

Welcome to Today's Webinar

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Publication Overview

Kara Herbertson, NASDCTEc Education Policy Analyst

- Today's presentation corresponds with the release of our fifth and last issue brief on the new vision for CTE:
 - *Investment in CTE: Linkages to Greater Earnings, Higher Employability, and Positive Benefit-Cost Ratio*
- To view the full CTE vision:
 - *Reflect, Transform, Lead: A New Vision for Career Technical Education*
- View all issue briefs and papers from NASDCTEc



Overview

- Programs that survive the stiff competition for funding are those that can show positive results
- Immediate and long-term benefits for students, returns/savings for government and employers, and positive benefits for the local, state and national economies



Overview

- CTE programs must be able to demonstrate their positive impact
- Diminishing resources, unavailability of longitudinal data limit states
- Today – we aim to frame the conversation around the cost-saving benefits of CTE. Identify programs, states and organizations that use their data effectively to show how CTE students are succeeding



Today's Speaker

- Kevin Hollenbeck

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Return on Investment Estimation

Kevin Hollenbeck
W.E. Upjohn Institute

September 27, 2011

Prepared for NASDCTEc Webinar

Background

- Conducted two prior studies and undertaking third funded by Washington Workforce Training and Education Coordinating Board (WTECB)
- Note: ROI of workforce system mandated by state legislature

Concepts

- ROI estimates useful for making investment decisions
- Investment (costs) made today; benefits accrue in future. ROI is interest rate that equilibrates costs and expected benefits.
- Rational investor chooses to invest where ROI is highest.

Concepts (continued)

- Usually know costs; have to estimate benefits.
- Advice: Be conservative in benefit estimates.
Can't monetize all benefits.
- Benefits are net/value added.

Concepts (continued)

- Two types of investors: participants (students) and government (representing society)

Theory

<u>Benefits</u>	<u>Students</u>	<u>Taxpayers</u>	<u>Society</u>
Higher productivity	0	+	+
Higher earnings	+	0	+
Fringe benefits	+	0	+
Less unemployment/turnover	+	+	+
Lower income maintenance transfer	-	+	0
Higher taxes	-	+	0
<u>Costs</u>			
Tuition, fees	-/0	-	-
Foregone wages	-	0	-
<u>Total (Net Benefits)</u>	+	??	+/??

WTECB Study Framework

<u>Benefits</u>	<u>Students</u>	<u>Taxpayers</u>	<u>Society</u>
Higher productivity	0	+	+
Higher earnings	+	0	+
Fringe benefits	+	0	+
Less unemployment/turnover	+	+	+
Lower income maintenance transfer	-	+	0
Higher taxes	-	+	0
<u>Costs</u>			
Tuition, fees	-/0	-	-
Foregone wages	-	0	-
<u>Total (Net Benefits)</u>	+	??	+/??

WTECB Results - Secondary

Table 4 Participant and Public Benefits and Costs per Completer in Secondary CTE Programs

Benefit/Cost	First 2.5 years		Lifetime (until 65)	
	Participant	Public	Participant	Public
<u>Benefit</u>				
Earnings	2,753	0	34,603	0
Fringe Benefits	551	0	6,920	0
Taxes	-475	475	-5,969	5,969
<u>Transfers</u>				
UI	16	-16	168	-168
TANF	-91	91	-442	442
FS	-73	73	-380	380
Medicaid	-27	27	-169	169
<u>Costs</u>				
Foregone earnings	-28	0	-28	0
Program costs	0	704	0	704

NOTE: '00 \$.

WTECB Results - Postsecondary

Table 3 Participant and Public Benefits and Costs per Participant in Postsecondary CTE Programs

Benefit/Cost	First 2.5 years		Lifetime (until 65)	
	Participant	Public	Participant	Public
<u>Benefit</u>				
Earnings	12,411	0	82,280	0
Fringe Benefits	2,482	0	16,456	0
Taxes	-2,141	2,141	-14,193	14,193
<u>Transfers</u>				
UI	-2,137	2,137	-2,629	2,629
TANF	351	-351	933	-933
FS	107	-107	331	-331
Medicaid	45	-45	161	-161
<u>Costs</u>				
Foregone earnings	2,100	0	2,100	0
Program costs	3,519	6,877	3,519	6,877

NOTE: '00 \$.

WTECB Results - ROI

Table 5 Benefits, Costs, and Rates of Return for Postsecondary and Secondary CTE Programs over the First 2.5 Years and Lifetime for the Average Participant

Benefit/Cost	Secondary CTE		Postsecondary CTE	
	First 2.5 years	Lifetime (age 65)	First 2.5 years	Lifetime (age 65)
<u>Participant</u>				
Benefits	2,654	34,731	11,118	83,339
Costs	-28	-28	5,619	5,619
r.o.i.	na	na	8.68%	15.10%
<u>Public</u>				
Benefits	650	6,792	3,775	15,397
Costs	704	704	6,877	6,877
r.o.i.	-1.38%	9.29%	-15.38%	2.20%
<u>Society</u>				
Benefits	3,304	41,523	14,893	98,736
Costs	676	676	12,496	12,496
r.o.i.	42.34%	43.97%	-0.04%	9.19%

NOTE: Table entries are for average participant. Benefits include earnings, fringe benefits, and income-related transfer payments. Costs include tuition and fees (if any), foregone earnings, and public program costs per participant. \$ figures are in real 2000\$. na means that r.o.i. could not be calculated because of 0 or negative costs.

Findings

- Secondary and postsecondary CTE have huge payoffs for participants
- State eventually gets positive ROI, but payback takes slightly more than 2.5 years for secondary and considerably longer for postsecondary
- “Social” ROI quite positive for secondary and positive after 2.5 years for postsecondary

Implications for Other States

- Minimum data needed:
 - Per student added cost
 - Estimate of annual earnings net impact
 - Assumptions about depreciation rate and discount rate
- Use Excel irr function

References

- Hollenbeck and Huang (2003)

http://research.upjohn.org/up_technicalreports/18/

- Hollenbeck and Huang (2006)

http://research.upjohn.org/up_technicalreports/20/

- Hollenbeck, *Conducting Return on Investment Analysis for Secondary and Postsecondary CTE: A Framework*, prepared for National Research Center for Career and Technical Education (Louisville: University of Louisville), April 2010.

Questions?



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