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## Estimates of the Net Impact of Career Technical Education in Washington

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# **Estimates of the Net Impact of Career Technical Education in Washington**

**September 16, 2002**

Presentation to  
**NASDCTE Consortium's Fall Conference**  
**Charleston, SC**

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W.E. Upjohn Institute  
for Employment Research

# Project

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- Sponsored by Washington State Workforce Training and Education Coordinating Board (WTECB)
- Legislatively mandated

# Sample Sizes

<u>Program</u>	<u>97/98</u>	<u>99/00</u>
JTPA II-A Adults	3,303	4,691
JTPA III	4,565	4,045
JTPA II-C Youth	2,403	3,057
Apprenticeship	3,212	3,198
→ CC Job Prep	17,206	16,748
CC Worker Retraining	3,317	6,894
CC ABE	11,421	13,623
Private Career School	--	10,992
→ Secondary Voc/Tech	6,212	10,030
<u>Comparison Group Pools</u>		
ES Labor Exchange Registrants **	106,440	223,608
HS General Track Survey	33,424	32,759

\*\* Removed all observations who had ever participated in any of the education or training programs.

# Methodology

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- Quasi-experimental
- Administrative Data
  - Relatively inexpensive
  - Timely
  - More accurate

# Net Impact vs. Gross Impact

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Gross Impact - - What happened to program participants?

Net Impact - - What happened to program participants as compared to what would have happened if there were no program?

# Preferred Methodology:

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Random Assignment Experiment

e.g., clinical trials of a pharmaceutical

Calculate the difference between the “treatment” group and the “control” group.

# Alternative methodology:

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Quasi-experimental:

Identify a population with characteristics “like” program participants, but who didn’t participate in any programs.

Called a comparison group.



## Alternative methodology (cont'd):

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Calculate the difference between the “treatment” group and the “comparison” group.

# Comparison Group Pool

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- Individuals who registered with ES, but didn't participate in any workforce education or training program

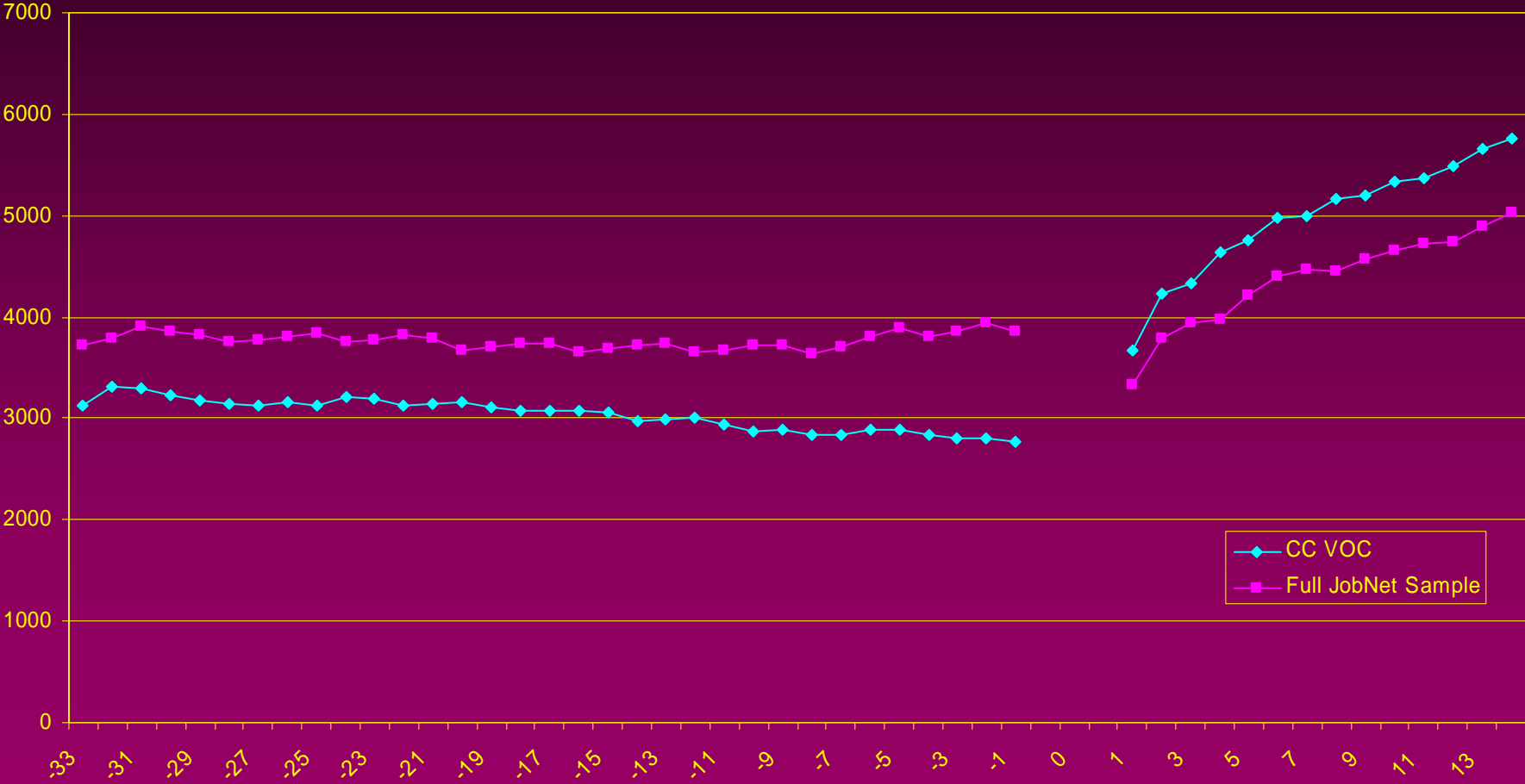
# Comparison Groups:

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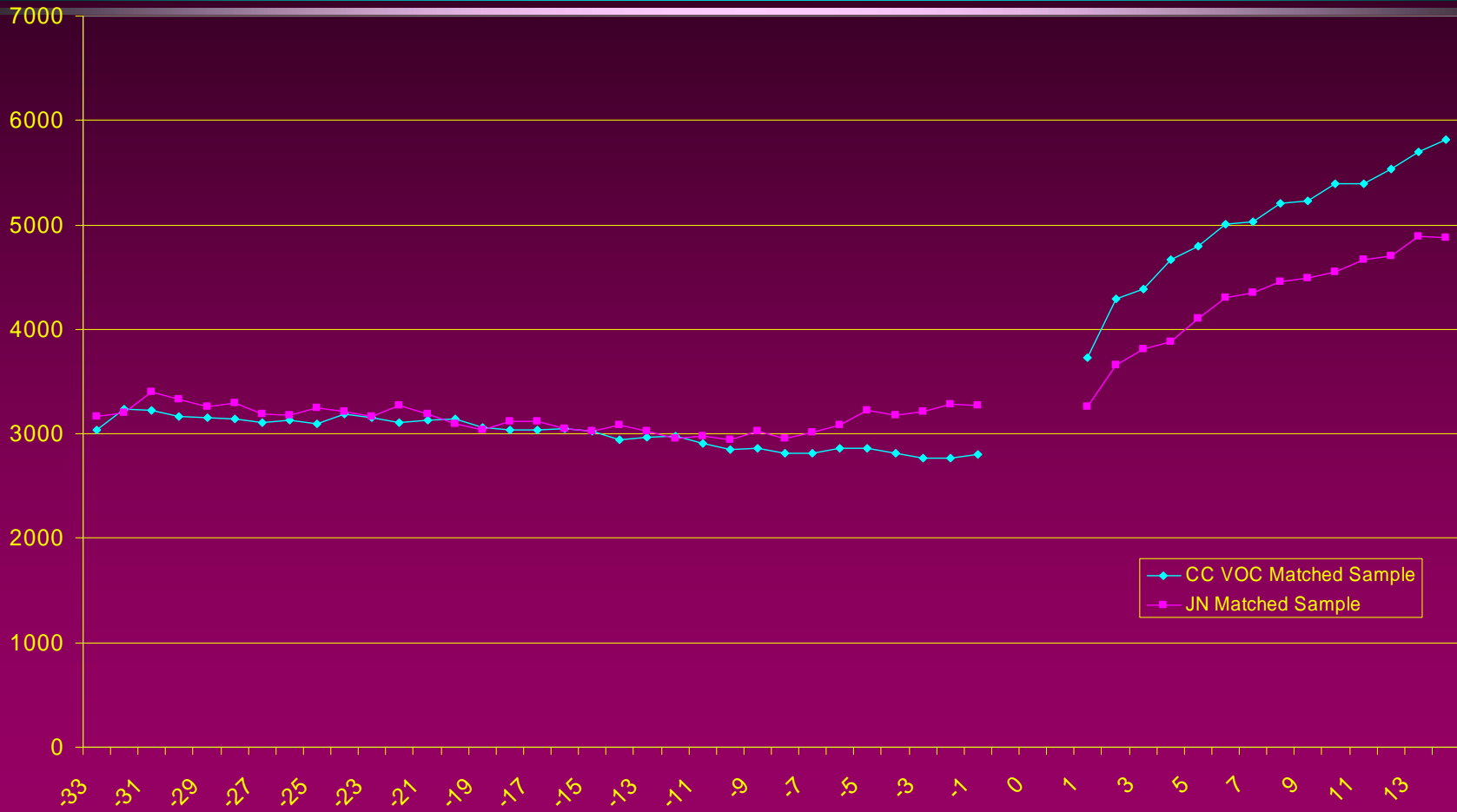
- Individuals among the ES registrants who are statistically similar to program participants
- Statistical similarity determined by technique called *statistical matching*

# CC VOC

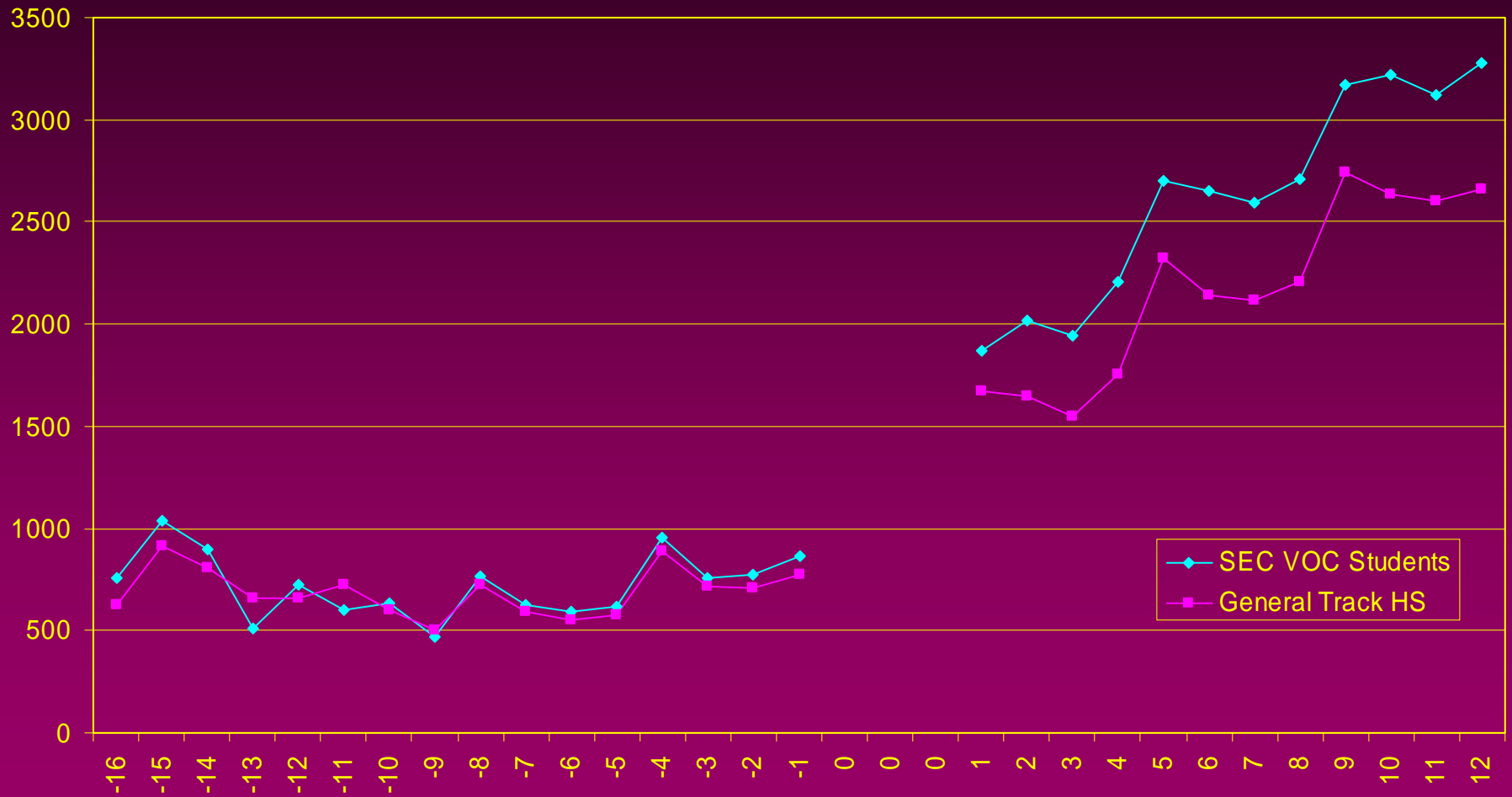
## Earnings Trend, 1997/1998



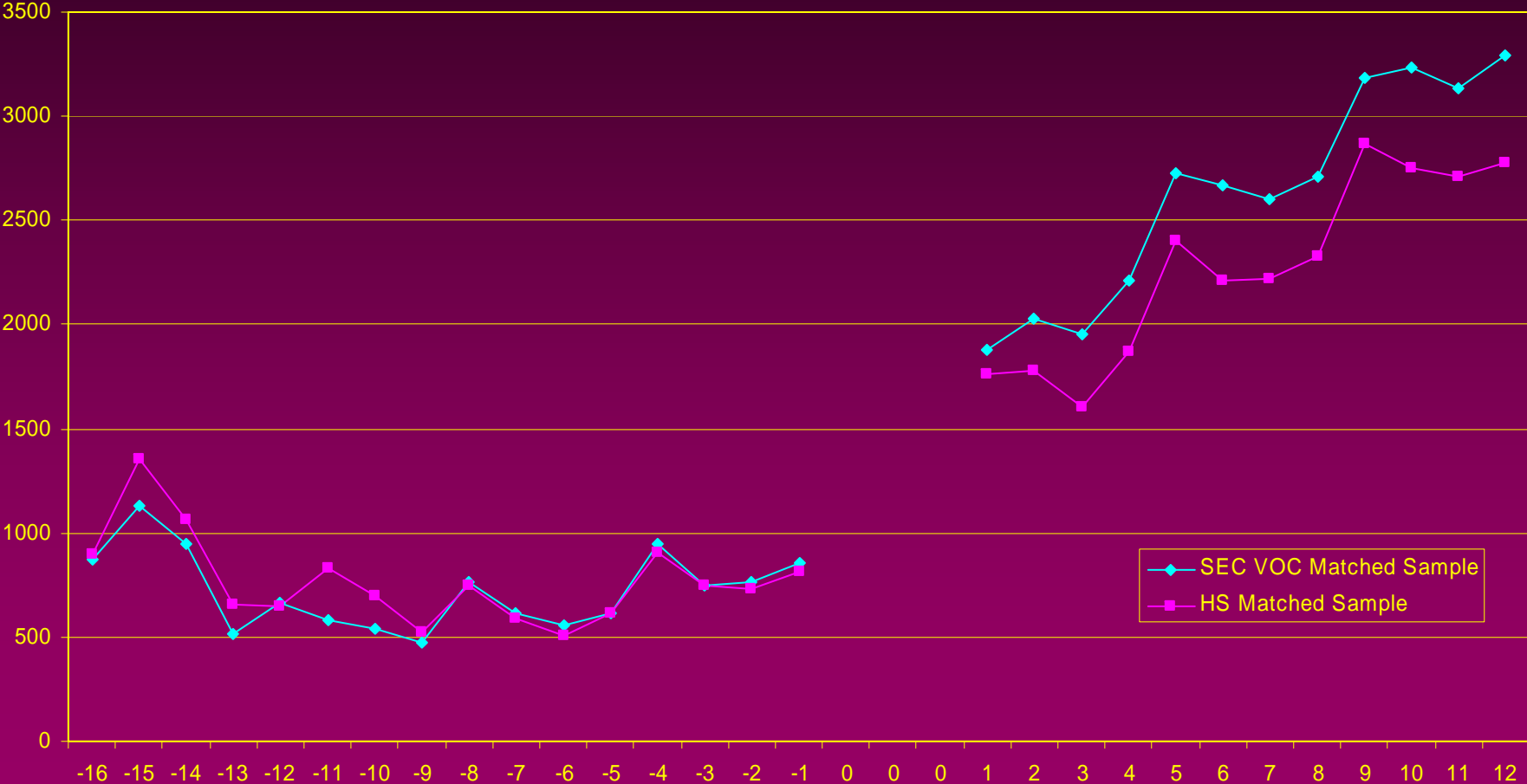
# CC VOC Earnings Trend, 1997/1998



## SEC VOC Earnings Trend, 1997/1998



# SEC VOC Earnings Trend, 1997/1998



# Results

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- Current project results are **PRELIMINARY – Please do not cite.**



**Job Preparation Training**

**at**

**Community and Technical Colleges**

# Short-Term Net Impacts (during 3<sup>rd</sup> Quarter after Leaving)

	Comparison Group	Net Impact	Participants (Adjusted)*
<b>Employment:</b> (%age in reported employment)	71.0%	4.5%	75.5%
<b>Mean Hourly Wage</b> (of those working)	\$11.56	\$1.76	\$13.32
<b>Mean Hours Worked:</b> (per quarter for those working)	402.1	38.6	440.7
<b>Mean Quarterly Earnings:</b> (of those working)	\$4,560	\$931	\$5,491
<b>TANF:</b> (%age receiving aid)	6.1%	-0.6%	5.5%
<b>Food Stamps</b> (%age receiving)	10.8%	-0.9%	9.9%
<b>Medicaid Benefits:</b> (%age receiving)	15.2%	-0.8%**	13.4%

\*Statistically adjusted to control for demographic differences.

\*\*Not statistically significant at the 0.10 level.

# Longer-Term Net Impacts (during 8<sup>th</sup> – 11<sup>th</sup> Quarters after Leaving)

	Comparison Group	Net Impact	Participants (Adjusted)*
<b>Employment:</b> (%age in reported employment)	68.4%	7.0%	75.4%
<b>Mean Hourly Wage</b> (of those working)	\$12.74	\$1.70	\$14.44
<b>Mean Hours Worked:</b> (per quarter for those working)	398.0	44.8	442.8
<b>Mean Quarterly Earnings:</b> (of those working)	\$5,097	\$1,185	\$6,282
<b>Unemployment Insurance:</b> (%age receiving)	10.6%	-0.7%	9.9%
<b>TANF:</b> (%age receiving aid)	5.2%	-0.4%**	9.1%
<b>Food Stamps</b> (%age receiving)	10.5%	-1.4%	9.1%
<b>Medicaid Benefits:</b> (%age receiving)	16.7%	-1.8%	14.9%

\* Statistically adjusted to control for demographic differences

\*\*Not statistically significant at the 0.10 level.

# Private Career Schools

# Short-Term Net Impacts (during 3<sup>rd</sup> Quarter after Leaving)

	Comparison Group	Net Impact	Participants (Adjusted)*
<b>Employment:</b> (%age in reported employment)	70.5%	2.6%	73.1%
<b>Mean Hourly Wage</b> (of those working)	\$12.54	\$0.25**	\$12.79
<b>Mean Hours Worked:</b> (per quarter for those working)	393.7	-4.9**	388.8
<b>Mean Quarterly Earnings:</b> (of those working)	\$4,742	\$10**	\$4,751
<b>TANF:</b> (%age receiving aid)	4.9%	2.7%	7.6%
<b>Food Stamps</b> (%age receiving)	11.0%	2.9%	13.9%
<b>Medicaid Benefits:</b> (%age receiving)	18.4%	3.8%	22.2%

\*Statistically adjusted to control for demographic differences.

\*\*Not statistically significant at the 0.10 level.

# Secondary Voc/Tech

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# Short-Term Net Impacts (during 3<sup>rd</sup> Quarter after Leaving)

	Comparison Group	Net Impact	Participants (Adjusted)*
<b>Employment:</b> (%age in reported employment)	50.7%	5.5%	56.2%
<b>Mean Hourly Wage</b> (of those working)	\$9.74	\$0.29**	\$10.03
<b>Mean Hours Worked:</b> (per quarter for those working)	252.7	11.4	264.1
<b>Mean Quarterly Earnings:</b> (of those working)	\$2,143	\$112	\$2,255
<b>TANF:</b> (%age receiving aid)	1.0%	0.0%**	1.0%
<b>Food Stamps</b> (%age receiving)	2.6%	-0.4%	2.2%
<b>Medicaid Benefits:</b> (%age receiving)	9.4%	-0.6%**	8.8%

\*Statistically adjusted to control for demographic differences.

\*\*Not statistically significant at the 0.10 level.

# Longer-Term Net Impacts (during 8<sup>th</sup> – 11<sup>th</sup> Quarters after Leaving)

	Comparison Group	Net Impact	Participants (Adjusted)*
<b>Employment:</b> (%age in reported employment)	62.4%	5.7%	68.1%
<b>Mean Hourly Wage</b> (of those working)	\$9.70	\$0.50	\$10.21
<b>Mean Hours Worked:</b> (per quarter for those working)	302.6	27.1	329.7
<b>Mean Quarterly Earnings:</b> (of those working)	\$2,991	\$451	\$3,442
<b>Unemployment Insurance:</b> (%age receiving)	4.3%	1.0%	5.3%
<b>TANF:</b> (%age receiving aid)	2.3%	0.1%**	2.4%
<b>Food Stamps</b> (%age receiving)	3.7%	0.1%**	3.8%
<b>Medicaid Benefits:</b> (%age receiving)	9.2%	-0.3%**	8.9%

\*Statistically adjusted to control for demographic differences.

\*\*Not statistically significant at the 0.10 level.



# Benefits and Costs (from previous study)

# Benefits and Costs of Postsecondary Training at Community and Technical Colleges

	First 3.5 years after program		Forecast to age 65	
	Participant	Public	Participant	Public
Earnings	\$13,260		\$91,381	
Employee Benefits	\$1,801		\$17,425	
Foregone Earnings	-\$4,255		-\$4,255	
UI Benefits	-\$967	\$967	\$2,787	-\$2,787
Welfare Benefits	-\$257	\$257	-\$5,310	\$5,310
Program Costs		-\$6,543		-\$6,543
Tuition	-\$1,828		-\$1,828	
Taxes*	-\$2,320	\$3,216	-\$22,740	\$31,409
<b>TOTAL</b>	<b>\$5,434</b>	<b>-\$2,103</b>	<b>\$77,460</b>	<b>\$27,389</b>

\* Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.

# Benefits and Costs of Secondary Vocational-Technical Education

	First 1.5 years after program	
	Participant	Public
Earnings	\$2,107	
Employee Benefits	\$508	
Foregone Earnings	\$435	
UI Benefits	-\$52	\$52
Welfare Benefits	-\$597	\$597
Program Costs		-\$1,316
Taxes	-\$300	\$552
<b>TOTAL</b>	<b>\$2,101</b>	<b>-\$115</b>

\* Tax revenues are greater than the tax cost to the participant because revenues include unemployment insurance, social security, and medicare payroll taxes paid by employers.