

Are Education Programs in Prison Worth It?

A meta-analysis of the highest-quality academic research

By Steven Sprick Schuster and Ben Stickle

(Editor's note: This analysis was turned into an academic paper and published in the *American Journal of Criminal Justice* on Oct. 21, 2023. It is available here: <https://link.springer.com/article/10.1007/s12103-023-09747-3>.)

Introduction

More than five in every 1,000 people in the U.S. population are behind bars, the sixth highest rate in the world, even though many other countries have higher violent crime rates.¹ The Prison Policy Initiative project that 6% of Americans will be imprisoned at some point in their lifetimes, including one in 10 men and almost one in three African-American men.²

The impact of high incarceration rates extends beyond the effects on inmates and their families. There are large societal costs, directly and indirectly, with each crime and corresponding imprisonment. Direct costs consist of the expenses to house prisoners and other forms of public expenditures within the criminal justice system. A 2017 estimate places the cost to house prisoners at \$80.7 billion, while the costs of policing, courts, health care, and various other expenses brings the total price to \$182 billion.³ The cost of crime on victims themselves is another significant, if difficult to quantify, cost of criminal activity.

The indirect costs of imprisonment are also a concern and may be even more impactful to society. For example, incarceration decreases employment, social

engagement, civic participation, and education rates for the incarcerated. Imprisoning parents increases the likelihood that their children also end up in prison.⁴

With all the costs and negative impacts of incarceration, how could the situation be improved? Because a sizable portion of prisoners are repeat offenders, one strategy is to rehabilitate the incarcerated and provide them with education or training while in prison.⁵ This will set them up for productive and legal work when released.

Unfortunately, this effort is not new, and the disappointing prospects of rehabilitation eventually gave way to the '70's mindset of "nothing works."⁶ This conclusion led to bipartisan support for increasingly punitive prison sentences and a reduction in rehabilitation programs. After all, if nothing worked in rehabilitating criminals, why waste money on education and training instead of just locking the cell and throwing away the key? Combined with a dramatic increase in crime and escalating punishments in the '80s and '90s, incarceration rates dramatically increased.^{*}

While incarceration rates have recently slowed (down from the peak in the 2000s), they remain high and are four times the rates in the 1970s.⁷ Education programs within prisons are gradually experiencing a resurgence as funding for programs is restored.⁸ Government

ABOUT THE AUTHORS

Steven Sprick Schuster is an assistant professor of economics and member of the Political Economy Research Institute at Middle Tennessee State University. Ben Stickle is an associate professor of criminal justice administration at Middle Tennessee State University.

* Some examples are the Sentencing Reform Act of 1984, the Anti-Drug Abuse Act of 1986 and the expansion of three-strikes laws in the 1990s.

action — such as the First Step Act or the expansion of Second Chance Pell Grants — has devoted more resources and public money to prison education.

But the question remains: Do these programs work? If so, what are the costs associated with the dollars spent and dollars saved (if any), and what is the impact on prisoners? These critical questions must be answered to ensure education programs are effective and dollars are invested wisely.

Prison education programs

Studies on education programs in prison settings have been conducted for years. However, they evaluate different programs (e.g., college courses vs. vocational training), measure different impacts (cost savings vs. recidivism), and occur across different states. This makes it challenging to know the overall, or typical, effect of these efforts.

Recognizing this challenge, we methodically found and reviewed 750 research papers published between 1980 and 2022 related to prison education programs. Of these, we identified 78 that examined the impact of these programs on one or more outcomes. These studies were the source of a meta-analysis that included 148 unique estimates of the causal effects of prison education programs assessed in the identified studies.

This meta-analysis is the largest on the topic to date and features a substantial portion of studies of the highest quality. Of the 148 estimates, 105 come from papers that use random assignment or quasi-random assignment to estimate the effect of prison programs. These types of studies are typically the best way to estimate the causal relationships between an intervention and an outcome. In other words, this study is the first to calculate the impact of different prison education programs using only high-quality studies. Three different outcomes are considered: recidivism, employment, and wages.

Impact on recidivism

Recidivism occurs when someone reoffends and returns to prison. Educational and training programs in prison appear to reduce recidivism rates. The results from this meta-analysis suggest that participation in any form of educational program leads to a 14.8% decrease in the likelihood of recidivism. This effect is slightly smaller at 11.3% when restricting the results to the highest quality papers. And when considering studies published since 2010, the estimates decrease to about 7%.

A decline in effectiveness based on more recent research is not surprising. Expanding programs to less interested participants may impact the outcome. However, a decline in recidivism of between 7% to 15% is a significant success. That means, for instance, that for every 1,000 inmates served by prison education and later released, between 70 and 150 fewer will return to prison than otherwise would.

Impact on employment after incarceration

Reduced employment opportunities after incarceration are a vital factor to consider when weighing the impact of imprisonment. In this study, 30 papers captured data on the effect of educational programs on employment. Estimates for the full sample suggest that participating in education programs while incarcerated increases the likelihood of being employed after release by 6.9% above what is typically expected. Moreover, recent studies (since 2010) provide a similar estimate, with the probability of employment rising to 7.6%. This means that for every 1,000 students completing education while incarcerated, about 30 more will be employed after being released than otherwise would be.

Impact on wages after incarceration

Employment effects and wage rates should be considered together. After all, the goal is for former inmates both to stay employed and to earn enough to be productive citizens and family members, thereby reducing their chance of reoffending.

Prison education programs increase post-release wages by an average of \$131 per quarter. While this may seem a modest increase, it is a positive signal. The workers most affected by schooling are often marginal workers whose wages were expected to be lower than average. Not only are released prisoners more likely to find work, but those who do find work earn more at those jobs than those who do not receive education while incarcerated.

Impact by type of education program

Based on the 105 highest quality estimates included in this meta-analysis, four types of educational offerings in prisons were considered individually:

- Adult Basic Education, or ABE:
Remedial reading, writing, mathematics, etc.
- Secondary Education:
GED or high school diploma
- Vocational Education:
Job skills training and job preparedness
- College Education:
Associate's, Bachelor's or Master's degrees

Graphic 1: Effects on Recidivism and Employment by Education Type

Education Type	Effect on Recidivism	Effect on Employment
ABE	-6.30%	1.47%
Secondary	-7.17%	1.21%
Vocational	-9.37%	5.54%
College	-27.70%	10.50%

All forms of education appear to provide some benefit, but there is variation in their relative effects. College education reduces recidivism the most, leading to a 27.7% decrease in the probability of recidivism. This is followed by vocational education at 9.4%, secondary education at 7.2%, and ABE at 6.3%. The significant difference between college and other forms of education could be related to the different lengths of time students participate in the programs. College programs, for instance, often take multiple years for students to complete.

The impact on employment across different educational types is more challenging to estimate. ABE and secondary education have negligible effects on employment, with increases of 1.5% and 1.2%, respectively. Vocational education increases employment by 5.5%, while college programs increase employment by 10.5%. However, this effect is estimated using only a single paper, so the results cannot be stated with as much confidence.

Graphic 2: Return on Investment of Four Types of Prison Education

Education Type	Cost	Effect on Recidivism (Percentage Points)	Cost-Savings Recidivism	Effect on Employment (Percentage Points)	Benefit: Employment	ROI
ABE	-\$1,987	-2.9	\$3,105	0.66	\$951	104.12%
Secondary	-\$1,987	-3.3	\$3,533	0.54	\$883	122.25%
Vocational	-\$2,126	-4.31	\$4,615	2.48	\$1,978	210.12%
College	-\$10,467	-12.74	\$13,641	4.68	\$3,220	61.09%

Returns on investment

The study summarized here collected numerous calculations of the average cost, per participant, of each form of educational program. While there is considerable variation across programs, these averages provide helpful estimates of the average program's cost. Results indicate that ABE and secondary education are the least expensive, both averaging an annual cost of \$1,987 per participant. Vocational education costs slightly more at \$2,126, and college education programs are the costliest, with an average of \$10,467 annually per participant.

These costs were compared to the estimated benefits of recidivism reduction, increased employment and higher wages. The Bureau of Justice Statistics estimates that the average prison stay is 2.7 years.⁹ The Vera Institute of Justice calculates the average cost of imprisonment to be \$40,028 per prisoner per year (in 2022 dollars).¹⁰ Combined, this means that each return to prison costs approximately \$107,000. The Department of Justice estimates that the average quarterly wage for released prisoners in the third year following release is \$5,600 per quarter.¹¹

Using these numbers, the estimated cost savings (i.e., via the reduction in recidivism) and economic benefits (i.e., higher wages and employment) that come from participation in prison schooling reveal that each dollar spent on ABE education yields \$2.04. For secondary education, each dollar spent yields \$2.25, \$3.10 for vocational education, and \$1.61 for college education.

These estimates do not include the social costs of crime, such as the costs of victimization, nor the costs to police departments, courts and other various, less tangible costs. Since all these costs should increase as crime increases, the calculations on the returns to investment, which capture only fiscal benefits experienced by prisons or prisoners, are likely low.

A college education (due to its high cost) yields the lowest return for each dollar spent despite having the most significant impact. However, considering the greatest economic benefit per participant, college education has the highest effect, yielding \$16,863 in benefit per college participant.

For each form of education, the wage and employment benefits experienced by the students themselves are lower than the program's cost. In other words, while education provides a positive return on investment, most of those benefits will not benefit the students directly (e.g., from wage increases and employment opportunities). Instead, the larger benefit is to the community, through reduced costs for not having to incarcerate as many people.

ABE, secondary, and vocational education each cost about \$2,000 per participant. As a result, the breakeven point for recidivism reduction is about two percentage points, well below the decreases in recidivism of ABE (2.9 percentage points), secondary (3.3 percentage points), and vocational (4.31 percentage points). With the high cost of housing prisoners, even a tiny decrease in recidivism is

enough to justify the cost of prison education. The breakeven point for college is about 9-10 percentage points, again below the effect of college education in reducing recidivism (12.7 percentage points).

Summary

The findings summarized here result from the largest meta-analysis on the impact of prisoner education programs in the United States, compiling 148 estimates from 78 research papers. The effect of college, vocational, secondary, and adult basic education on prisoner recidivism, employment, and wages are evaluated. Findings indicate that participating in a prison education program:

- Decreases the likelihood of recidivism by 14.8%.
- Increases likelihood of employment by 6.9%.
- Increases quarterly wages for employed ex-offenders by \$131.

Some of these impacts shown in the research have declined slightly in recent years and are not even across all types of education. For example, secondary education and ABE have the smallest effect, while vocational training programs are highly effective given their low cost. Despite significantly higher costs, college education has the largest impact.

All forms of education provide cost-saving opportunities for states by reducing recidivism. Given the high incarceration costs, most of this benefit comes through prison-related costs, but participants benefit, too, from increased wages. Considering both of these benefits, the return on investment is robust for ABE at 104%, vocational education at 122%, and secondary education with a 210% ROI. The return for more expensive college programs is still positive at 61%. Vocational education programs provide the highest return for each dollar spent (\$3.10), and college education provides the highest benefit per student (\$16,861).

Policy recommendations

1. Create educational and training programs and expand existing programs in prisons. These will pay for themselves by reducing prison housing costs and likely reducing victimization and other indirect costs.
2. Keep educational programs free to prisoners. From a cost-benefit perspective, the biggest gains from these programs are experienced collectively by taxpayers. If prisoners are required to pay for these programs, the costs may discourage them from participating.
3. Given that all four forms of education are beneficial, prisons should offer all forms. Students could progress through multiple programs, increasing the total benefits of prison education. This could amplify the positive effects of these education programs. The effect of ABE programs, for instance, will be greater if it enables prisoners to go on to participate in secondary or vocational programs.

Endnotes

- 1 “Highest to Lowest – Prison Population Rate” (World Prison Brief), <https://perma.cc/5UYX-HPP9>; “Violent Crime Rates by Country” (Wisevoter, 2022), <https://perma.cc/7SLM-VSSR>.
- 2 “Lifetime Chance Of Being Sent To Prison At Current U.S. Incarceration Rates” (Prison Policy Initiative), <https://perma.cc/VF3A-HGTT>.
- 3 “Following the Money of Mass Incarceration” (Prison Policy Initiative), <https://perma.cc/5NUQ-5WS8>.
- 4 Eric Martin, “Hidden Consequences: The Impact of Incarceration on Dependent Children” (*NIJ Journal* 278, March 2017), <https://perma.cc/28TJ-AMYD>.
- 5 Matthew R. Durose, Alexia D. Cooper and Howard N. Snyder, “Recidivism of Prisoners Released in 30 States in 2005: Patterns from 2005 to 2010” (U.S. Department of Justice, April 2014), <https://perma.cc/E73B-XCWV>.
- 6 Robert Martinson, “What Works? — Questions and Answers About Prison Reform,” *The Public Interest* 35:22–54 (1974), <https://perma.cc/R57Z-QP56>.
- 7 Nazgol Ghandnoosh, “U.S. Prison Population Trends: Massive Buildup and Modest Decline” (The Sentencing Project, Sept. 2019), <https://perma.cc/A4NF-D6FK>.
- 8 Based on “Justice Expenditure and Employment Extracts, 2012 – Preliminary” (Bureau of Justice Statistics, Feb. 26, 2015), <https://perma.cc/4TUX-CFUW>.
- 9 “Time Served in State Prison, 2018” (Bureau of Justice Statistics, March 30, 2021), <https://perma.cc/U75D-WGPY>.
- 10 Chris Mai and Ram Subramanian, “The Price of Prisons: Examining State Spending Trends, 2010-2015” (Vera Institute of Justice, May 2017), 7-8, <https://perma.cc/CHT6-QQVP>.
- 11 E. Ann Carson et al., “Employment of Persons Released from Federal Prison in 2010” (U.S. Department of Justice, December 2021), Table 6, <https://perma.cc/4T66-SBV5>.

Board of Directors

Hon. Clifford W. Taylor,
Chairman
*Retired Chief Justice,
Michigan Supreme Court*

Joseph G. Lehman, President
Mackinac Center for Public Policy

Jim Barrett
*Retired President and CEO
Michigan Chamber of Commerce*

Daniel J. Graf
*Chief Investment Officer
Amerisure Mutual Holdings, Inc.*

Richard G. Haworth
*Chairman Emeritus,
Haworth, Inc.*

J.C. Huizenga
President, Westwater Group

Edward C. Levy Jr.
*Executive Chairman for
Edw. C. Levy Co.*

Rodney M. Lockwood Jr.
*President, Lockwood
Construction Company, Inc.*

Joseph P. Maguire
*President, Wolverine
Development Corporation*

Richard D. McLellan
*Member, McLellan
Law Offices*

Board of Scholars

Donald Alexander
Western Michigan University

Brad Birzer
Hillsdale College

Peter Boettke
George Mason University

Theodore Bolema
Wichita State University

Alex Cartwright
Ferris State University

Michael Clark
Hillsdale College

Matthew Coffey
Central Michigan University

Daniel Crane
*University of Michigan
Law School*

Shikha Dalmia
Mercatus Center

Christopher Douglas
University of Michigan-Flint

Jefferson Edgens
University of Wyoming

Ross Emmett
Arizona State University

Sarah Estelle
Hope College

Hugo Eyzaguirre
Northern Michigan University

Tawni Ferrarini
Lindenwood University

Burton Folsom
Hillsdale College (ret.)

John Grether
Kettering University

David Hebert
Aquinas College

Michael Hicks
Ball State University

Ormand Hook
Mecosta-Osceola ISD

Harry Hutchison
*George Mason University
School of Law*

David Janda
*Institute for Preventative
Sports Medicine*

Annette Kirk
*Russell Kirk Center for
Cultural Renewal*

David Littmann
Mackinac Center for Public Policy

Dale Matcheck
Northwood University

Charles Meiser
*Lake Superior
State University (ret.)*

Glenn Moots
Northwood University

George Nastas III
Marketing Consultants

Todd Nesbit
Ball State University

John Pafford
Northwood University (ret.)

Mark Perry
University of Michigan-Flint

Lawrence W. Reed
*Foundation for
Economic Education*

Gregory Rehmke
Economic Thinking

Steve Safranek
*Private Sector
General Counsel*

Howard Schwartz
Oakland University

James Sheehan
SunTrust Robinson Humphrey

Rev. Robert Sirico
*Acton Institute for the
Study of Religion and Liberty*

Bradley Smith
Capital University Law School

Daniel Smith
Middle Tennessee State University

Chris Surprenant
University of New Orleans

Jason Taylor
Central Michigan University

John Taylor
Wayne State University

Richard K. Vedder
Ohio University

Harry Veryser Jr.
University of Detroit-Mercy

John Walter Jr.
Dow Corning Corporation (ret.)

Gary Wolfram
Hillsdale College

Guarantee of Quality Scholarship

The Mackinac Center for Public Policy is committed to delivering the highest quality and most reliable research on Michigan issues. The Center guarantees that all original factual data are true and correct and that information attributed to other sources is accurately represented.

The Center encourages rigorous critique of its research. If the accuracy of any material fact or reference to an independent source is questioned and brought to the Center's attention with supporting evidence, the Center will respond in writing. If an error exists, it will be noted in a correction that will accompany all subsequent distribution of the publication. This constitutes the complete and final remedy under this guarantee.

© 2023 by the Mackinac Center for Public Policy. All rights reserved.
Permission to reprint in whole or in part is hereby granted, provided that the Mackinac Center for Public Policy is properly cited.
ISBN: 978-1-942502-64-7 S2023-01