

TESTIMONY SUBMITTED TO THE LITTLE HOOVER COMMISSION

**By
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April 26, 2007**

INTRODUCTION

I am honored to be asked to present information to you today, concerning the future of Career and Technical Education in the State of California. My name is Dr. Laurel Adler. I am currently the Superintendent of East San Gabriel Valley ROP Technical Center. In addition to having held that position for a number of years, I have worked with the University of California, Riverside in conducting follow-up research on students who were enrolled in ROP Career Tech programs. Beginning in 1992, I worked with Dr. Douglas Mitchell in studying the effectiveness of career tech delivery systems - first within my own system which serves seven school districts in Los Angeles County, and since 2002, studying the effectiveness of ROP Career Tech programs on a statewide basis. The most recent study was released in March, 2007, and I have included relevant data from that study in this paper.

I have divided this presentation into five parts: 1) a profile and introduction to the practices within our own organization, East San Gabriel Valley ROP Technical Center, 2) An Overview of the California ROCP System, 3) Highlights of the most recent Longitudinal Study on ROCP effectiveness completed by U.C. Riverside and released in 2007, 4) Conclusions and Recommendations for the incorporation of the ROCP system in California Career and Technical Education, and finally 5) Key Graphs and Tables taken from the study.

PROFILE OF EAST SAN GABRIEL VALLEY ROP TECHNICAL CENTER

The East San Gabriel Valley ROP Technical Center is a Joint Powers ROP composed of seven school districts in Los Angeles County., The organization partners with over 200 participating businesses, several community colleges, two Worksource Centers, and numerous social service agencies that provide support services to students.

In 2006, the organization trained over 9,000 high school students in 214 separate classes, covering 34 different career areas. The number of high school students completing the ROCP career tech programs produces a completion rate of 92%. Approximately 1,000 high school students are bussed daily to and from their school sites to the three centers and to business internships in the

community.

Student support services include: career assessment, academics reinforcement, childcare, transportation, job development, job placement, and Department of Rehabilitation services. Students who qualify also receive work experience and tutoring through a partnership with the local Worksource Center.

The Students attend career pathway courses that have articulation agreements with one or more colleges. ESGVROP/TC offers 23 University of California approved "A-G" courses and over 65 Career courses, which have tech prep articulated agreements with one or more of 5 Community colleges, plus 5 Post secondary technical colleges or universities in the service area.

The geographic area of the East San Gabriel ROP service area has a total population of 458,928 (U.S. Census). 28,951 students attend public high school in the seven school districts. In 2006, 9,357 or 32% of all secondary students attended ESGVROP/TC courses.

The ESGVROP's success with utilizing integrated career and academic curricula, and other career tech strategies was first validated in the 1990's by the Program Effectiveness Panel (P.E.P.) of the U.S. Department of Education. During the last dozen years, the ROP has operated a number of federally funded pilot projects including: an Integration of Academic and Vocational Learning project; a School to Work project; an Urban Rural Opportunities (UROG) project for the lowest income schools within the ROP; and a Smaller /Learning Communities project involving five of its feeder high schools. These grants allowed the ESGVROP to get an early start on 1) designing programs that integrate academic and career standards, 2), and to obtain student outcome data. East San Gabriel Valley ROP Technical Center is currently a demonstration project with ConnectEd, demonstrating: 1) how Work Based Learning can effectively strengthen both the career and academic skills of students, and 2) demonstrating a Contextual high school Algebra course which teaches the California Algebra One Standards within the context of a CTE curriculum, using real life projects that challenge the student to use Algebra in career specific tasks.

Since the 1990's the ESGVROP/TC has worked cooperatively with the University of California Riverside, to document and evaluate student outcomes from these pilot projects. Results of these research studies have been published in a number of journals (Hemsley and Dick, 1992; Hemsley, 1995; Adler, Cragin and Searls, 1996, Mitchell, 2002, 2004, 2006). These studies demonstrated that students who may have struggled in traditional school environments have succeeded in completing high school, often with dramatically higher GPAs and standardized scores when taught in groups or pathways organized around careers that integrate CTE and academics, and utilize related work based-learning strategies. For example, as far back as May of 1998, UCR's research study of at risk students enrolled in the ESGVROP Marketing pathway indicated that: **a)** the treatment group was more likely to graduate from high school than the control group students. **b)** The career path treatment group graduated with a higher GPA than the control group. For both groups the sophomore GPA (baseline) represented a high "C" grade average. The difference between this baseline and the GPA at time of exit from high school was significantly improved from 2.65 to 3.15 only for those students in the treatment group. **c)** The treatment group was significantly more likely to be in a post-secondary institution. **d)** The treatment group was significantly more likely to be employed. (74% vs. 65%). **e)** Significantly more students in the

treatment group reported being “very happy” on the job (85% vs. 65%) f) A significantly higher percentage (73% vs. 58%) of students in the treatment group had job advancement.

In 2002 the California Department of Education requested ESGVROP to partner with UC Riverside to conduct a statewide study of the effectiveness of ROP courses using variables similar to those that were used in UCR’s studies of ESGVROP. (Mitchell, 2002, 2004, 2006) The 2002 study was a small pilot that looked at 8 ROPS in various geographical areas in the state. The 2004 and 2006 studies encompassed more ROCPs and a wider geographic area. Before discussing these statewide results, a quick overview of California’s ROCP delivery system is necessary

OVERVIEW OF THE CALIFORNIA ROCP SYSTEM

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

- 1) Be employed in upwardly mobile careers and
- 2) Successfully continue into post-secondary education

More than 100 different ROCP career/technical areas are taught in courses offered throughout the state, falling under 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, and marketing. By state law, ROCPs must only offer courses that are based upon actual labor market demand. Over 18,000 businesses and industry representatives are involved in the development and monitoring of ROCP curriculum in California. In addition to business’ involvement in course development, over 35,000 businesses throughout California also offer work-based internships to students who are training in the particular business’ occupational field.

In the most recent post high-school follow-up studies completed by UCR (2006), ROP students were earning higher average salaries, and were more likely to be promoted than similar students from their same high schools who had not taken ROP work-based learning. The former ROP students were also attending college at similar rates than other students at their high schools, even though their (pre-ROP enrollment) 10th grade GPAs and 10th and 11th grade Star scores had tended to be lower than their general school population. In another section of these follow-up studies, students had been surveyed about their perceptions of school in general and about their like or dislike for specific school subjects. In all of the studies, math was the subject that students disliked the most, and the ROCP courses were the subjects that they liked the most. What is interesting is that math skills are incorporated into just about all of the ROP courses as math is used in almost every career in some form or other. So judging from the survey results, students did not balk at using math within the work-based learning situation. It was the traditional classroom

math classes that students did not like. Thus, an area for attention is to explore ways in which aspects of ROCP and work-based learning types of activities could reinforce math standards, so that students could see the connections of math to real-life.

HIGHLIGHTS OF THE 2007 LONGITUDINAL STUDY OF ROCP EFFECTIVENESS

Common Features of the ROCP courses included in the 2006 study

The results of the 2002, 2004 and 2006 studies were consistent with one another. So, for the purpose of this presentation, I will focus on the most recent study which was completed in 2006 and released in March of 2007. In addition to teaching the career specific standards being taught in the various programs studied, The ROCP courses that were studied had certain other common features:

- Yearly labor market analyses that updates the courses' content to keep it current with industry demand
- A Business Advisory Committee for each course, the majority of members consisting of businesses that hire individuals who possess the career-specific skills taught in 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 classroom skills through experiences in business internships and/or industry state-of-the-art labs.

Aims of this Study

The research study was 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 had not participated in these programs. The study was designed to assess the impact of ROCP programs on participating students in the following variables:

1. Cumulative high school grade point averages
2. Rates of attendance during the last three years of students' high school enrollment

3. Job placement during the students' first year after leaving high school
4. Wages, wage raises and job promotions during the students' first year after leaving high school
5. 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
6. Satisfaction with high school courses and ROCP training experiences.

Data 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 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.

Briefly, the key conclusions are:

- 1. ROCP students improve their high school grade point averages at a greater rate than comparison students.** On average, ROCP students entered ROCP training programs with academic records that were well below those of the Comparison Group of their high school peers. Nevertheless, as they moved through high school they raised 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. These differences in gains are particularly notable for African American, Hispanic and female students (see charts)
- 2. ROCP students earn higher wages than comparison group peers.** In telephone follow-up interviews, ROCP students reported 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 males. Likewise, ROCP students of all ethnic backgrounds made more than comparison group white males. African American male ROCP students in particular, made significantly higher salaries than African American males who did not take ROCP courses. (See charts)

3. **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. (See charts)
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).

Observations

ROCP training provides students, on average, with both successful entry into the job market and continuing education opportunities after leaving high school. 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 numerous 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 ROCP 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.

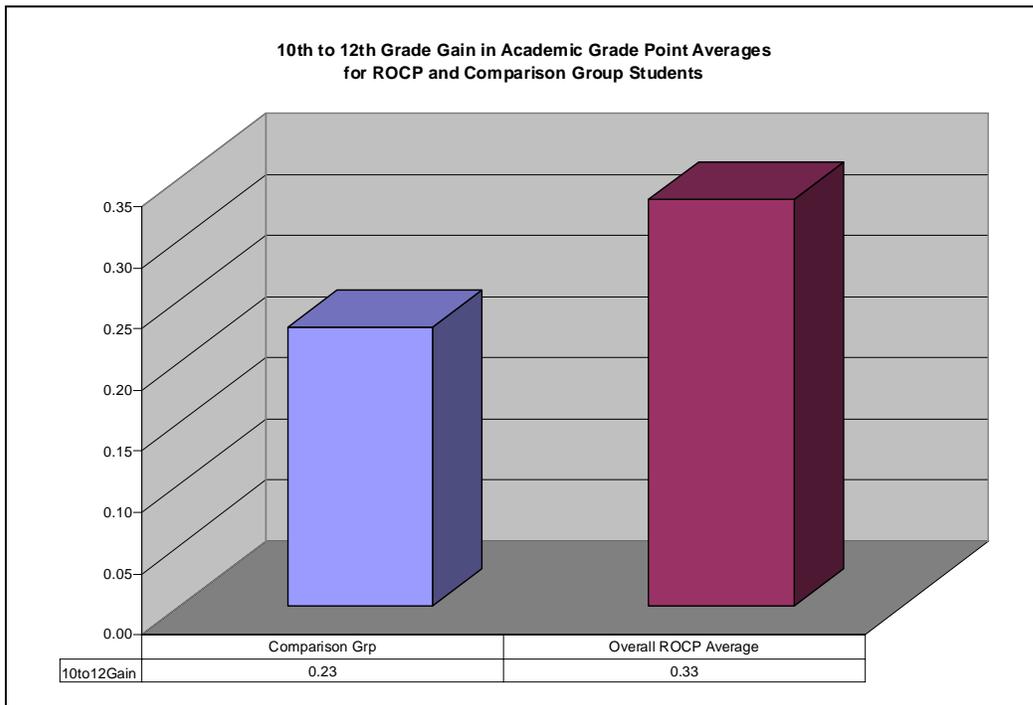
CONCLUSIONS AND RECOMMENDATIONS

California is unique in having a statewide delivery system such as ROCP. The results of the 2006 UCR study, plus the previous two studies, 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 potent set of tools that would lead to success in both college and the workplace. It is a powerful delivery system that should be utilized to the fullest. The following recommendations are aimed at encouraging the expansion and best possible use of the ROCP system as a key provider of quality career technical education for all secondary students in California.

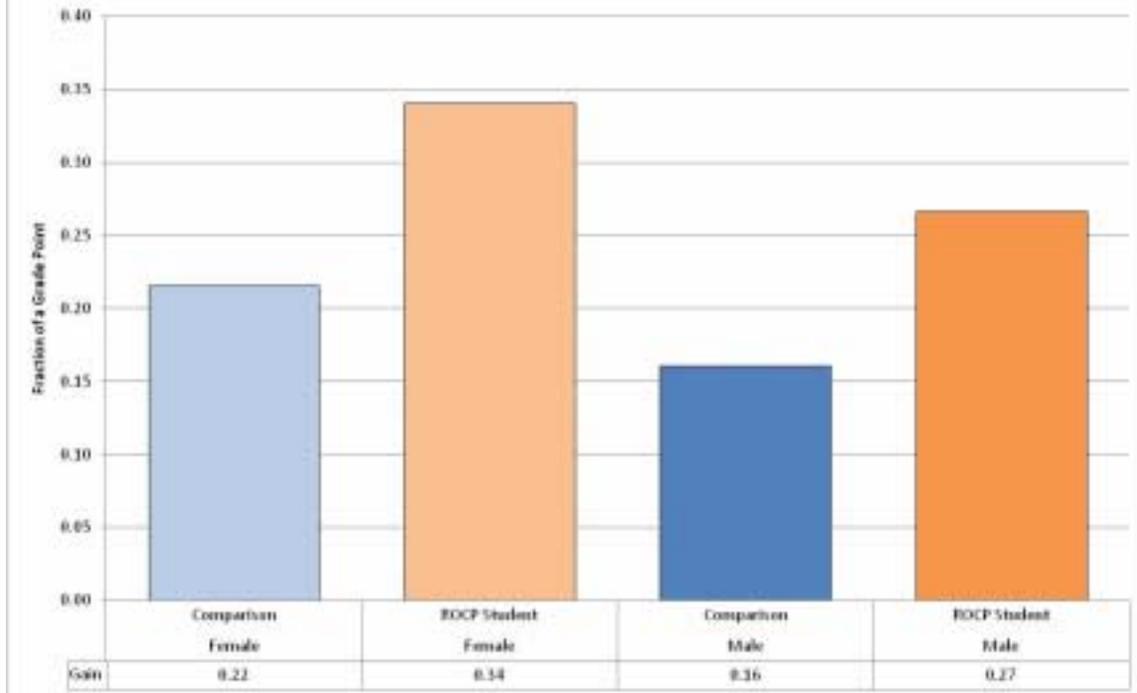
- 1 All secondary students should be able to enroll in quality career tech programs that teach not only the career specific standards, but the academic standards that are inherent in that career.
- 2 The work-based learning experiences that are available through ROCP courses should be available to all students in secondary programs. In ROCP's work based learning, academic and career skills are reinforced in a real life manner that simply cannot be duplicated in a classroom.
- 3 There needs to be continued research on the effectiveness of ROCP and other career tech delivery systems in California.
- 4 The 2006 UCR study looked at 4,000 individual students throughout the state. Local ROCPs and high schools need to be provided with technical assistance and resources that will assist them in gathering the individual student data so that future studies can look at an even larger number of individual students.
- 5 ROCP courses need to be utilized as key components in high school career academies and multiple career pathways.
- 6 ROCPs should be encouraged to infuse the appropriate academic standards into their career tech curricula. Technical assistance needs to be provided to ROCP administrators and instructors on the teaching of the appropriate academic standards within their career specific curricula.

GRAPHS

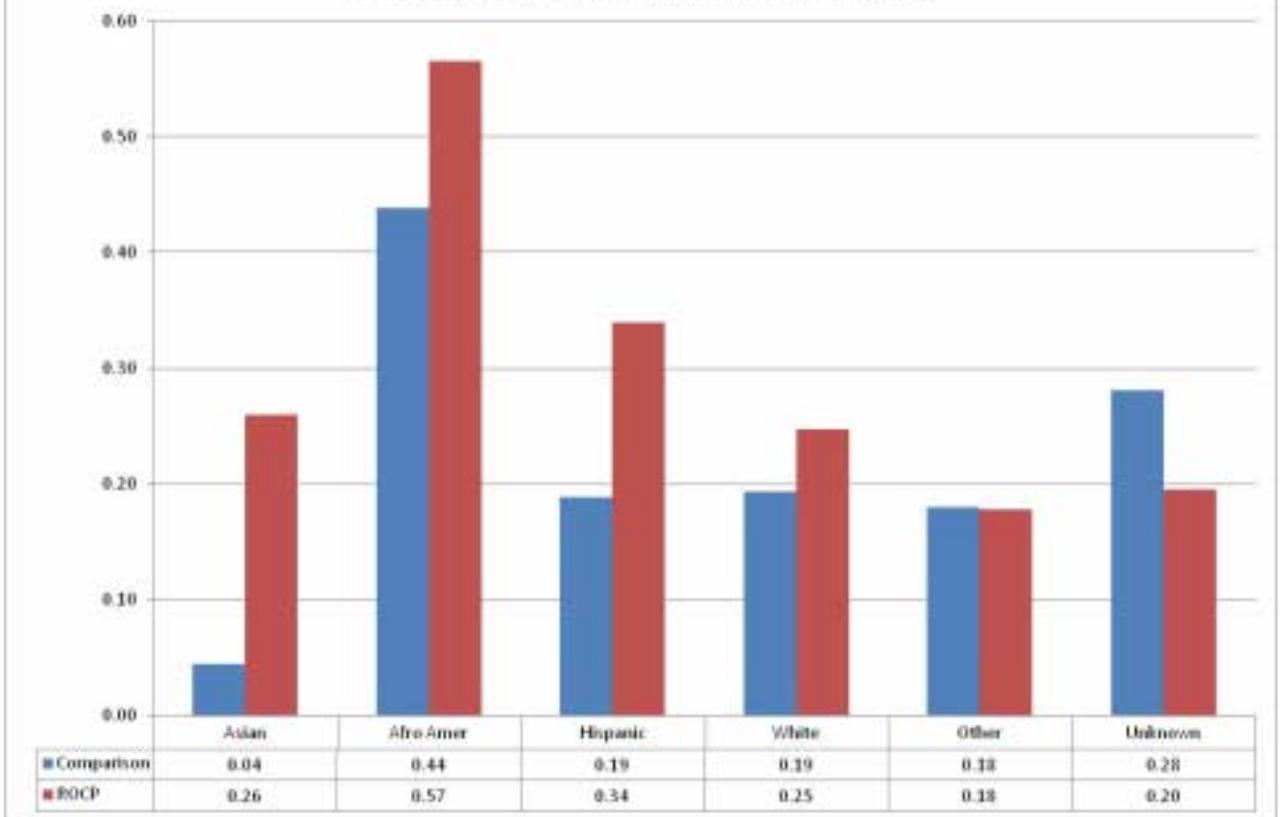
10th to 12th Grade Gain in Academic Grade Point Averages for ROCP and Comparison Group Students



**Gains in GPA between 10th and 12th Grades
by
ROCP Enrollment and Gender**



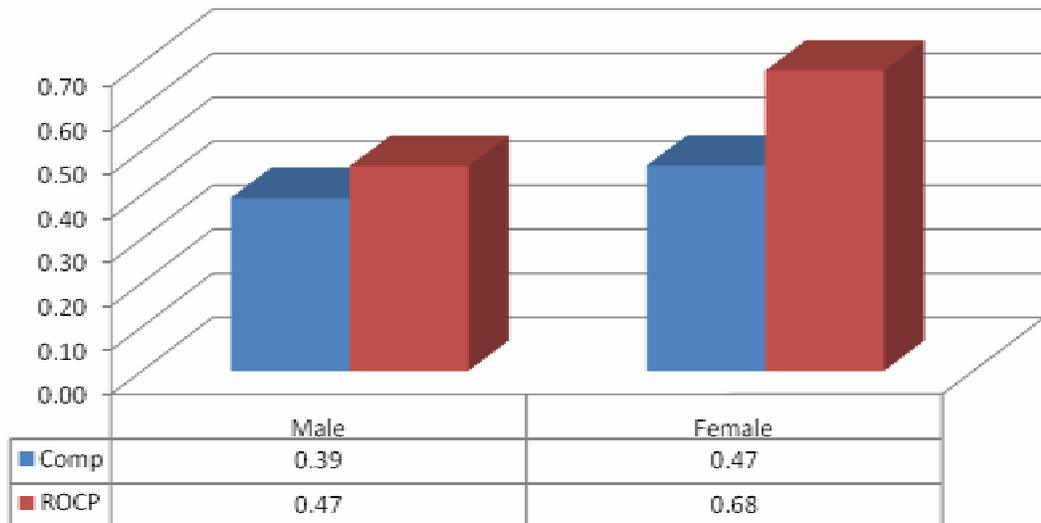
**Gain in GPA from Grade 10 to Grade 12
by Comparison Group and ROCP Students**



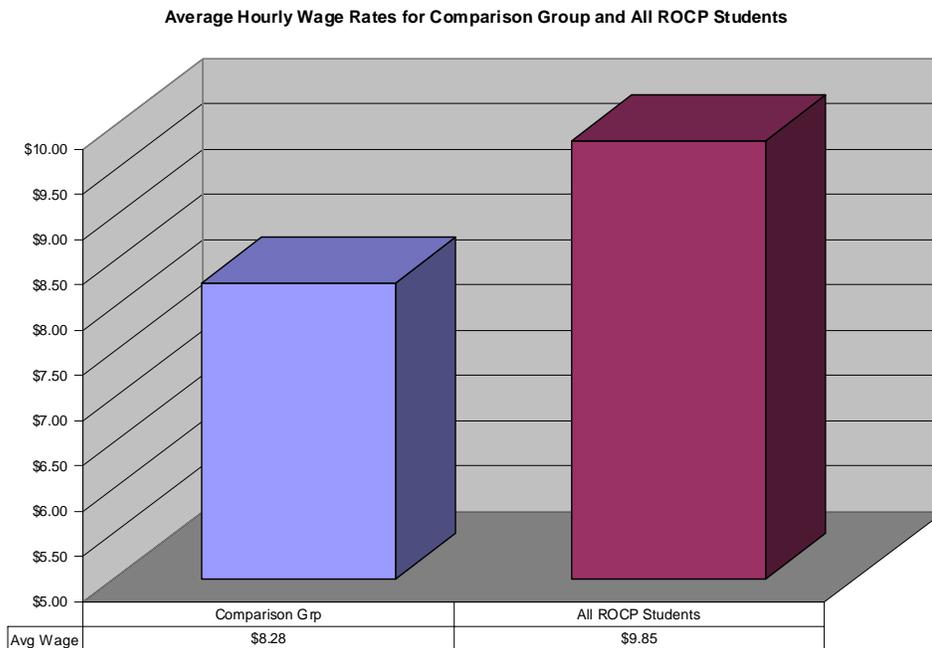
GPA Gains from 10th to 12th Grade for African American Students by Gender and ROCP Enrollment

Sample Sizes: Male ROCP = 47; Male Comp = 26; Female ROCP = 40; Female Comp = 42

(All Gains differ significantly from zero [$p < .01$] -- Due to small sample sizes, h

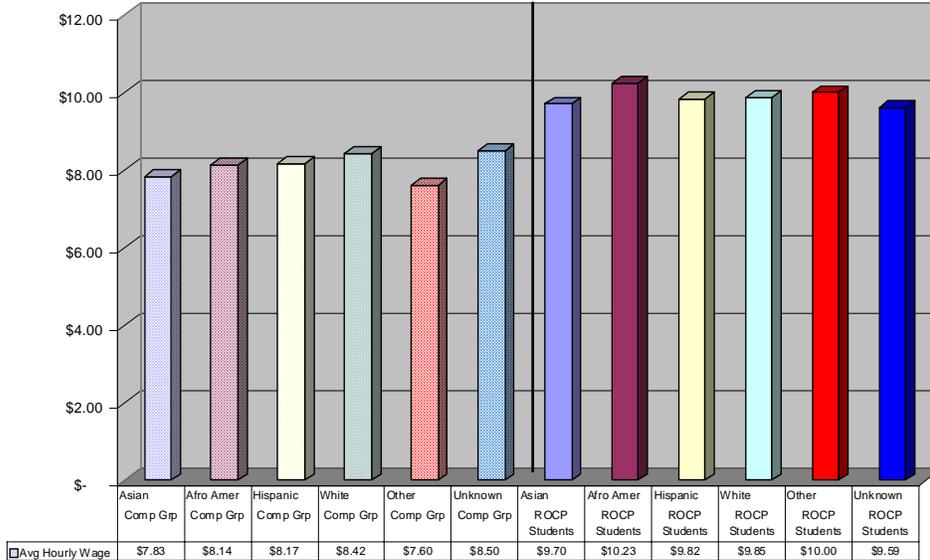


Average Hourly Wage Rates for Comparison Group and All ROCP Students



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

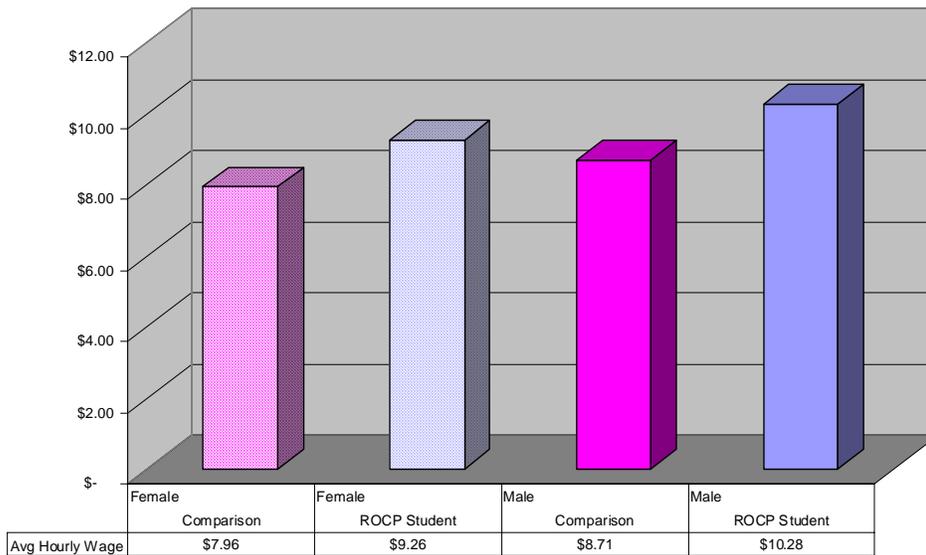
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Approximate Wage Rates by Gender by ROP Participation

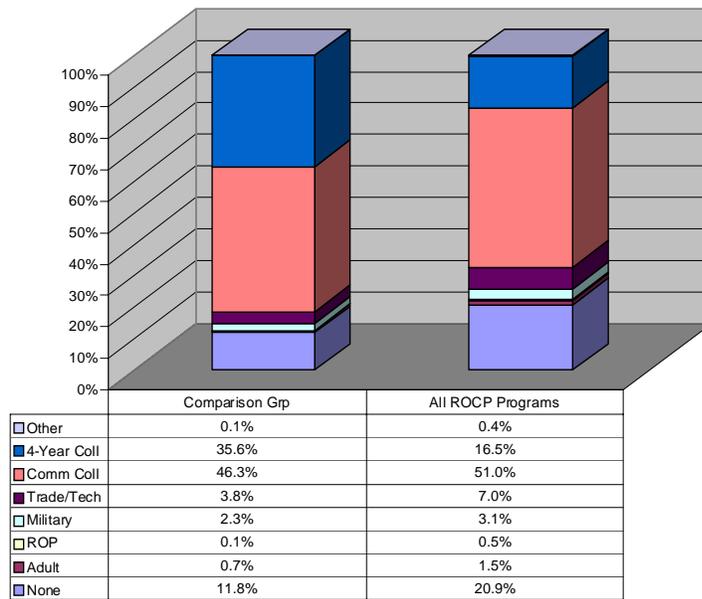
**ROCP Students have an average \$1.53 higher wage;
Males average \$1.57 higher; Females average \$1.30 higher than same sex comparison group**

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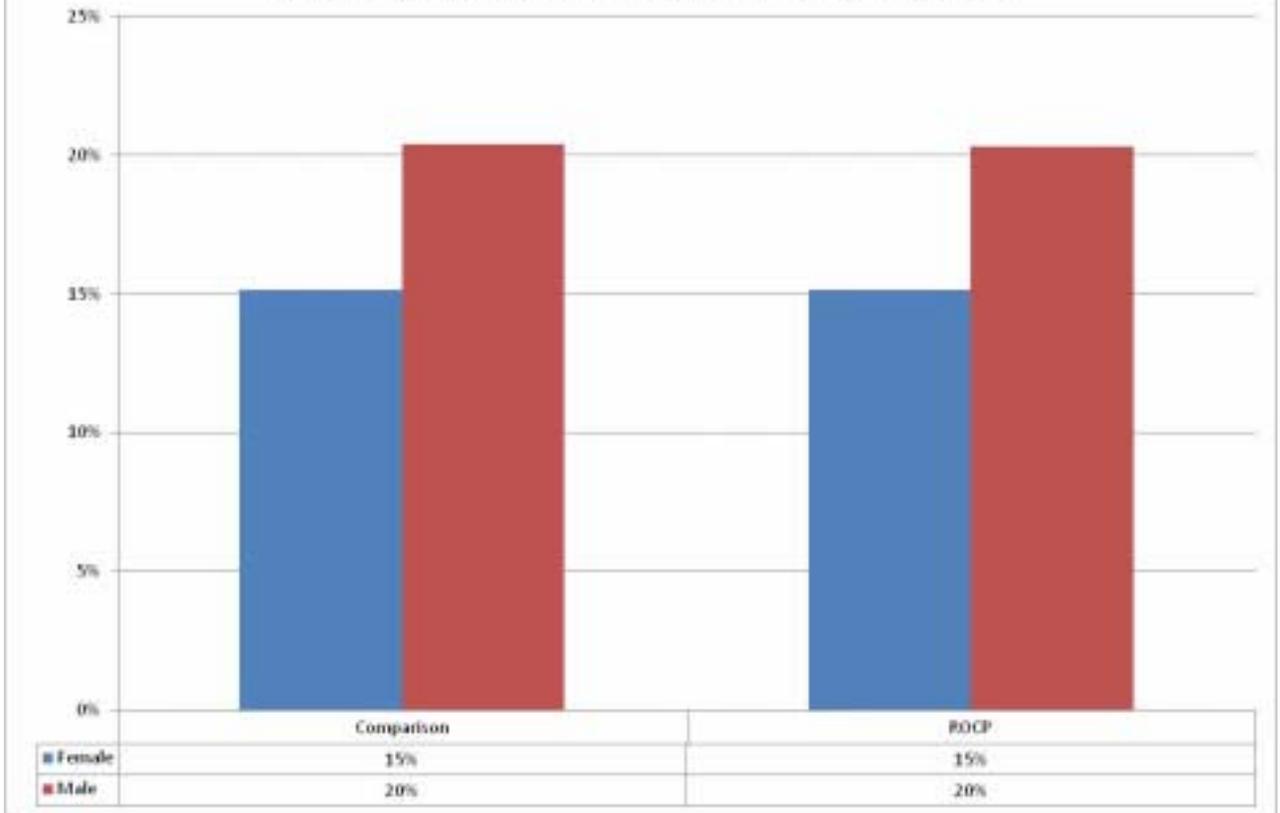


Continuing Education of ROCP and Comparison Group Graduates

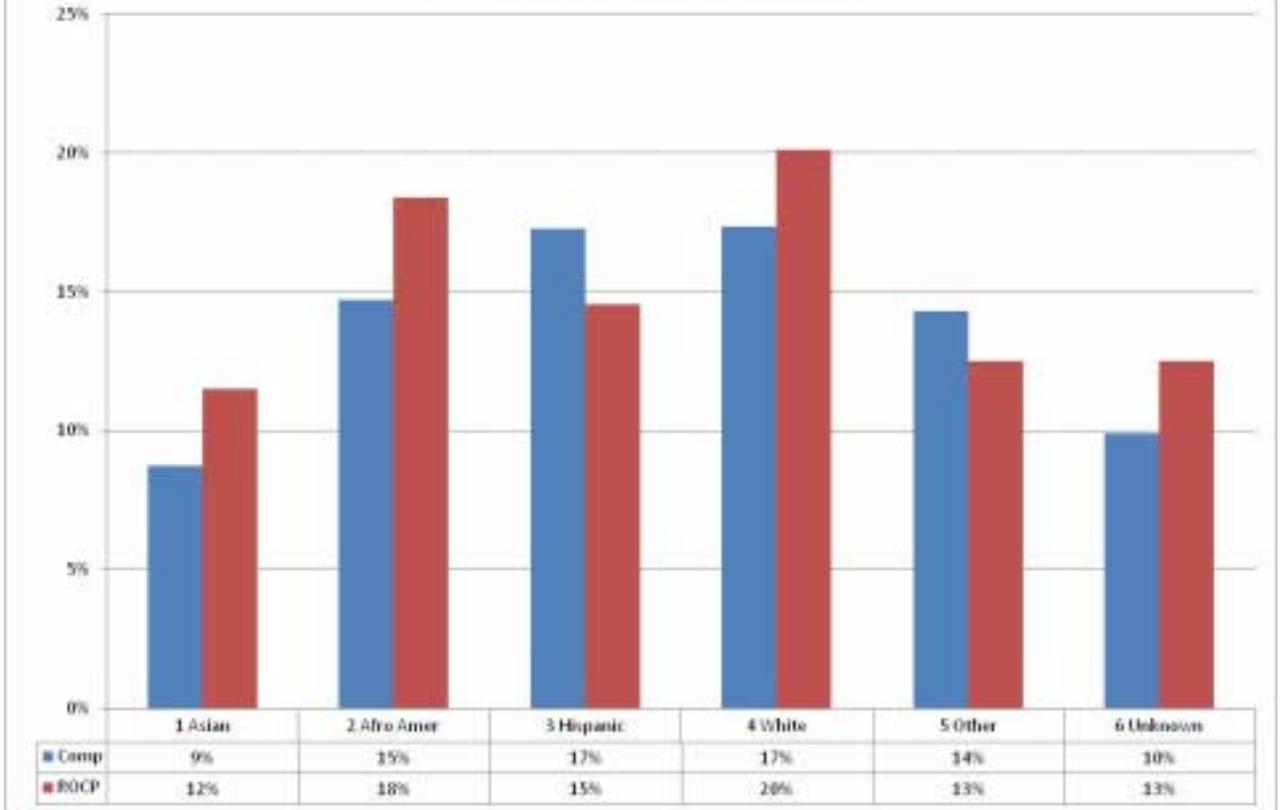
Continuing Educaton of ROCP and Comparison Group Graduates



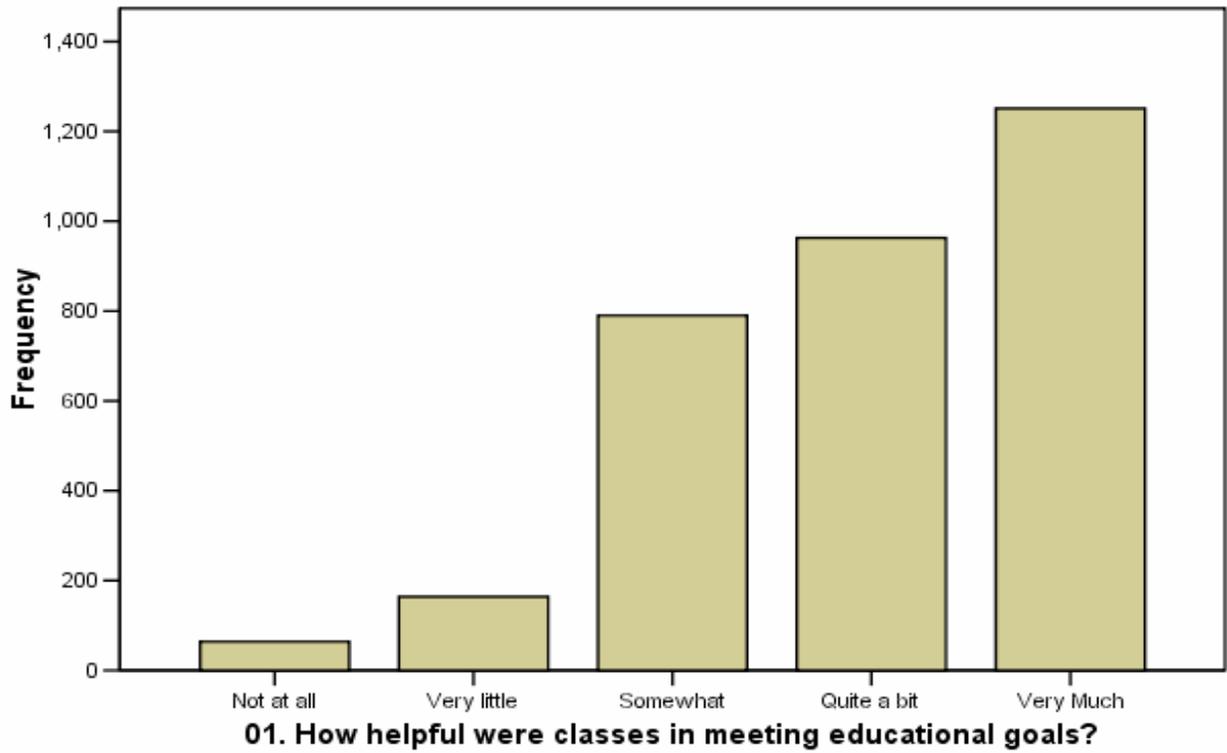
Among Working Graduates the Percent Receiving Promotions During the First Year on the Job by Gender and ROCP Enrollment



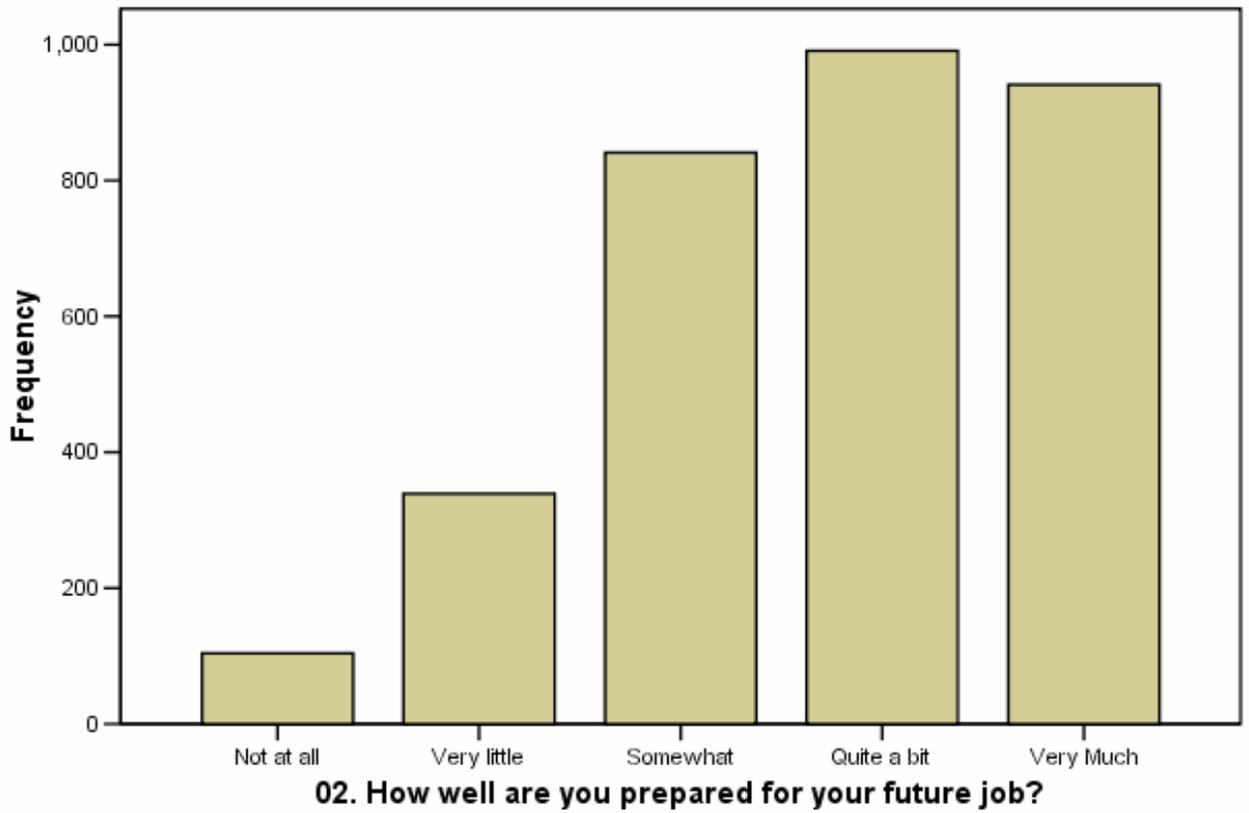
**Graduates Receiving Raises During the First Year
by ROCP Enrollment and Ethnicity**



01. How helpful were classes in meeting educational goals?



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



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