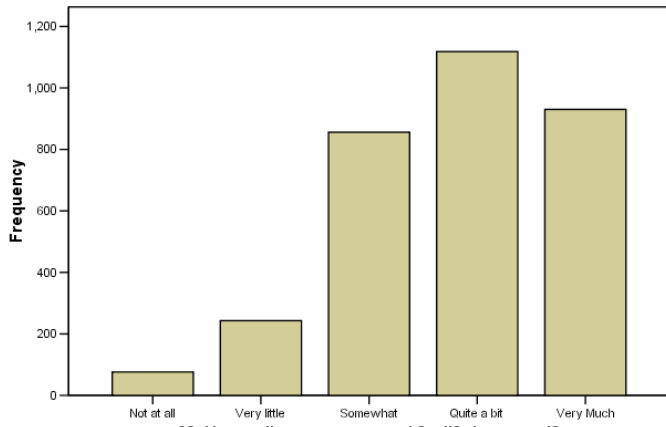
01. How helpful were classes in meeting educational goals?

02. How well are you prepared for your future job?



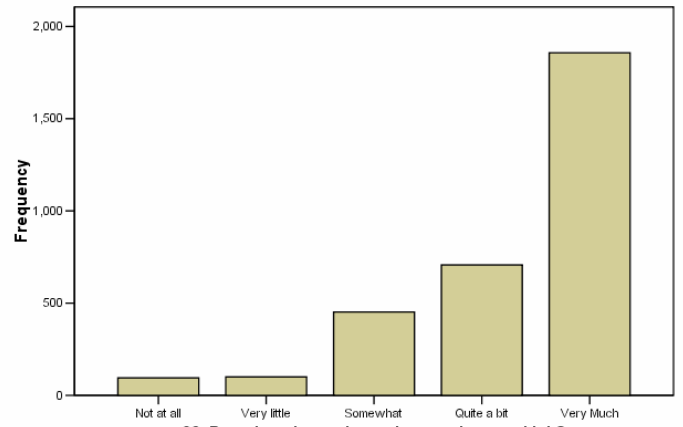
02. How well are you prepared for your future job?

03. How well are you prepared for life in general?



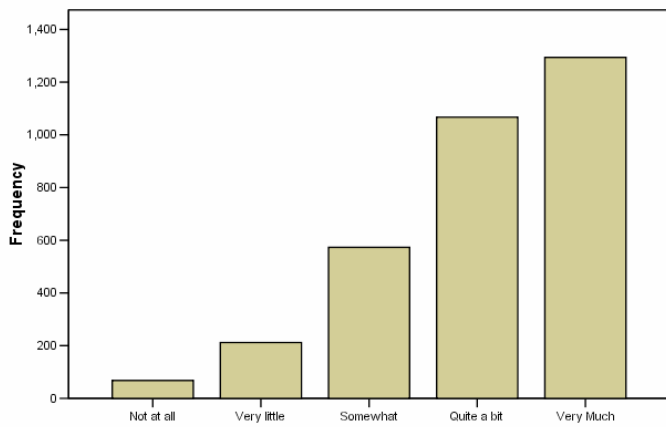
03. How well are you prepared for life in general?

06. Does happiness depend on getting good job?



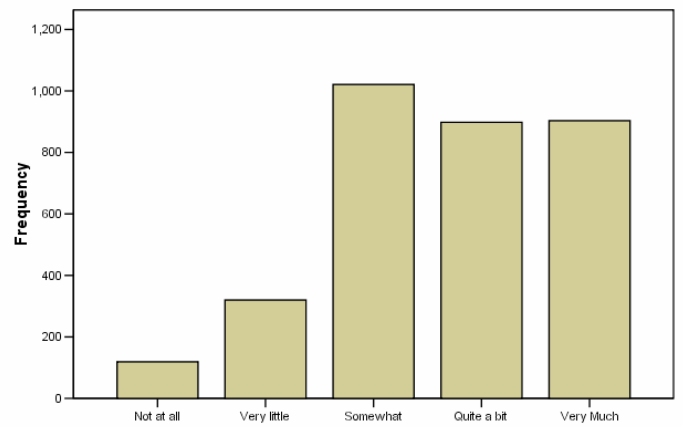
06. Does happiness depend on getting good job?

05. How much do you control your life?



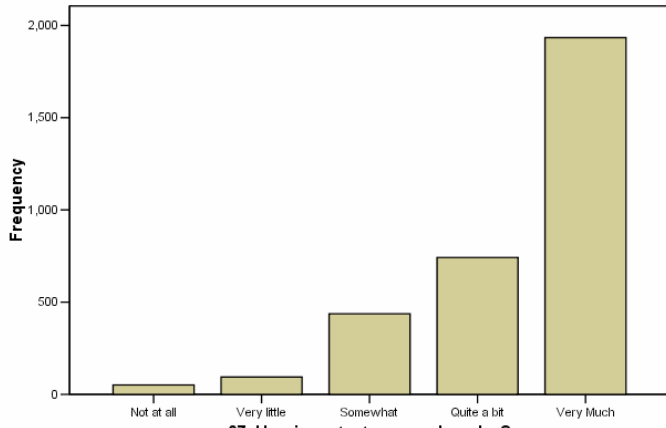
05. How much do you control your life?

04. Do you enjoy your classes?

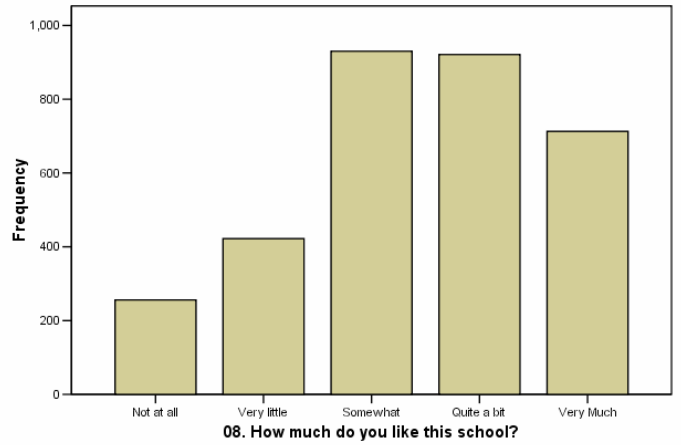


04. Do you enjoy your classes?

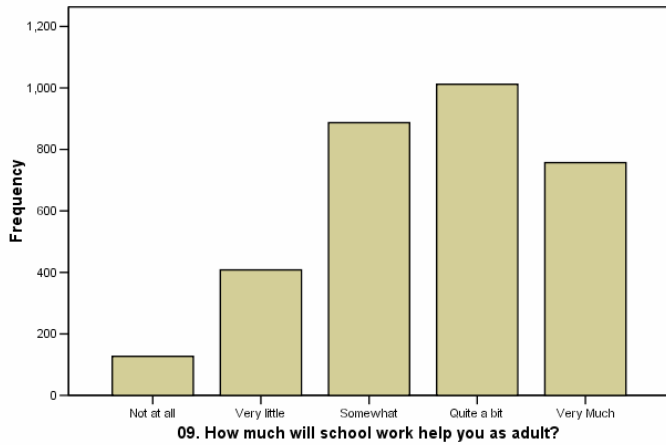
07. How important are good grades?



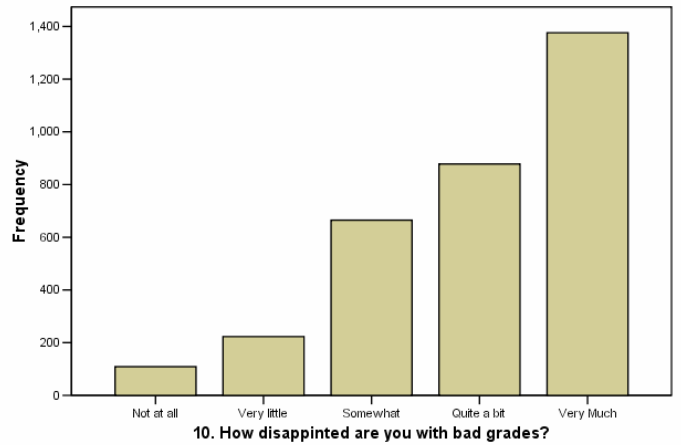
08. How much do you like this school?



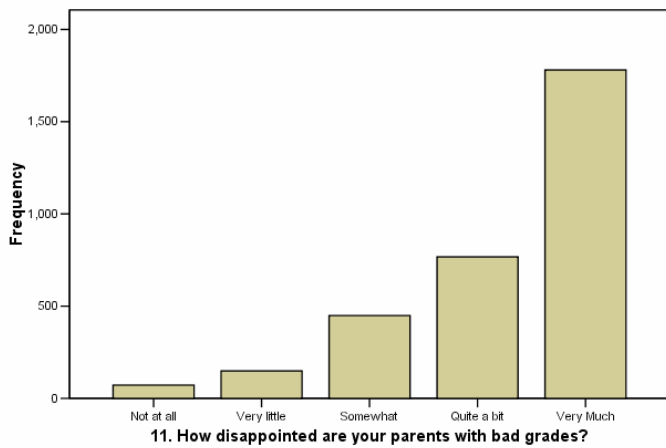
09. How much will school work help you as adult?



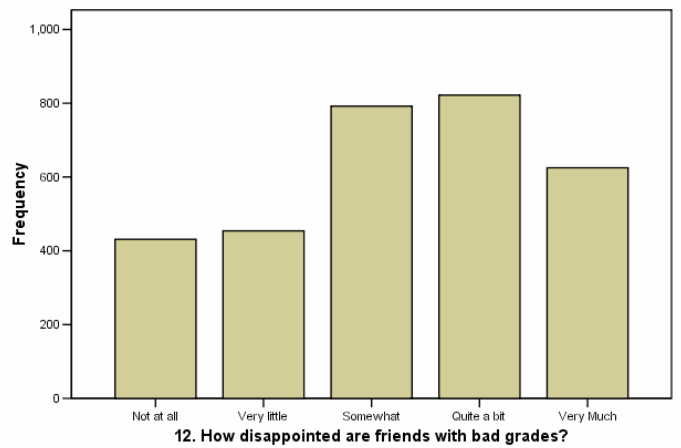
10. How disappointed are you with bad grades?



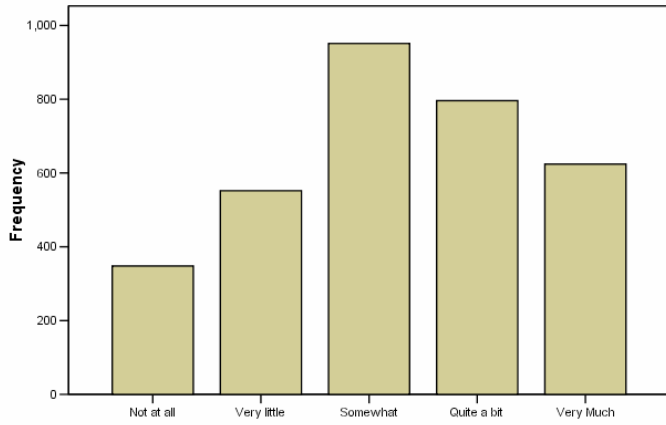
11. How disappointed are your parents with bad grades?



12. How disappointed are friends with bad grades?

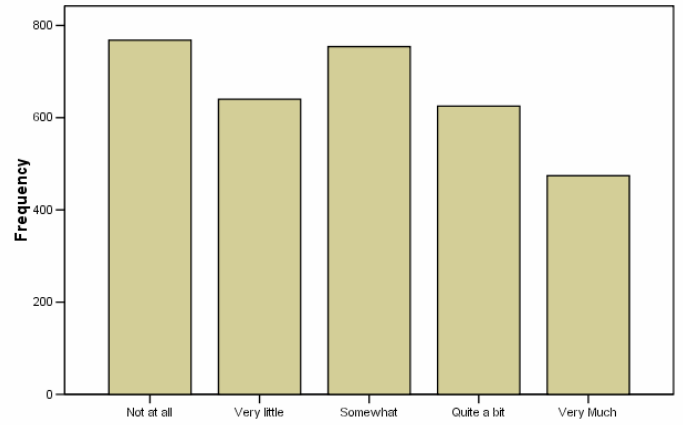


13. How much do you like English/Language Arts?



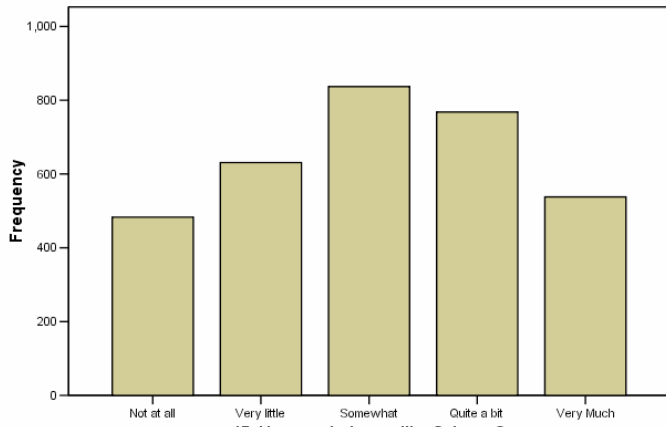
13. How much do you like English/Language Arts?

14. How much do you like Mathematics?



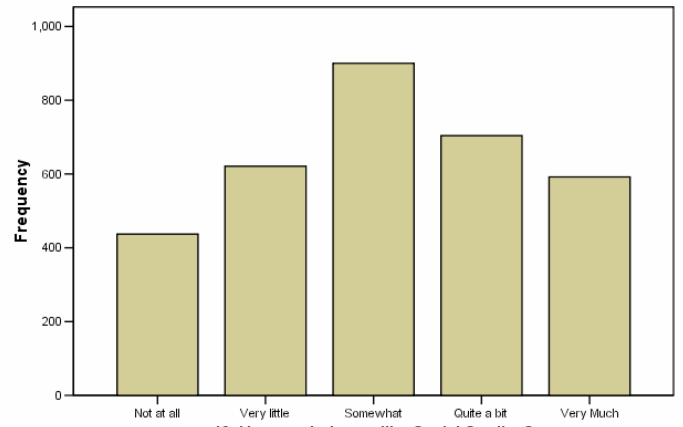
14. How much do you like Mathematics?

15. How much do you like Science?



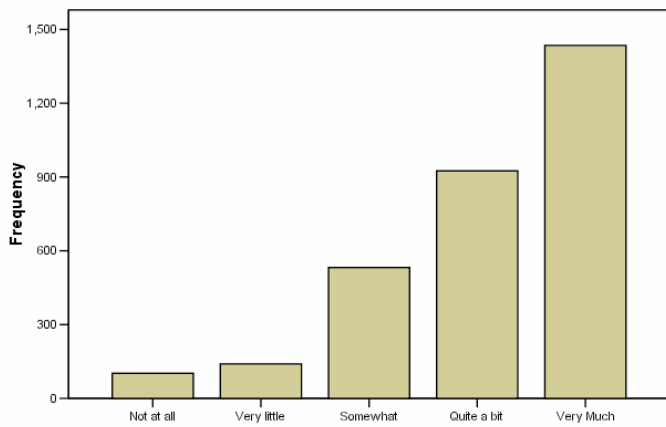
15. How much do you like Science?

16. How much do you like Social Studies?



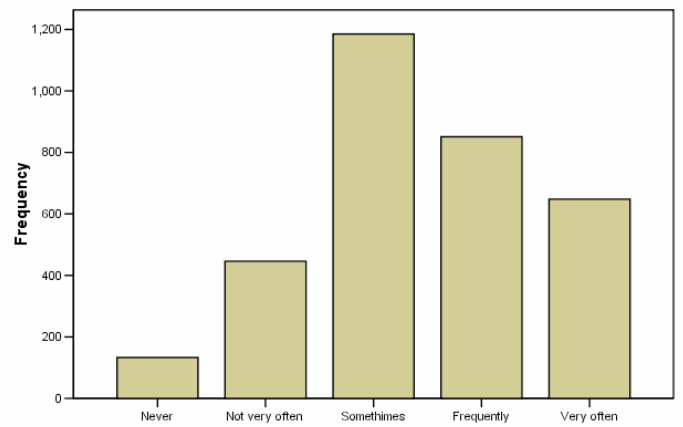
16. How much do you like Social Studies?

19. How much do you like Career/ROP classes?



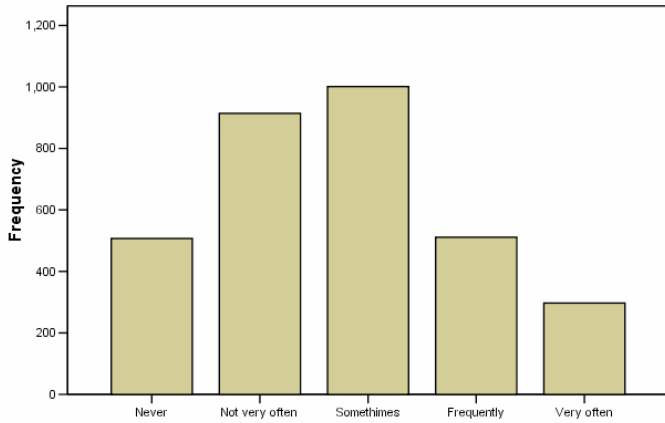
19. How much do you like Career/ROP classes?

20. Teachers connect class to the 'real world'



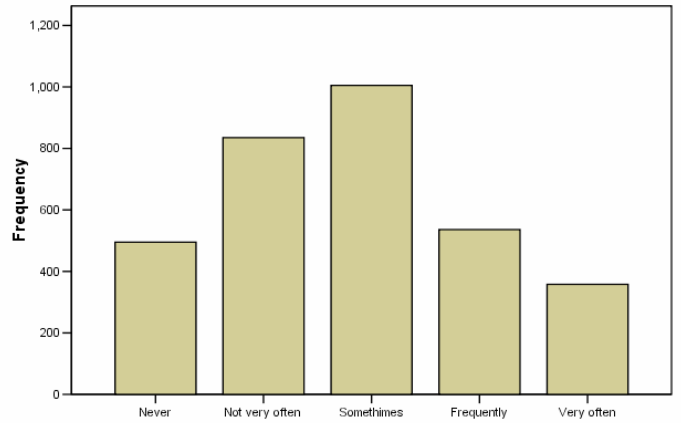
20. Teachers connect class to the 'real world'

21. Teachers help solve real-life problems



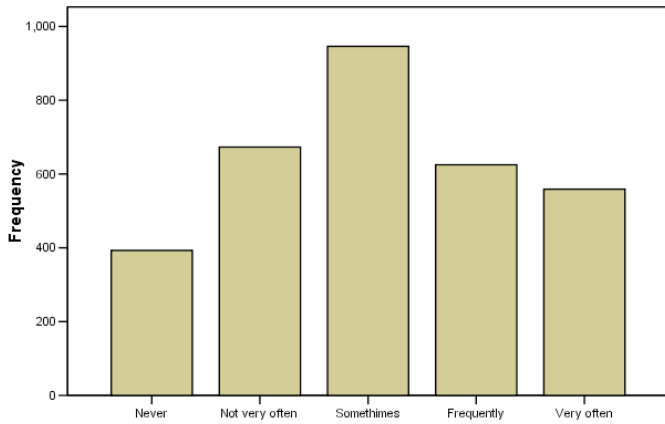
21. Teachers help solve real-life problems

22. Teachers adjust lessons to my own pace



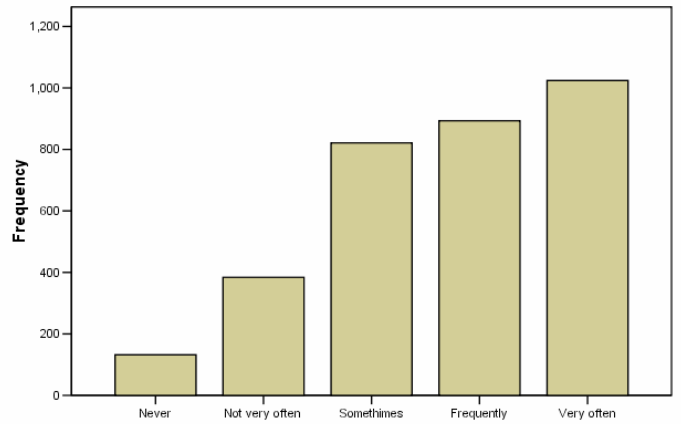
22. Teachers adjust lessons to my own pace

23. School program brings contact with business/comm



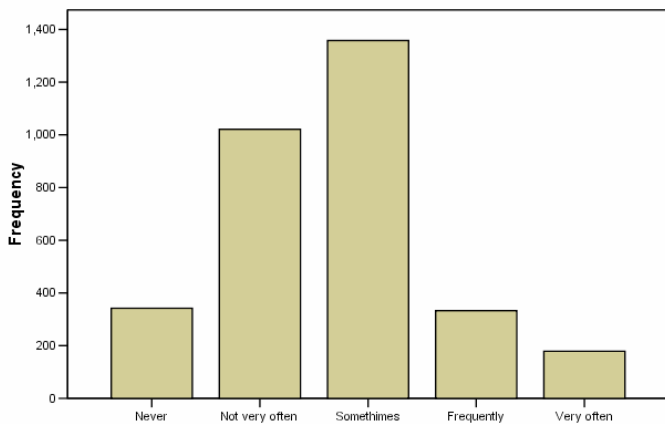
23. School program brings contact with business/comm

24. I use computer for classroom work



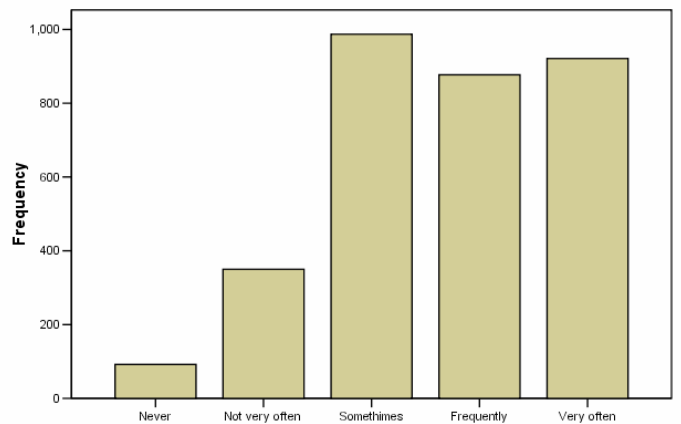
24. I use computer for classroom work

25. My class work is very confusing



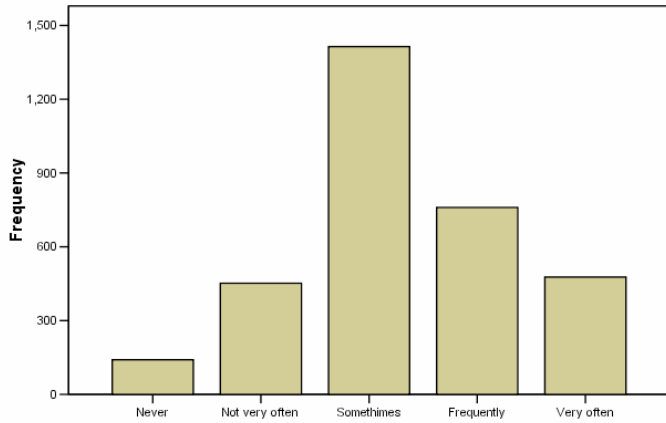
25. My class work is very confusing

26. Teachers use grading standards I understand



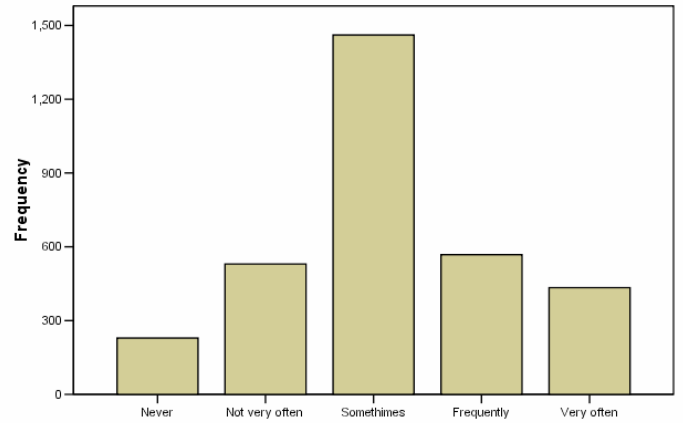
26. Teachers use grading standards I understand

27. Classes are interesting and enjoyable



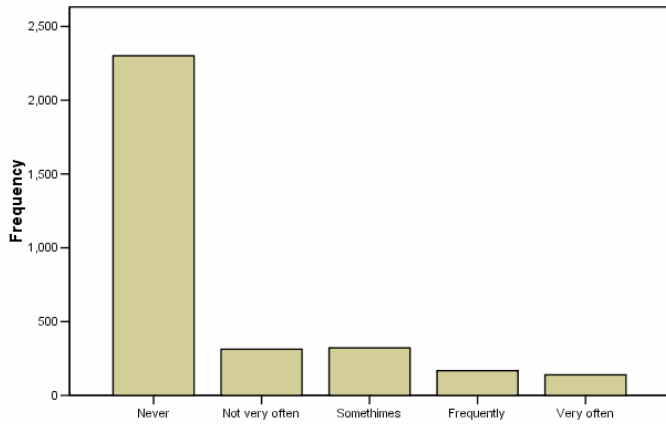
27. Classes are interesting and enjoyable

28. Classes are boring



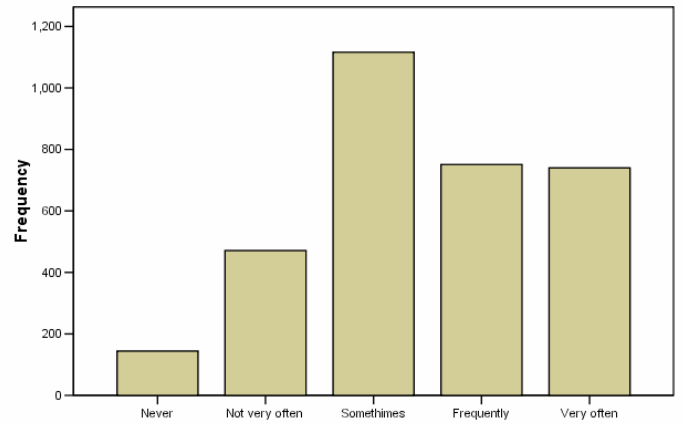
28. Classes are boring

29. I feel like I want to drop out without graduating



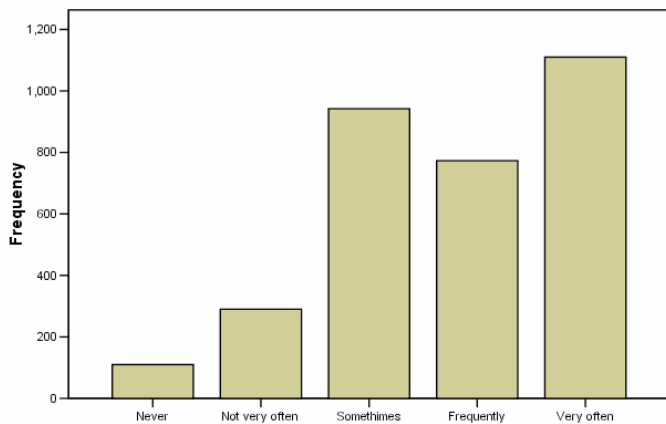
29. I feel like I want to drop out without graduating

30. My courses are preparing me to be successful



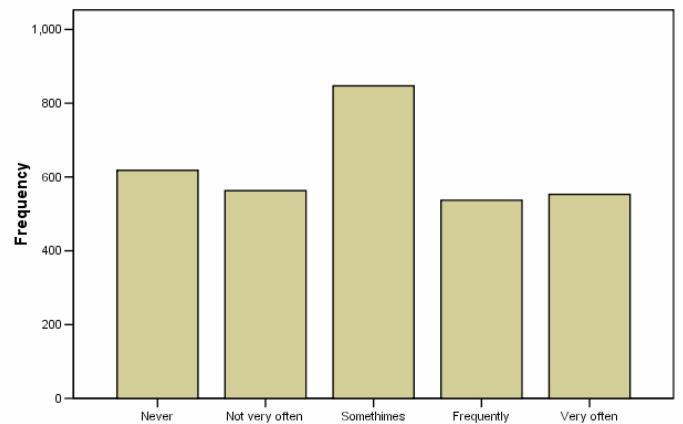
30. My courses are preparing me to be successful

31. The best part of school is being with friends



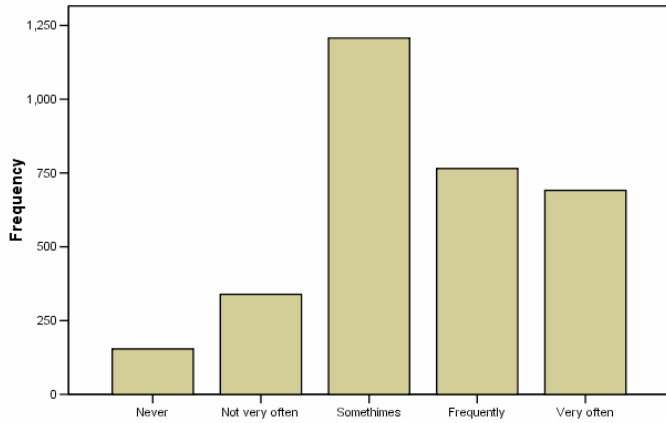
31. The best part of school is being with friends

32. The best part of school is the after-school activities



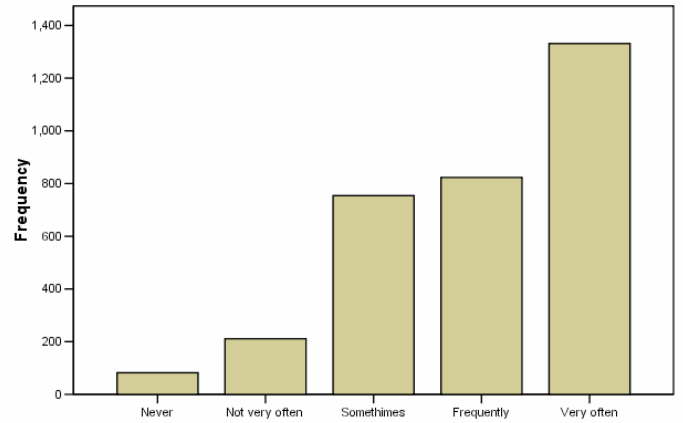
32. The best part of school is the after-school activities

33. There is too much emphasis on grades



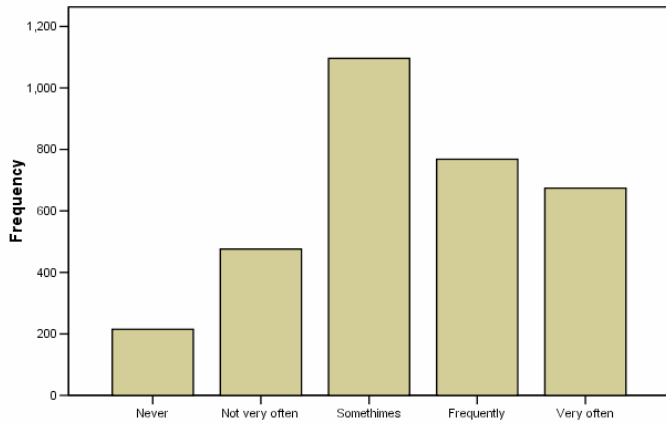
33. There is too much emphasis on grades

34. I could get much better grades if I tried harder



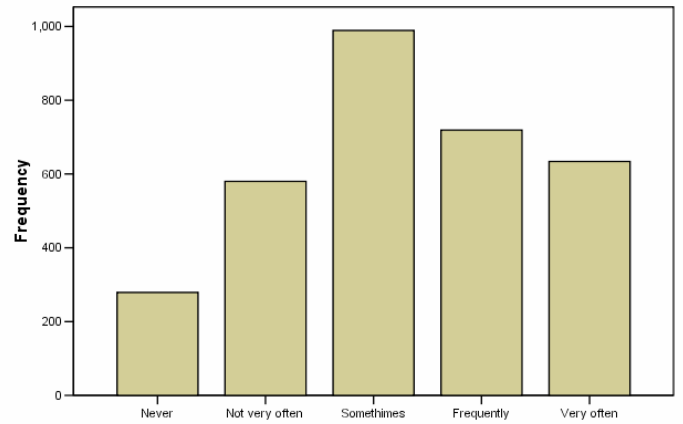
34. I could get much better grades if I tried harder

35. My teachers really care about my success



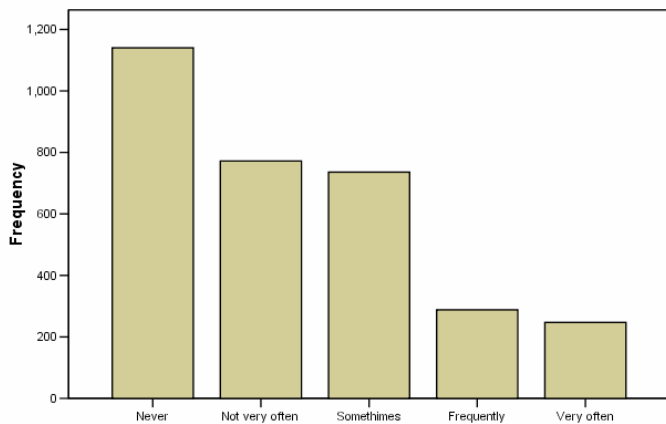
35. My teachers really care about my success

36. My teachers care about my success as an adult



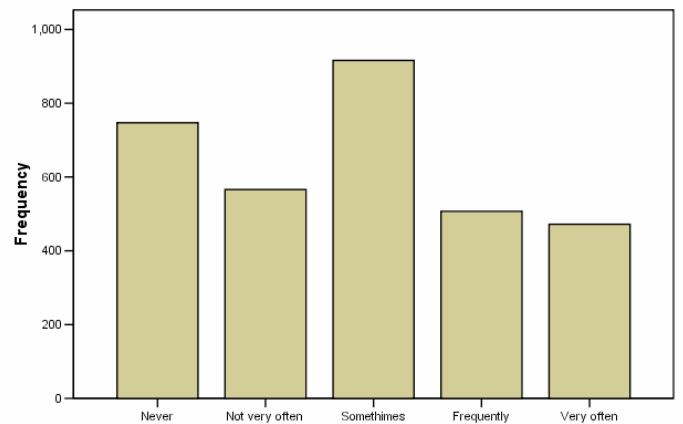
36. My teachers care about my success as an adult

37. My career decisions are made for me by others



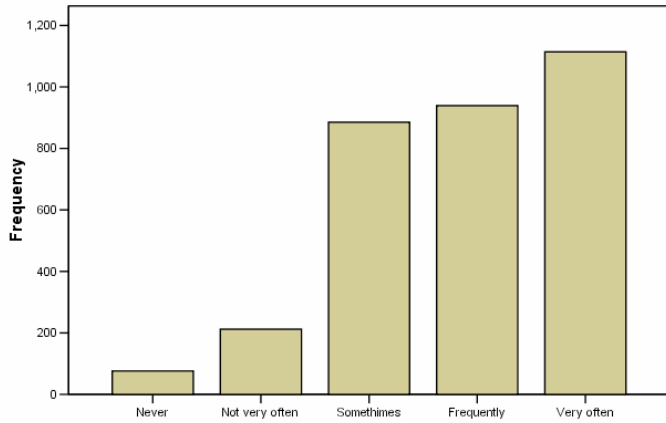
37. My career decisions are made for me by others

38. I just can't make up my mind what I want to do



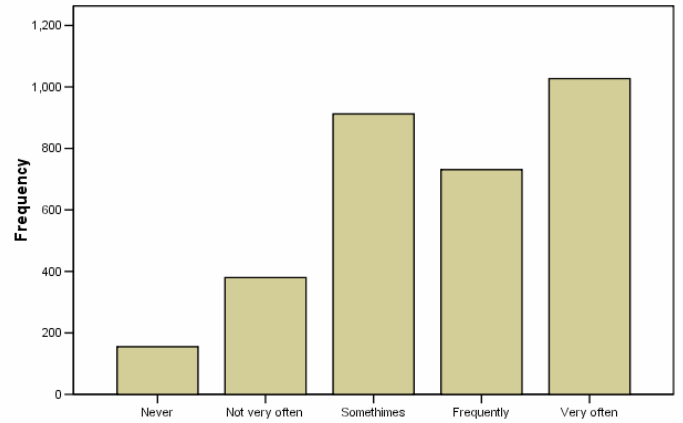
38. I just can't make up my mind what I want to do

39. I'm in control of my life and will reach my goals



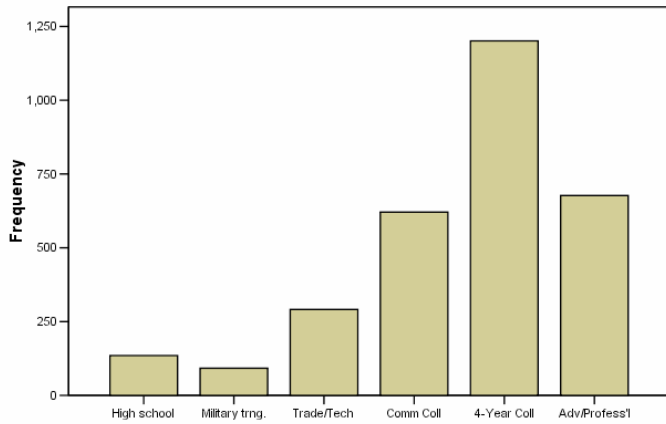
39. I'm in control of my life and will reach my goals

40. I know just what I want to do with my life



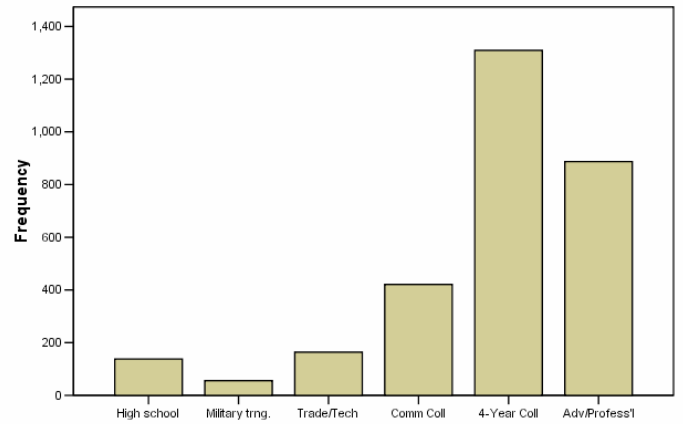
40. I know just what I want to do with my life

41. Realistically, how far will you go in school?



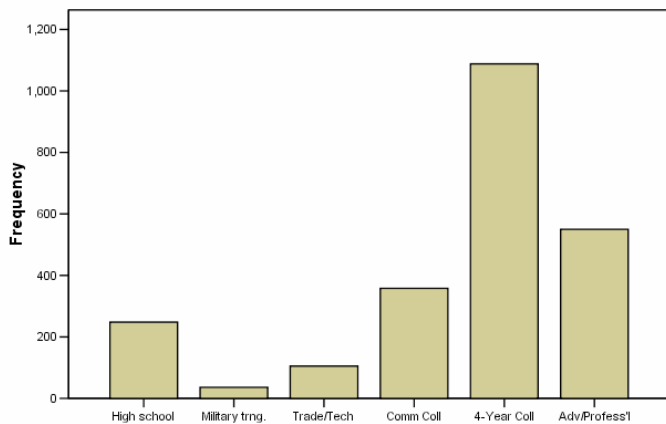
41. Realistically, how far will you go in school?

42. How far do parents expect you to go?



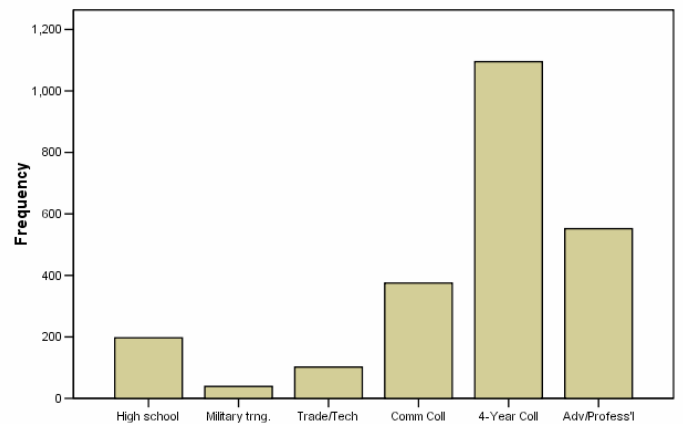
42. How far do parents expect you to go?

43. How far do teachers expect you to go?



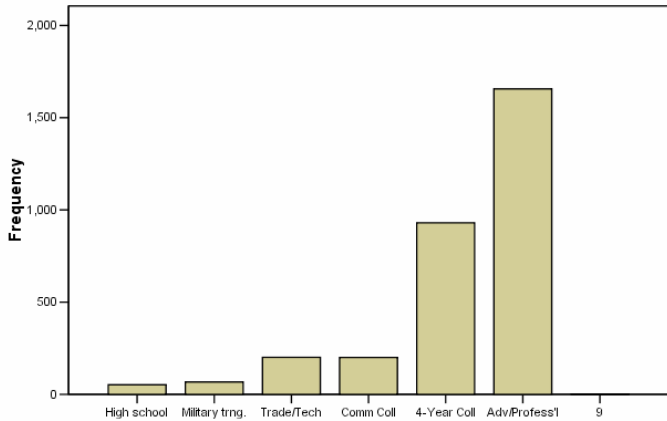
43. How far do teachers expect you to go?

44. How far do counselors expect you to go?



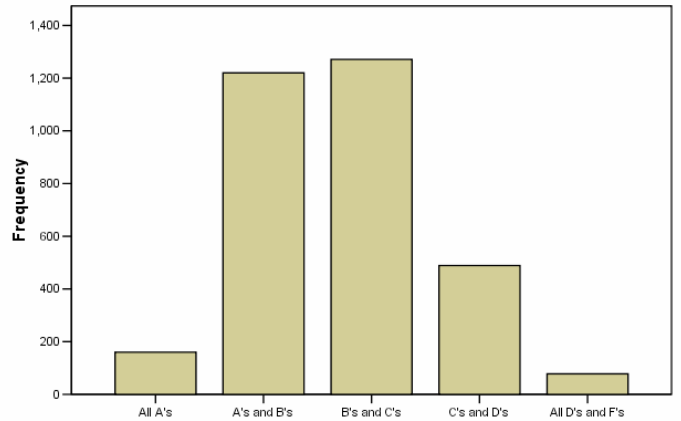
44. How far do counselors expect you to go?

45. How far would you like to go if you could?



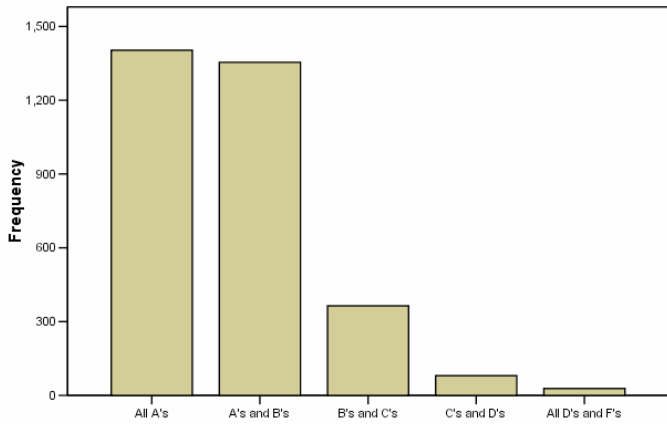
45. How far would you like to go if you could?

46. What kind of grades do you usually get?



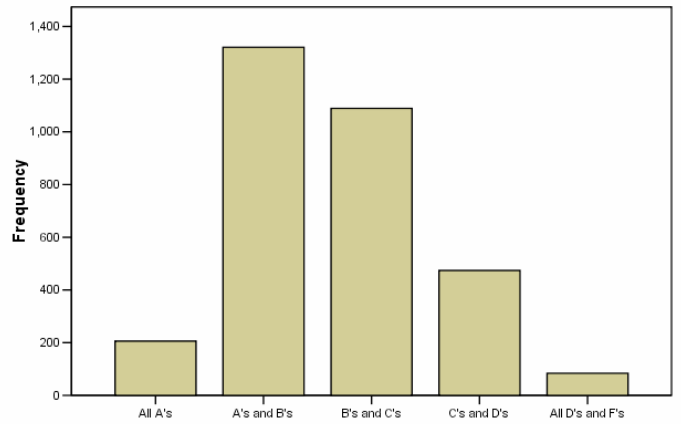
46. What kind of grades do you usually get?

47. What grades could you get if you really tried?



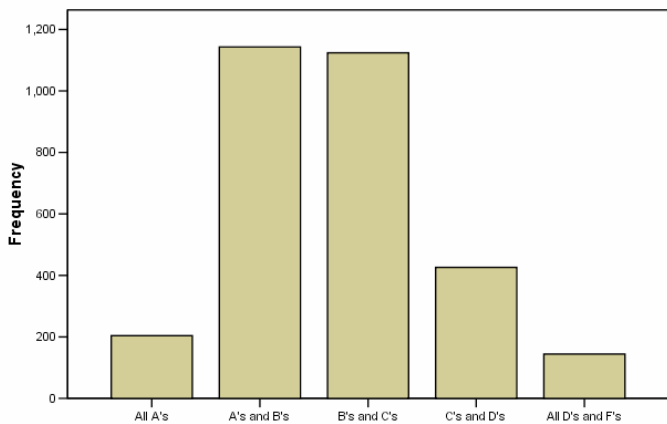
47. What grades could you get if you really tried?

48. What kind of grades did you get this year?



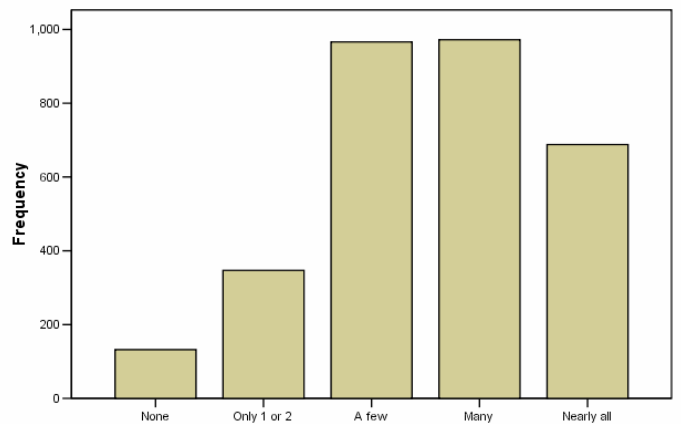
48. What kind of grades did you get this year?

49. What kind of grades do friends get?



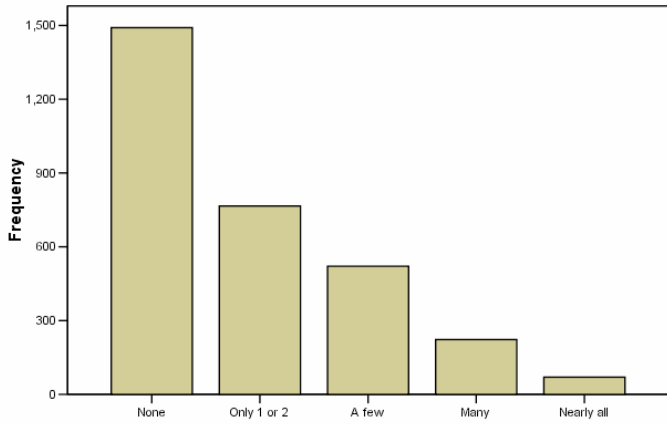
49. What kind of grades do friends get?

50. How many friends care how they do in school?



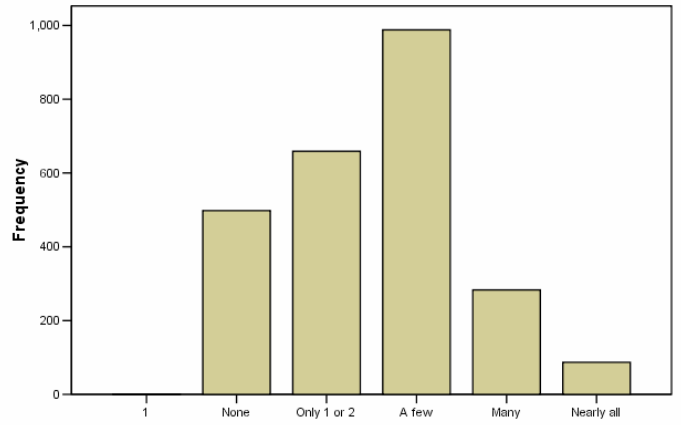
50. How many friends care how they do in school?

51. How many friends have dropped out of high school?



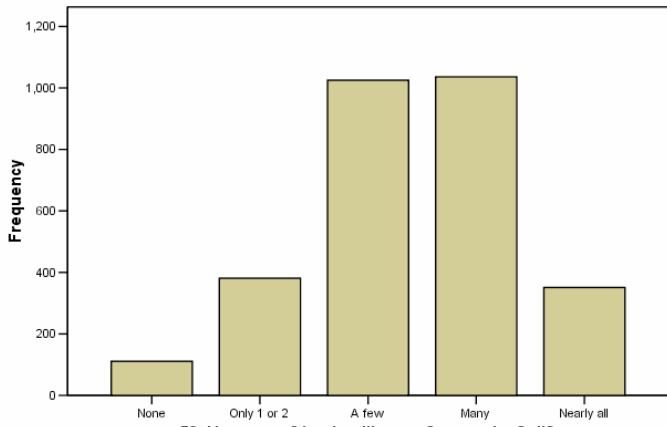
51. How many friends have dropped out of high school?

52. How many friends will go to trade/tech school?



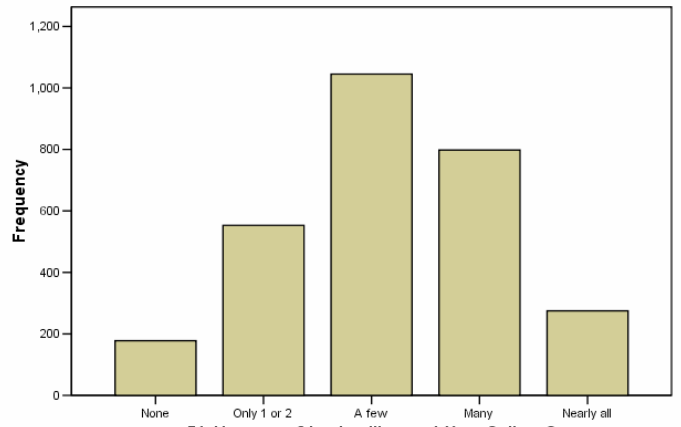
52. How many friends will go to trade/tech school?

53. How many friends will go to Community Coll?



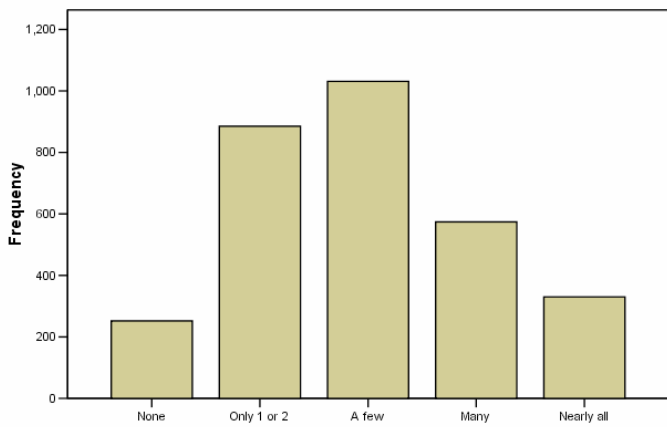
53. How many friends will go to Community Coll?

54. How many friends will go to 4-Year College?



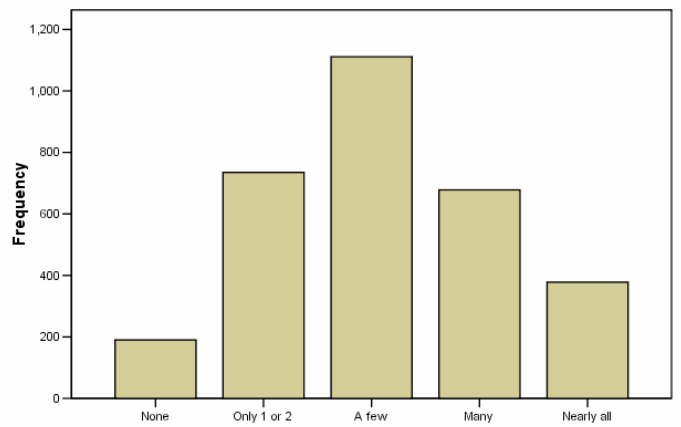
54. How many friends will go to 4-Year College?

55. How many classes important to getting a job?



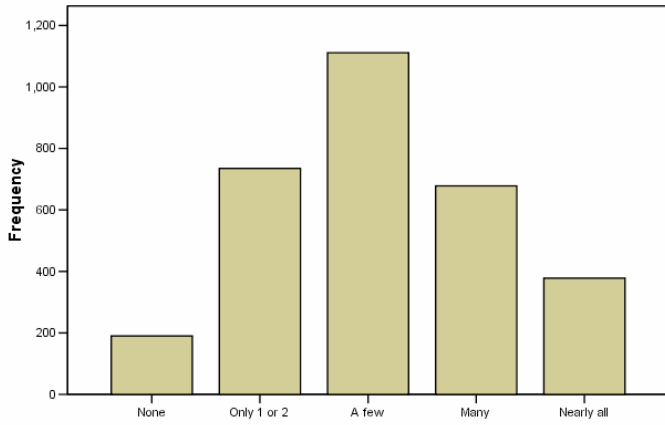
55. How many classes important to getting a job?

56. How many classes are preparing you for life?



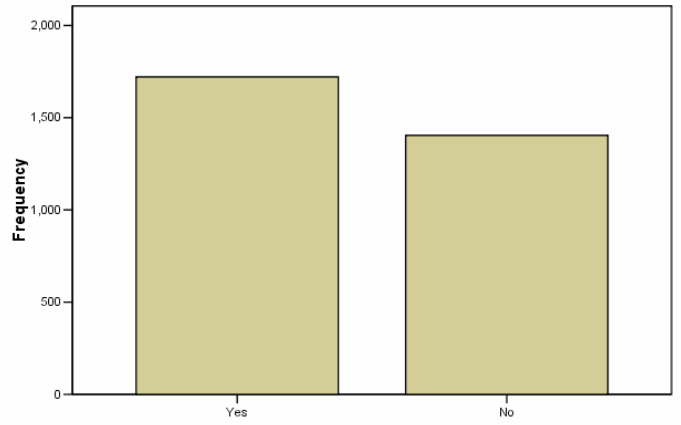
56. How many classes are preparing you for life?

56. How many classes are preparing you for life?



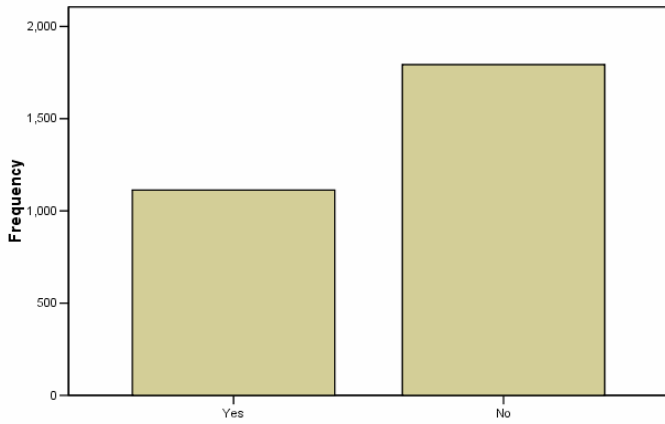
56. How many classes are preparing you for life?

58. Have you completed Algebra I before 9th grade?



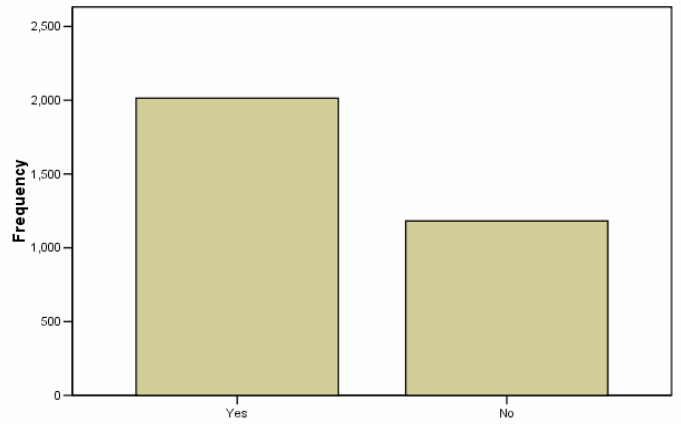
58. Have you completed Algebra I before 9th grade?

59. Have you participated in work-based internship?



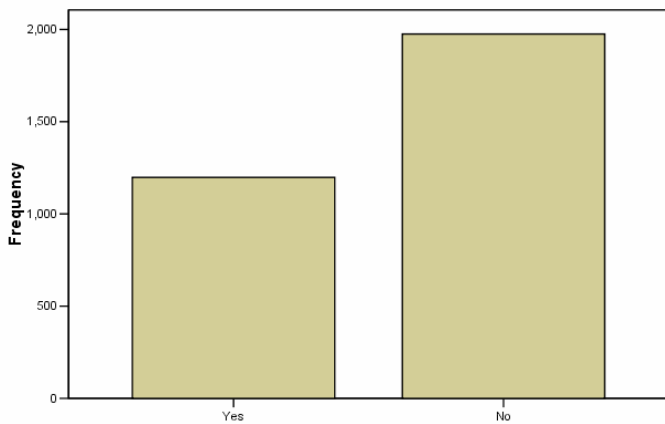
59. Have you participated in work-based internship?

60. Have you attended summer school for requirements?



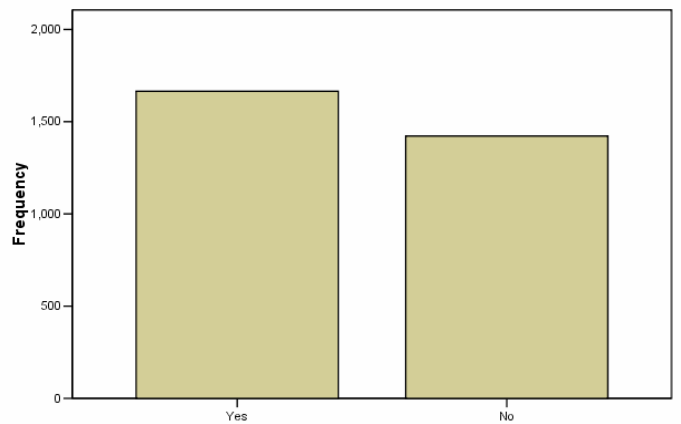
60. Have you attended summer school for requirements?

61. Have you gotten tutoring through school program?



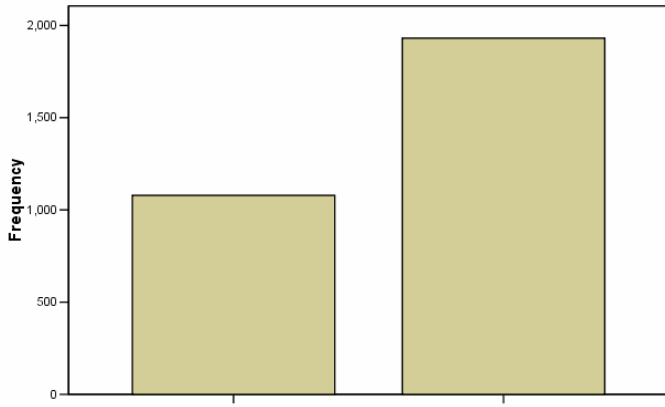
61. Have you gotten tutoring through school program?

62. Have you enrolled in "college prep" courses?



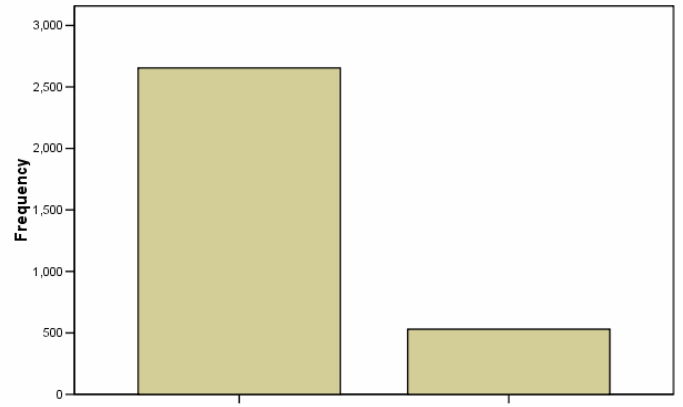
62. Have you enrolled in "college prep" courses?

63. Have you participated in "job shadowing"?



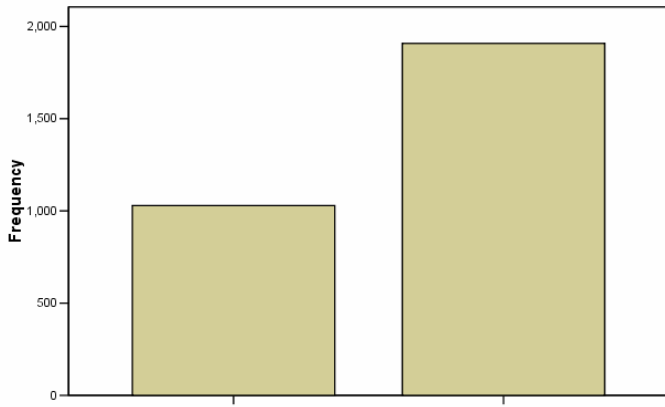
63. Have you participated in "job shadowing"?

64. Have you a computer at home?



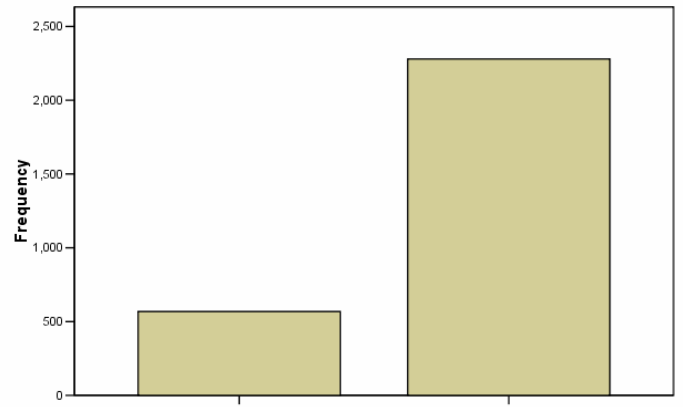
64. Have you a computer at home?

65. Have you completed "Advanced Placement" courses?



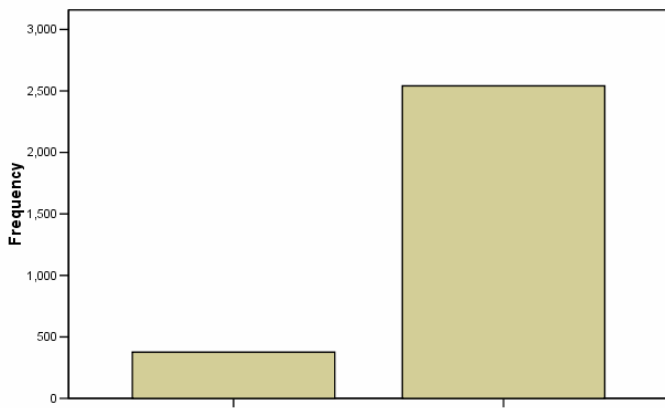
65. Have you completed "Advanced Placement" courses?

66. Have you participated in DCA, FBLA, FHA, etc?



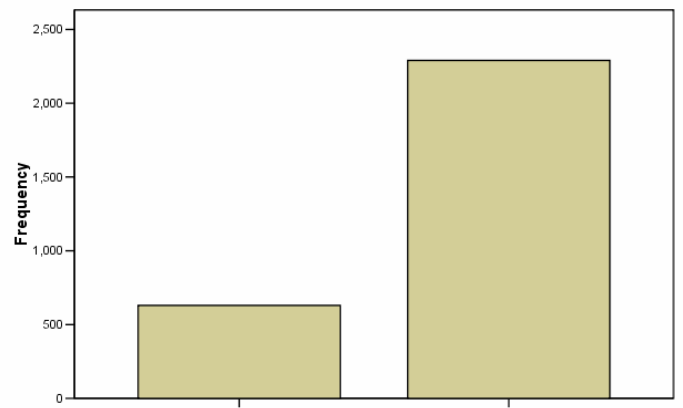
66. Have you participated in DCA, FBLA, FHA, etc?

67. Have you participated in AVID?



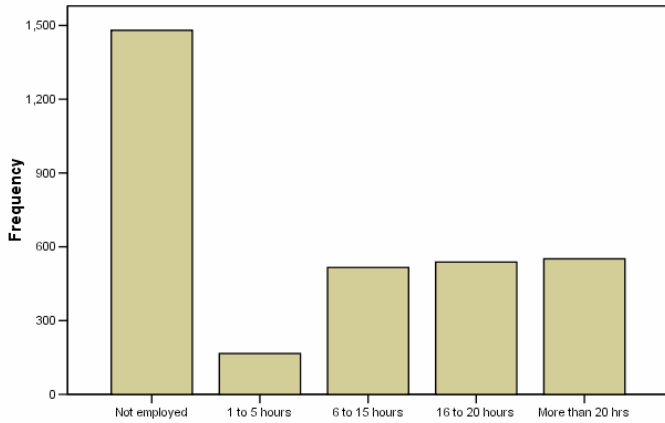
67. Have you participated in AVID?

68. Have you enrolled in an "academy" program?



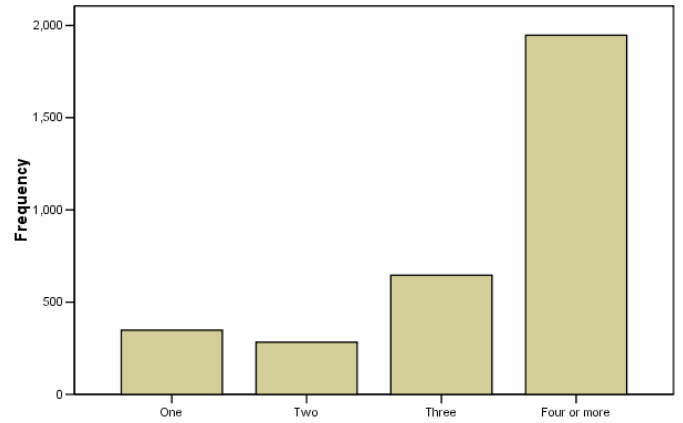
68. Have you enrolled in an "academy" program?

69. How many hours per week do you work?



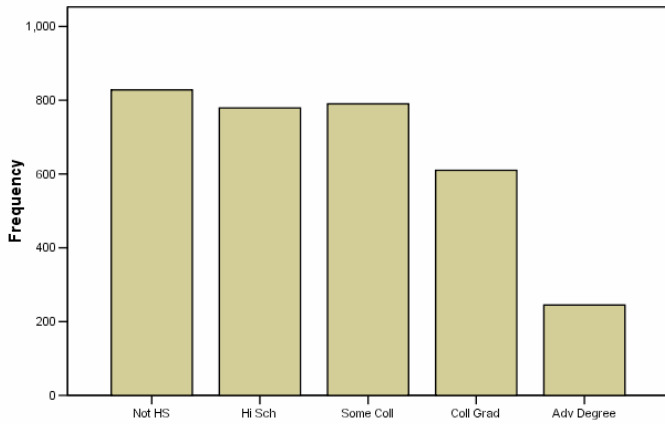
69. How many hours per week do you work?

70. How many years at your current high school?



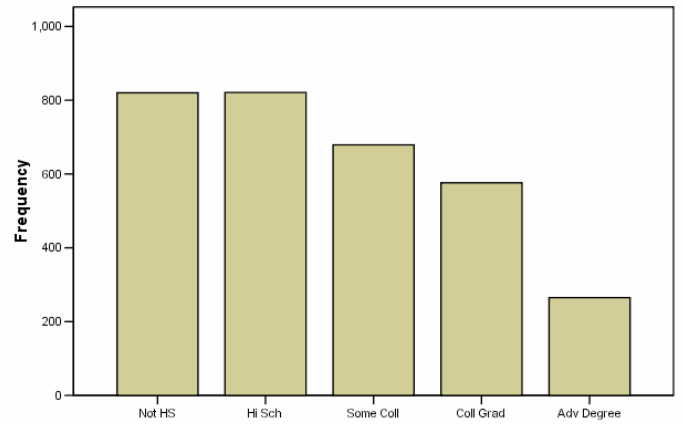
70. How many years at your current high school?

71. What is your mother's education level?



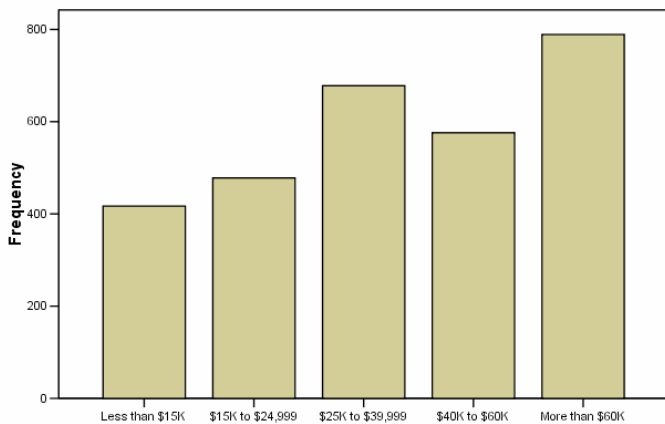
71. What is your mother's education level?

72. What is your father's education level?



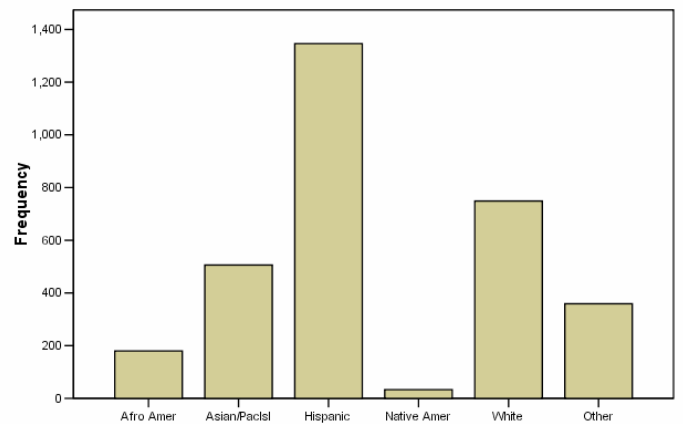
72. What is your father's education level?

73. What is approximate family income?



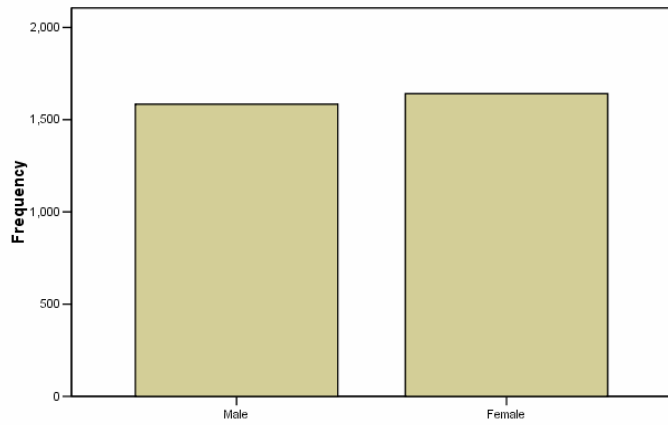
73. What is approximate family income?

74. To what ethnic group do you belong?



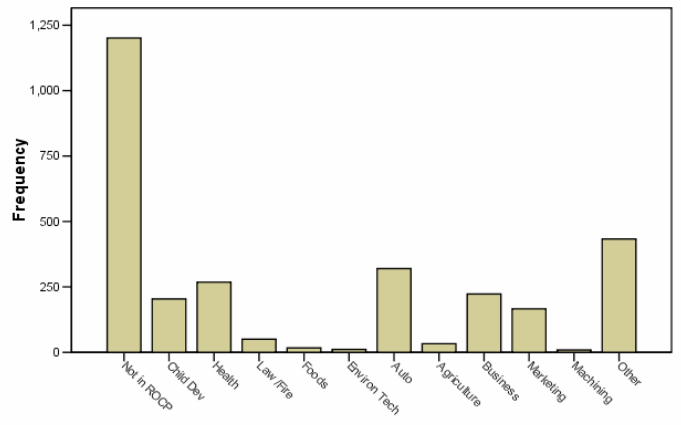
74. To what ethnic group do you belong?

75. Are you male or female?



75. Are you male or female?

77. What ROP program in the 11th grade?



77. What ROP program in the 11th grade?