

Budgeting for Results IDOC Vocational Education Program Assessment



Introduction

The statute that created Budgeting for Results (BFR) states that in Illinois, budgets submitted and appropriations made must adhere to a method of budgeting where priorities are justified each year according to merit (Public Act 96-958). The BFR Commission, established by the same statute, has worked since 2011 to create and implement a structure for data-driven program assessment useful to decision makers.

The BFR framework utilizes the Results First benefit-cost model and the State Program Assessment Rating Tool to produce comprehensive assessments of state funded programs.

The Pew-MacArthur Results First Initiative developed a benefit-cost analysis model based on methods from the Washington State Institute for Public Policy (WSIPP). The Results First benefit-cost model can conduct analysis on programs within multiple policy domains including; adult crime, juvenile justice, substance use disorders, K-12 education, general prevention, health, higher education, mental health, and workforce development.

The State Program Assessment Rating Tool (SPART) combines both quantitative (benefit-cost results) and qualitative components in a comprehensive report. It is based on the federal Program Assessment Rating Tool (PART) developed by the President's Office of Management and Budget and has been modified for state use. The SPART provides a universal rating classification to allow policy makers and the public to more easily compare programs and their performance across results areas.

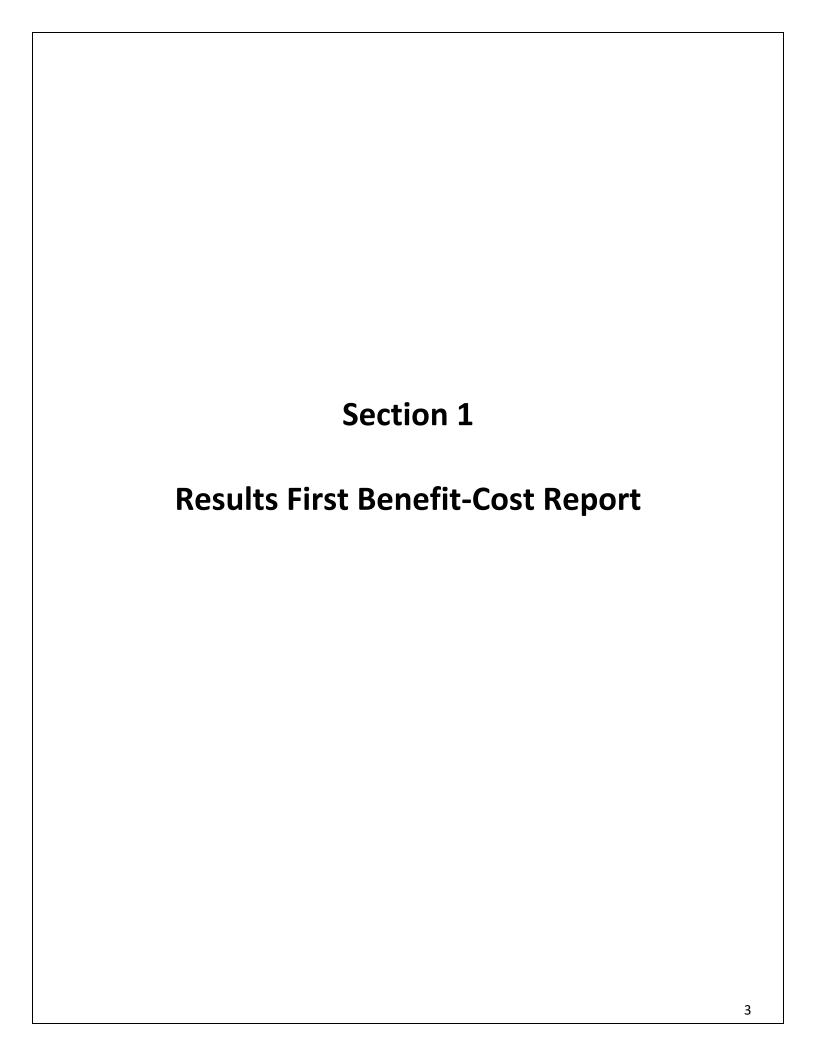
Methods

BFR begins each assessment by modeling an Illinois program's design and assessing its implementation. Each program is then matched with an existing rigorously studied program or policy. BFR completes a comprehensive review of related program literature to inform the modeling and matching process.

Each rigorously studied program has an effect size determined from existing validated research that summarizes the extent to which a program impacts a desired outcome. The effect size is useful in understanding the impact of a program run with fidelity to best practices or core principles.

The Results First benefit-cost model uses the effect size combined with the state's unique population and resource characteristics to project the optimal return on investment that can be realized by taxpayers, victims of crime, and others in society when program goals are achieved.

The SPART contains summary program information, historical and current budgetary information, the statutory authority for the program, performance goals and performance measures. The SPART tool consists of weighted questions, which tally to give a program a numerical score of 1-100. Numerical scores are converted into qualitative assessments of program performance: effective, moderately effective, marginal and not effective.



Benefit-Cost Summary – IDOC Vocational Education

This is the pilot benefit-cost analysis in the Adult Crime domain of the Illinois Department of Corrections (IDOC) Vocational Education program. The IDOC Vocational Education program offers skills training classes to offenders in IDOC custody, with the aim of preparing offenders to enter specific job sectors after they are released. This program can increase offenders' employability and reduce their risk of recidivism when they return to the community.

The IDOC Vocational Education program served 3,302 inmates in FY2017. The program's FY2017 expenditures were approximately \$4.9 million. This pilot benefit-cost analysis completed by BFR calculated that for every one dollar spent on the Vocational Education program by IDOC, **\$2.23** of future benefits could be realized by Illinois taxpayers and crime victims.

The major takeaways from this analysis can be found in *Table 1* below. The optimal benefits are projected for programs run with fidelity to best practices or core principles. The optimal benefits are determined using a standard metric called an effect size. The real costs of a program are the sum of its direct and indirect costs. The benefit/cost ratio is the optimal return on investment (OROI) Illinois can expect from implementing the program with fidelity. BFR performs a Monte Carlo risk estimate showing the percent of time that the benefits exceed the costs when simulated 10,000 times with random variation in costs and benefits.

Table 1:

Benefit-Cost Results Illinois Vocational Education per Participant				
Optimal Benefits	\$9,234			
Real Cost (Net)	\$4,138			
Benefits - Costs	\$5,096			
Benefits/Costs (OROI)	\$2.23			
Chance Benefits Will Exceed Costs	100%			
SPART Score	80, Effective			

Benefit-Cost Detail – IDOC Vocational Education

Program Information

The Vocational Education program provides offenders in IDOC custody with education and training on a variety of occupations. The most popular programs are in Construction Occupations, Culinary Arts, and Custodial Maintenance. One of the primary outcomes this program was implemented to achieve is a reduction in recidivism.

Using program information gathered with IDOC, BFR matched Illinois' Vocational education program to similar program profiles in multiple Results First evidence-based clearinghouses. The information for the IDOC Vocational Education program was provided by the Office of Adult Education and Vocational Services (OAEVS) at IDOC and is described in *Table 2* below.

Table 2:

Program Name	Program Description
Construction Occupations	 Students gain knowledge and skills in the areas of plumbing, masonry, residential wiring, and green building practices. Participants develop competencies needed for entry-level employment in construction or building maintenance Inmate also receive preparation for continuing education in Construction Technology
Culinary Arts	 Participants gain entry-level skills needed to pursue employment in the food service industry Students learn positions such as food prep workers, cooks, and dining room or cafeteria attendants
Custodial Maintenance	 Participants gain hands-on skills in maintenance, such as shampooing carpets, cleaning floors (stripping, scrubbing and waxing), and washing walls and windows Students also learn resume-writing and the procedures of starting a small custodial business

- In FY2017, 3,302 inmates participated in the three largest Vocational Education programs
- The annual cost of these programs ranged from \$2,600 per person for the Custodial Maintenance courses to \$5,600 for the Culinary Arts courses. The average cost was \$4,138 in FY2017.

The *Crime Solutions Clearinghouse* profile for this program contains three meta-analyses based on more than 30 studies. These analyses indicate that overall, recidivism¹ was reduced significantly for inmates who participated in vocational training programs compared with inmates who did not participate.²

Additionally, the *What Works on Reentry Clearinghouse* rated vocational education for inmates as having strong beneficial evidence, based on a quasi-experimental study of over 6,000 inmates. The clearinghouse explained:

VET (Vocational Education and Training) programs were effective in reducing recidivism across both of the recidivism outcomes examined. Overall, 23% of VET participants were reincarcerated over the follow-up period, compared to 32% of the comparison group. A logistic regression model, which controlled for pre-existing differences between groups, indicated that this difference was statistically significant. When examining a broader definition of recidivism (either reincarceration or returns to community supervision), 32% of VET participants recidivated over the follow-up period, compared to 42% of nonparticipants. In a logistic regression model, this difference was found to be statistically significant.³

 $^{^{\}mathrm{1}}$ Recidivism is defined as reconviction after a release from prison or sentence to probation.

² Vocational Correctional Education, https://www.crimesolutions.gov/ProgramDetails.aspx?ID=511

³ Callan & Gardner 2005; 2007, https://whatworks.csgjusticecenter.org/evaluation/callan-gardner-2005-2007

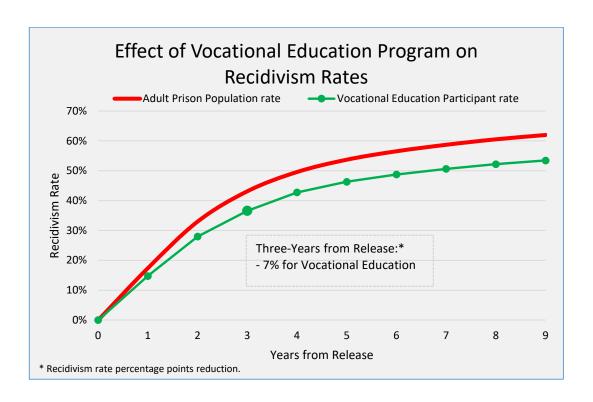
Analysis

A well-run vocational education program for offenders saves taxpayer's money over time by avoiding future criminal justice expenses. Taxpayers avoid paying for additional criminal justice system costs of arrests and processing; prosecutions, defense, and trials; and incarceration and supervision. Lower recidivism rates lead to fewer prisoners that need to be paid for by the State.

Just as importantly, decreasing recidivism saves money by avoiding private costs incurred as a result of fewer Illinois crime victims. The private victimization costs include lost property, medical bills, wage loss, and the pain and suffering experienced by crime victims.

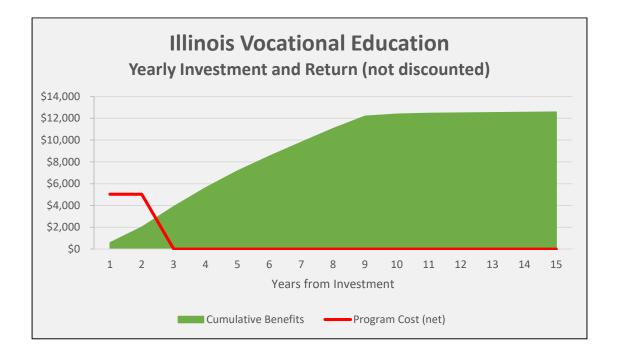
The benefit-cost model predicts an 7% decrease in the recidivism rate three years from release from IDOC custody for participants in the Vocational Education program, as illustrated in *Figure 1*. The model also predicts a nine-year recidivism rate for program participants of 53%, or 8.5% less than the overall adult prison population recidivism rate of 62%.

Figure 1:



The average cost to the State of Illinois for providing vocational education in prison is \$4,138 per person per year. The program lasts for two years, while the benefits of reduced recidivism increase over time after the offender is released from IDOC custody, as shown in *Figure 2*. The red line across the graph depicts net program costs, which do not increase after the second year. The green area shows the accumulation of program benefits.

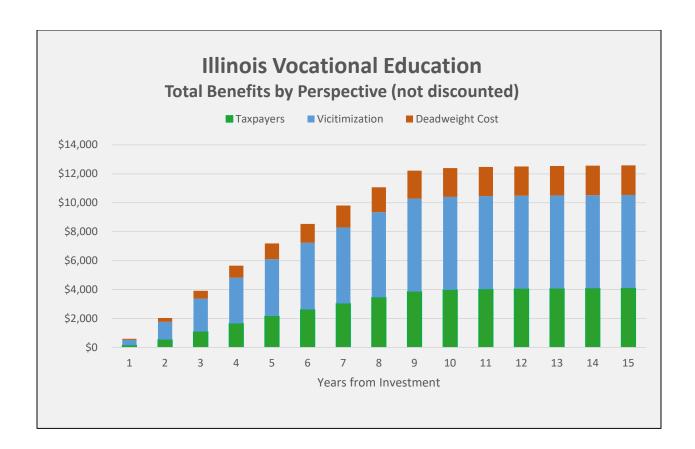
Figure 2:



The IDOC Vocational Education program could optimally produce \$9,234 in future lifetime benefits per average participant. Beyond the direct benefits to Illinois taxpayers and crime victims, additional indirect benefits accrue to society as well, including better use of the tax dollars that are currently raised, and future taxes that won't have to be raised to pay for avoidable costs due to recidivism. When tax revenue is spent on one program, it has an opportunity cost of revenue that cannot be spent on other beneficial programs and services like public safety or economic development. Money that is taxed is also not available for private consumption and investment. The indirect benefits of making effective, economically efficient investments to reduce criminal recidivism are quantified within the Results First model using the Deadweight Cost of Taxation.

Figure 3 below illustrates that most of the benefits come from future avoided taxpayer costs and the benefits from future victimization costs avoided by society in general. The remaining benefits come from other avoided indirect deadweight costs.

Figure 3:



This is one of three pilot analyses run by BFR using the Results First benefit-cost model. Please see Budget. Illinois.gov for BFR annual reports, additional benefit-cost reports and supporting information.

Section 2

State Program Assessment Rating Tool

State Program Assessment Rating Tool (SPART)

Illinois Vocational Education

426- Illinois Department of Corrections

Prior Year (PY), Current Year (CY), Fiscal Year (FY) Budget (in thousands) Appropriated Expended					
PY 2013	PY2014	PY2015	PY2016	CY 2017	FY 2018
\$6,883.4	\$6,971.1	\$6,666.9	\$6,924.5	\$4,944.6	N/A

Is this program mandated by law?	Yes	No_X		
Identify the Origin of the law.	State	Federal	Other	
Statutory Cite				-
Program Continuum Classification	Prevention	n, Selective		
Evaluability				
Provide a brief narrative statement on f	actors that impo	act the evaluabil	ity of this progra	ım.
Information technology compatibility	between Offend	er 360 and legad	y databases im	pact the ability
of program managers to tack offender	data and progre	ess though the p	rogram longitud	linally.
Budgetary impacts from the prolonged	d impasse result	ed in losing seve	ral community-	colleges that
provide the educational services that a	are the bedrock	of this program.	This loss impact	ts the scale of
benefits that could potentially be reali	zed by the prog	ram.		

Performance Goal	FY 2015	FY2016	FY 2017	Major Challenges Meeting this Goal
Recidivism Rate	46.9	45.5	43.9	

Key Performance Measure	FY 2015	FY 2016	FY 2017	Reported in IPRS Y/N
Vocational education completers	2394	2681	2553	Y

Section 2: Evidence Based Programming and Benefit-Cost

Total Points Available: 30 Total Points Awarded: 30

Question	Points Available	Yes/Partial /No	Points Awarded	Explanation
2.1 Is the Program Evidence Based ?	10	YES	10	This program was matched with evidence-based programs in the Results First clearinghouse. Please see the attached clearinghouse reports from the What Works in Reentry Clearinghouse.
2.2 Does the program have fidelity to best practices?	10	YES	10	This program was matched with evidence-based programs in the Results First clearinghouse. Please see the attached reports from the What Works in Reentry Clearinghouse.
2.3 Is the return on investment for this program equal to or greater than \$1 for each \$1 spent?	10	YES	10	The Program did achieve a greater that one dollar return on investment. For details, please see the attached Results First Program Report.

Section 3: Strategic Planning

Total Points Available: 30 Total Points Awarded: 25

Question	Points	Yes/Partial	Points	Explanation
3.1 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?	Available 10	YES	Awarded 10	The program collects performance measures that reflect annual performance and point toward long-term goals. Some of the measures reported to GOMB can be found on the attached IPRS report. In addition the program collects additional measures which are maintained by IDOC.
3.2 Do the annual performance measures focus on outcomes?	10	YES	10	The Program collects measures of Vocational education completion rates.
3.3 Are independent and thorough evaluations of the program conducted on a regular basis or as needed to support program improvements and evaluate effectiveness?	10	Partial	5	This program does not have any independent evaluations. However, currently, the only program evaluations completed are an annual needs assessment that takes place in the Spring per Administrative Directive. These evaluative and planning practices do meet the criteria for partial credit as established in the SPART guidance.

Section 4: Program Management

Total Points Available: 20 Total Points Awarded: 20

Question	Points	Yes/Partial	Points	Explanation
4.1 Does the Agency regularly collect timely and credible performance information?	Available 10	YES YES	Awarded 10	The program collects performance measures that reflect annual performance. Some of the measures reported to GOMB can be found on the attached IPRS report. In addition the program collects additional measures which are maintained by IDOC.
4.2 Does the Agency use performance information (including that collected from program partners) to adjust program priorities, allocate resources, or take other appropriate management actions?	10	YES	10	The IDOC uses performance information to help determine staffing levels as well as prisoner transfer and location dispositions.

Section 5: Program Results

Total Points Available: 20 Total Points Awarded: 5

Question	Points Available	Yes/Partial /No	Points Awarded	Explanation
5.1 Does the program (including program partners) commit to and achieve annual performance targets?	10	Partial	5	The IDOC has no annual performance targets for Vocational education. They have a goal of reducing recidivism and creating safer communities.
5.2 Is the program (including program partners) on track to meet all performance goals, including targets and timeframes?	10	NO	0	There is not sufficient information available on targets or timeframes to determine whether this program is on track.

Concluding Comments

Vocational Education programs are run by most states in the country. The Illinois Vocational program meets standards for best practices as established in the Results First Clearinghouse. It is recommended that technology improvements will allow for better tracking of offenders through the program and easier tracking of outcomes. Additionally, staff training may help improve overall program outcomes. It is recommended that program managers engage in setting long-term goals including targets and timeframes. Overall, this program achieves outcomes which are cost-effective and are a benefit to the goal to decrease recidivism and provide a safer Illinois in general.

Final Program Score and Rating

Final Score	Program Rating
80	Effective

SPART Ratings

Programs that are PERFORMING have ratings of Effective, Moderately Effective, or Adequate.

- <u>Effective.</u> This is the highest rating a program can achieve. Programs rated Effective set ambitious goals, achieve results, are well-managed and improve efficiency. Score 75-100
- Moderately Effective. In general, a program rated Moderately Effective has set ambitious goals
 and is well-managed. Moderately Effective programs likely need to improve their efficiency or
 address other problems in the programs' design or management in order to achieve better
 results. Score 50-74
- <u>Adequate.</u> This rating describes a program that needs to set more ambitious goals, achieve better results, improve accountability or strengthen its management practices. Score 25-49

Programs categorized as <u>NOT PERFORMING</u> have ratings of Ineffective or Results Not Demonstrated.

- <u>Ineffective</u>. Programs receiving this rating are not using your tax dollars effectively. Ineffective programs have been unable to achieve results due to a lack of clarity regarding the program's purpose or goals, poor management, or some other significant weakness. Score 0-24
- Results Not Demonstrated. A rating of Results Not Demonstrated (RND) indicates that a
 program has not been able to develop acceptable performance goals or collect data to
 determine whether it is performing.

Glossary

Best Practices: Policies or activities that have been identified through evidence-based policymaking to be most effective in achieving positive outcomes.

Evidence-Based: Systematic use of multiple, rigorous studies and evaluations which demonstrate the efficacy of the program's theory of change and theory of action.

Illinois Performance Reporting System (IPRS): The state's web-based database for collecting program performance data. The IPRS database allows agencies to report programmatic level data to the Governor's Office of Management and Budget on a regular basis.

Optimal Return on Investment (OROI): A dollar amount that expresses the present value of program benefits net of program costs that can be expected if a program is implemented with fidelity to core principles or best practices.

Outcome Measures: Outcomes describe the intended result of carrying out a program or activity. They define an event or condition that is external to the program or activity and that is of direct importance to the intended beneficiaries and/or the general public. For example, one outcome measure of a program aimed to prevent the acquisition and transmission of HIV infection is the number (reduction) of new HIV infections in the state.

Output Measures: Outputs describe the level of activity that will be provided over a period of time, including a description of the characteristics (e.g., timeliness) established as standards for the activity. Outputs refer to the internal activities of a program (i.e., the products and services delivered). For example, an output could be the percentage of warnings that occur more than 20 minutes before a tornado forms.

Results First Clearinghouse Database: One-stop online resource providing policymakers with an easy way to find information on the effectiveness of various interventions as rated by eight nation research clearinghouses which conduct systematic research reviews to identify which policies and interventions work.

Target: A quantifiable metric established by program managers or the funding entity established as a minimum threshold of performance (outcome or output) the program should attain within a specified timeframe. Program results are evaluated against the program target.

Theory Informed: A program where a lesser amount of evidence and/or rigor exists to validate the efficacy of the program's theory of change and theory of action than an evidence-based program.

Theory of Change: The central processes or drives by which a change comes about for individuals, groups and communities

Theory of Action: How programs or other interventions are constructed to activate theories of change.

ILLINOIS PERFORMANCE REPORTING SYSTEM

Agency	Department Of Corrections
Program Name	Vocational Programming
Program Description	Vocational program provides offenders with opportunities to acquire skill sets that can be utilized to gain employment post-release. Vocational programming is provided by community colleges and Illinois Correctional Industries. The programs offered include: culinary arts, welding, auto mechanics, warehousing, horticulture, recycling, food production and manufacturing. Studies in Illinois consistently demonstrate recidivism is significantly reduced when offenders attend educational programs. The last general study completed in 1997 by the University of Illinois found the recidivism rate to be 13.1% for post-secondary completers as compared to 39.2% of the general prison population and compared to 37.5% of a control group sharing similar demographic characteristics. The study concluded post-secondary education favorably impacts the recidivism rate regardless of prior criminal activity or length of sentence or minority status.
Target Population	Offender population that meet programmatic qualifications, standards and guidelines.
Activities	Vocational programming in the areas of: culinary arts, welding, auto mechanics, warehousing, horticulture, recycling, food production and manufacturing.
Goals	Reduce the recidivism rate by providing job training to inmates so that they can successfully reintegrate back into society upon release.
Outcome	Create Safer Communities

PROGRAM FUNDING

Appropriations (\$ thousands)			
FY16 Actual	FY17 Enacted	FY18 Recommended	
64,933.7	65,333.5	72,467	

MEASURES

Number of offenders completing vocational programming

Reported : Annually Key Indicator : Yes Desired Direction : Increase

Benchmark: Previous Fiscal Year-Provide services to all offenders that are eligible and enroll in the program

Source: Internal Reports

Baseline: 1,599 Baseline Date: 7/1/2011

Methodology: Number of offenders who complete the applicable programming.

FY 2016	FY 2017	FY 2018 Est.	FY 2019 Proj.
2,681	2,553	2,603	

Callan & Gardner 2005; 2007

Program Evaluated: Vocational Education and Training Provision (VET)

Findings

The study's findings suggest that VET programs were effective in reducing recidivism across both of the recidivism outcomes examined. The findings below reflect an approximate follow-up period of two years to three and a half years, as described above.

 Overall, 23% of VET participants were reincarcerated over the follow-up period, compared to 32% of the comparison group. A logistic regression model, which controlled for pre-existing differences between groups, indicated that this difference was statistically significant (p=.000).

Evaluated Outcomes

BASIC RIGOR

Recidivism:

Employment: (not evaluated)

Substance Abuse: (not evaluated)

Age: Adult **Gender:** Mixed

Locations: Australia

• When examining a broader definition of recidivism (either reincarceration or returns to community supervision), 32% of VET participants recidivated over the follow-up period, compared to 42% of nonparticipants. In a logistic regression model, this difference was found to be statistically significant (p=.000).

Methodology

This study employed a quasi-experimental design using a sample of 6,021 individuals released from Queensland correctional institutions between July 2001 and November 2002. Of these individuals, 1,493 had participated in VET programs and 4,528 had not. To examine differences between these two groups, researchers conducted significance tests on a number of background variables, finding that the groups differed in several ways. Participants in VET programs were significantly more likely to be female (p<.001), to be younger (p=.002), to have obtained more education (p=.003), and to have participated in other employment and educational programs (p<.001). Nonparticipants were significantly more likely to be an Aboriginal or Islander (p<.001). Significant differences between groups were also found with respect to offense type (p<.001) and sentence length (p<.001), with a much greater proportion of VET nonparticipants serving sentences of less than one year relative to VET participants. Out of the variables tested, the only one that did not differ between groups was level of risk to recidivate, although these data were missing for over half of the treatment group.

The researchers measured the recidivism outcomes of both groups in two ways: 1) the likelihood of being reincarcerated, and 2) the likelihood of being either reincarcerated or returned to community supervision. Outcomes were tracked until November 2004; thus, everyone in the study had at least a two-year post-release follow-up period, and a maximum follow-up period of about Three years and five months. In order to control for pre-existing differences between groups, the researchers conducted logistic regression analyses that controlled for the same variables discussed above (age, gender, Aboriginal or Islander heritage, offense type, sentence length, educational attainment, and participation in pre-release employment and education programs).

Methodology Limitations

Selection bias is a potential limitation to this study. Because participation in VET programs was voluntary, the treatment group may have been more motivated to succeed after release than the comparison group. The researchers also observed several differences between the groups in terms of their demographic and other background characteristics. Although the researchers conducted regression analyses controlling for these differences, there may be other differences between the groups that the researchers did not measure or include in their regression models. Thus, differences in recidivism could be due to unmeasured pre-existing differences between groups, rather than to the program itself.

An additional limitation involves the length of the follow-up period, which varied from two years to about three and a half years, depending on when an individual was released from prison. In their analyses, the researchers did not attempt to control or adjust for this variable follow-up period. If the treatment and comparison groups differed systematically with respect to the length of the follow-up period, this may have biased

- Treatment group
 - Gender: 86.9% male, 13.1% female
 - Race/ethnicity: 23.7% Aboriginal or Islander, 76.3% other
 - Average age: 33.4
 - Education: less than 9th grade (14.2%), 9th-11th grade (69.6%), 12th grade or higher (16.1%)
 - Most serious offense: property offense, robbery, or extortion (46.0%); offense against a person (25.2%); motor vehicle/traffic offense (9.9%); drug offense (7.0%); other (11.8%)
 - Sentence length: less than 6 months (18.4%), 6-12 months (25.6%), 1-2 years (21.5%), 2-5 years (22.3%), more than 5 years (12.2%)
- Comparison group
 - Gender: 89.8% male, 10.2% female
 - Race/ethnicity: 30.0% Aboriginal or Islander, 70.0% other
 - Average age: 34.4
 - Education: less than 9th grade (17.0%), 9th-11th grade (70.3%), 12th grade or higher (12.7%)
 - Most serious offense: property offense, robbery, or extortion (37.1%); offense against a person (25.2%); motor vehicle/traffic offense (12.6%); drug offense (7.5%); other (17.5%)
 - Sentence length: less than 6 months (42.0%), 6-12 months (22.2%), 1-2 years (13.9%), 2-5 years (12.6%), more than 5 years (9.3%)

Quality of Implementation

The researchers conducted semi-structured interviews with inmate participants in the VET programs, VET program staff and administrators,



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quality of the training they received. Program staff felt that the program was adequately funded and that it generally received support from management, although they noted that the prison culture remained focused primarily on supervision rather than rehabilitation. Despite the generally satisfactory implementation of the VET programs, the interviews also revealed a number of barriers and challenges to the provision of these programs, including a lack of qualified trainers to teach the classes, waiting lists for classes, conflicts between VET program attendance and other inmate responsibilities (including other programs and prison work assignments), and the possibility that inmates would be transferred or released before finishing the programs.

The researchers also note that VET program completion rates across Queensland prisons were typically 80% or better. These high completion rates were attributed to the use of risk and needs assessments to place inmates into VET programs, reviews of inmate progress in programming that took place every six months, the use of training workshops, and module-by-module program delivery. The researchers also note that program staff emphasized the importance of VET program attendance and warned participants that dropping out without justification could result in reduced opportunities to participate in future VET programs. Staff also actively sought out inmates who did not attend class to ask them why they were absent.

Citation(s)

Callan, V., & J. Gardner. (2005). Vocational Education and Training Provision and Recidivism in Queensland Correctional Institutions. Adelaide, Australia: National Centre for Vocational Education Research.

Callan, V., & J. Gardner. (2007). "The Role of VET in Recidivism in Australia." In S. Dawe (ed.), Vocational Education and Training for Adult Prisoners and Offenders in Australia: Research Readings (34-46). Adelaide, Australia: National Centre for Vocational Education Research.



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