

Where Do They Go, What Do They Do,  
How Much Do They Earn?  
Tracking Employment Outcomes of  
California Community College Graduates

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# Two Statewide Projects

- **CCC Student Labor Market Outcomes**
  - Ryan Fuller
- **CTE Outcomes Survey (CTEOS)**
  - KC Greaney, Mallory Newell

# One Goal

- **Track employment outcomes for California Community College CTE students with the ultimate goal of improving CTE programs**

# Different Approaches

	CTEOS 2013	CCCCO LMI Study
Methodology	Survey	Data Match (CCCCO & EDD)
Sample	CTE completers and leavers from 35 CCCs	All award completers (excluding xfers)
N	47,436	51,649
Response/Match Rate	24%	-
Timeframe	Surveyed in 2013 (cohort Enrolled/ Completed in 10/11, did not enroll in 11/12)	Award completers 2002-03 to 2006-07

# Merits/Limitations

	CTEOS 2013	CCCCO LMI Study
Merits	<ul style="list-style-type: none"><li>• Includes all students, regardless of employment status or residence</li><li>• Provides information on a variety of outcomes in addition to wage gain</li></ul>	<ul style="list-style-type: none"><li>• Can provide actual wages as reported to EDD for those with valid SSN's</li><li>• Can see changes over time (pre-post award) and by industry.</li></ul>
Limitations	<ul style="list-style-type: none"><li>• Self-Reported Information (with the exception of COMIS data)</li></ul>	<ul style="list-style-type: none"><li>• Includes only students earning wages in California</li><li>• No self employment or federal, military etc.</li><li>• No control for part-time/full-time status</li></ul>

# Exploring Student Labor Market Outcomes: Industry of Occupation

Ryan Fuller

California Community Colleges Chancellor's Office  
Research, Analysis and Accountability



CALIFORNIA COMMUNITY COLLEGES

# Background

- Chancellor's Office released Salary Surfer tool earlier this year
- Wage outcomes for graduates only represent one piece of the puzzle
- Besides annual wages from EDD also get industry of employment (NAICS) for students
- CCCCO data joined with EDDUI wage data
- Many studies have looked at earnings of community college students but very few have been able to link to industry or occupation.
- Washington Workforce Training & Education Coordinating Board



# Methodology

- Using Salary Surfer/Wage Tracker data
  - Those who earned awards who did not transfer to a 4 year institution & were not enrolled anywhere in CCC system after award
- Joined to EDDUI wage data using SSN
- Inflation adjusted wages





# Challenges

- Unclear what area of employment within industry wages were earned in
  - No wages reported by occupation to EDD
- No control for part time vs. full time employment, wages reported only by quarter. No other indicator of time worked.
- Industry may not necessarily be associated with occupation. Within a given industry there may be a wide variety of occupations. No indicator for occupation within industry.



# Research Question

- How do wages and industry of employment vary by discipline and award type before and after completion of award?

# About NAICS

- North American Industry Classification System
- U.S., Canada & Mexico replaced the old SIC (Standard Industrial Classification) codes with the NAICS in 1997. Have been revised several times since.
- Primarily used to track national economic statistics

# About NAICS

- NAICS is the lowest level of employment detail that EDD collects
- NAICS can be grouped at the two (sector), three (subsector), four (industry group), five (international industry) and six digit levels (national industry).
- For purposes of analysis, wages were aggregated to the two and four digit levels.



# Nursing Associate Degree

Most Common Industries of Employment 2 years before award:

Industry of Employment	Median Wage	% in Industry
Health Care and Social Assistance	\$18,778	50.6
Retail Trade	\$6,792	8.4
Accommodation and Food Services	\$7,831	8.2
Administrative and Support and Waste Management and Remediation Services	\$4,004	7.1
Educational Services	\$6,159	5.4



# Nursing Associate Degree

- Most Common Industries of Employment 5 years after award:

Industry of Employment	Median Wage	% in Industry
Health Care and Social Assistance	\$75,259	77.5
Public Administration	\$83,552	6.9
Administrative and Support and Waste Management and Remediation Services	\$7,264	5.8
Educational Services	\$64,966	4.7
Other Services (except Public Administration)	\$7,003	1.2



# Fire Technology Certificate

Most Common Industries of Employment 2 years before award:

Industry of Employment	Median Wage	% in Industry
Retail Trade	\$11,921	25.2
Public Administration	\$67,889	14.7
Health Care and Social Assistance	\$12,380	9.1
Construction	\$25,993	7.7
Accommodation and Food Services	\$1,286	7.0



# Fire Technology Certificate

- Most Common Industries of Employment 5 years after award:

Industry of Employment	Median Wage	% in Industry
Public Administration	\$105,068	24.4
Retail Trade	\$23,197	11.4
Construction	\$27,066	8.9
Professional, Scientific, and Technical Services	\$25,313	8.1
Health Care and Social Assistance	\$40,324	7.3





# Liberal Arts & Sciences Associate Degree

Most Common Industries of Employment 2 years before award:

Industry of Employment	Median Wage	% in Industry
Retail Trade	\$8,464	16.4
Health Care and Social Assistance	\$17,499	11.0
Educational Services	\$18,507	11.0
Accommodation and Food Services	\$7,302	10.2
Administrative Support , Waste Management and Remediation Services	\$5,154	7.9



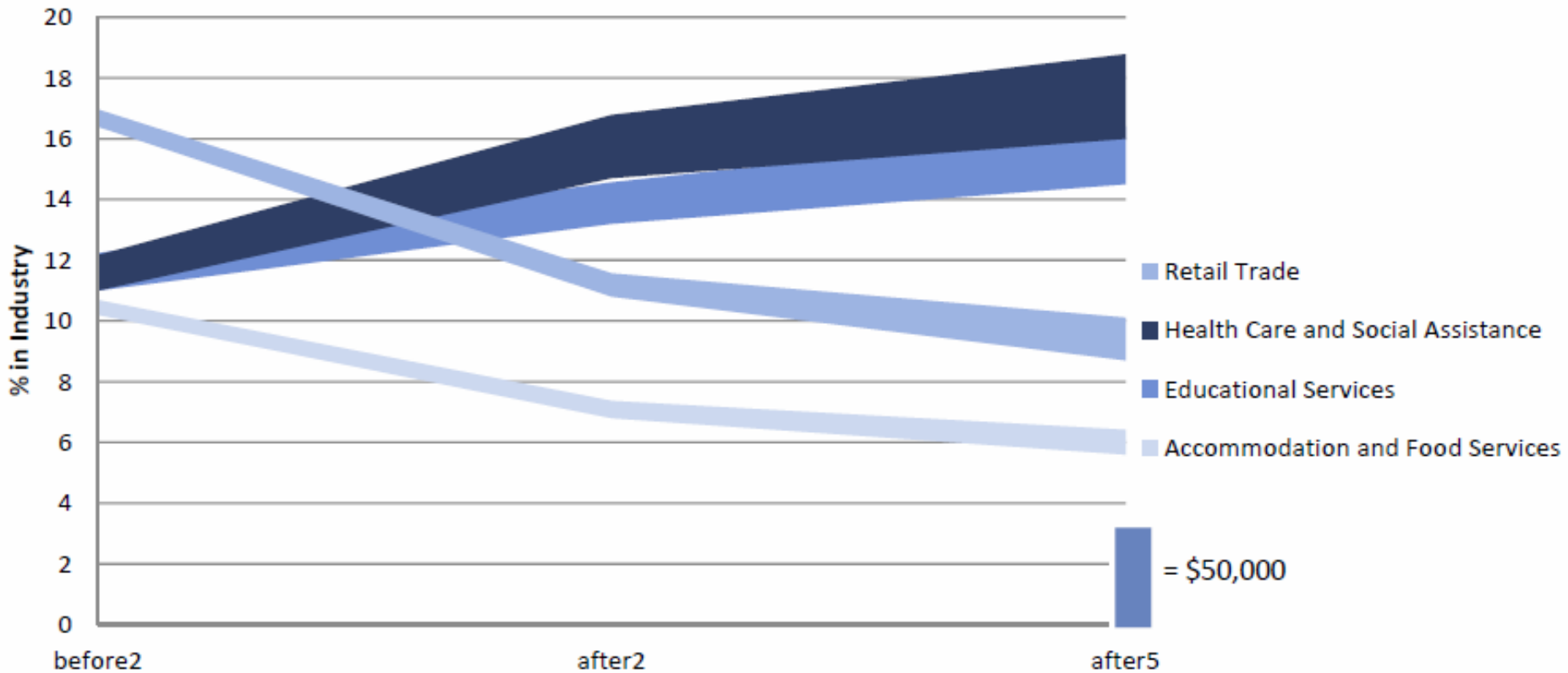
# Liberal Arts & Sciences Associate Degree

Most Common Industries of Employment 5 years after award:

Industry of Employment	Median Wage	% in Industry
Health Care and Social Assistance	\$41,830	16.0
Educational Services	\$28,491	14.5
Retail Trade	\$21,178	8.7
Public Administration	\$53,836	8.6
Professional, Scientific, and Technical Services	\$28,004	8.0



## Liberal Arts AA, % in Industry and Median Income



# Drilling Down Further (4 Digit NAICS) Nursing Associate Degree 2 years before

Industry of Employment	Median Wage	% in Industry
General Medical and Surgical Hospitals	\$22,710	24.8
Offices of Physicians	\$19,145	8.3
Employment Services	\$3,504	5.8
Nursing Care Facilities (Skilled Nursing Facilities)	\$13,548	5.1
Full-Service Restaurants	\$10,570	4.7

# Drilling Down Further (4 Digit NAICS) Nursing Associate Degree 5 years After

Industry of Employment	Median Wage	% in Industry
General Medical and Surgical Hospitals	\$79,107	57.5
Offices of Physicians	\$60,929	8.7
Executive, Legislative, and Other General Government Support	\$80,278	5.3
Employment Services	\$ 6,735	5.0
Colleges, Universities, and Professional Schools	\$73,022	3.5

# All Associate Degrees

Most Common Industries of Employment 2 years before award (4 digit NAICS):

Industry of Employment	Median Wage	% in Industry
General Medical and Surgical Hospitals	\$23,674	9.1
Elementary and Secondary Schools	\$17,633	5.5
Employment Services	\$4,099	5.2
Full-Service Restaurants	\$9,812	4.5
Executive, Legislative, and Other General Government Support	\$41,215	4.3

# All Associate Degrees

Most Common Industries of Employment 5 years after award (4 digit NAICS):

Industry of Employment	Median Wage	% in Industry
General Medical and Surgical Hospitals	\$76,838	22.2
Elementary and Secondary Schools	\$28,452	6.1
Executive, Legislative, and Other General Government Support	\$65,016	6
Offices of Physicians	\$56,011	4.7
Employment Services	\$ 6,660	4.3

# What conclusions can we draw from this?

- Many community college awards do a good job of moving students from low paying service sector employment to higher paying professional industries.
- Many of the allied health fields such as Nursing and Radiologic technology have a strong alignment with employers in health related industries.
- Even earning academic awards in areas such as Liberal Arts can help graduates move into professional occupations with higher wages.





# Future work

- We will continue to explore industry related outcomes associated with wages. Begin to look at outcomes of those who don't complete a formal awards (skills upgrade, career upgrade, industry certificate etc.)
- Ways we can incorporate industry of employment wages with our existing wage tracker data.



# Thanks!

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# CTE Outcomes Survey

KC Greaney, Santa Rosa Junior College

# CTE Employment Outcomes Survey: Background

- **Collaborative effort among community college consortia, the Chancellor's Office, the RP Group, and Santa Rosa Junior College**
  - Modeled primarily after Cabrillo College's Completer/Leaver Surveys
- **Dual purposes:**
  - Provide insightful information for local program improvement
  - Collect statewide data for documentation of CTE outcomes
- **Practitioner-Driven Effort**
  - Statewide meetings, conference calls, collaboration
  - All methodology, implementation and survey questions vetted
  - Use survey to collect data and information not available elsewhere
  - Report format developed in response to practitioner needs

# CTE Employment Outcomes Survey: Background

- **First (pilot) year of survey, 2012**
  - 15 colleges participated
- **Second year of survey, 2013**
  - 35 colleges participated, nearly 50,000 students surveyed
- **Third year of survey, 2014**
  - ~ 30 colleges participating
- **Changes from pilot year:**
  - Slight modification to questions
  - Inclusion of new questions regarding industry certification/licensure, and journey-level status

# CTE Employment Outcomes Survey 2013

## Methodology

- 3 Modalities: e-mail, then US mail, then phone calls
- Survey conducted approximately 1.5 years after completing/leaving

## Sample

- All students included who met the criteria
  - By 10/11, had either earned a vocational award of 6+ units OR earned 9+ CTE units AND did not enroll in more than 5 units in 11/12
- Total = 35 Colleges and 47,436 students

## Data

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

# CTE Employment Outcomes Survey 2013

## Response Rates

- Overall, 24%
- By College, overall response rate ranged from 33.4% to 11.9%
- Lower response rates from colleges that did not participate in all three modalities, AND those without current, accurate contact information

## Reports

- Statewide, and college level reports
- Full data sets given back to colleges for further analysis

# Statewide Findings

## The big questions...

- Are our CTE students employable?
- Do they find jobs in the field in which we trained them?
- Do they see an increase in income?

...in other words, was the program worth it?

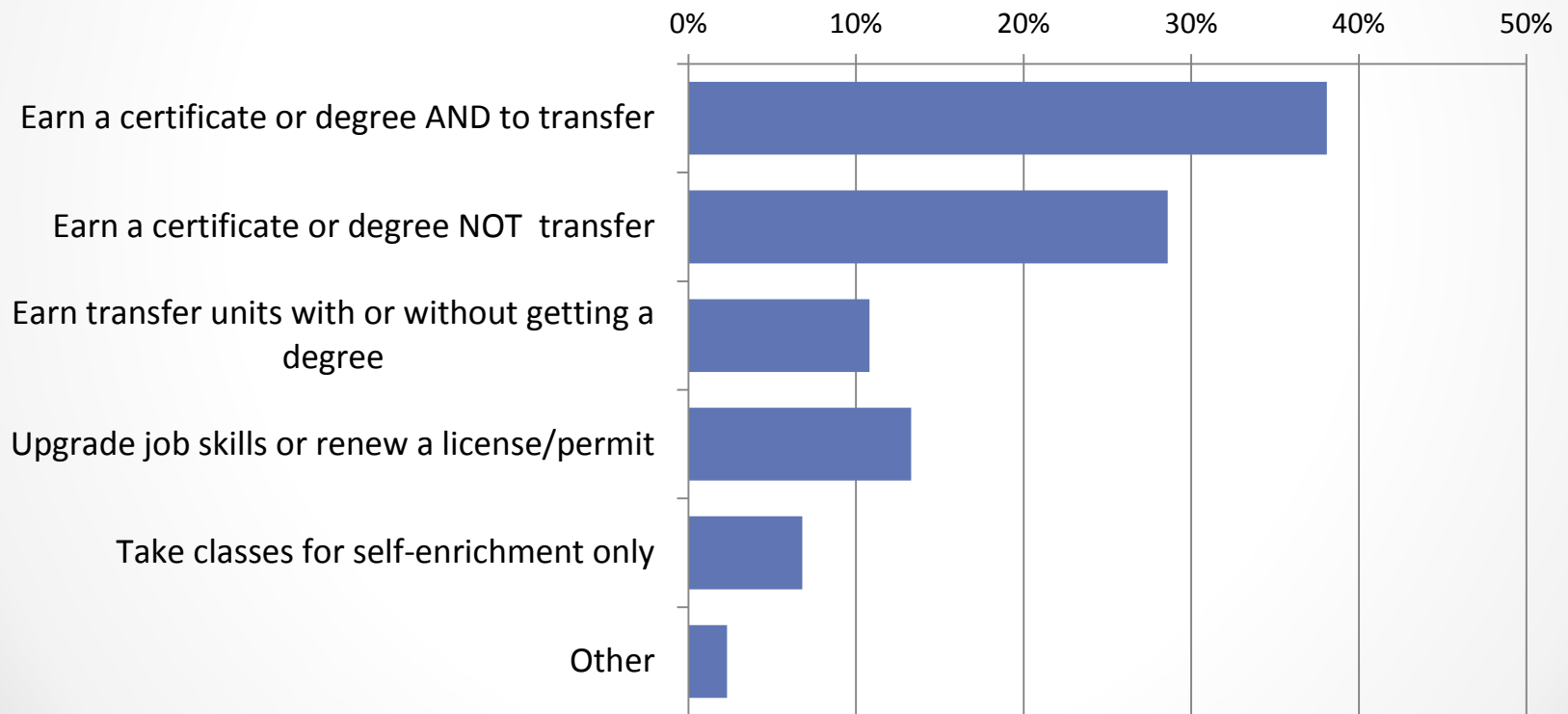


# Statewide Findings

- 24% Response Rate
- 92% Satisfaction Rate with education and training
- 35% transferred
- 75% working in their field of study (or “close”)
- 32% successfully engaged in a job search, 11% unsuccessfully engaged in a job search (the remainder were not looking or were already employed)

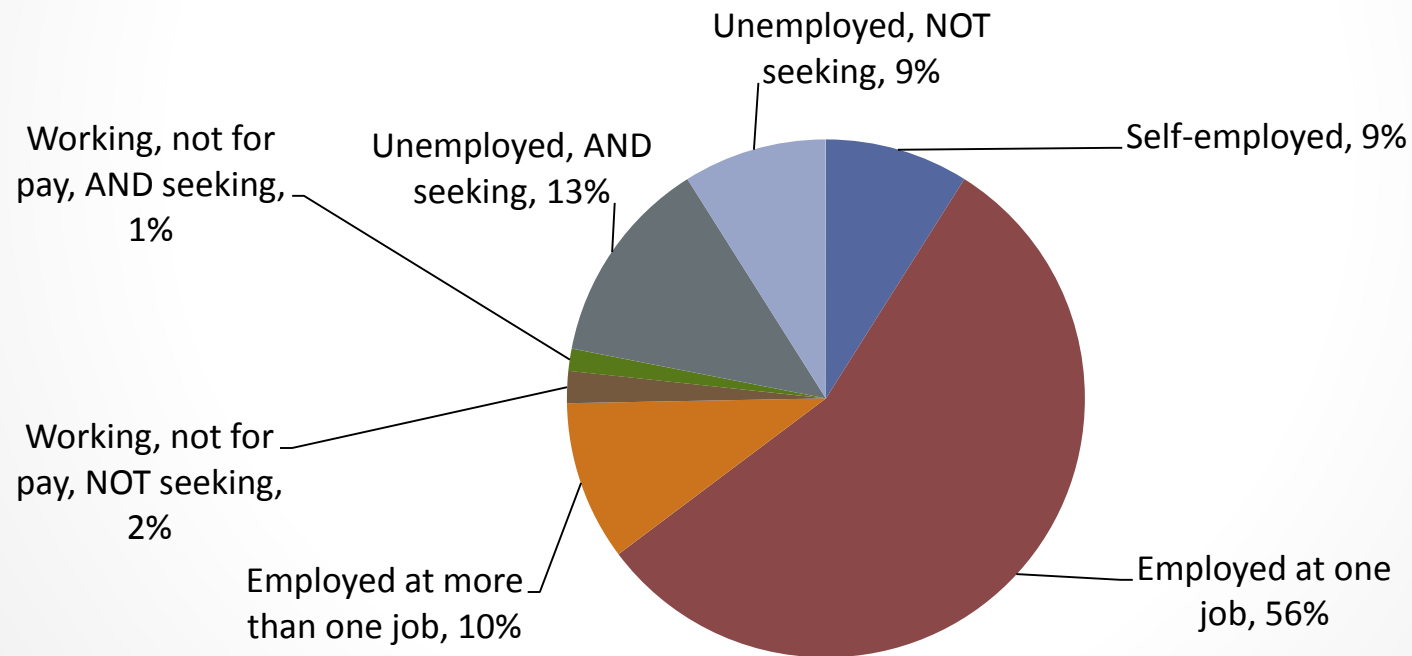
# Findings: Educational Goal

Most (67%) indicated earning a certificate or degree (with or without transfer) and 13% upgrading job skills or license/permit renewal



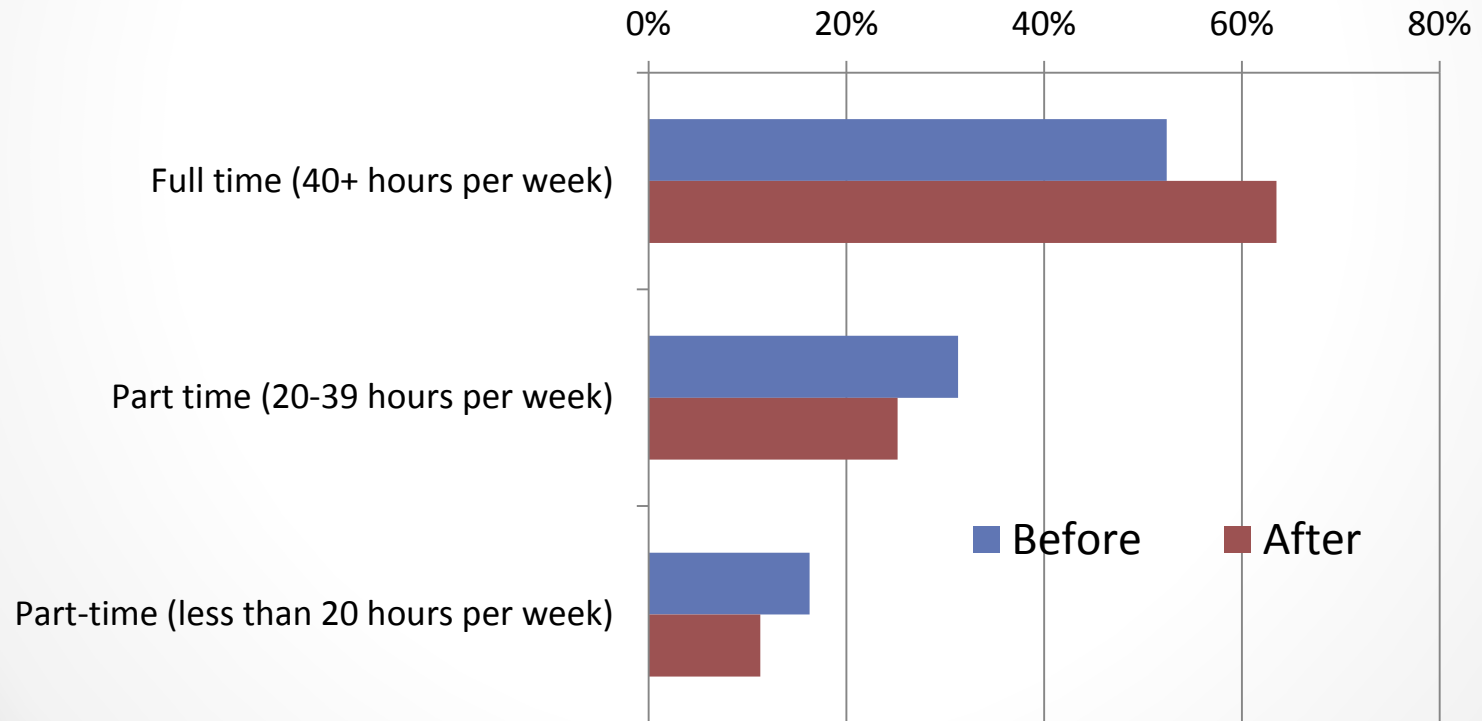
# Findings: Employment Status

75% of respondents are employed for pay



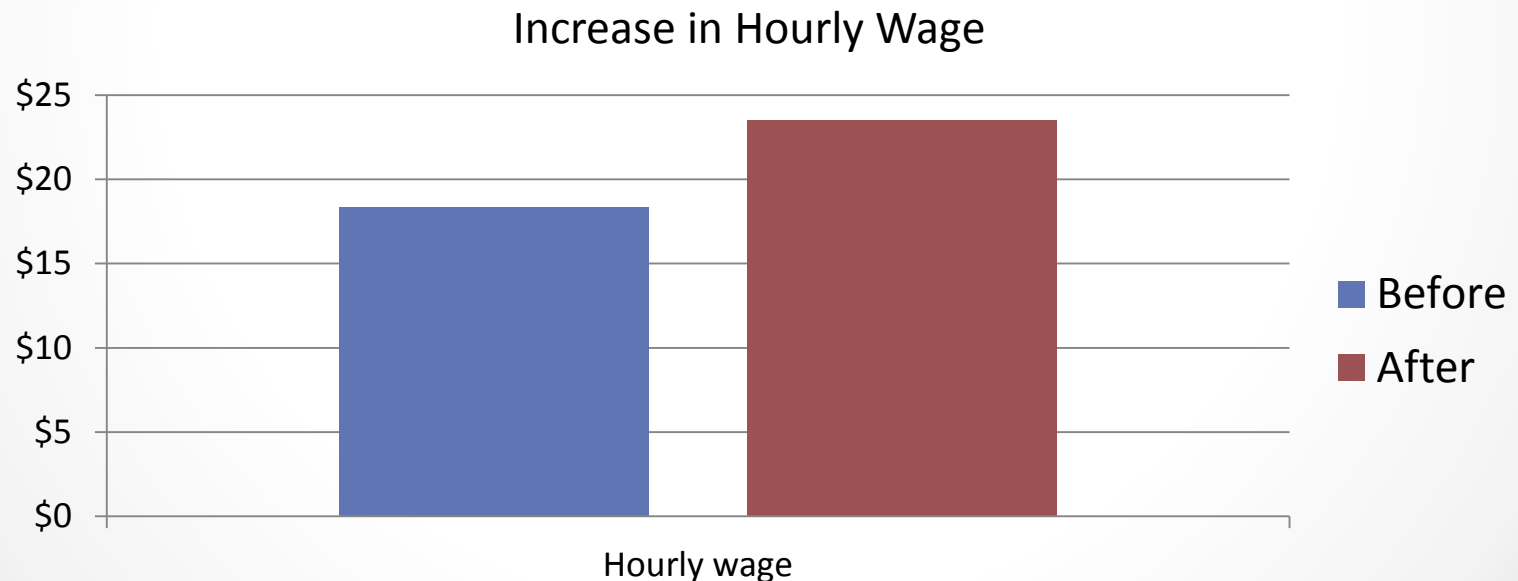
# Findings: Work Status

More students worked full time after completing studies and training



# Findings: Wage Increase

The hourly wage of respondents *increased 28%* from their hourly wage before their studies/training (\$18.34) to their hourly wage after completing their studies/training(\$23.51)



# Further Examination of Results

- Over a third of respondents transferred to a 4-year college or university
- Less than half of respondents earned a degree or certificate

## **...doesn't that make a difference?**

- ✓ How do the results vary by transfer and completion status?
- ✓ What characterizes “Skills Builders” (non-completers)?
- ✓ Does completion matter?

# Wage Increase by Completion Status

<i>Completion Status</i>	<i>Hourly Wage Prior</i>	<i>Hourly Wage Post</i>	<i>Increase</i>	<i>Change</i>
Skills Builder	\$18.65	\$23.39	\$4.74	25.4%
Completer	\$17.99	\$23.68	\$5.69	31.6%
<b>Total</b>	<b>\$18.35</b>	<b>\$23.52</b>	<b>\$5.17</b>	<b>28.2%</b>

# Wage Increase by Award Level

<i>Award Level</i>	<i>Hourly Wage Prior</i>	<i>Hourly Wage Post</i>	<i>Increase</i>	<i>Change</i>
AA/AS	\$17.75	\$25.09	\$7.34	41.3%
Cert of 60+ units	\$23.81	\$29.80	\$5.99	25.2%
Cert of 30 to <60	\$17.72	\$22.00	\$4.28	24.2%
Cert of 18 to <30	\$18.55	\$21.91	\$3.36	18.1%
Cert of 12 to <18 units (CO approved)	\$18.16	\$21.23	\$3.06	16.9%
Cert of 6 to <18 units (not CO approved; posted in COMIS)	\$18.08	\$21.07	\$2.98	16.5%
<b>Total</b>	<b>\$17.99</b>	<b>\$23.68</b>	<b>\$5.69</b>	<b>31.6%</b>



# Respondents: Characteristics

	No Transfer: Skills Builder	No Transfer: Completer	Transfer: Skill Builder	Transfer: Completer
Gender: Female	50.2%	63.0%	48.4%	55.6%
Ed Attain: BA/BS +	27.1%	19.5%	6.3%	5.2%
Age	36.8	36.1	25.6	28.7
Acad. Disadvantaged	34.6%	43.1%	42.1%	50.1%
Attend only 1 CCC	42.6%	26.2%	41.5%	24.8%
	n=4,112	n=3,470	n=2,552	n=1,460

# Respondents: Interesting Findings

	No Transfer: Skills Builder	No Transfer: Completer	Transfer: Skill Builder	Transfer: Completer
“Very close” relationship between studies/training and job	44.8%	59.5%	38.1%	46.2%
Successful job search	29.1%	43.1%	22.4%	28.1%
Coursework/training had “no impact” on employment	30.5%	18.6%	41.6%	29.3%
Self Employed	11.4%	7.8%	6.1%	6.7%
Ed Goal: Update Skills, Renew License	25.5%	10.5%	4.0%	2.5%
Ed Goal: Self Enrichment	13.6%	4.0%	2.8%	1.6%
Obtained industry certificate or licensure	30.6%	59.7%	10.2%	23.6%

# Respondents: Wage Increase

	No Transfer: Skills Builder	No Transfer: Completer	Transfer: Skill Builder	Transfer: Completer
Hourly Wage PRE	\$21.19	\$19.03	\$14.45	\$15.53
Hourly Wage POST	\$25.87	\$24.78	\$19.01	\$20.81
Increase in Wage	\$4.68	\$5.75	\$4.56	\$5.28
<b>Percent Change</b>	<b>22.1%</b>	<b>30.2%</b>	<b>31.5%</b>	<b>34.0%</b>

# Summary: Transfer and Completion Status

- **Non-transfer skills builders are an unusual group**
  - Older; more likely to have the educational goal of upgrading job skills or renewing an industry license/permit
  - More likely to already have a BA/BS and to be self-employed
  - Show the highest pre- AND post- hourly wages
- **Completion Matters, at least somewhat**
  - While both completers and skills builders show post-program wage increases, the increase is more pronounced for completers
  - Completers, regardless of transfer status, are more likely to report successful job searchers
  - Completers, regardless of transfer status, are more likely to report that their job is “very” closely related to their coursework/training

# CTEOS User Feedback Survey and Resources

Mallory Newell, De Anza College

# CTEOS User Feedback Survey

- A link to the survey was emailed to all college contacts who participated in the survey on the 2011-12 academic year
- Received 6 valid responses
- Respondents suggested that the results had largely been used to inform decision making in the areas of:
  - Enrollment management
  - Accreditation
  - Perkins or other reporting
  - Program improvements
  - Changes to program degree offerings

# Additional Highlights

- Respondents found the following to be **most valuable about the survey**:
  - Ease of administration by the RP Group
  - The multiple ways students were contacted to increase response rates
  - The overall findings from the survey from my college
  - The model report that was provided
- Respondents stated the following **technical support would have been beneficial**:
  - Assistance with the initial data pull of students
  - Assistance with analyzing the results
  - Examples of how other colleges shared the results and with whom

# CTEOS Resources

## User Guide:

- How other colleges used and shared the results
- Lessons learned from participating in the survey
- Example discussion questions

## PowerPoint Template:

- Input your college's results and share!

## Program examples:

- Examples from 2 colleges who disaggregated the data by program.

<http://www.rpgroup.org/resources/resources-using-results>



# Thank You

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