Using Data to Evaluate Field of Study and Occupational Outcomes

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WestEd

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CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

Underlying Questions

- What happens to students after they graduate?
- Do students find jobs related to the fields they trained in?
- Do students see an increase in income?
- Does the program deliver on its promises?
- How can past student outcomes help us advise current students?

Layering Perspectives

- **Career Technical Education Outcome Survey (CTEOS)**
  Annual statewide survey of former community college students
- **WestEd's American Community Survey (ACS) Field of Study Interface**
  Research asset for internal use
- **UI Wage Match projects**
  Student SSNs to UI wage data efforts by CCC, CSU and others

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CTEOS: Background

The Early Years (2012-2017)

- From 2012-2017, CTEOS was an opt-in and pay up project.
- It started with 15 colleges in 2012 and grew to 70 by 2016.
- Individual colleges or college districts elected to participate and reimbursed the research center at Santa Rosa Junior College for costs.

2017 Forward

- In 2017, the Chancellor's Office decided to directly fund the CTEOS project to enable all community colleges to participate.

Strong Workforce Program Metrics

Strong Workforce Program Metrics

Santa Rosa Junior College || All Programs || 2014-2015 (Change Filter?)

Drill down by: Time Trend

+ NUMBER OF COURSE ENROLLMENTS: **169,884**

+ COMPLETED 12+ CTE UNITS IN ONE YEAR: **2,367**

+ COMPLETED 48+ CTE CONTACT HOURS IN ONE YEAR: **105**

+ NUMBER OF STUDENTS WHO GOT A DEGREE OR CERTIFICATE: **2,594**

+ NUMBER OF STUDENTS WHO TRANSFERRED: **1,617**

+ EMPLOYED IN THE SECOND FISCAL QUARTER AFTER EXIT: **75%**

+ EMPLOYED IN THE FOURTH FISCAL QUARTER AFTER EXIT: **73%**

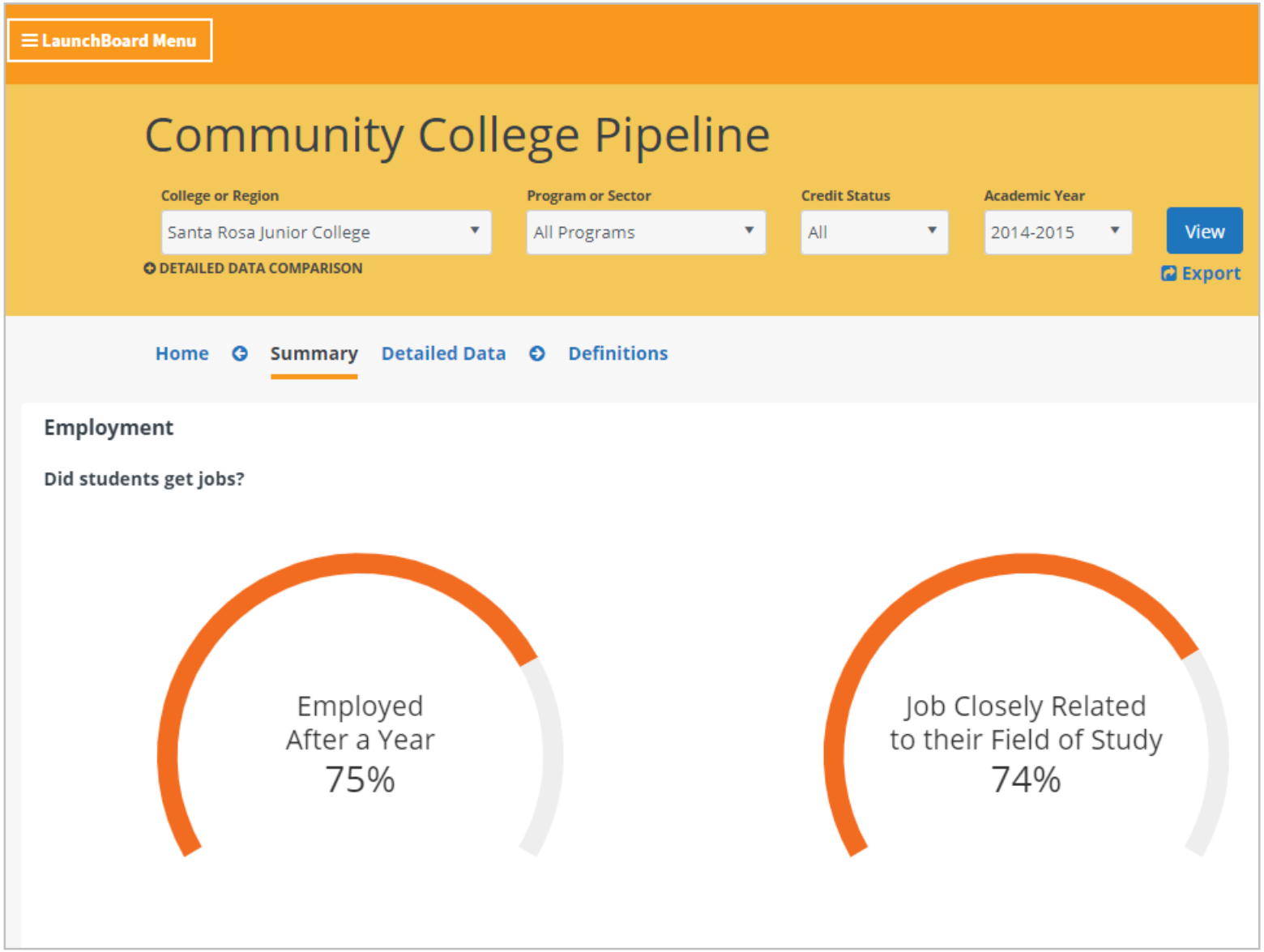
+ JOB CLOSELY RELATED TO FIELD OF STUDY: **74%**

+ MEDIAN CHANGE IN EARNINGS: **44%**

+ ATTAINED A LIVING WAGE: **54%**

https://www.calpassplus.org/LaunchBoard/SWP

Community College Pipeline



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Use of Findings

Many additional applications of survey results, including:

- Veteran's Reporting and Gainful Employment
- Accreditation
- Strategic Planning
- Program Review
- Regional Analysis
- Sector Analysis
- Scholarly Research

CTEOS: Method

Sample

- All students included (universe) who meet the criteria:
  - Completers (CTE degree, Chancellor's Office Approved Certificates)
  - Skills Builders (9+ CTE units)

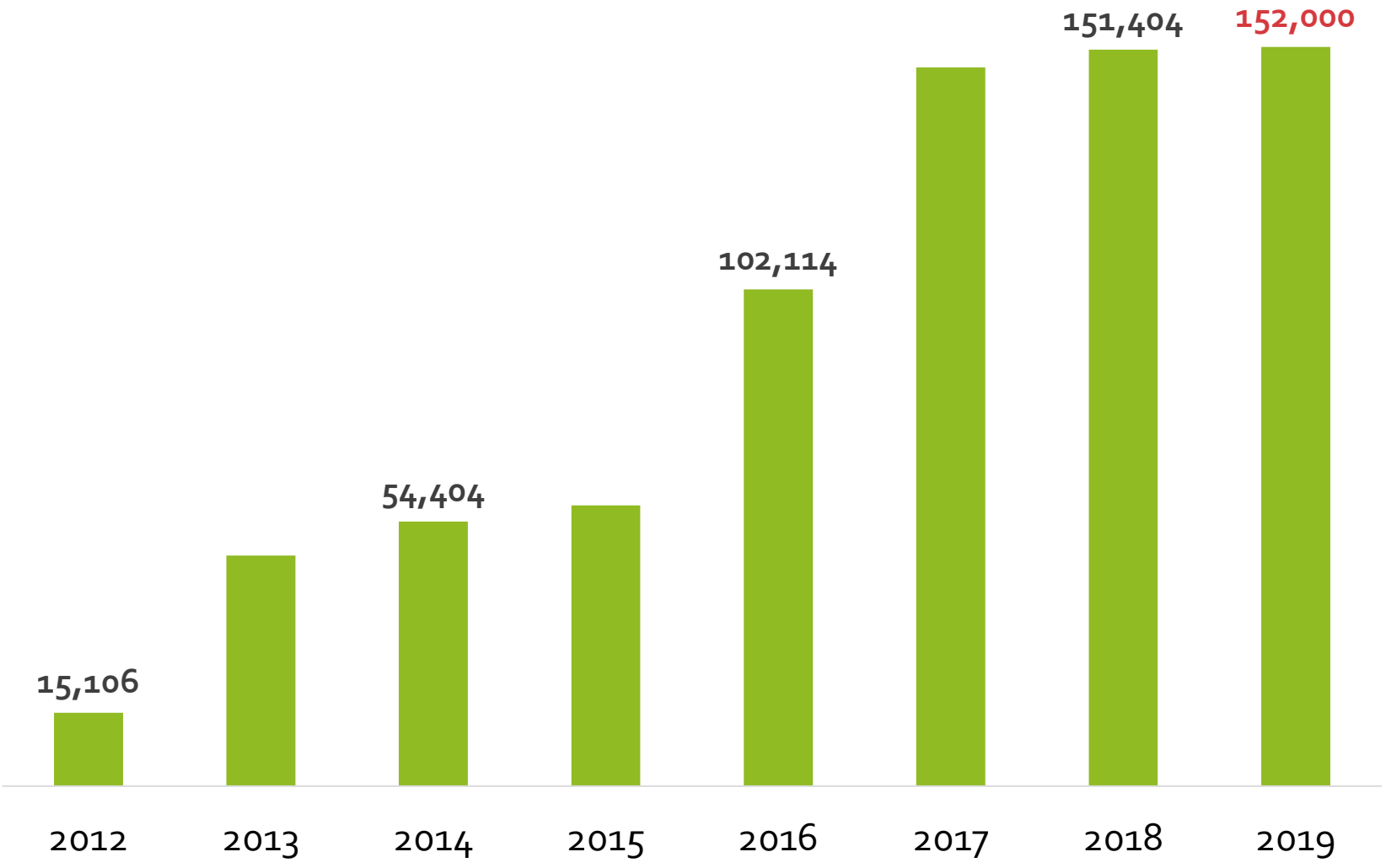
Survey Distribution

- Then: e-mail, then US mail, then phone calls
- Now: e-mail, sms text message, then phone calls
- Survey conducted approximately 1.5 years after completing/leaving

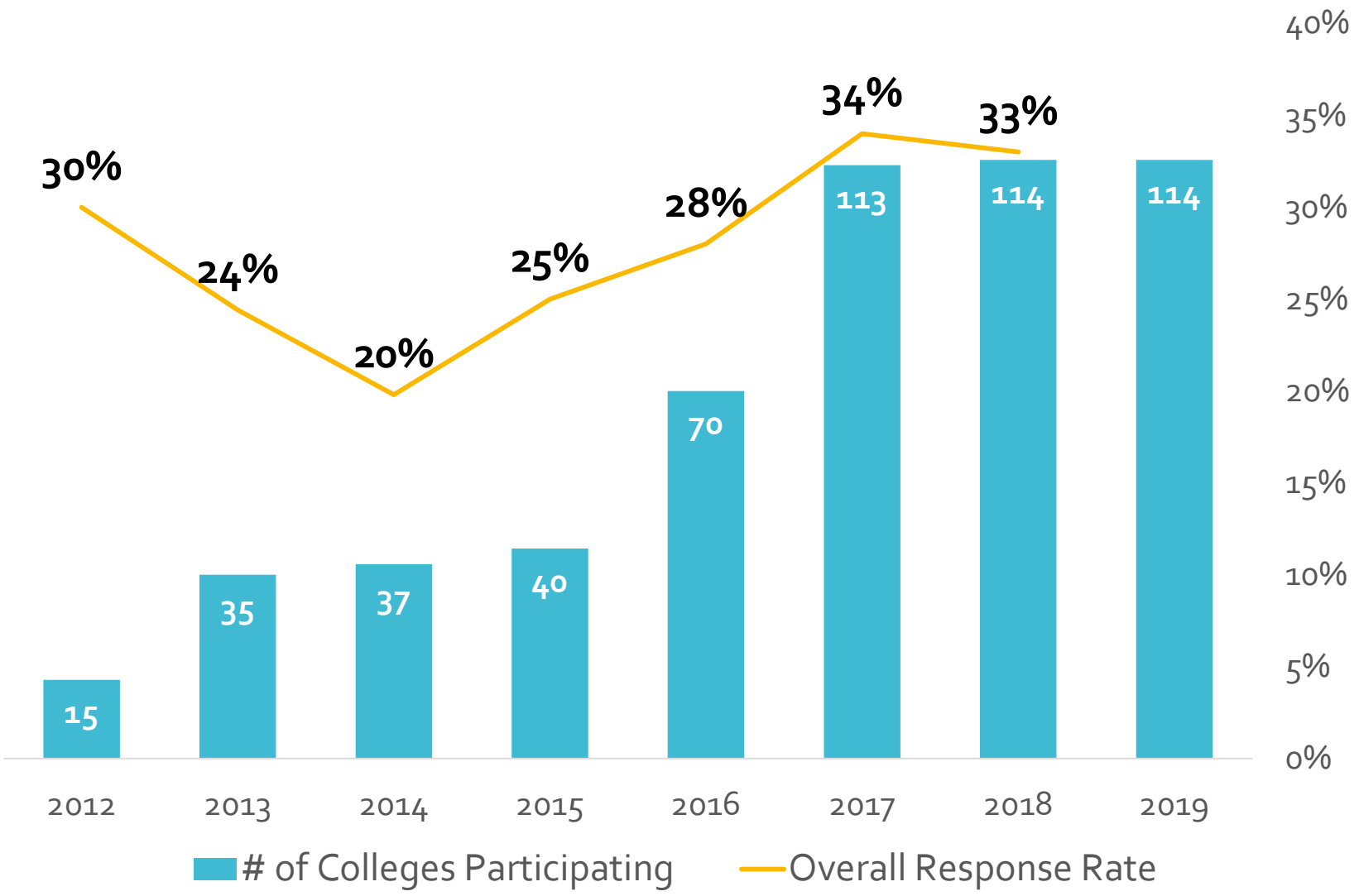
Other Data

- Chancellor's Office MIS data wherever possible
- Local data supplement (student contact information)

Number of Students Surveyed



Participation & Response Rates



CTEOS Response Rates by College

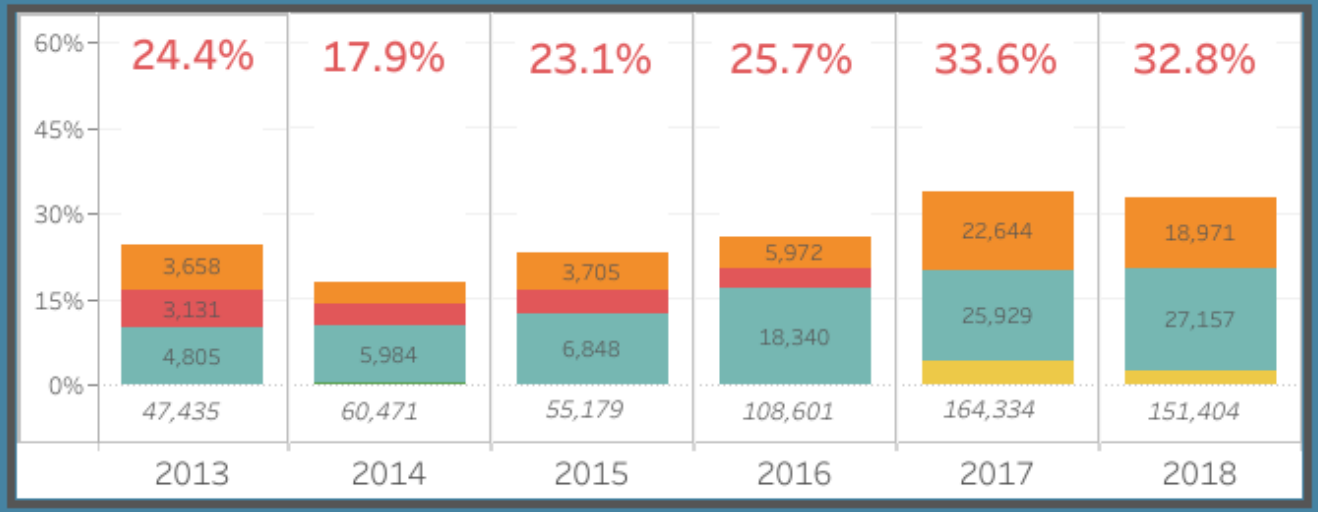
Regions (Macro/CCCAOE): **All/All**
District: **All**
College: **All**

Macro Region
(All)

CCCAOE Region
(All)

District
(All)

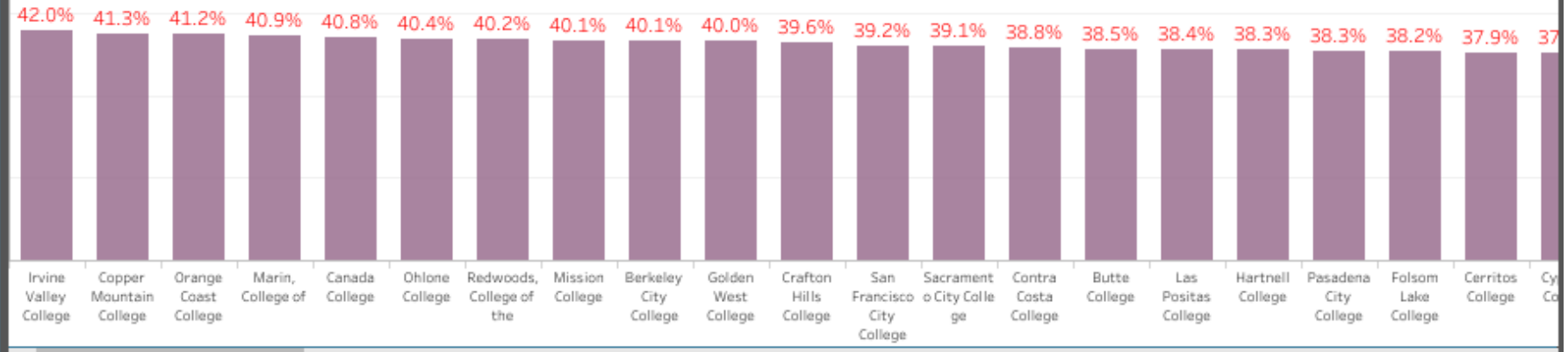
College
(All)



Modality
- Email
- Mail
- Phone
- Postcard
- SMS

2018 Overall Response Rate by College

Highest to Lowest

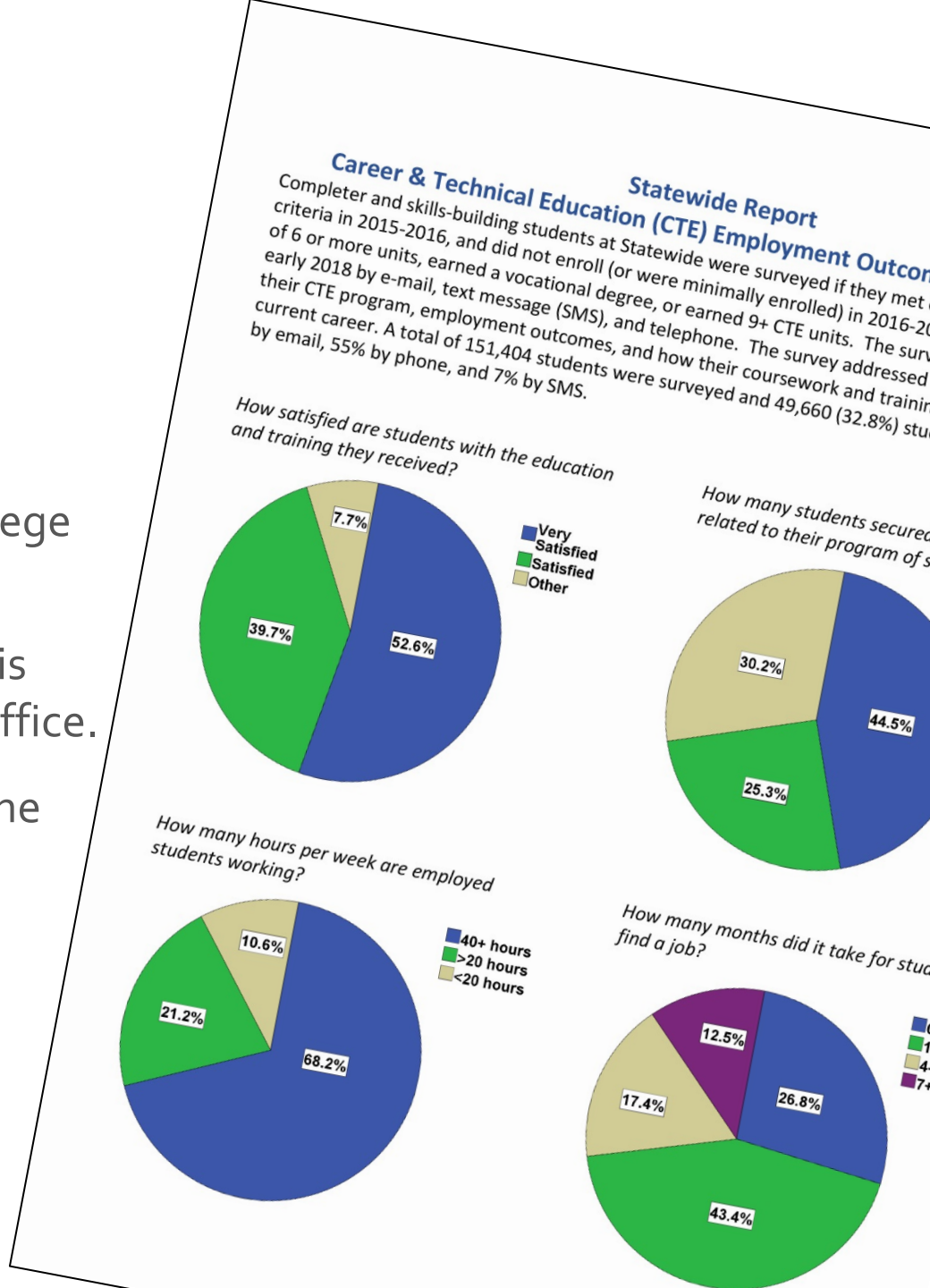


Available with other data visualizations at cteos.org

CTEOS: Results

September 30th:

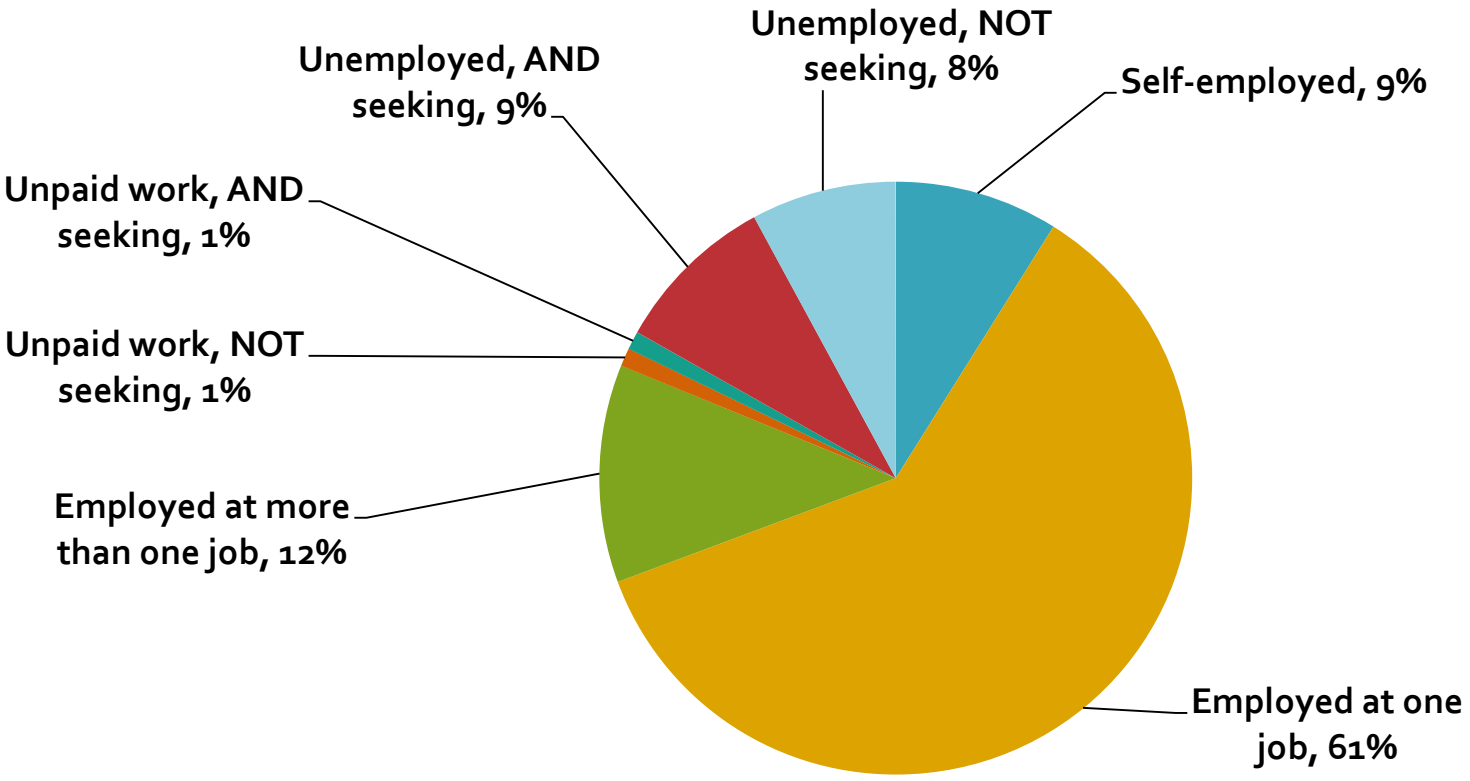
- The Statewide & Individual College Reports completed.
- A complete statewide data file is submitted to the Chancellor's office.
- Visualizations are updated on the CTEOS.org website.



2018 Findings

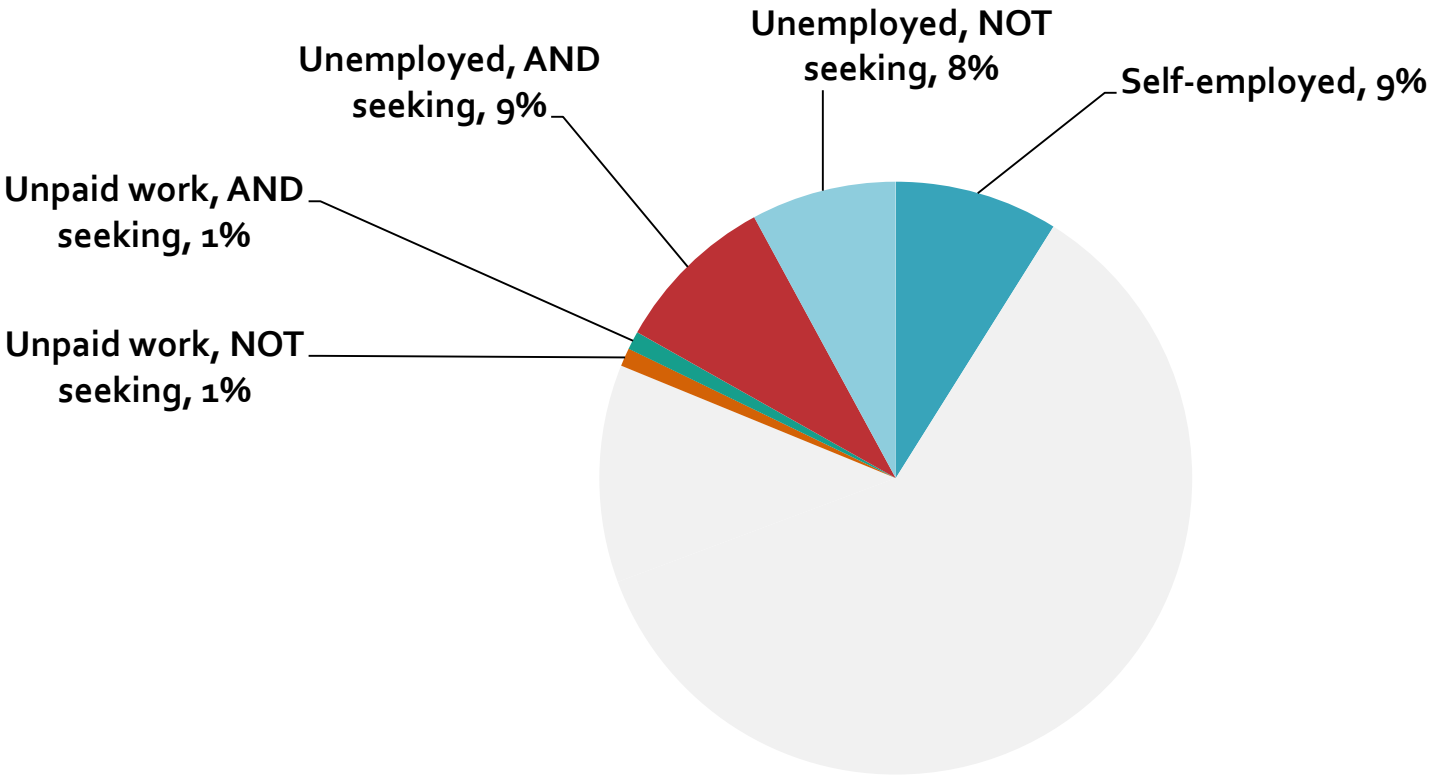
- In 2018, 151,404 students were surveyed. Of these 49,660 (**32.8%**) responded.
- **53%** reported a positive change in Hourly Wage after completing coursework
- **91%** reported being very satisfied or satisfied with their education and training
- **34%** transferred to another college/university
- **69%** reported that their current employment is "close" or "very close" to their field of study

Employment Status



82% of survey respondents are employed – at one job, more than one job or self-employed.

Employment Status

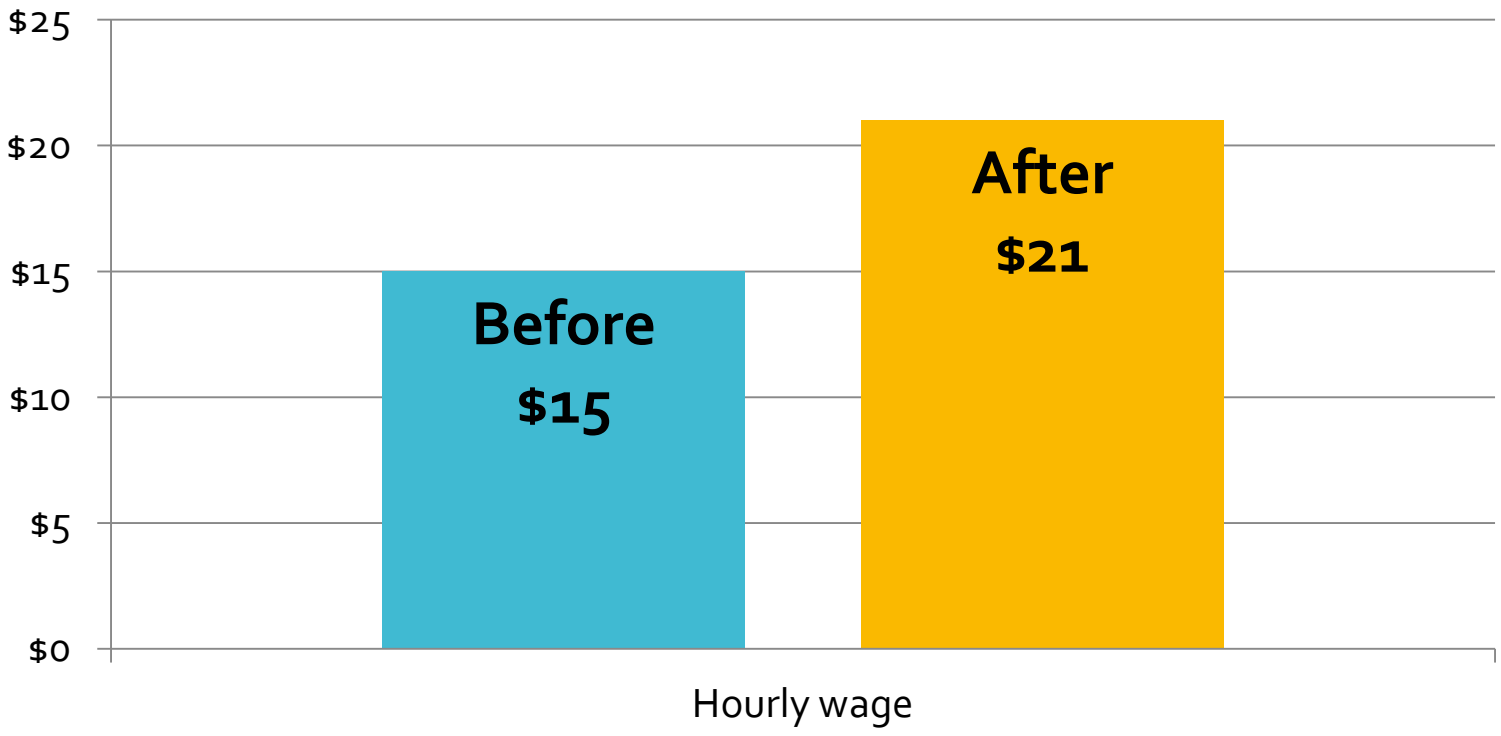


Administrative data matches with EDD/UI wage data unable to match more than 30% of former California Community College Students

Additionally, federal, military, out of state, no SSN, working "under the table" employment not included in EDD/UI wage data

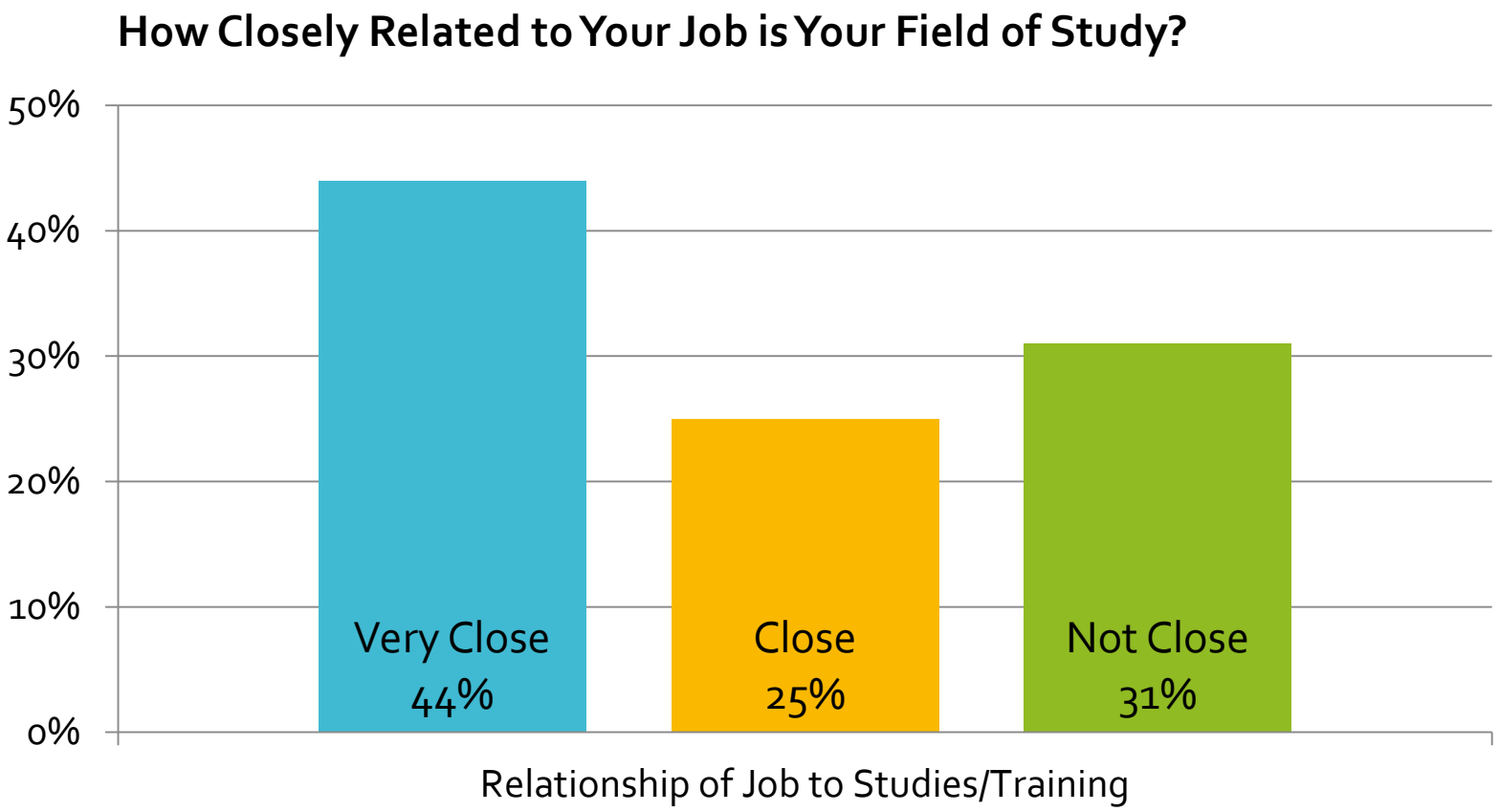
Wage Increase

The median hourly wage of respondents ***increased 53%*** from their hourly wage before their studies/training ($15) to their hourly wage after completing their studies/training($23)



Working in Field of Study

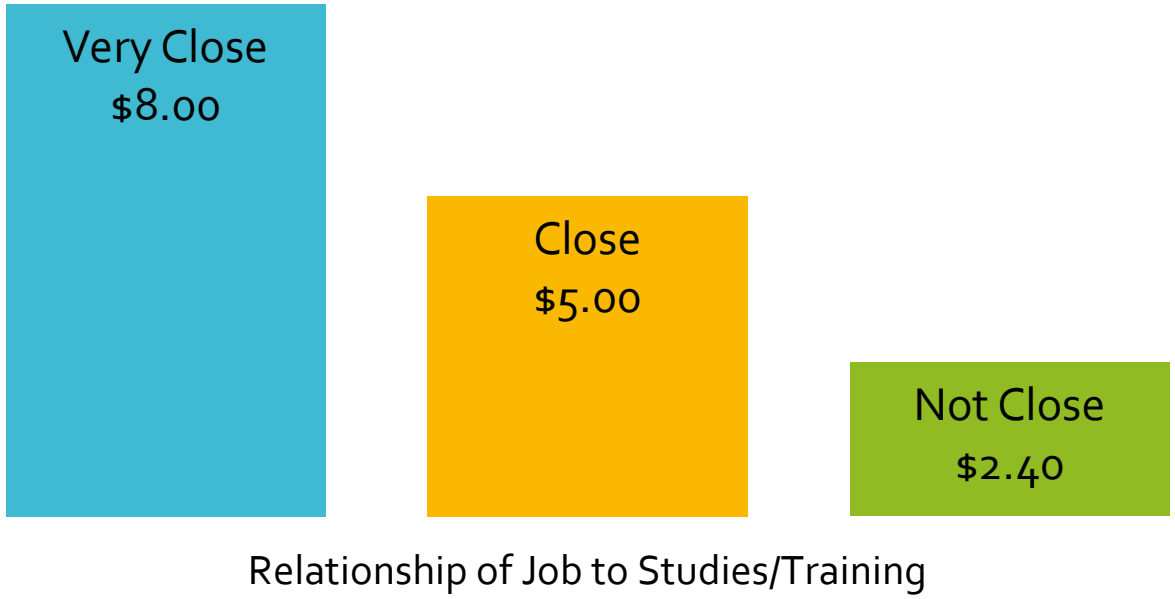
The majority of students (69%) indicated their current job is in their field of study, or in a field that is "close" or "very close."



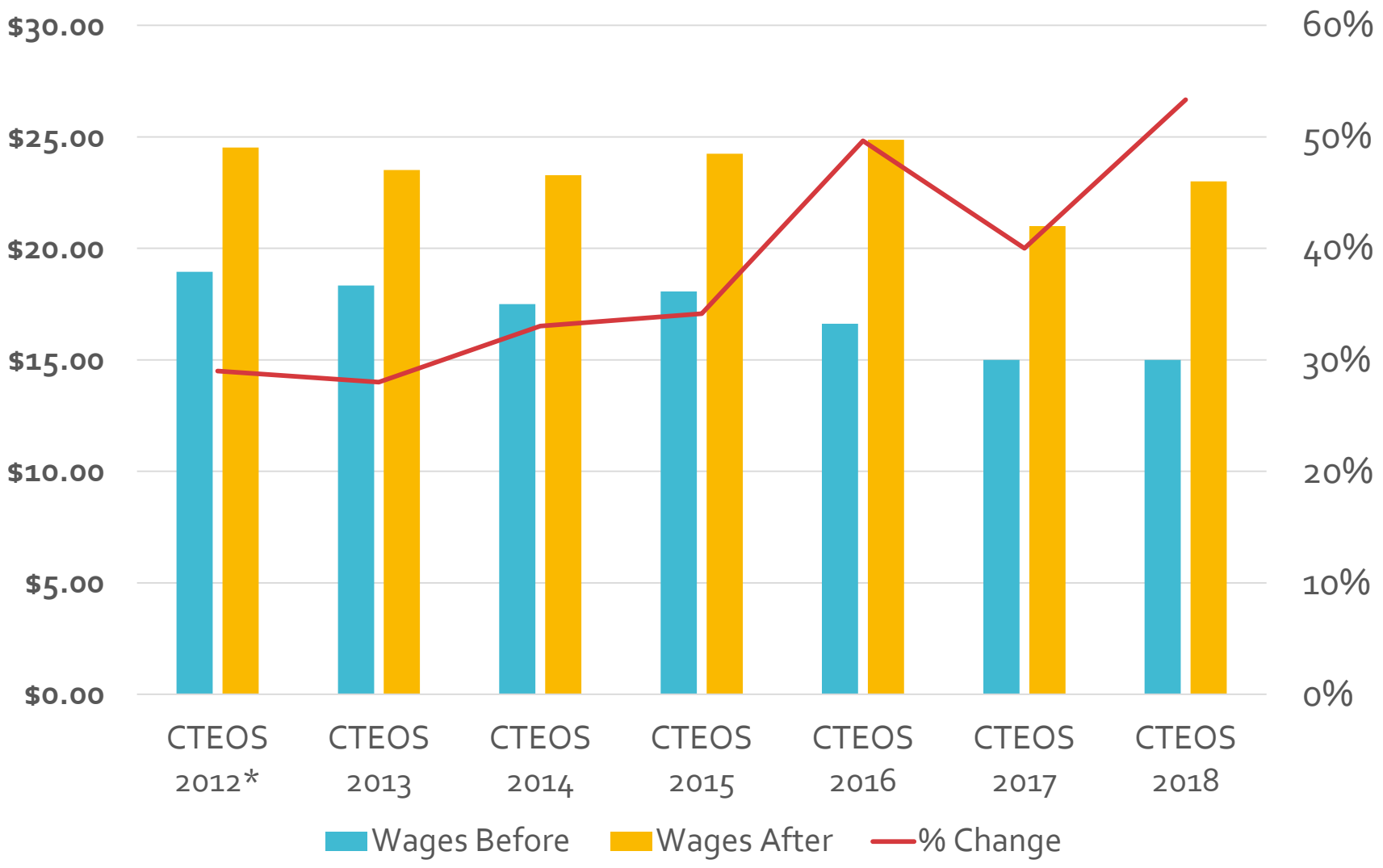
Wage Gain by Working in Field of Study

There is a strong correlation between Working in the Field of Study and Median Wage Gain, with higher gains for students who report a close relationship between their job and their field of study/training.

Median Wage Gain, in $, by:
How Closely Related to Your Job is Your Field of Study?



Change in Wages Over Time



For More Detailed Findings

https://cteos.org

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Project Purpose

- Demonstrate most common occupations students enter segmented by field of study at the bachelor degree level.
- Understand which most common bachelor degrees feed into particular occupations.
- Begin to identify opportunities to improve student living wage attainment.

Minnesota Dashboard inspired our work for California

California Project Methodology

- Data used for this dashboard is the American Community Survey 2013–2017 Public Use Microdata Sample File (the latest ACS 5-year PUMS) by the U.S. Census Bureau.
- Similar to other self-reported surveys, ACS 5-year PUMS file limitation is the self-report response bias.

Organized by:

- *Six Age Groups*
- *Seven California Macro Regions*
- *Twelve Meta Major Areas*
- *Twenty-three Occupation Groups*

ACS Dashboard Demo

Bachelor's degrees to career destinations among Californians (..

Instructions: Use the drop-down boxes to ***Select a Macroregion, a Microregion, and an Age Group*** you are interested. The first table gives an overview of the distribution of population by the highest education level. Type into the ***Detailed Field of Study*** search bar or select a ***Metamajor*** in the drop-down box. The first bar chart provides educational attainment by field of study among the individuals with a Bachelor's degree and a..

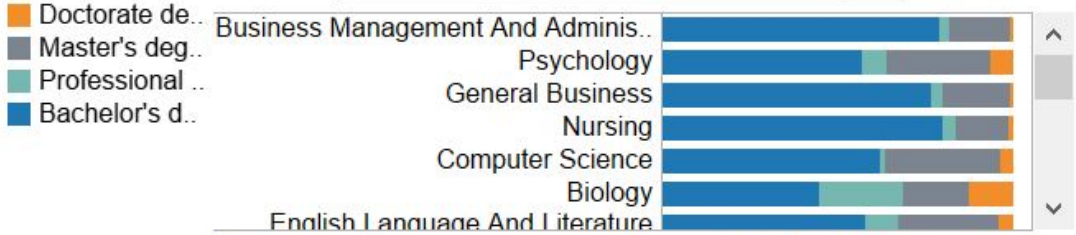
Select .. All **Select ..** (All) **Select ..** All **Searc..** **or a M..** (All)

The statistics in the table and bar charts below will change accordingly when the selections above change.

The highest education level attained among 25,764,437 Californians (All age group) in this region

High school or below	40.5%
Some college no degr..	6.1%
Some college no degr..	18.2%
Associate's degree	7.1%
Bachelor's degree	18.5%
Master's degree	6.7%
Professional degree	1.8%
Doctorate degree	1.2%
Grand Total	100.0%

Chart 1. The highest level of education attained by field of study among 7,249,116 Californians with at least a Bachelor's degree



Note: The advanced degree may be in a different field of study from the Bachelor's degree.

Psychology

Skills	Jobs
Active Listening	• Counselors • Elementary and Middle School Teachers • Miscellaneous and General Managers • Secretaries and Administrative Assistants
Reading Comprehension	• Elementary and Middle School Teachers • Human Resources Workers • Social Workers • Registered Nurses
Critical Thinking	• Counselors • Secretaries and Administrative Assistants • Social Workers • Retail Salespersons

Common jobs for bachelors degree students based on ACS dashboard

Psychology

Skills	Jobs
Active Listening	• Child, Family, and School Social Workers • Judges, Magistrate Judges, and Magistrates • Lawyers • School Psychologists*
Reading Comprehension	• Counseling Psychologists* • Judicial Law Clerks • Lawyers • Sports Medicine Physicians
Critical Thinking	• Chief Executives • Family and General Practitioners • Judges, Magistrate Judges, and Magistrates • Managers, All Other; such as Investment Fund Managers*

*An asterisks * indicates that the occupation sits within the CIP to SOC crosswalk for Psychology*

Thank You

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