Vocational and employment training for court-involved youth
Juvenile Justice
Benefit-cost estimates updated December 2023. Literature review updated July 2019.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our Technical Documentation.

Program Description: Vocational and employment training includes a combination of vocational skills training, academic education or tutoring, and job search assistance or placement programs. These programs aim to support positive outcomes to reduce recidivism, specifically steady, long-term employment and education attainment. Vocational skills training uses classroom-based job training to teach youth employable skills. As part of some training curriculums, youth can receive certification in a variety of specialties. For programs that focus on job search assistance, youth participate in interview preparation, resume building, or job placement services aided by community volunteers. Commonly, job assistance programs provide total or subsidized wages which offer an additional incentive to employers in the community to work with youth.

The current analysis includes programs that provide services to youth while on probation in the community. Youth in the studies are classified as moderate or high risk per a validated risk assessment tool. In the included studies, participants receive services over three to six months. Of the studies in our analysis that reported demographic information, 55% of participants were youth of color and 14% were female.

Evaluations of Education and Employment Training (EET), mentoring programs, and vocational and employment training programs that occur while youth are in state institutions are excluded from this analysis and analyzed separately.

Benefit-Cost Summary Statistics Per Participant

Benefits to:			
Taxpayers	$2,964	Benefit to cost ratio	$4.16
Participants	$569	Benefits minus costs	$7,938
Others	$6,832	Chance the program will produce	
Indirect	$85	benefits greater than the costs	82%
Total benefits	$10,451		
Net program cost	($2,513)		
Benefits minus cost	$7,938		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2022). The chance the benefits exceed the costs are derived from a Monte Carlo risk analysis. The details on this, as well as the economic discount rates and other relevant parameters are described in our Technical Documentation.

Meta-Analysis of Program Effects

Outcomes measured	Treatment age	No. of effect sizes	Treatment N	Adjusted effect sizes and standard errors used in the benefit-cost analysis						Unadjusted effect size (random effects model)	
				First time ES is estimated			Second time ES is estimated				
				ES	SE	Age	ES	SE	Age	ES	p-value
Crime	16	5	703	-0.114	0.085	17	-0.114	0.085	25	-0.114	0.180
High school graduation[^^]	16	1	50	-0.382	0.367	18	n/a	n/a	n/a	-0.382	0.299
Cannabis use[^]	16	1	50	0.183	0.204	17	n/a	n/a	n/a	0.183	0.369
Externalizing behavior symptoms[^^]	16	1	50	0.431	0.208	17	n/a	n/a	n/a	0.431	0.038
Internalizing symptoms[^^]	16	1	50	0.077	0.207	17	n/a	n/a	n/a	0.077	0.709
Employment[^^]	16	1	50	0.738	0.276	17	n/a	n/a	n/a	0.738	0.008
Alcohol use[^]	16	1	50	0.010	0.203	17	n/a	n/a	n/a	0.010	0.959
Illicit drug use[^]	16	1	50	0.034	0.203	17	n/a	n/a	n/a	0.034	0.866
Problem alcohol use[^^]	16	1	50	-0.057	0.203	17	n/a	n/a	n/a	-0.057	0.780

[^]WSIPP's benefit-cost model does not monetize this outcome.

[^^]WSIPP does not include this outcome when conducting benefit-cost analysis for this program.

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our Technical Documentation.

Detailed Monetary Benefit Estimates Per Participant

Affected outcome:	Resulting benefits:[1]	Benefits accrue to:				
		Taxpayers	Participants	Others[2]	Indirect[3]	Total
Crime	Criminal justice system	$2,745	$0	$6,494	$1,373	$10,612
Crime	Labor market earnings associated with high school graduation	$282	$664	$367	$0	$1,313
Crime	Costs of higher education	($63)	($95)	($28)	($31)	($217)
Program cost	Adjustment for deadweight cost of program	$0	$0	$0	($1,256)	($1,256)
Totals		$2,964	$569	$6,832	$85	$10,451

[1]In addition to the outcomes measured in the meta-analysis table, WSIPP measures benefits and costs estimated from other outcomes associated with those reported in the evaluation literature. For example, empirical research demonstrates that high school graduation leads to reduced crime. These associated measures provide a more complete picture of the detailed costs and benefits of the program.

[2]"Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance.

[3]"Indirect benefits" includes estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

Detailed Annual Cost Estimates Per Participant

	Annual cost	Year dollars	Summary	
Program costs	$2,130	2016	Present value of net program costs (in 2022 dollars)	($2,513)
Comparison costs	$0	2016	Cost range (+ or -)	20%

We estimate the per-participant cost of treatment from the cost of Education and Employment Training (EET), a similarly structured vocational and employment training program used in Washington State. We use the weighted average length of treatment of the included studies (4.8 months) and apply the per-month expenditure calculated from the information reported in Miller, M., Fumia, D., & He, L. (2015). The King County Education and Employment Training (EET) Program: Outcome evaluation and benefit-cost analysis. (Doc. No. 15-12-3901). Olympia: Washington State Institute for Public Policy.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The cost range reported above reflects potential variation or uncertainty in the cost estimate; more detail can be found in our Technical Documentation.

Benefits Minus Costs Over Time (Cumulative Discounted Dollars)
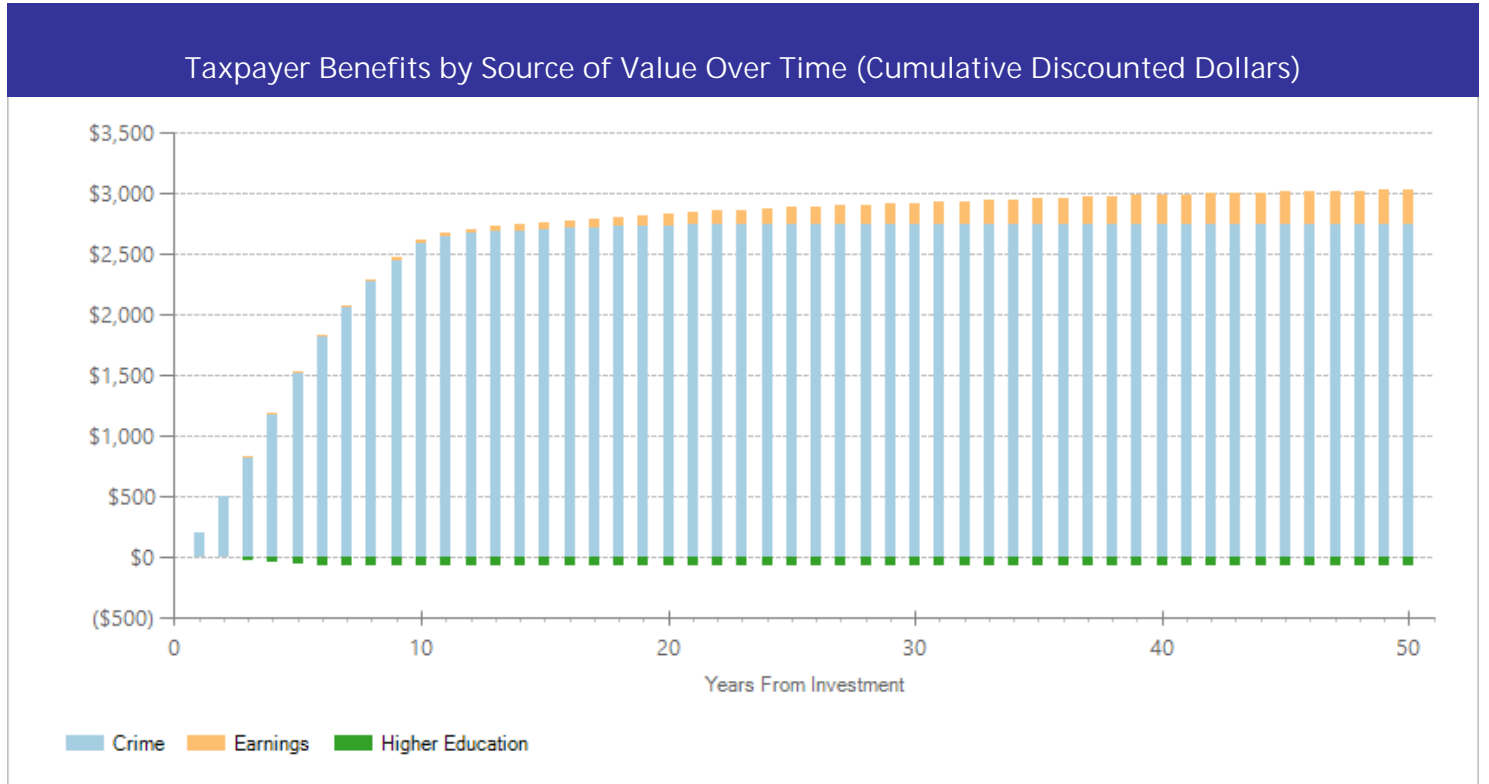

Cumulative net benefits
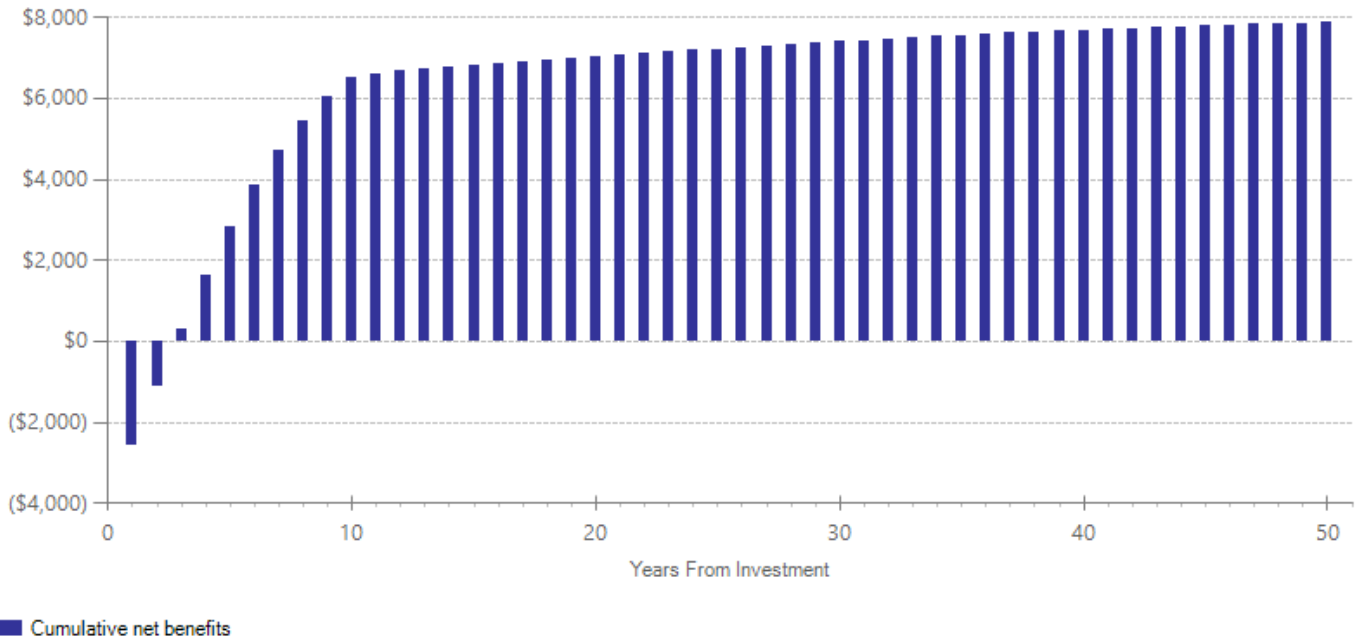
The graph above illustrates the estimated cumulative net benefits per-participant for the first fifty years beyond the initial investment in the program. We present these cash flows in discounted dollars. If the dollars are negative (bars below $0 line), the cumulative benefits do not outweigh the cost of the program up to that point in time. The program breaks even when the dollars reach $0. At this point, the total benefits to participants, taxpayers, and others, are equal to the cost of the program. If the dollars are above $0, the benefits of the program exceed the initial investment.

Benefits by Perspective Over Time (Cumulative Discounted Dollars)

Participant   Taxpayer   Others   Indirect
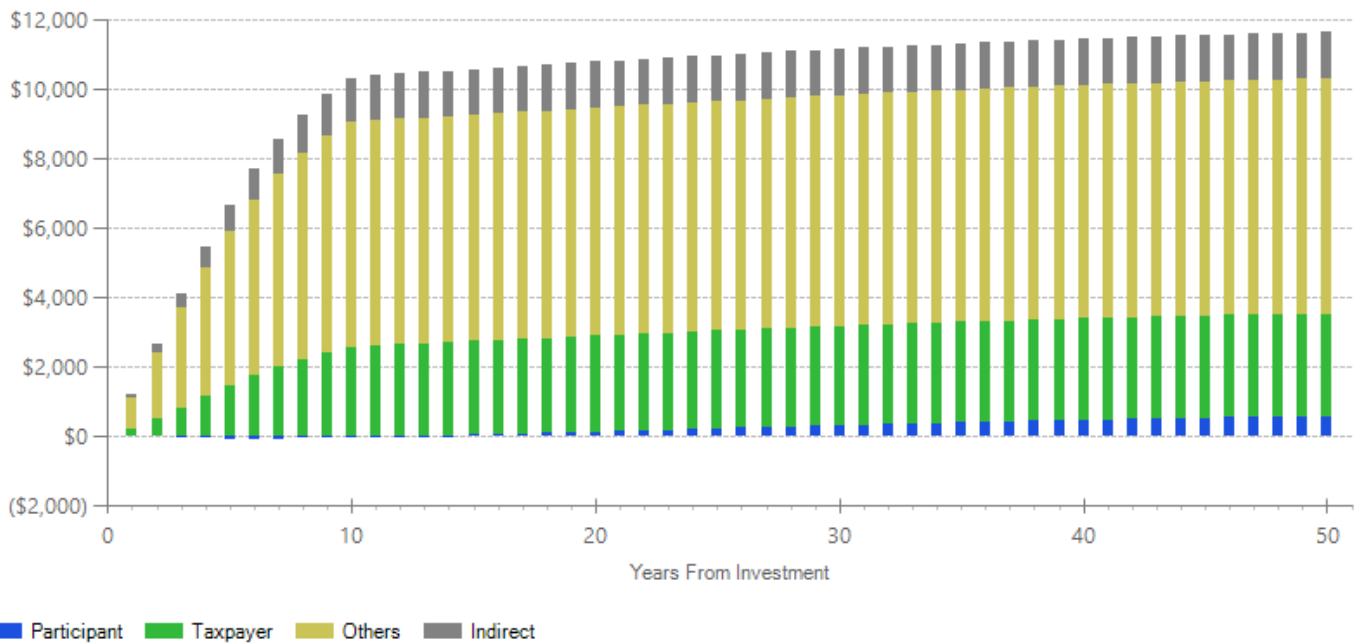
The graph above illustrates the breakdown of the estimated cumulative benefits (not including program costs) per-participant for the first fifty years beyond the initial investment in the program. These cash flows provide a breakdown of the classification of dollars over time into four perspectives: taxpayer, participant, others, and indirect. "Taxpayers" includes expected savings to government and expected increases in tax revenue. "Participants" includes expected increases in earnings and expenditures for items such as health care and college tuition. "Others" includes benefits to people other than taxpayers and participants. Depending on the program, it could include reductions in crime victimization, the economic benefits from a more educated workforce, and the benefits from employer-paid health insurance. "Indirect benefits" includes estimates of the changes in the value of a statistical life and changes in the deadweight costs of taxation. If a section of the bar is below the $0 line, the program is creating a negative benefit, meaning a loss of value from that perspective.

Taxpayer Benefits by Source of Value Over Time (Cumulative Discounted Dollars)

The graph above focuses on the subset of estimated cumulative benefits that accrue to taxpayers. The cash flows are divided into the source of the value.

Citations Used in the Meta-Analysis

Gruenewald, P.J., Laurence, S.E., & West, B.R. (1985). *National evaluation of the New Pride replication program, final report - Volume II: Client impact evaluation.* Pacific Institute for Research and Evaluation (PIRE).

Quay, H.C., & Love, C.T. (1977). The effect of a juvenile diversion program on rearrests. *Criminal Justice and Behavior, 4,* 377-396.

Schaeffer, C.M., Henggeler, S.W., Ford, J.D., Mann, M., Chang, R., & Chapman, J.E. (2014). RCT of a promising vocational/employment program for high-risk juvenile offenders. *Journal of Substance Abuse Treatment, 46* (2), 134-143.

Washington State Institute for Public Policy

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