



A Prospectus for a Study of the Match between Degrees Awarded and California Labor Market Demand

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There is a persistent concern over mismatches between the degrees awarded by universities and the needs of the job market. Although there are shortages of graduates in some fields, many university graduates have difficulty finding jobs that make good use of their education. This has been discussed in newspaper articles, in education and business journals, and is a topic of conversation among people who either experience this mismatch or know someone in the situation. It is often assumed that this mainly affects recent graduates, but job data show that this is also the case for people further on in their careers.

The Commission's work on the nexus between higher education and the workforce is concerned with how well higher education in California is meeting the needs of employers and is providing opportunities for graduates to enter rewarding careers. As part of its work on this issue, the Commission examined job data from the 2007 American Community Survey. The data showed that 17% of workers with a university degree are working in occupations that are regarded by the U.S. Bureau of Labor Statistics as requiring only on-the-job training, a vocational certificate, or an associate degree.

This possible underemployment of university graduates is an important issue for many reasons:

- University education has become increasingly expensive. The cost of a year at the University of California or California State University doubled between 1975 and 2005, when measured in inflation-adjusted dollars.
- Rising costs have made a university education a burden for many families. For a middle-income family, supporting a student at UC now takes nearly one-third of their annual income.
- Students are increasingly financing their education with loans. In many cases, students must start repaying loans 6 months after graduation. University graduates need the income from a well-paid profession to repay these loans.
- A shortage of skilled professional workers may be limiting growth in some industries. Employment of university graduates in low-skill jobs represents a lost opportunity for economic growth.

One of the greatest benefits of a university education is that it prepares people for careers, but when degrees are not aligned with desirable, high-wage jobs, research needs to examine the reasons and implications for the mismatch.

Jobs for University Graduates?

California has 657,000 university graduates aged 27–57 working in occupations that do not require a university degree. This constitutes 17% of all university graduates in the workforce.

Occupation	Workers with a university degree	Hourly wage
Administrative assistants, secretaries	58,200	\$21
Office clerks	26,500	13
Bookkeepers, account clerks	23,400	18
Cashiers	20,400	9
Admin support workers	17,800	–
Truck drivers, delivery drivers	17,200	–
Home health aides	16,900	10
Nursing assistants	15,000	10
Waiters	15,000	9
Factory supervisors	14,500	24
Teacher assistants	14,200	–

Definitions are based on those used by the U.S. Bureau of Labor Statistics, which regularly surveys employers to assess the training needed in various occupations.

Education and California’s Workforce

Overall, 657,000 California workers aged 27–57 have a bachelor’s degree or higher and are working in jobs that do not require those degrees. Using this age range excludes people who are just starting their careers. Generally, university graduates 27 and older have had time to establish themselves in a career, change careers, or find an occupation that suits their interests and skills.

One-quarter of university graduates in non-degree occupations are in office work. Nearly 58,000 university graduates aged 27–57 are working as secretaries and administrative assistants and another 100,000 are in other clerical jobs. About 40,000 are in lower-level jobs in health care. Many thousands more are working in retail, food service, and manufacturing. More details are in the table on page 3.

Next Steps

These employment patterns are troubling, particularly since many employers are finding it difficult to recruit skilled professional workers. This raises the question — how can degree programs be better aligned to the needs of the job market? A closer examination of data may result in greater understanding of the match between what students learn in a university program and the needs of employers. The findings may result in policy options for career counseling, university and career alignment, job placement assistance, and skills assessment. Additional survey research conducted by the Commission would be useful in understanding career choices of university graduates.

Previous Commission work compared degree production with job openings in some high-demand technical fields such as nursing and computer science. This showed significant shortages of graduates in these fields. But for most occupations, there are less specific matches to degree disciplines. For example, a graduate with a degree in mathematics could work as a high school teacher, an actuary, or a software engineer. Liberal arts graduates can work in a wide variety of occupations.

In order to take a broader look at the relationship between degree production and labor market demand, the Commission has compiled data from a variety of labor agencies showing the match between degree disciplines and occupational fields. The Commission also has job projections from the U.S. Bureau of Labor Statistics and the state Employment Development Department. Staff plan to conduct an analysis combining this information with the Commission’s degree data to assess whether California is producing enough educated workers to meet the demands of the skilled labor market and to examine issues such as overproduction of degrees in some fields and underproduction in other fields.

What degrees do they have?

About 15% of the university graduates working in non-degree occupations have a graduate degree.

Degree	Graduates	Percent
Bachelor’s	560,700	85%
Master’s	72,600	11
Doctorate/ Professional	23,900	3
Total	657,000	100%

Bachelor’s degree not required

Not all non-degree jobs are low-paid and low-skilled. Many high-paid and fast-growing occupations require only an associate degree or a community college certificate.

Occupation	Hourly wage	Current jobs	Total job openings
Registered nurses	\$38	238,400	12,000
Technical sales reps	\$36	45,400	1,900
Electricians	\$25	68,300	2,400
Correctional officers	\$32	38,400	1,800
Paralegals, legal assistants	\$26	24,700	1,300
Real estate agents	\$26	24,700	800
Heavy equipment operators	\$30	34,400	1,400
Dental hygienists	\$42	22,400	1,400
Respiratory therapists	\$30	10,800	600

University graduates working in occupations that do not require a university degree. California, 2007

Occupation	Workers in occupation	Workers with a degree	Percent of workers	Hourly wage
Administrative assistants, secretaries	293,700	58,200	19.8%	\$21
Office clerks	141,800	26,500	18.7	13
Bookkeepers, account clerks	148,400	23,400	15.8	18
Cashiers	198,300	20,400	10.3	9
Administrative support workers	55,800	17,800	32.0	–
Truck drivers, delivery drivers	332,100	17,200	5.2	–
Home health aides	139,500	16,900	12.1	10
Nursing assistants	123,530	15,000	12.2	10
Waiters	113,700	14,700	13.0	9
Factory supervisors	84,900	14,500	17.1	24
Teacher assistants	87,500	14,200	16.3	–
Receptionists	98,900	13,300	13.5	13
Child care workers	139,700	12,800	9.2	10
Quality control inspectors	83,300	11,900	14.3	15
Security guards	93,340	11,300	12.1	–
Engineering technicians	42,900	10,400	24.3	29
Janitors, building cleaners	228,400	10,000	4.4	–
Construction foremen	113,300	9,800	8.7	33
Carpenters	155,800	9,500	6.2	25
Cooks	171,800	8,000	4.7	8
Maids, house cleaners	203,700	7,800	3.9	10
Data entry personnel	43,500	7,700	17.9	13
Warehouse, stock workers	154,800	7,700	5.0	11
Construction laborers	237,000	7,500	3.2	16
Stock clerks, order fillers	114,700	7,100	6.2	11
Medical assistants	64,700	6,500	10.2	–
Grounds maintenance workers	176,800	6,300	3.6	11
Firefighters	32,200	6,300	19.6	31
Word processors, typists	35,400	6,200	17.5	17
Hair stylists, cosmetologists	70,300	6,100	8.7	10
Billing clerks, office machine operators	42,100	5,900	14.2	16
Food service managers	47,200	5,900	12.6	13
Automotive technicians	91,500	5,800	6.4	19
Licensed vocational nurses	43,700	5,400	12.4	23
Insurance claims adjusters	25,700	5,300	20.7	18
Bartenders	34,000	5,300	15.6	9
Mail carriers	36,100	5,200	14.6	22
Manufacturing production workers	90,200	5,000	5.6	–
Other non-degree occupations	2,705,700	206,700	7.6	–
Total	7,097,700	657,320	9.3	–

Workers aged 27–57. Excludes workers enrolled at graduate school. Data from 2007 American Community Survey, U.S. Bureau of the Census, California Employment Development Department, and the U.S. Bureau of Labor Statistics.