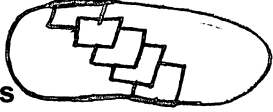


→ from Rock

# Towards a Criteria for CTE Program Prioritization



## Effectiveness

- CTE programs meet the college mission of helping all students achieve their career goals in the following ways:
  - preparation for direct entry into a career
  - instruction that enables those employed to advance in their careers
  - preparation for transfer to 4-year college or technical school for more advanced study in their career field
- Job placement within the field of study or successful transfer, and wage advancement are the best indicators of a CTE program's success at meeting the college mission.

Yes → good for all?

## Efficiency

prepare for future

- If a program's effectiveness is measured by its rate of job placement within the field and the wage gains it produces for its students, then its efficiency could be measured by the economic impact on students divided by the net cost of the program to the general fund.

less important / age of student / individual goals

## Program Fit with Labor Market Trends

what about stu who takes a few classes DM, weld, Etech to build a skill for job [improvement]

- A program's placement rate is dependent on the demand by employers for program graduates and on the supply of qualified candidates from other sources. Programs with a low placement rate may simply be too large for the labor market. Reducing the size of the program could reduce cost and increase the placement rate.
- In some fields changing labor markets may portend an increase or decrease in demand for program graduates. For example, in the greater San Francisco Bay area we are seeing a rapidly growing demand for industrial machinists, mechanics and maintenance workers. Colleges that were on the verge of closing these programs are now being approached by industry to grow their programs.

## Skills Oriented Programs

- Some CTE programs are more valuable for the occupationally relevant skills they teach than for preparing students for particular occupations. A non-CTE example would be English or math. These basic skills are obviously essential across almost all occupations. Technology oriented skills taught in some CTE programs are becoming part of the basic skill set required across many occupations. Within this dimension, the most valuable programs would teach skills that are utilized in the broadest number of occupations.

m-22 m-6x

Fall August 29th 1st day

Perkins - problems with data?

## Job Placement Rate

We have two sources of data for this indicator. Each with different strengths and weaknesses. And each resulting in a different ordering.

### Perkins Core Indicator #4 Placement

Percentage of completers who either showed as being employed in the Unemployment Insurance Wage Data or transferred to a UC or CSU. No indication of whether student was employed in the field for which they studied. Does not count self-employed. Captures all students with SSN. At least 2, possibly 4 years of data available.

### Completer Leaver Survey

Percentage of completers (leaver data available as well) who reported being employed in the field for which they studied. ~ 10 years of data available. Captures self-employed. Percentage of respondents averages ~45-50% over all programs, but some programs have a very small number of respondents.

One possibility would be to do some sort of blend of the two indicators, such as an average.

Sorted by Completer Leaver Emp in Field

Program	Emp in Field	Perkins	Average
1	95%	100%	97%
2	91%	97%	94%
3	85%	88%	86%
4	75%	80%	78%
5	74%	76%	75%
6	67%	50%	59%
7	62%	81%	71%
8	61%	69%	65%
9	57%	91%	74%
10	55%	97%	76%
11	53%	76%	65%
12	53%	83%	68%
13	50%	67%	59%
14	46%	65%	55%
15	43%	77%	60%
16	39%	50%	45%
17	37%	70%	54%
18	35%	69%	52%
19	34%	72%	53%
20	30%	0%	15%

Sorted by Perkins – Employed Anywhere

Program	Emp in Field	Perkins	Average
1	95%	100%	97%
2	91%	97%	94%
10	55%	97%	76%
9	57%	91%	74%
3	85%	88%	86%
12	53%	83%	68%
7	62%	81%	71%
4	75%	80%	78%
15	43%	77%	60%
5	74%	76%	75%
11	53%	76%	65%
19	34%	72%	53%
17	37%	70%	54%
8	61%	69%	65%
18	35%	69%	52%
13	50%	67%	59%
14	46%	65%	55%
6	67%	50%	59%
16	39%	50%	45%
20	30%	0%	15%

## Wage Advancement

Our completer/leaver survey asks respondents to report their income at the time of the survey (about one year after leaving the program) and before entering Cabrillo. In some cases we are able to compare what is reported by students with wage data for the occupation available from other sources and these comparisons give us some confidence in the accuracy of this method.

There are several ways to rank order programs by this data. The two rankings below are based on the *difference* the program makes in students' wages.

Ranked by Absolute Difference in Wages

Program	Before	After	Difference	%
1	18.38	51.06	<b>32.68</b>	178%
2	16.31	38.90	<b>22.59</b>	139%
3	12.16	34.33	<b>22.17</b>	182%
4	14.74	31.47	<b>16.73</b>	113%
5	12.14	21.31	<b>9.17</b>	76%
6	17.94	25.67	<b>7.73</b>	43%
7	10.00	16.02	<b>6.02</b>	60%
8	12.45	17.68	<b>5.23</b>	42%
9	12.63	17.84	<b>5.21</b>	41%
10	11.99	17.12	<b>5.13</b>	43%
11	19.91	24.96	<b>5.05</b>	25%
12	12.30	17.12	<b>4.82</b>	39%
13	17.68	22.21	<b>4.53</b>	26%
14	19.57	23.66	<b>4.08</b>	21%
15	11.71	15.71	<b>4.01</b>	34%
16	10.61	14.31	<b>3.70</b>	35%
17	10.80	13.47	<b>2.67</b>	25%
18	15.00	17.27	<b>2.27</b>	15%
19	12.62	14.19	<b>1.57</b>	12%
20	17.90	17.41	<b>-0.49</b>	-3%

Ranked by Percentage Difference in Wages

Program	Before	After	Difference	%
3	12.16	34.33	22.17	<b>182%</b>
1	18.38	51.06	32.68	<b>178%</b>
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19	12.62	14.19	1.57	<b>12%</b>
20	17.90	17.41	-0.49	<b>-3%</b>

## Program Fit with Labor Market Trends

We have recently acquired access to web-based labor market information service that aggregates data from a variety of sources to project local, regional, state and national supply and demand for occupations. These projections are primarily based on historical data. Within a month we are scheduled to also receive access to a state-of-the-art service that spiders the web to report real-time demand for occupations. This may help us track

Here's an example of the kind of reports that we get with the EMSI economic modeling tool. I've obscured the occupational title. This report is for the Monterey Bay Region. It shows that there will be approximately 87 openings per year, yet the supply in 2009 was 79 AS graduates, 24 certificate of achievement level, and 126 skill certificate level. Looking at this and the program's placement data would suggest that the program might be downsized to better fit the labor market.

It would be possible to evaluate each of the programs and indicate those that seem to be the right size or too small, those that should consider downsizing to better fit the labor market, and those for which the labor market is substantially oversupplied. This analysis might be something that would be done on a selective basis after the programs are ranked using other criteria.

### Executive Summary

#### Program Occupations



#### Summary

2010 Occupational Jobs	1,783
2018 Occupational Jobs	2,314
Total Change	532
Total % Change	30%
2011 Median Hourly Earnings	\$17.78
Annual Openings	87

Source: EMSI Complete Employment - 2011.2

### Completers By Award Level

Select All Deselect All

Trim Run Report Save Group Filter

CIP Code ▲	Title	Award Level	2009 Completers, Base Institution	2009 Total Completers, Region
		Associate's degree	8	71
		Award of at least 1 but less than 2 academic years	12	12
		Award of less than 1 academic year	19	107

Source: National Center for Education Statistics

## **Skills Oriented Programs**

It would be possible to identify programs that teach skills that are highly valuable across a large number of occupations. It might be as effective however to use student demand as a gauge. Student enrollments in CTE classes are driven to a significant degree by perception of the extent to which the course will advance a career interest. Programs with large enrollments that don't have correspondingly high job placement rates may be drawing students who are seeking skills that they believe will give them a competitive edge in the labor market.