

# 2018

## Executive Summary

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TEXAS TECH UNIVERSITY  
College of Human Sciences

Community, Family  
& Addiction Sciences™

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Primary Author:  
Eugene W. Wang, Ph.D.

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Dr. Wang's Research Team:

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Brooke K. Bell

Nick Campbell

Jacob D. Curtis

Orion Koepke

Samuel F. Meeks

Haleigh Nettles

Kristyn N. Petry

Ricardo Ruiz

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With Special Thanks to:  
Michelle Raines  
Communication Consultant





# Executive Summary

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Windham School District (WSD) is the education provider for offenders within the Texas Department of Criminal Justice (TDCJ).

The District is required to complete a biennial evaluation and report of the effectiveness of its programs.

WSD has compiled data regarding participation in its programs, including academic, career and technical education (CTE), and life skills programs (specifically Cognitive Intervention Program [CIP] and the Changing Habits and Achieving New Goals to Empower Success [CHANGES] program).

Dr. Eugene Wang's research team at Texas Tech University performed analyses to evaluate the effectiveness of WSD programming on reentry outcomes such as employment, wage-earning, rearrests, and reincarceration. The team examined WSD program attendance and completion, and outcomes such as improvement in academic ability, High School Equivalent (HSE) certificate and industry

certification attainment, and institutional disciplinary violations.

The following report provides detailed results and findings for the above analyses. These analyses are based on WSD educational data for all offenders released during the 2013-2014 fiscal years (e.g., those released from September 1, 2012 through August 31, 2014). This included 135,227 unique individuals. Of those 135,227, we had post-release employment information on 53,441.

[All program and disciplinary statistics are reported only for the offender's most recent incarceration. Any reported criminal history is prior to that most recent incarceration.]

The bulk of this report evaluates WSD academic, CTE, and life skills programs (CIP and CHANGES) against these outcomes: academic achievement gains, HSE certificate and industry certifications, and reentry outcomes.

We believe that job successes (getting and keeping a job, earning a living wage) are the best measures of successful reentry and reintegration.

# Executive Summary

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We looked at whether or not the offender got employed, how long it took, whether the individual was employed one year after gaining initial employment, and whether or not the individual was rearrested or reincarcerated within three (3) years post-release. We also examined how many hours offenders participated in academic, CTE, and life skills classes.

To compare apples-to-apples for WSD programs, we used a sophisticated matching strategy called propensity score matching (see the Appendices for details).

As far as post-release outcomes a majority, about 52% of the overall released offenders, were rearrested and approximately 27% of the overall released offenders were reincarcerated.

The second group of post-release outcomes we examined were employment and income. We found that about 48% of all paroled

offenders found a job upon reentry into the community within an average length of time of about 86 days.

Of those offenders who were employed upon reentry into the community, about 86% were still employed after 1 year. The overall average (median) starting hourly income for the entire sample, regardless of WSD involvement, was approximately \$13.60 per hour.

We examined the factors related to job retention (defined as being currently employed a year from initial employment date). We found that of all the factors related to WSD programming, total CTE hours and years of education (defined as years of education attained before incarceration or attainment of an HSE certificate while incarcerated), were found to be significant predictors of job retention. Each year of education attained increased the likelihood of job retention by about 4%.



Initial employment wages, generally understood to be the hourly rate of the first job, was also found to be highly significant in job retention.

The higher the initial wage of the first job, the more likely an ex-offender would retain that job.

In all, we compared participants in 8 WSD programs with matched controls:

(1) academic program participants; (2) CTE (“vocational”) program participants; (3) CIP program participants; (4) CHANGES program participants; (5) Title I program participants; (6) participants in both academic and CTE programs; (7) participants in both CIP and CHANGES program; (8) participants in academic, CTE, CIP, and CHANGES programs.

The primary conclusion about the WSD program participants is that their academic achievement went up, their job skills increased, and they were better able to find and retain a job, compared to released offenders without WSD services who were matched on various indicators. All 8 participant groups had lower rates of recidivism and higher rates of employment than controls,

and 7 of the 8 had higher job retention rates; and 5 of the 8 had lower rearrest rates.

In summary, there are positive gains that can be attributed to WSD programs in the areas of: rearrest, recidivism, employment, and wage information (relative to controls). These are highlighted on the following pages of this executive summary.

#### EMPLOYMENT OUTCOMES

**42%** of released offenders found employment, most within 1 year

**86%** of those were still employed after 1 year of getting their first job

**26%** of CTE students found employment related to training

**\$13.60** average (median) hourly income

# Outcomes by Academic Program

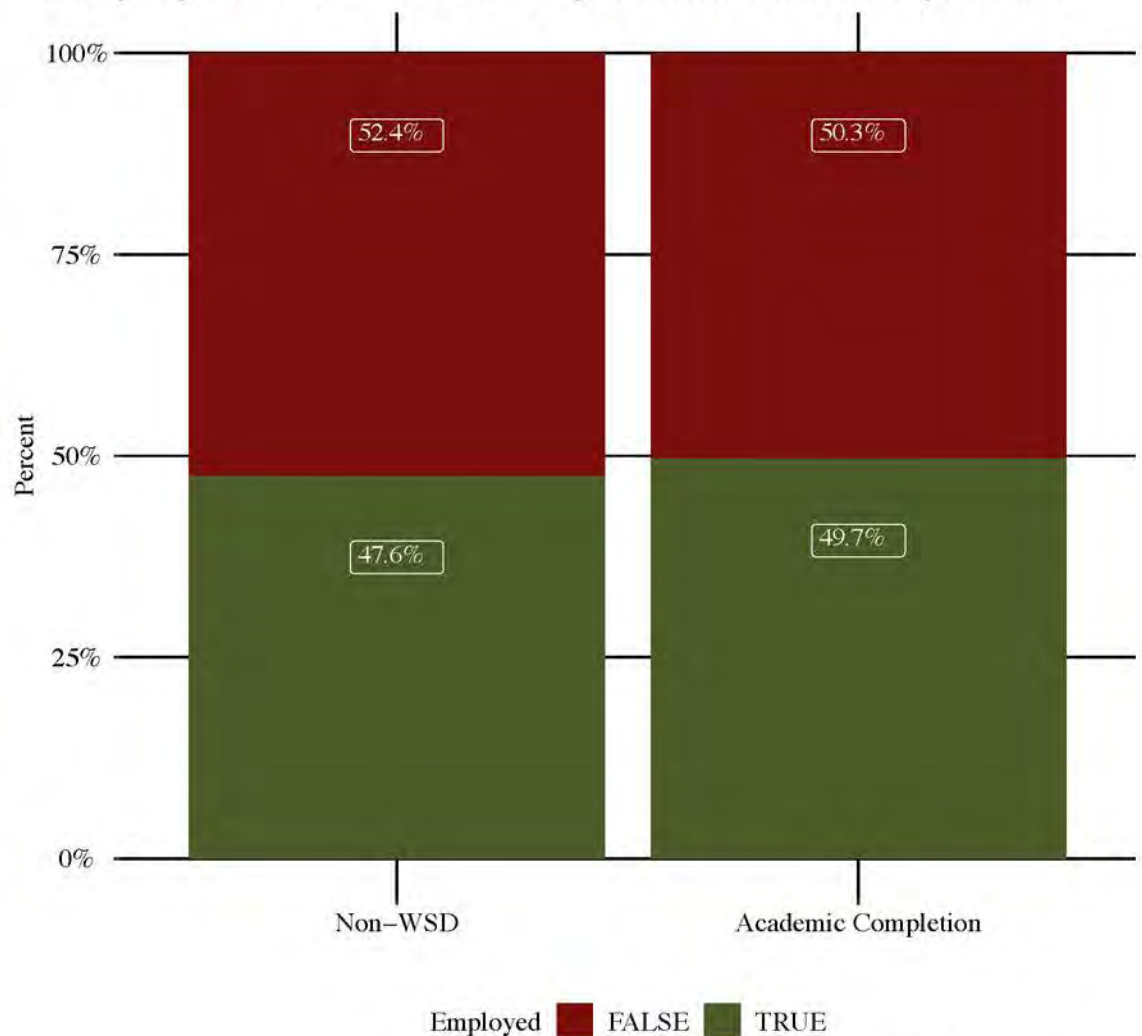
## For Academic Program Participant

- TABE grade equivalent gains per year of 4.5 in Reading, 6.5 in Math, 6.8 in Language, and 6.1 Composite (See page 22 for additional information.)

## For Academic Program Completer

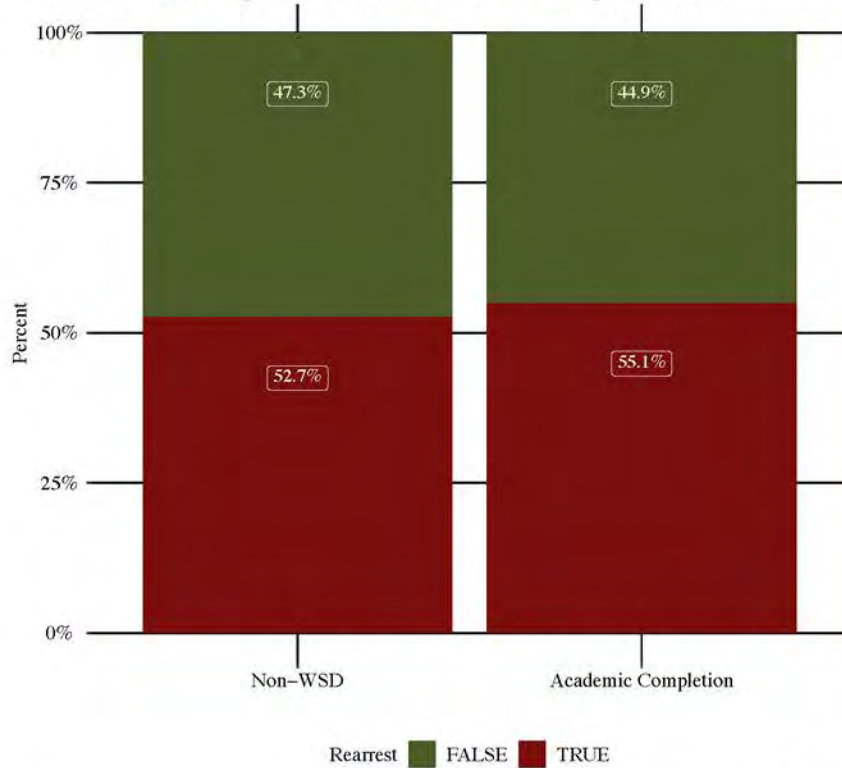
- Recidivism was lower: 27.1% vs. 27.9%
- Employment within 1 year was higher: 49.7% vs. 47.6%
- Found first job faster: 82 days vs. 88 days
- Job retention was higher: 84.1% vs. 83.6%

## Employed Within 1 Year by Academic Completion



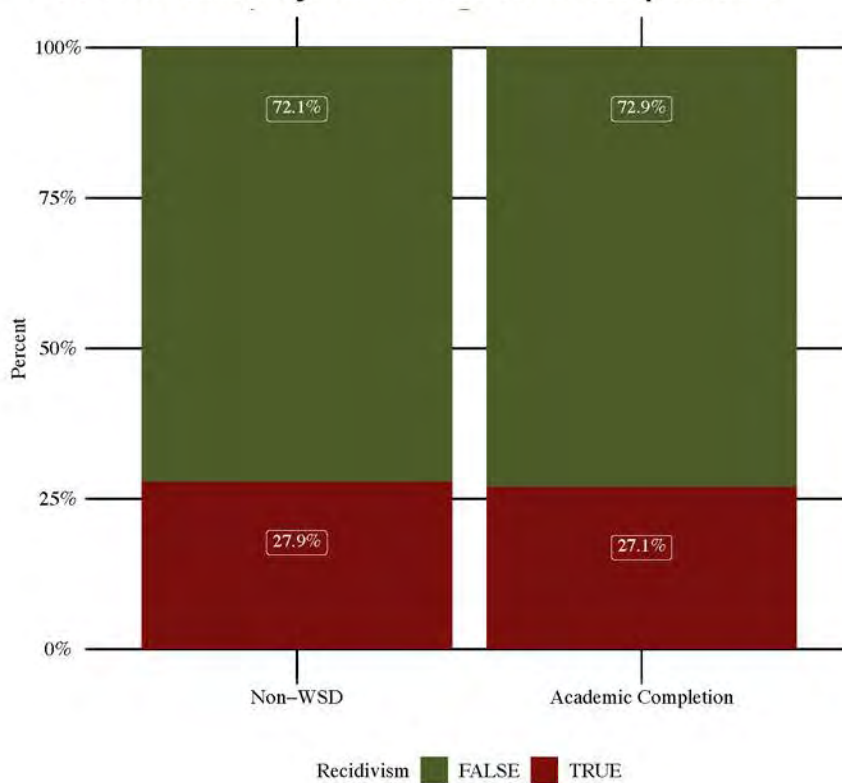
PSM matched samples

## Rearrest by Academic Completion



PSM matched samples

## Recidivism by Academic Completion



PSM matched samples



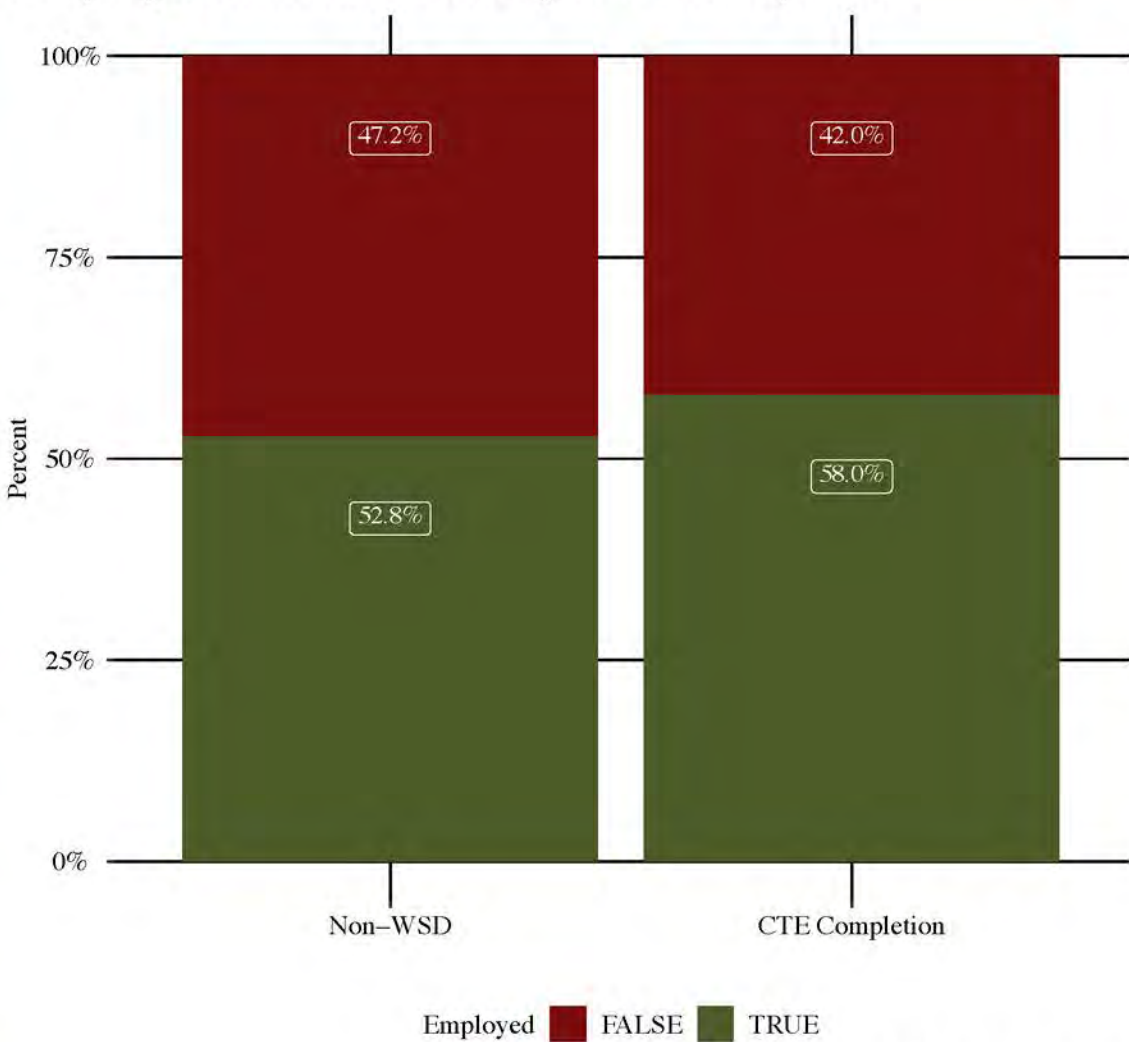


# Outcomes by CTE Completion

## For CTE (Vocational) Program Completer

- Rearrest rate was lower: 48.6% vs. 52.6%
- Recidivism rate was lower: 22.5% vs. 26.7%
- Employed within 1 year was higher: 58.0% vs. 52.8%
- Starting hourly wage was higher: \$13.60 vs. \$13.50
- Job retention was higher: 86.9% vs. 85.3%

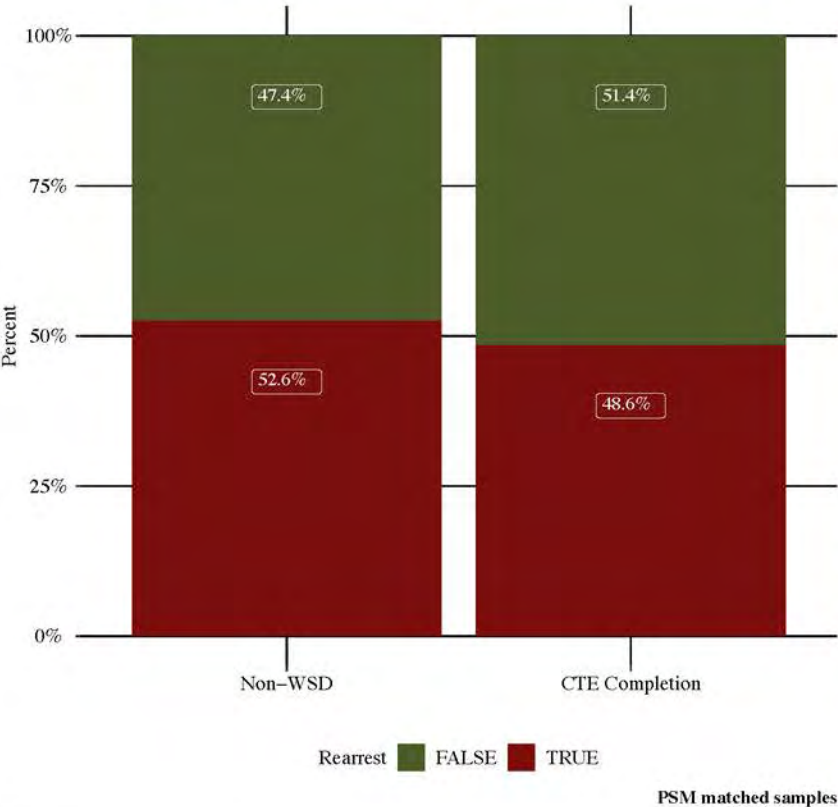
## Employed Within 1 Year by CTE Completion



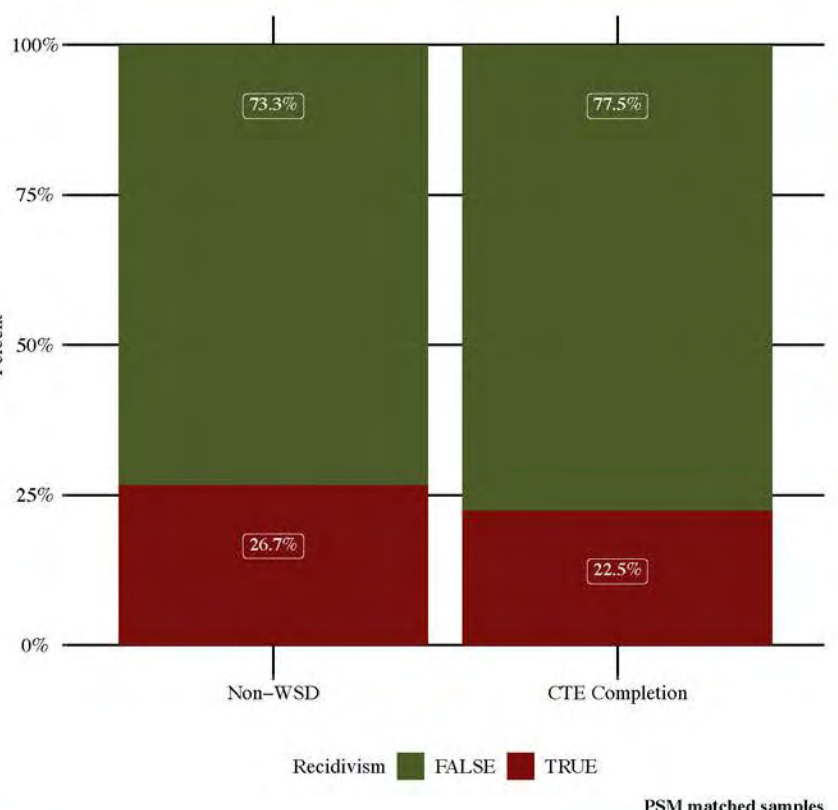
PSM matched samples



# Rearrest by CTE Completion



# Recidivism by CTE Completion

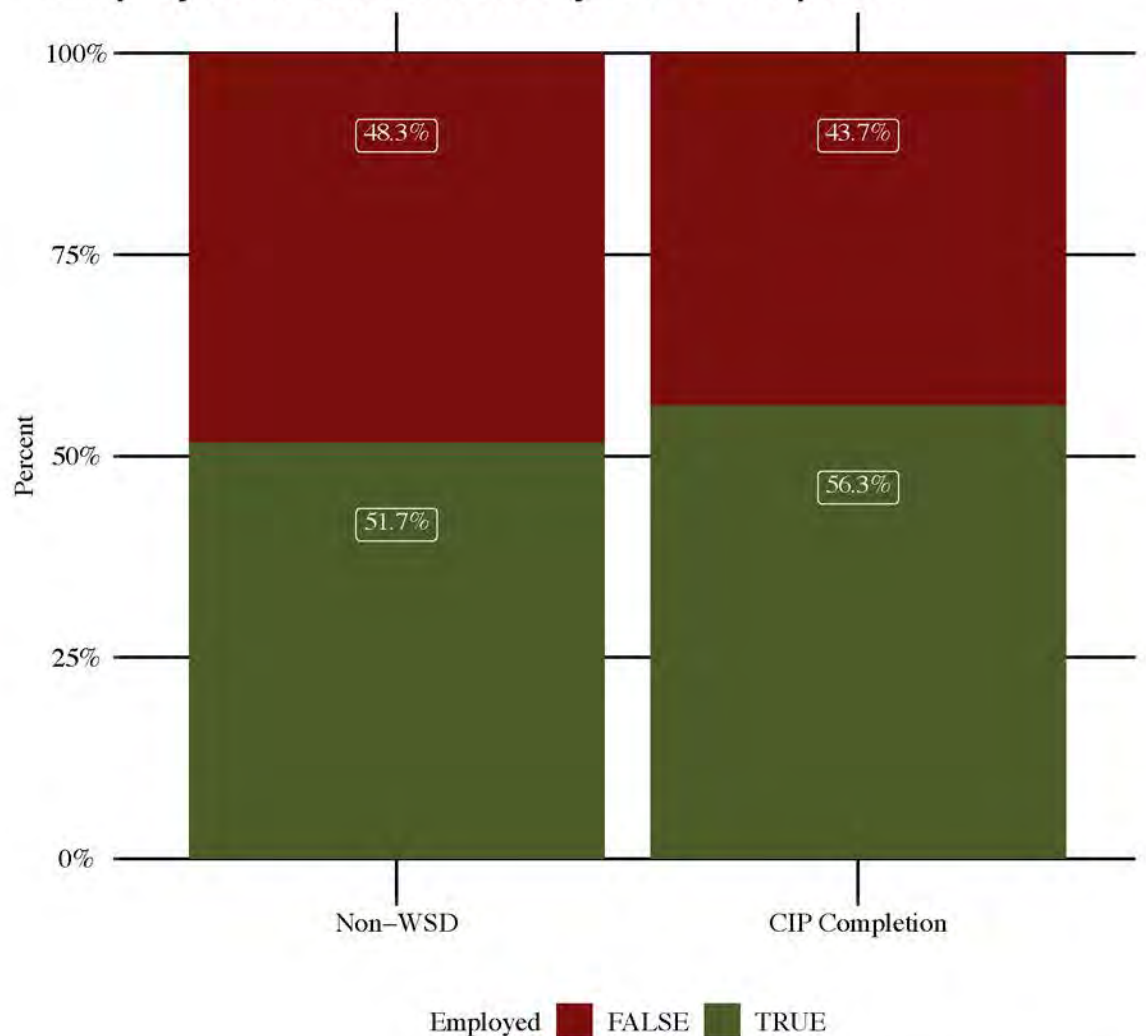


# Outcomes by CIP Completion

## For CIP Program Completer

- Rearrest rate was lower: 48.3% vs. 49.9%
- Recidivism rate was lower: 22.7% vs. 25.1%
- Employed within 1 year was higher: 56.3% vs. 51.7%
- Found first job faster: 77 days vs. 84 days
- Job retention was higher: 86.0% vs. 85.2%

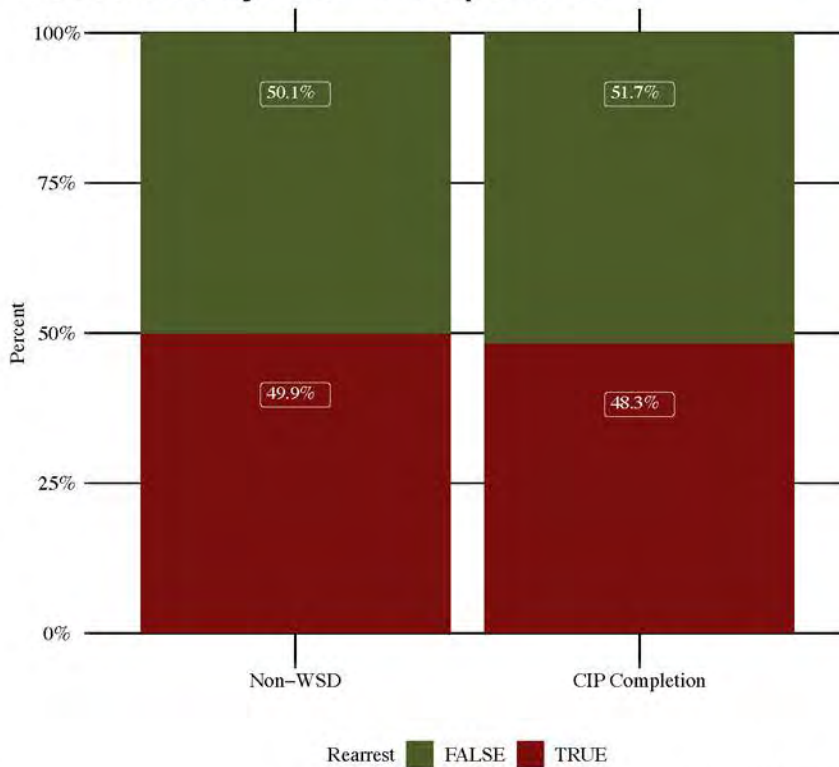
## Employed Within 1 Year by CIP Completion



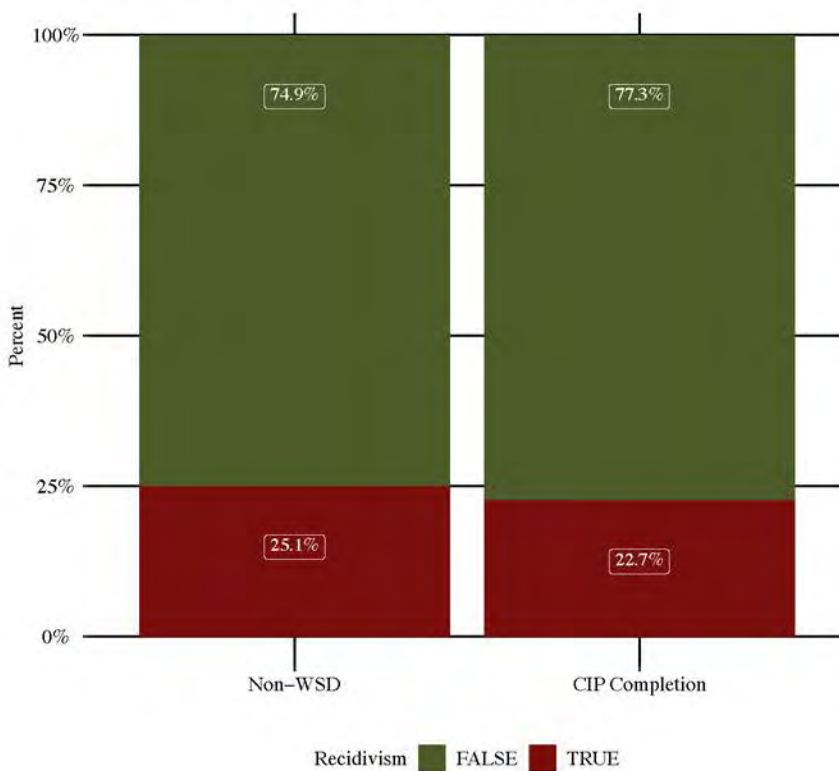
PSM matched samples



## Rearrest by CIP Completion



## Recidivism by CIP Completion

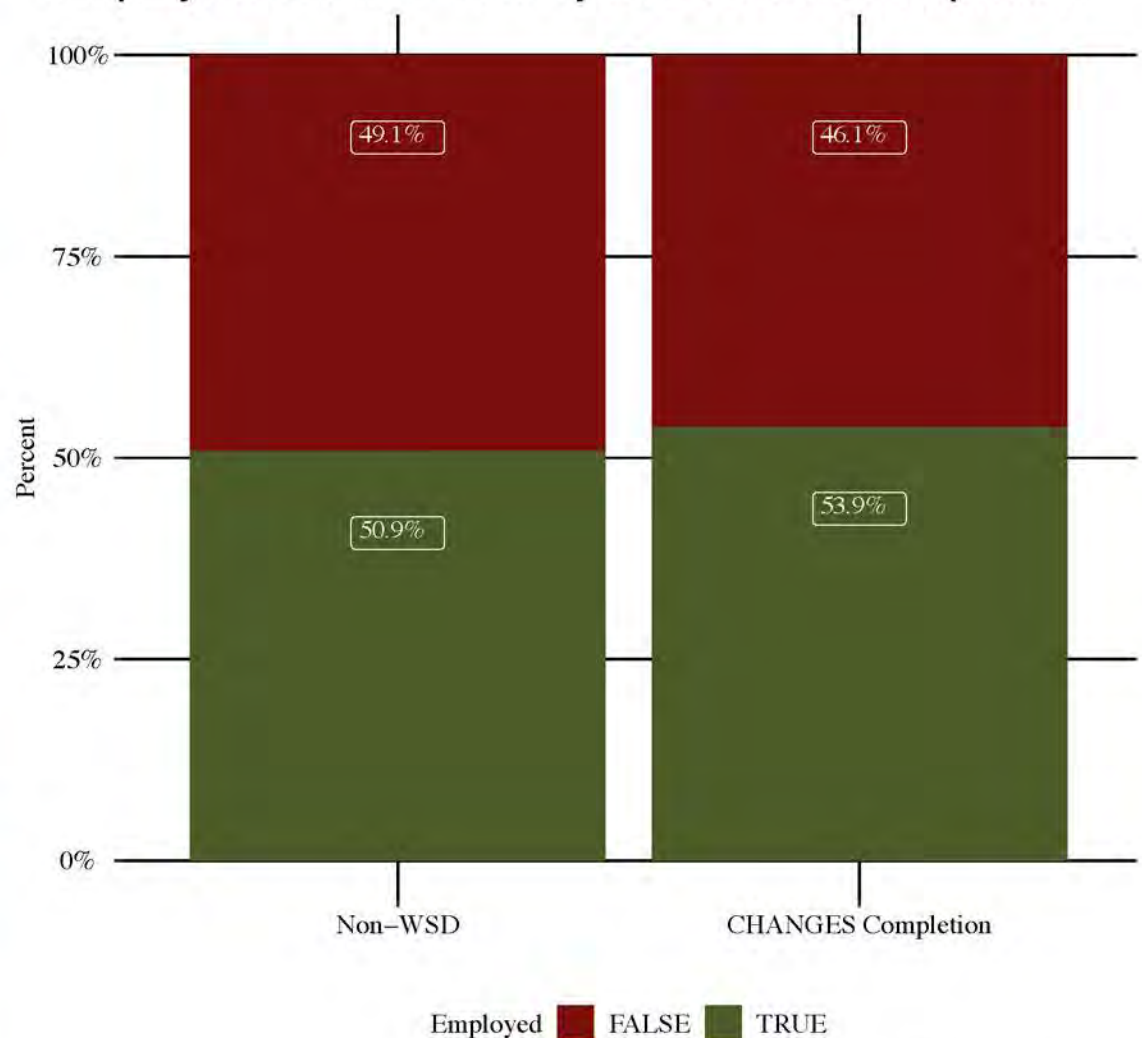


# Outcomes by CHANGES Completion

## For CHANGES Program Completer

- Recidivism was lower: 24.4% vs. 26.6%
- Employed within 1 year was higher: 53.9% vs. 50.9%
- Found first job faster: 80 days vs. 88 days
- Job retention was higher: 85.9% vs. 85.1%

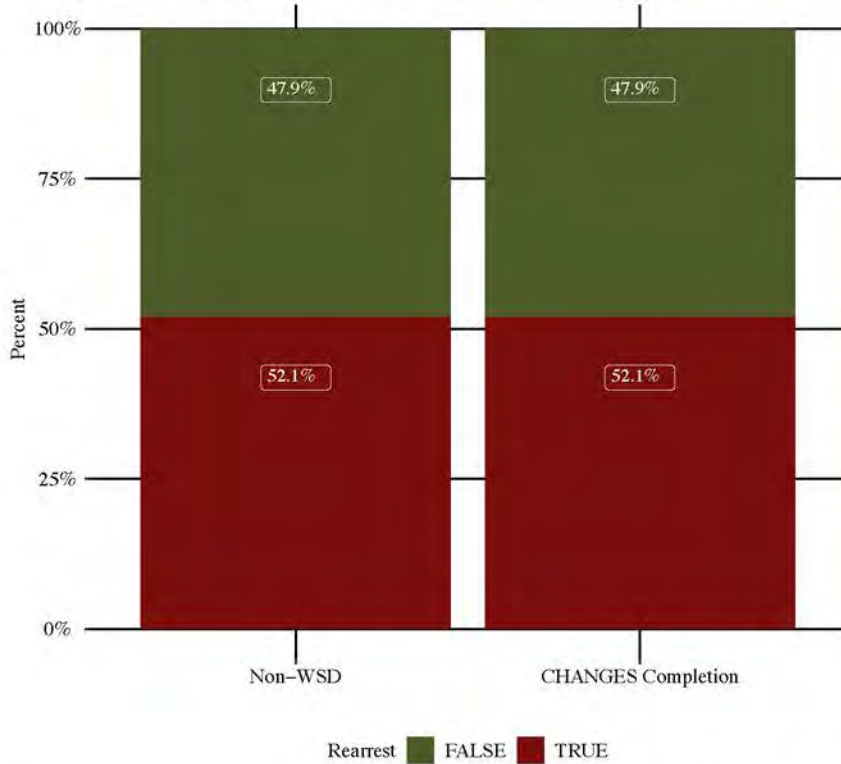
## Employed Within 1 Year by CHANGES Completion



PSM matched samples

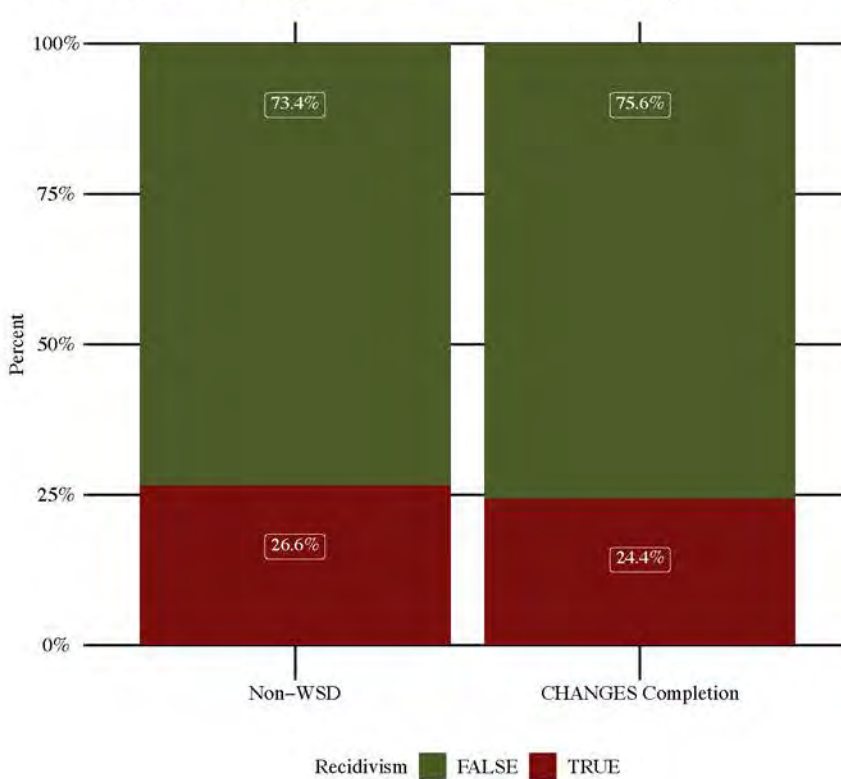


## Rearrest by CHANGES Completion



PSM matched samples

## Recidivism by CHANGES Completion



PSM matched samples

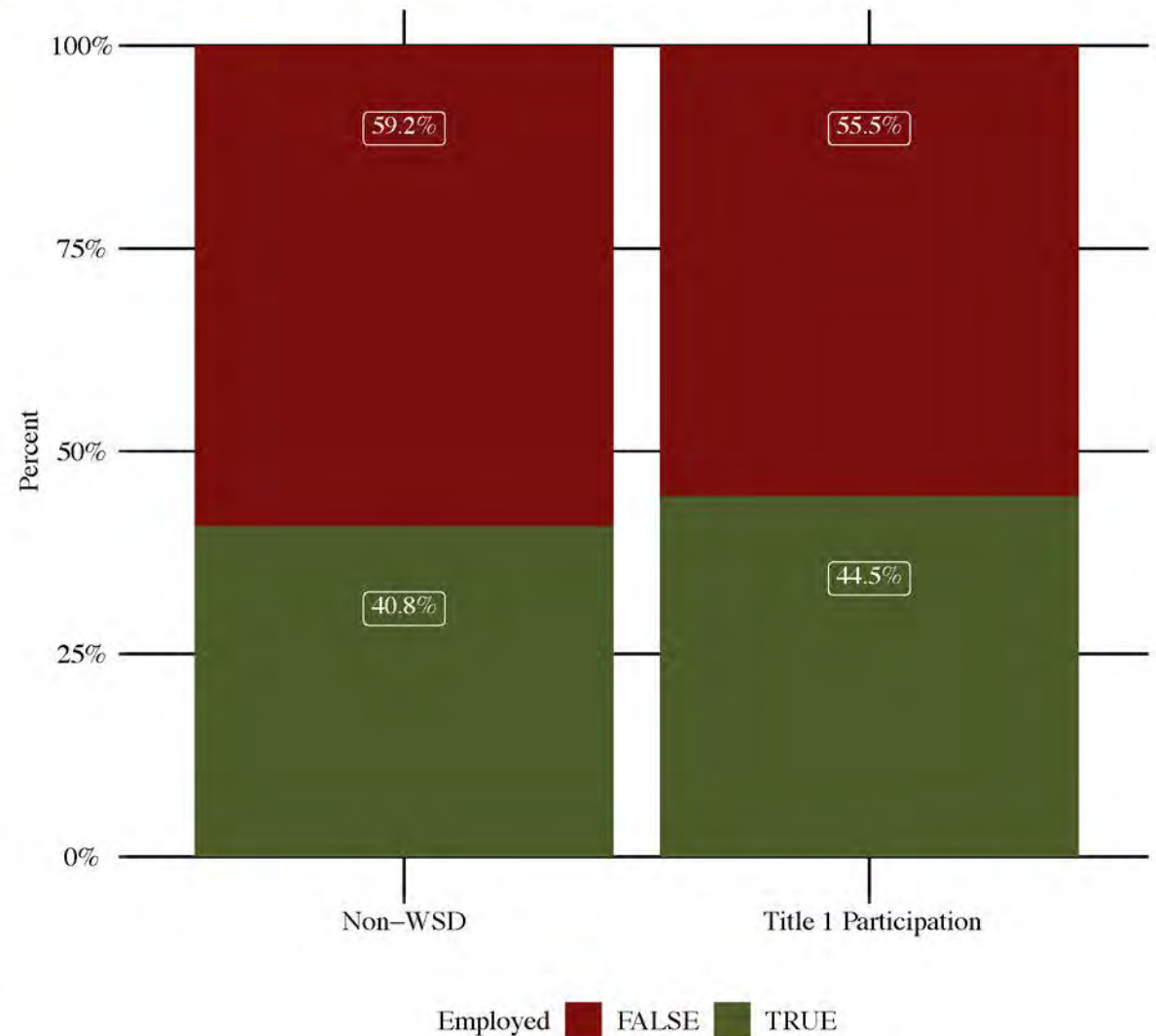


# Title 1 Outcomes

## Title 1 Program Participant

- Recidivism was lower: 33.2% vs. 36.7%
- Employed within 1 year was higher: 44.5% vs. 40.8%
- Starting hourly wage was higher: \$12.80 vs. \$12.50
- Job retention was higher: 81.2% vs. 74.5%

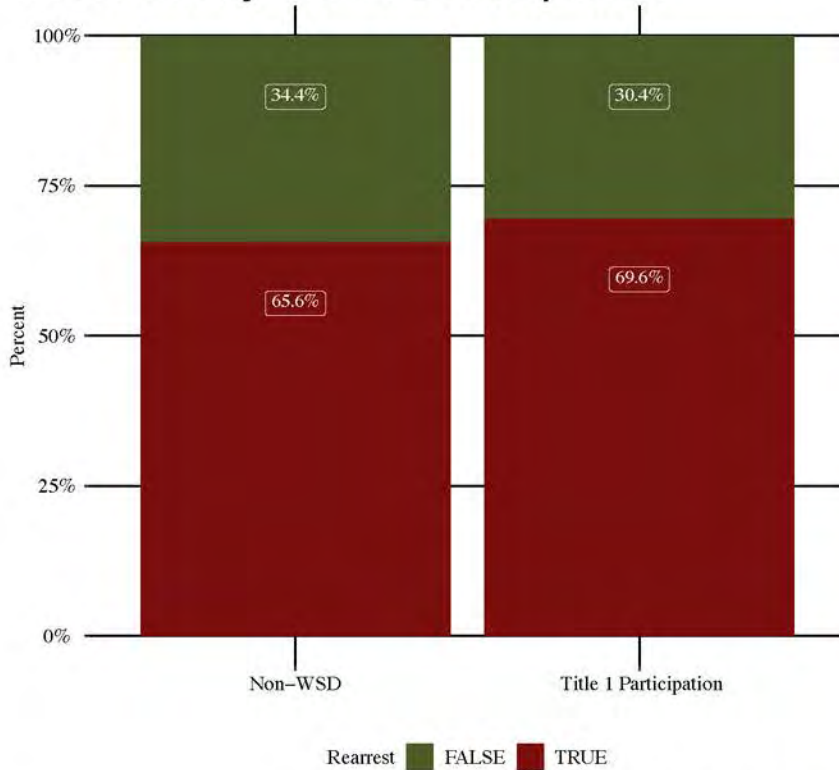
## Employed Within 1 Year by Title 1 Participation



PSM matched samples

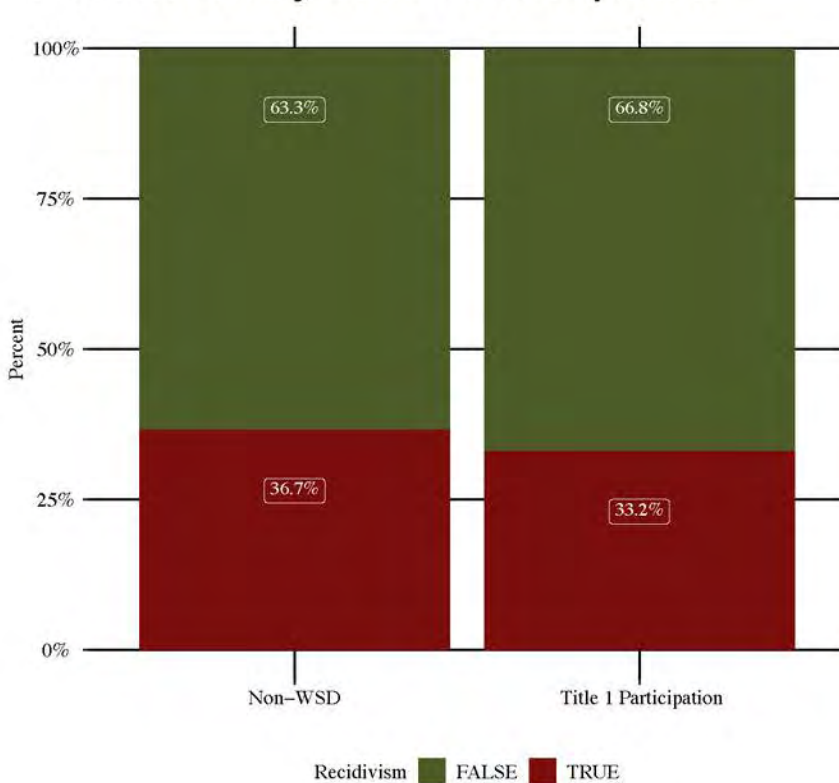


## Rearrest by Title 1 Participation



PSM matched samples

## Recidivism by Title 1 Participation



PSM matched samples

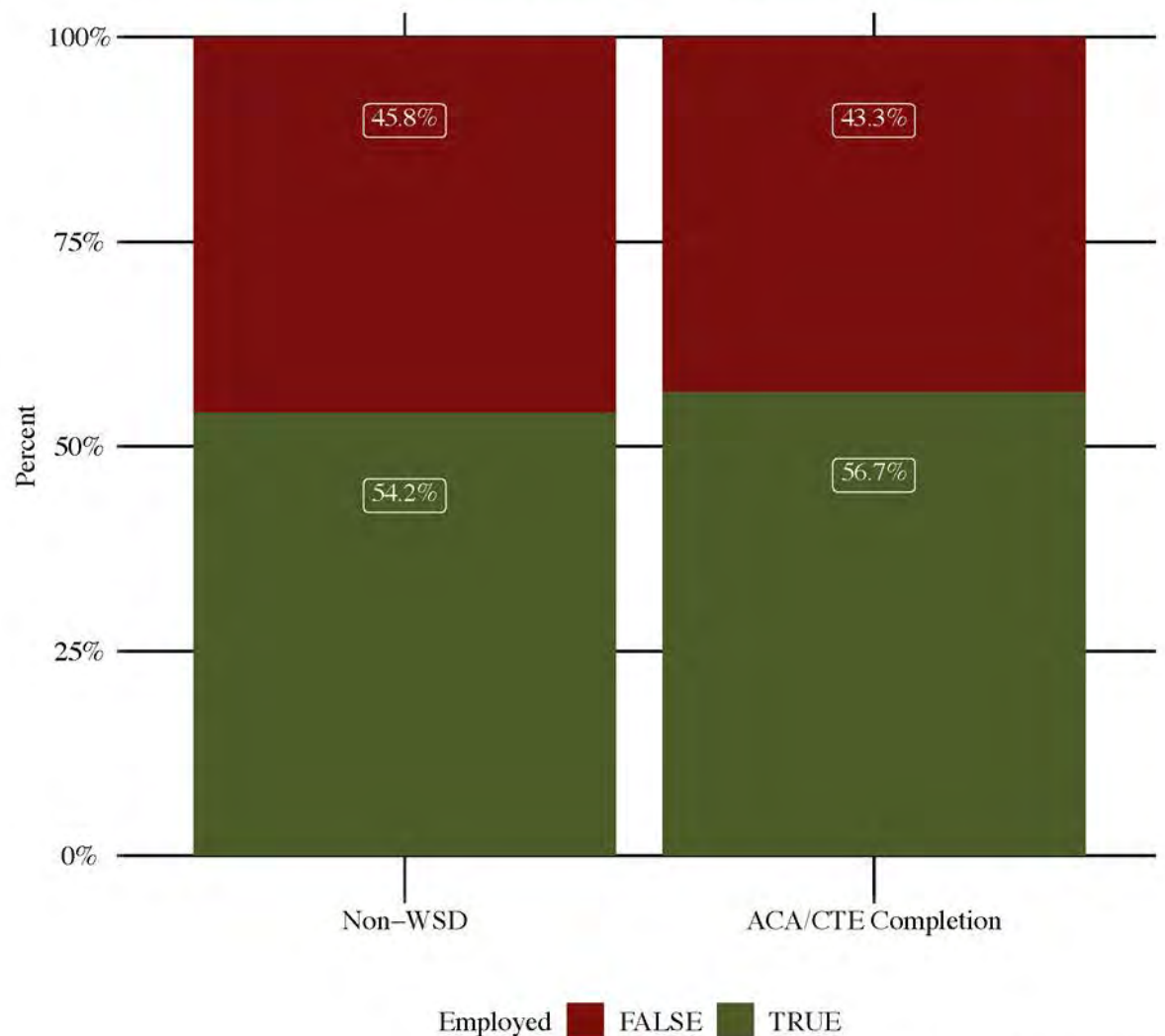


# Outcomes by ACA & CTE Completion

## For Academic & CTE Program Completer

- Rearrest was lower: 44.3% vs. 48.3%
- Recidivism was lower: 18.6% vs. 23.5%
- Employed within 1 year was higher: 56.7% vs. 54.2%
- Job retention was higher: 85.5% vs. 83.8%

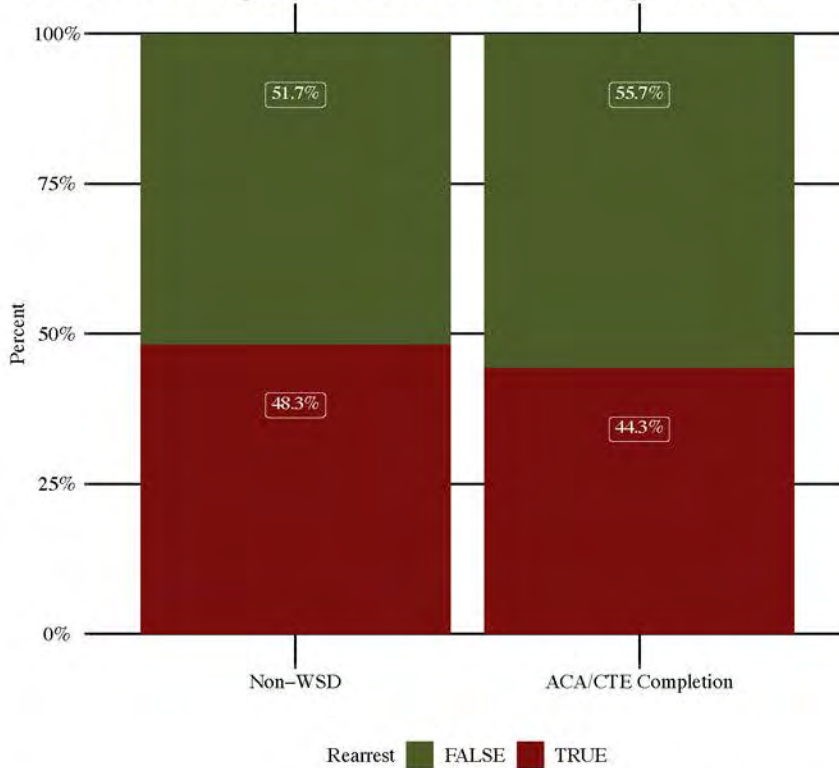
## Employed Within 1 Year by ACA & CTE Completion



PSM matched samples

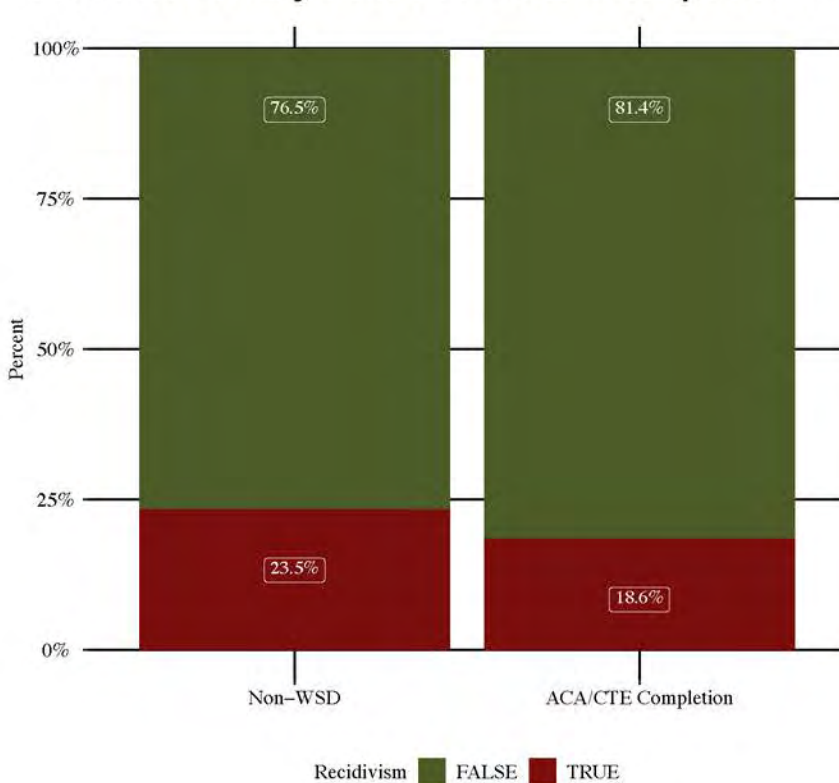


## Rearrest by ACA & CTE Completion



PSM matched samples

## Recidivism by ACA & CTE Completion



PSM matched samples

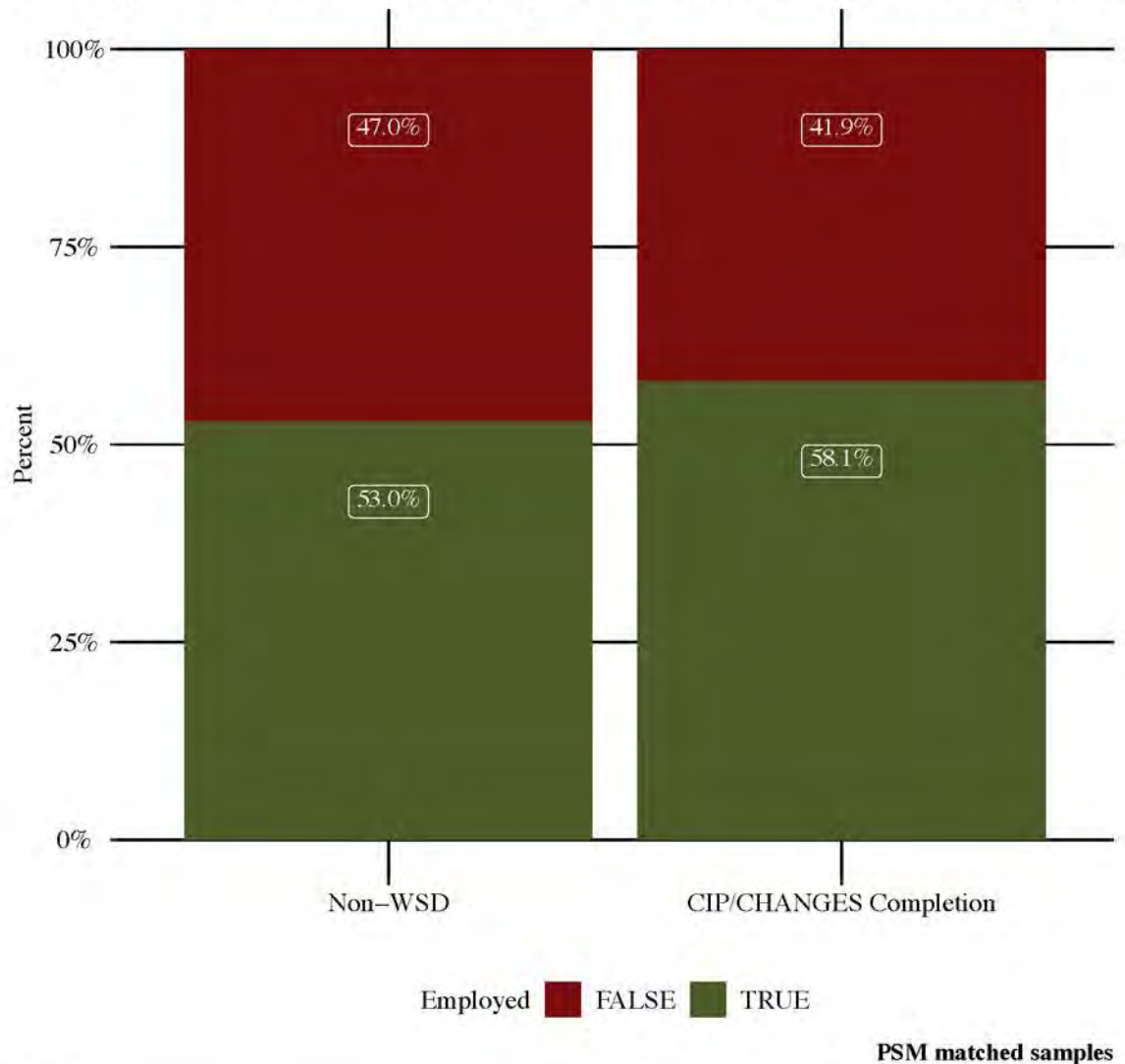


# Outcomes by CIP & CHANGES Completion

## For CIP & CHANGES Program Completer

- Rearrest was lower: 48.5% vs. 49.2%
- Recidivism was lower: 22.3% vs. 24.2%
- Employed within 1 year was higher: 58.1% vs. 53%
- Job retention was higher: 85.3% vs. 85.1%

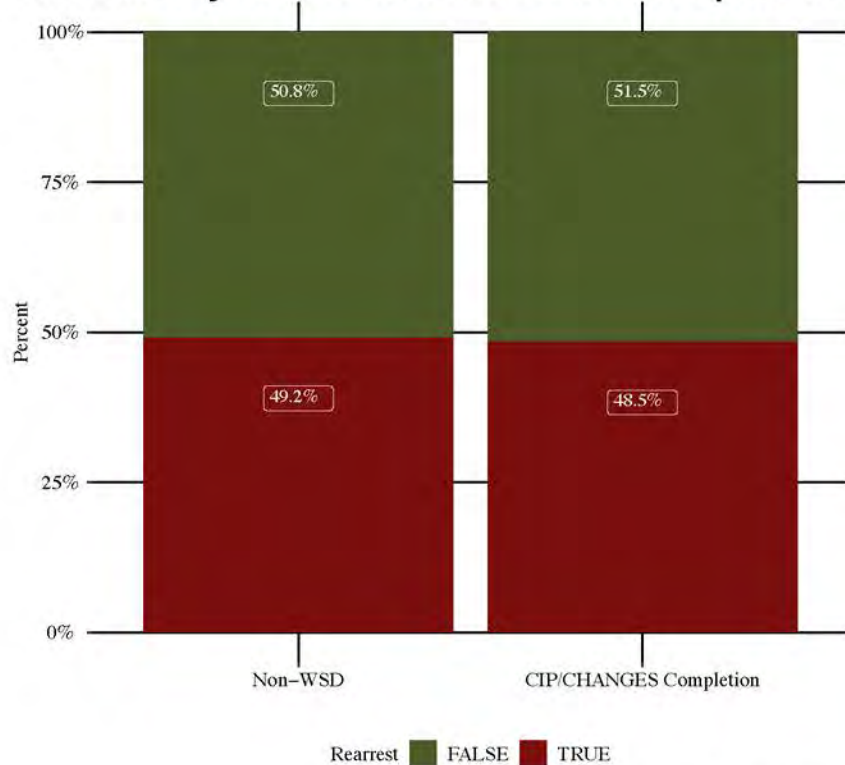
## Employed Within 1 Year by CIP & CHANGES Completion



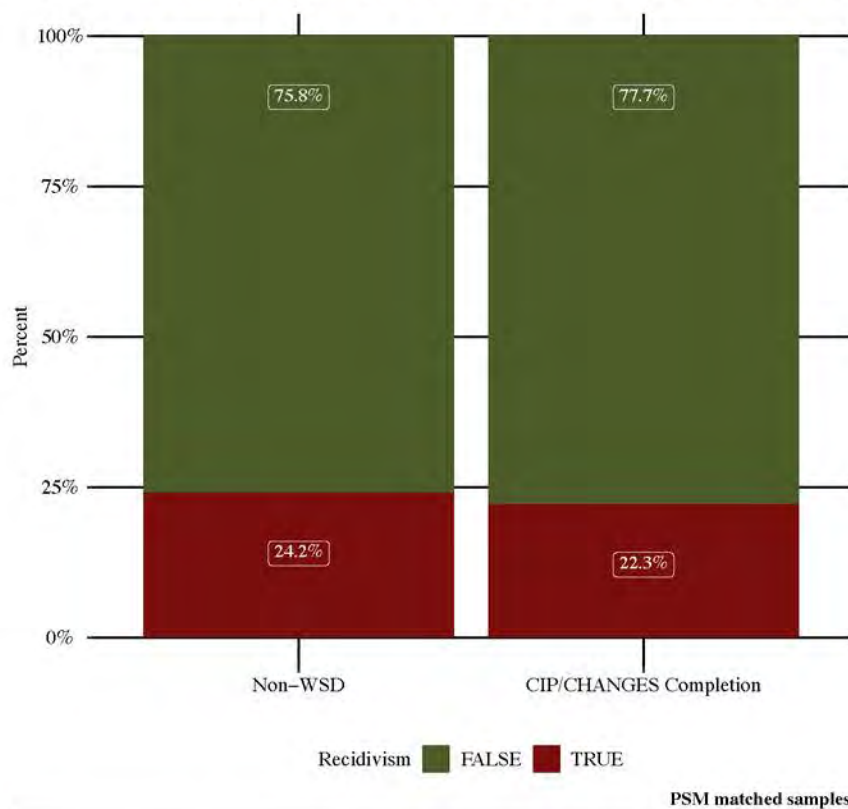
Research shows that the most successful vocational rehabilitation programs try to include a greater portion of community context into the program itself and therefore improve offender reentry outcomes. For example, gaining knowledge about the local economy, connecting offenders with potential employers, and building connections



## Rearrest by CIP & CHANGES Completion



## Recidivism by CIP & CHANGES Completion



with substance abuse and mental health organizations in the community are some of the interventions that have shown to significantly improve both positive and negative reentry outcomes even among violent offenders [Cochran, 2016].

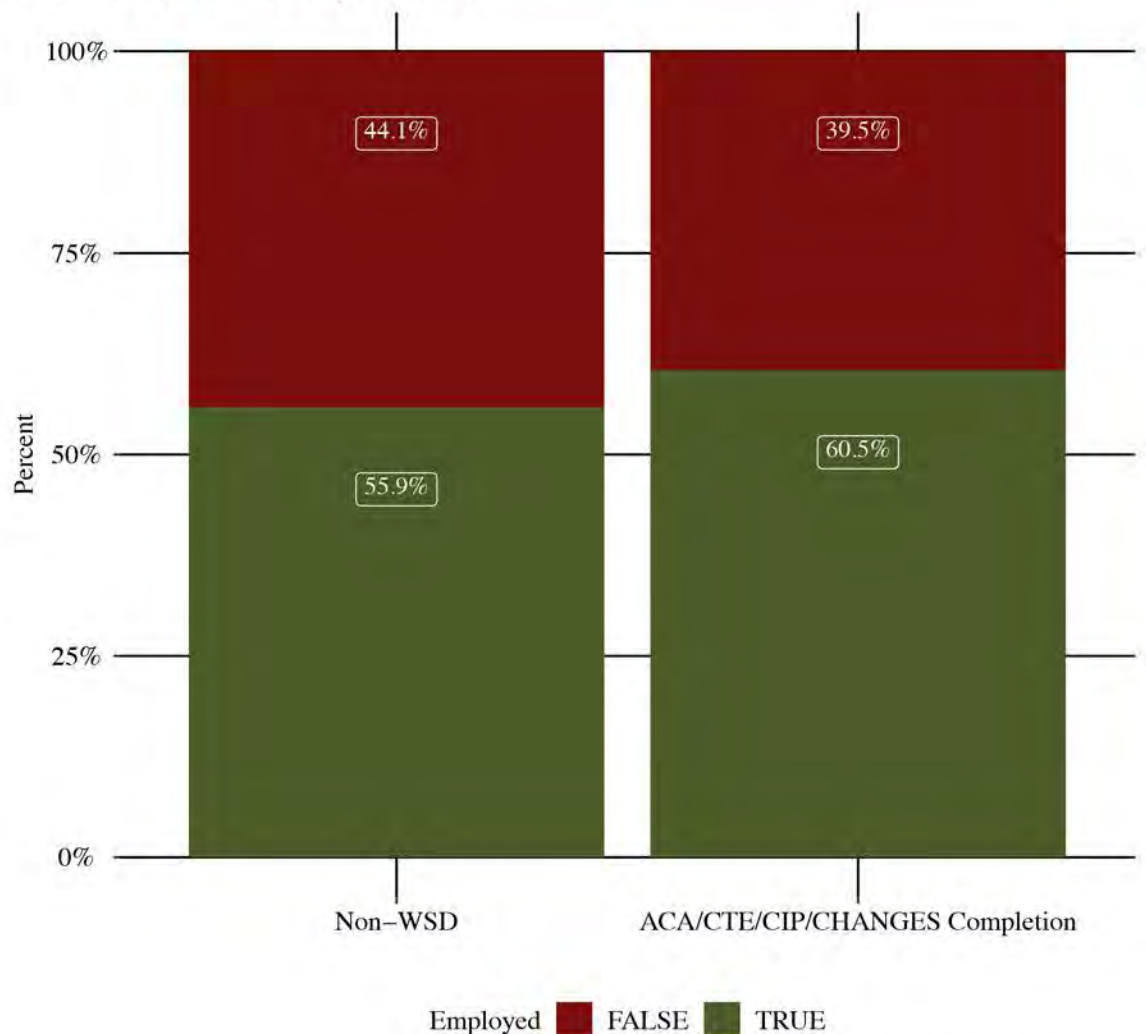


# Outcomes by Academic, CTE, CIP & CHANGES Completion

## For Academic, CTE, CIP & CHANGES Program Completer

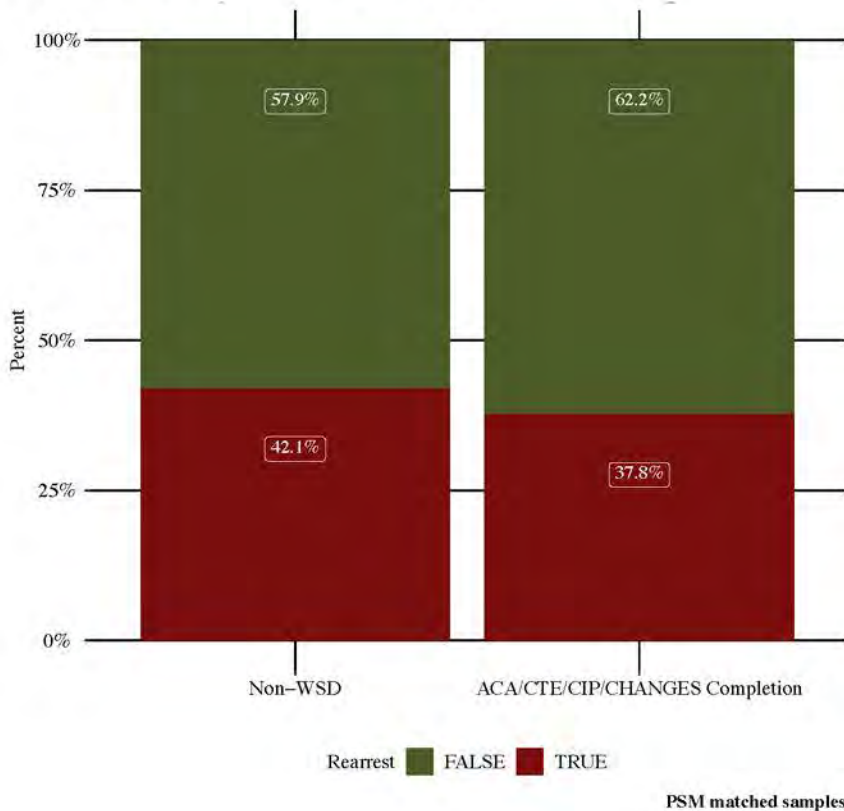
- Rearrest was lower: 37.8% vs. 42.1%
- Recidivism was lower: 15.9% vs. 19.4%
- Start hourly wage was higher: \$13.60 vs. \$13.50

## Employed Within 1 Year by Academic, CTE, CIP & CHANGES Completion

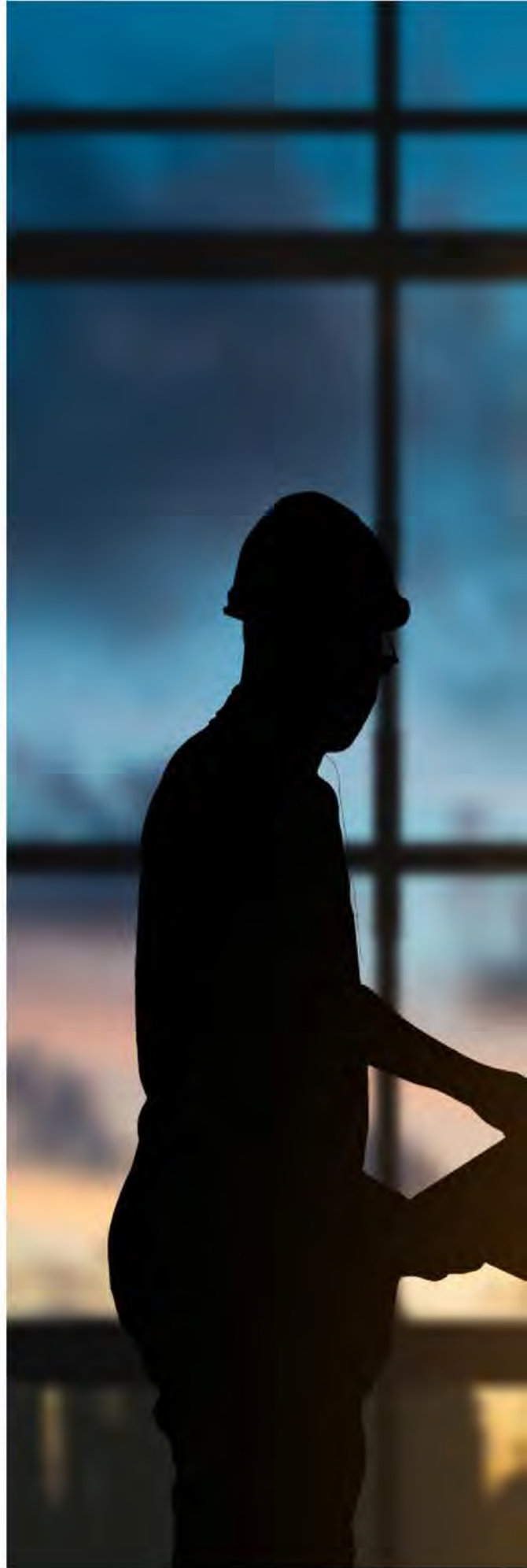
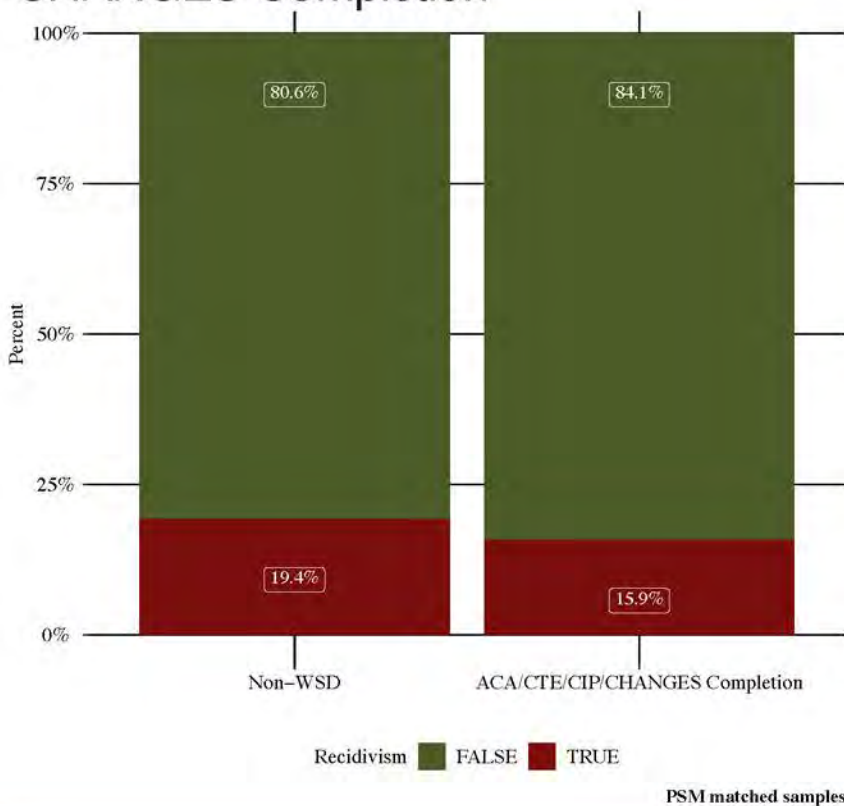


PSM matched samples

## Rearrest by Academic, CTE, CIP & CHANGES Completion



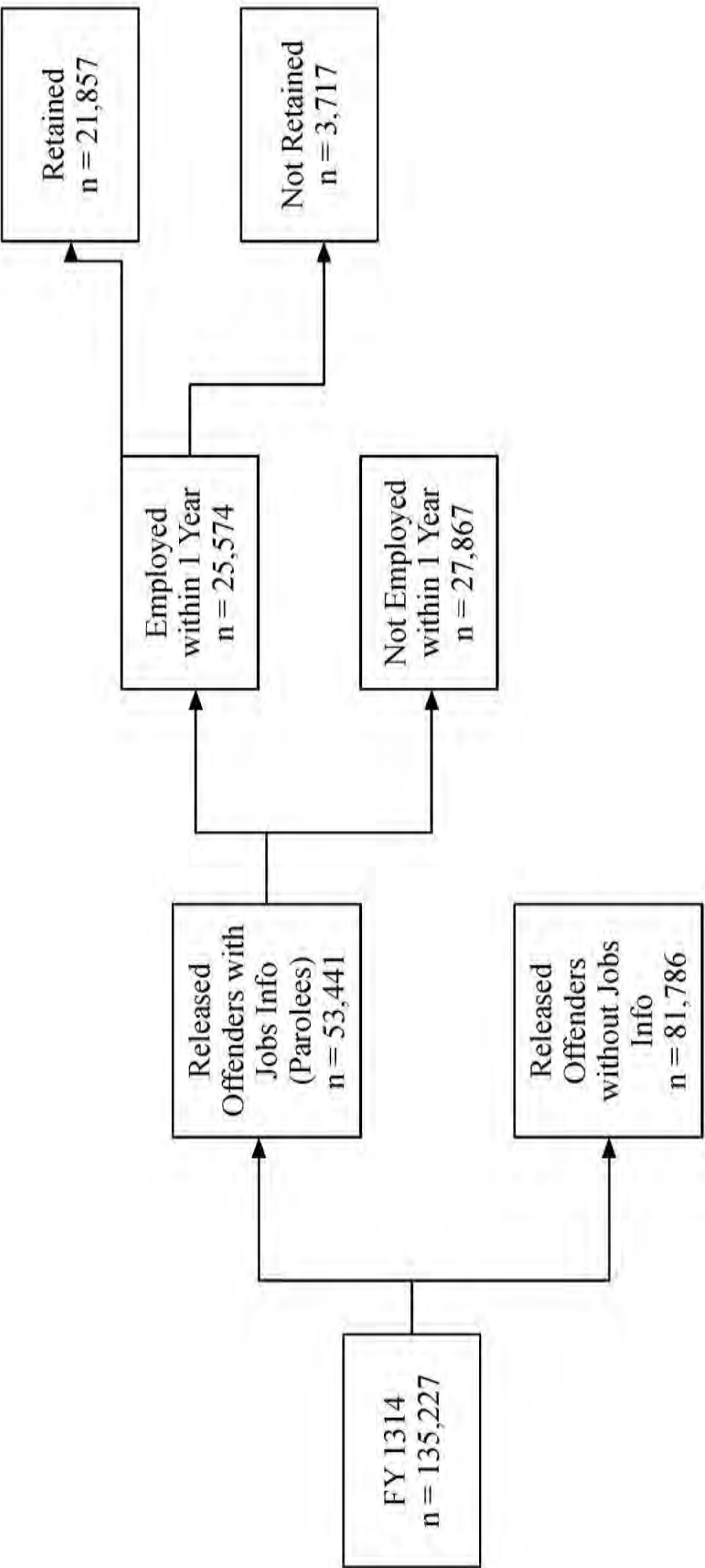
## Recidivism by Academic, CTE, CIP & CHANGES Completion



## **Appendices**

Cohort Sampling	1
Descriptive Program Statistics	
(Includes Program Specific Outcomes and achievements, Institutional Disciplinary Violations; Subsequent Arrests and Confinements, and Employment Related Findings)	
All Released Offenders	2
Academic Completers	3
CTE Completers	4
CIP Completers	5
CHANGES Completers	6
Title 1 Participants	7
Academic and CTE Completers	8
CIP and CHANGES Completers	9
Academic/CTE/CIP/CHANGES Completers	10
Propensity Score Matching	11
Institutional Disciplinary Violations (Summary)	12
Educational Achievement	13
HSE Certificate Analysis	14
CTE Training	15
Types of Employment	17
Employment Related to Training	18
Employment Results	19
Retention Factors	20





## Descriptive Statistics

	All Released Offenders	No WSD Programs
Full Sample Size	n = 135,227	n = 79,858
Gender	F: 15.4% M: 84.6%	F: 16% M: 84%
Race	Black: 32.3% Hispanic: 32.9% Other: 0.5% White: 34.4%	Black: 30.9% Hispanic: 32.5% Other: 0.5% White: 36%
Median Age at First Arrest	19.4	19.8
Median Age at Receive	32.4	34.5
Median Sentence Length (Days)	1,095	730
Inmate Type	ID: 60.5% SAFP: 8.3% State Jail: 31.2%	ID: 46.0% SAFP: 12.6% State Jail: 41.4%
Current Incarceration Offense Category	Drug: 29.3% Other: 18.5% Property: 29.0% Violent: 23.2%	Drug: 32.3% Other: 19.9% Property: 32.3% Violent: 15.5%
Median Years of Education	12	12
Median First TABE Reading	6.6	6.2
Median First TABE Math	5.6	5.4
Median First TABE Composite	5.9	5.5
Median First TABE Language	5.3	4.8
Max TABE Reading	9	8.1
Max TABE Math	7.8	6.8
Max TABE Composite	8.1	6.6
Max TABE Language	8.6	6.8
TABE Reading Grade Equivalent Gains Per Year	4.1	--
TABE Math Grade Equivalent Gains Per Year	5.9	--
TABE Composite Grade Equivalent Gains Per Year	5.7	--
TABE Language Grade Equivalent Gains Per Year	6.4	--
WSD HSE Cert	19.60%	14.20%
Industry Cert	3.20%	0.00%
Annual Rate Minor Inc.	0.5	0
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	286	188
Median Age at Release	34.5	35.5
Recidivism	27.20%	29.30%
Rearrest	51.80%	52.60%
Post-Release Felony Conviction	40.80%	42.80%
Post-Release Violent Conviction	13.80%	13.10%
Post-Release Drug Conviction	23.90%	25.00%
Post-Release Employment	47.90%	42.00%
Employed at 1 Year	85.50%	86.00%
Time to First Job (Days)	86	88
Median First Job Hourly Wages	\$13.60	\$13.60
Median Hourly Wages at 1 Year	\$13.90	\$14.50

### Matched Academic Completers with Individuals without Windham Programs

	Academic Program Completers	No WSD Programs
Full Sample Size	n = 135,227	n = 79,858
Academic Sample Size	n = 17,865	n = 17,865
Gender	F: 18.1% M: 81.9%	F: 18.9% M: 81.1%
Race	Black: 32.6% Hispanic: 39.7% Other: 0.4% White: 27.2%	Black: 32.9% Hispanic: 41.0% Other: 0.5% White: 25.7%
Median Age at First Arrest	18.8	19.1
Median Age at Receive	28.2	28
Median Sentence Length (Days)	1,461	1,095
Inmate Type	ID: 68.6% SAFP: 5.3% SJ: 26.1%	ID: 69.8% SAFP: 5.1% SJ: 25.1%
Current Incarceration Offense Category	Drug: 27.5% Other: 16.4% Property: 28.9% Violent: 27.2%	Drug: 27.5% Other: 16.2% Property: 29.1% Violent: 27.2%
Median Years of Education	11	12
Median First TABE Reading	6.8	6.4
Median First TABE Math	5.7	5.5
Median First TABE Composite	6	5.7
Median First TABE Language	5.6	5
Max TABE Reading	9	8.5
Max TABE Math	7.8	7.1
Max TABE Composite	8.3	7.2
Max TABE Language	8.8	7.7
TABE Reading Grade Equivalent Gains Per Year	4.5	--
TABE Math Grade Equivalent Gains Per Year	6.5	--
TABE Language Grade Equivalent Gains Per Year	6.8	--
TABE Composite Grade Equivalent Gains Per Year	6.1	--
WSD HSE Cert	34.80%	--
Industry Cert	4.60%	--
Annual Rate Minor Inc.	1.3	0.7
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	429	273
Median Age at Release	30.2	29.5
Recidivism	27.10%	27.90%
Rearrest	55.10%	52.70%
Post-Release Felony Conviction	41.20%	40.70%
Post-Release Violent Conviction	15.90%	15.30%
Post-Release Drug Conviction	25.50%	24.60%
Post-Release Employment	49.70%	47.60%
Employed at 1 Year	84.10%	83.60%
Time to First Job (Days)	82	88
Median First Job Hourly Wages	\$13.50	\$13.50
Median Hourly Wages at 1 Year	\$13.80	\$13.90



# Matched CTE (Vocational) Completers with Individuals without Windham Programs

	Vocational Program Completers	No WSD Programs
Full Sample Size	n = 135,227	n = 79,858
Vocational Sample Size	n = 8,377	n = 8,377
Gender	F: 15.8%	F: 17.4%
Race	M: 84.2% Black: 29.7% Hispanic: 31.4% Other: 0.4%	M: 82.6% Black: 28.6% Hispanic: 32.5% Other: 0.3%
	White: 38.4%	White: 38.5%
Median Age at First Arrest	19.1	18.9
Median Age at Receive	30.4	29.8
Median Sentence Length (Days)	1826	1826
Inmate Type	ID: 85.8% SJ: 14.2%	ID: 87.7% SAFP: 0.2% SJ: 12.1%
Current Incarceration Offense Category	Drug: 26.7% Other: 15.4% Property: 24.0% Violent: 33.9%	Drug: 26.3% Other: 14.1% Property: 23.4% Violent: 36.2%
Median Years of Education	12	12
Median First TABE Reading	7.8	7.4
Median First TABE Math	6.1	6
Median First TABE Composite	6.4	6.2
Median First TABE Language	6.3	6
Max TABE Reading	10.5	9.4
Max TABE Math	9.3	8
Max TABE Composite	9.4	8.2
Max TABE Language	10	8.8
TABE Reading Grade Equivalent Gains Per Year	4.5	--
TABE Math Grade Equivalent Gains Per Year	7.2	--
TABE Composite Grade Equivalent Gains Per Year	6.7	--
TABE Language Grade Equivalent Gains Per Year	720.00%	--
WSD HSE Cert	37.80%	--
Industry Cert	37.20%	--
Annual Rate Minor Inc.	1	0.7
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	902	618
Median Age at Release	3380.00%	3250.00%
Recidivism	22.50%	26.70%
Rearrest	48.60%	52.60%
Post-Release Felony Conviction	36.00%	40.60%
Post-Release Violent Conviction	12.90%	14.60%
Post-Release Drug Conviction	21.70%	23.30%
Post-Release Employment	58.00%	52.80%
Employed at 1 Year	86.90%	85.30%
Time to First Job (Days)	84	83
Median First Job Hourly Wages	\$13.60	\$13.50
Median Hourly Wages at 1 Year	\$14.40	\$13.90

**Matched CIP Completers with Individuals without Windham Programs**

	<b>CIP Program Completers</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
CIP Sample Size	n = 12,003	n = 12,003
Gender	F: 14.4% M: 85.6%	F: 16.8% M: 83.2%
Race	Black: 32.1% Hispanic: 31.6% Other: 0.4% White: 35.9%	Black: 31.8% Hispanic: 31.5% Other: 0.3% White: 36.4%
Median Age at First Arrest	19.2	19.2
Median Age at Receive	31.8	31.2
Median Sentence Length (Days)	1,826	1,461
Inmate Type	ID: 88.2% SAFP: 0.1% SJ: 11.7%	ID: 89.7% SAFP: 0.3% SJ: 10.0%
Current Incarceration Offense Category	Drug: 25.7% Other: 18.0% Property: 22.7% Violent: 33.6%	Drug: 25.3% Other: 16.7% Property: 22.4% Violent: 35.6%
Median Years of Education	12	12
Median First TABE Reading	6.8	6.6
Median First TABE Math	5.7	5.7
Median First TABE Composite	5.9	6
Median First TABE Language	5.6	5.2
Max TABE Reading	9.4	9
Max TABE Math	8.2	7.6
Max TABE Composite	9.1	7.8
Max TABE Language	9.2	8.1
TABE Reading Grade Equivalent Gains Per Year	4.6	--
TABE Math Grade Equivalent Gains Per Year	6.2	--
TABE Composite Grade Equivalent Gains Per Year	5.9	--
TABE Language Grade Equivalent Gains Per Year	6.6	--
WSD HSE Cert	27.20%	--
Industry Cert	9.70%	--
Annual Rate Minor Inc.	0.9	0.7
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	822	582
Median Age at Release	35	33.8
Recidivism	22.70%	25.10%
Rearrest	48.30%	49.90%
Post-Release Felony Conviction	36.40%	37.60%
Post-Release Violent Conviction	13.10%	14.10%
Post-Release Drug Conviction	21.70%	22.20%
Post-Release Employment	56.30%	51.70%
Employed at 1 Year	86.00%	85.20%
Time to First Job (Days)	77	84
Median First Job Hourly Wages	\$13.60	\$13.60
Median Hourly Wages at 1 Year	\$14.50	\$14.30



**Matched CHANGES Completers with Individuals without Windham Programs**

	<b>CHANGES Program Completers</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
CHANGES Sample Size	n = 20,678	n = 20,678
Gender	F: 12.9% M: 87.1%	F: 13.7% M: 86.3%
Race	Black: 32.8% Hispanic: 33.1% Other: 0.4% White: 33.7%	Black: 33.3% Hispanic: 32.8% Other: 0.4% White: 33.4%
Median Age at First Arrest	19.1	19.2
Median Age at Receive	31.3	30.9
Median Sentence Length (Days)	1,461	1,095
Inmate Type	ID: 88.8% SAFP: 0.3% SJ: 11.0%	ID: 88.5% SAFP: 0.3% SJ: 11.2%
Current Incarceration Offense Category	Drug: 27.2% Other: 20.9% Property: 24.7% Violent: 27.2%	Drug: 27.4% Other: 20.1% Property: 25.9% Violent: 26.6%
Median Years of Education	12	12
Median First TABE Reading	6.8	6.6
Median First TABE Math	5.6	5.7
Median First TABE Composite	6	5.9
Median First TABE Language	5.6	5.2
Max TABE Reading	9.2	8.6
Max TABE Math	7.9	7.3
Max TABE Composite	8.3	7.3
Max TABE Language	8.8	7.8
TABE Reading Grade Equivalent Gains Per Year	4.5	--
TABE Math Grade Equivalent Gains Per Year	6.5	--
TABE Language Grade Equivalent Gains Per Year	6.7	--
TABE Composite Grade Equivalent Gains Per Year	6	--
WSD HSE Cert	23.60%	--
Industry Cert	5.80%	--
Annual Rate Minor Inc.	1	0.6
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	546	385
Median Age at Release	33.4	32.8
Recidivism	24.40%	26.60%
Rearrest	52.10%	52.10%
Post-Release Felony Conviction	37.20%	39.10%
Post-Release Violent Conviction	14.00%	13.80%
Post-Release Drug Conviction	22.90%	23.20%
Post-Release Employment	53.90%	50.90%
Employed at 1 Year	85.90%	85.10%
Time to First Job (Days)	80	88
Median First Job Hourly Wages	\$13.60	\$13.60
Median Hourly Wages at 1 Year	\$13.90	\$14.50

### Matched Title I Participants with Individuals without Windham Programs

	<b>Title I Program Participants</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
Title I Sample Size	n = 871	n = 871
Gender	F: 17.6% M: 82.4%	F: 15.8% M: 84.2%
Race	Black: 37.2% Hispanic: 44.3% Other: 0.5% White: 18.0%	Black: 37.5% Hispanic: 45.7% Other: 0.1% White: 16.6%
Median Age at First Arrest	17.7	17.7
Median Age at Receive	19.8	19.5
Median Sentence Length (Days)	730	730
Inmate Type	ID: 65.1% SJ: 34.9%	ID: 64.6% SJ: 35.4%
Current Incarceration Offense Category	Drug: 16.2% Other: 10.2% Property: 43.6% Violent: 30.0%	Drug: 16.3% Other: 10.1% Property: 41.8% Violent: 31.8%
Median Years of Education	11	12
Median First TABE Reading	6.4	7.4
Median First TABE Math	5.7	6.2
Median First TABE Composite	5.9	6.2
Median First TABE Language	5.2	6.3
Max TABE Reading	9	9.4
Max TABE Math	8.8	8.8
Max TABE Composite	8.8	8.5
Max TABE Language	9.2	8.4
TABE Reading Grade Equivalent Gains Per Year	3.5	--
TABE Math Grade Equivalent Gains Per Year	5.1	--
TABE Composite Grade Equivalent Gains Per Year	4.9	--
TABE Language Grade Equivalent Gains Per Year	5.3	--
WSD HSE Cert	38.60%	--
Industry Cert	3.10%	--
Annual Rate Minor Inc.	2.6	1.9
Annual Rate Major Inc.	0.7	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	434	234
Median Age at Release	21.4	20.8
Recidivism	33.20%	36.70%
Rearrest	69.60%	65.60%
Post-Release Felony Conviction	49.10%	50.70%
Post-Release Violent Conviction	22.60%	22.70%
Post-Release Drug Conviction	36.90%	27.20%
Post-Release Employment	44.50%	40.80%
Employed at 1 Year	81.20%	74.50%
Time to First Job (Days)	106	81
Median First Job Hourly Wages	\$12.80	\$12.50
Median Hourly Wages at 1 Year	\$13.60	\$13.40



**Matched Academic and CTE Completers with Individuals without Windham Programs**

	<b>Academic and CTE Program Completers</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
Academic and CTE Sample Size	n = 2,940	n = 2,940
Gender	F: 15.9% M: 84.1%	F: 17.1% M: 82.9%
Race	Black: 32.7% Hispanic: 36.9% Other: 0.3% White: 30.1%	Black: 32.7% Hispanic: 37.4% Other: 0.2% White: 29.7%
Median Age at First Arrest	18.8	18.9
Median Age at Receive	27	26.7
Median Sentence Length (Days)	2,556	1,826
Inmate Type	ID: 94.5% SJ: 5.5%	ID: 94.7% SAFP: 0.4% SJ: 4.9%
Current Incarceration Offense Category	Drug: 19.7% Other: 9.7% Property: 18.7% Violent: 51.9%	Drug: 18.9% Other: 7.7% Property: 17.2% Violent: 56.2%
Median Years of Education	12	12
Median First TABE Reading	7.7	7.4
Median First TABE Math	6	5.9
Median First TABE Composite	6.3	6.2
Median First TABE Language	6.2	5.8
Max TABE Reading	10.5	9.4
Max TABE Math	9.5	8
Max TABE Composite	9.9	8.2
Max TABE Language	10.1	8.5
TABE Reading Grade Equivalent Gains Per Year	4.3	--
TABE Math Grade Equivalent Gains Per Year	6.8	--
TABE Language Grade Equivalent Gains Per Year	6.9	--
TABE Composite Grade Equivalent Gains Per Year	6.4	--
WSD HSE Cert	64.70%	--
Industry Cert	37.90%	--
Annual Rate Minor Inc.	1.3	0.9
Annual Rate Major Inc.	0.2	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	1,405.00	968
Median Age at Release	32.1	30.5
Recidivism	18.60%	23.50%
Rearrest	44.30%	48.30%
Post-Release Felony Conviction	31.20%	36.10%
Post-Release Violent Conviction	14.50%	16.90%
Post-Release Drug Conviction	19.10%	20.40%
Post-Release Employment	56.70%	54.20%
Employed at 1 Year	85.50%	83.80%
Time to First Job (Days)	86	86
Median First Job Hourly Wages	\$12.90	\$13.50
Median Hourly Wages at 1 Year	\$13.60	\$13.70



**Matched CIP and CHANGES Completers with Individuals without Windham Programs**

	<b>CIP and CHANGES Program Completers</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
CIP and CHANGES Sample Size	n = 5,856	n = 5,856
Gender	F: 11.9% M: 88.1%	F: 13.0% M: 87.0%
Race	Black: 32.5% Hispanic: 32.7% Other: 0.4% White: 34.4%	Black: 33.8% Hispanic: 32.6% Other: 0.4% White: 33.2%
Median Age at First Arrest	19.1	19.1
Median Age at Receive	29.6	29
Median Sentence Length (Days)	1,826	1,826
Inmate Type	ID: 95.3% SJ: 4.7%	ID: 95.0% SAFP: 0.3% SJ: 4.7%
Current Incarceration Offense Category	Drug: 21.0% Other: 15.6% Property: 20.9% Violent: 42.5%	Drug: 20.2% Other: 13.7% Property: 21.0% Violent: 45.1%
Median Years of Education	12	12
Median First TABE Reading	6.8	7.2
Median First TABE Math	5.7	6
Median First TABE Composite	6	6.1
Median First TABE Language	5.6	5.6
Max TABE Reading	9.6	9.4
Max TABE Math	8.8	8
Max TABE Composite	9.4	8.2
Max TABE Language	9.5	8.4
TABE Reading Grade Equivalent Gains Per Year	4.1	--
TABE Math Grade Equivalent Gains Per Year	5.9	--
TABE Composite Grade Equivalent Gains Per Year	5.4	--
TABE Language Grade Equivalent Gains Per Year	6.5	--
WSD HSE Cert	29.10%	--
Industry Cert	13.10%	--
Annual Rate Minor Inc.	1.1	0.8
Annual Rate Major Inc.	0	0
Annual Rate Time Lost (Days)	0	0
Median Days of Current Incarceration	988	675
Median Age at Release	33.3	32.1
Recidivism	22.30%	24.20%
Rearrest	48.50%	49.20%
Post-Release Felony Conviction	35.80%	37.20%
Post-Release Violent Conviction	14.90%	15.20%
Post-Release Drug Conviction	20.60%	21.40%
Post-Release Employment	58.10%	53.00%
Employed at 1 Year	85.30%	85.10%
Time to First Job (Days)	80	81
Median First Job Hourly Wages	\$13.60	\$13.60
Median Hourly Wages at 1 Year	\$13.60	\$13.90

**Matched Academic/CTE/CIP/CHANGES Completers with Individuals  
without Windham Programs**

	<b>ACA/CTE/CIP/ CHANGES Program Completers</b>	<b>No WSD Programs</b>
Full Sample Size	n = 135,227	n = 79,858
Academic/CTE/CIP/CHANGES Sample Size	n = 975	n = 975
Gender	F: 12.9% M: 87.1%	F: 14.8% M: 85.2%
Race	Black: 33.4% Hispanic: 33.9% Other: 0.2% White: 32.4%	Black: 34.7% Hispanic: 34.7% Other: 0.0% White: 30.7%
Median Age at First Arrest	18.7	19.1
Median Age at Receive	25.5	25.5
Median Sentence Length (Days)	3,287	2,556
Inmate Type	ID: 98.8% SJ: 1.2%	ID: 98.2% SAFP: 0.4% SJ: 1.4%
Current Incarceration Offense Category	Drug: 11.2% Other: 7.4% Property: 11.8% Violent: 69.6%	Drug: 9.1% Other: 5.7% Property: 9.4% Violent: 75.7%
Median Years of Education	12	12
Median First TABE Reading	7.6	7.7
Median First TABE Math	5.9	5.7
Median First TABE Composite	6.2	6.1
Median First TABE Language	5.9	5.5
Max TABE Reading	10.8	9.4
Max TABE Math	9.5	7.9
Max TABE Composite	10	8.1
Max TABE Language	10.1	8.9
TABE Reading Grade Equivalent Gains Per Year	3.8	--
TABE Math Grade Equivalent Gains Per Year	6	--
TABE Language Grade Equivalent Gains Per Year	6.4	--
TABE Composite Grade Equivalent Gains Per Year	5.6	--
WSD HSE Cert	66.60%	--
Industry Cert	41.30%	--
Annual Rate Minor Inc.	1.3	1
Annual Rate Major Inc.	0.4	0.1
Annual Rate Time Lost (Days)	1.1	0
Median Days of Current Incarceration	2,092.00	1,820.00
Median Age at Release	33.1	31.5
Recidivism	15.90%	19.40%
Rearrest	37.80%	42.10%
Post-Release Felony Conviction	26.90%	33.40%
Post-Release Violent Conviction	13.70%	17.40%
Post-Release Drug Conviction	16.10%	18.20%
Post-Release Employment	60.50%	55.90%
Employed at 1 Year	84.80%	85.00%
Time to First Job (Days)	79	79
Median First Job Hourly Wages	\$13.60	\$13.50
Median Hourly Wages at 1 Year	\$13.60	\$16.20



### Propensity Score Matching

Propensity Score Matching (PSM) was used to account for the non-random program participation. Because Career and Technical Education (CTE), Cognitive Intervention Program (CIP), CHANGES, Academic and Title I program participation were not randomly assigned, the program participants and non-participants could have differed in some baseline characteristics. Thus, any differences observed between the groups could have been due to these baseline characteristics rather than the program. PSM works by only comparing non-participants and participants in the analysis with similar baseline characteristics.

We first chose baseline characteristics that could be confounding results. After an analysis of the data, many variables emerged for all programs (CTE, CIP, CHANGES, Academic, and Title I): sex, race, age at first arrest, age at the beginning and end of the most recent incarceration, times previously been to prison, state jail, and substance abuse felony punishment facilities, fiscal year released from incarceration, sentence lengths in days, time actually served, rate of annual major and minor disciplinary violations, good time lost from disciplinary violations, whether they were state jail or prison inmates, offense category (e.g., burglary), and years of education.

Next, using those variables, each offender was given a propensity score (ranging from 0 -1) for being a participant in each program. Once the propensity scores were estimated, participants and non-participants with similar propensity scores were matched. To match, we used the nearest neighbor technique (Coca-Parallon, 2006) through the MatchIt package (Ho, Imai, King, & Stuart, 2011) in R (R Core Team, 2018). After program participants were matched with non-participants with similar propensity scores, any remaining participants and non-participants were dropped from the analysis. The number of remaining participants and non-participants are listed in the Table 1 below.

Table 1. Sample sizes after PSM

	CTE	CIP	CHANGES	Academic	Title I
Participants	8,377	12,003	20,678	17,865	871
Non-participants	8,377	12,003	20,678	17,865	871
Total	16,754	24,006	41,356	35,730	1,742



## Institutional Disciplinary Violations

Institutional disciplinary violations are poor outcomes of WSD programs.

“Time Lost” refers to days lost due to TDCJ institutional disciplinary violations.

<b>Raw Frequencies (135,227)</b>	<b>Mean (Standard Error)</b>	<b>Median</b>
Minor Disciplinary Incidents	2.69 (6.38)	1.00
Major Disciplinary Incidents	1.44 (5.78)	0.00
Time Lost (Days)	48.90 (233.27)	0.00

Annual rates are more accurate reflections of institutional problems because they take into account the different length of time individuals have to exhibit the behaviors. Annual rates thus “standardize” the measures and we can make a detailed comparison.

<b>Annual Rates (135,227)</b>	<b>Mean (Standard Error)</b>	<b>Median</b>
Minor Disciplinary Incidents	1.40 (2.38)	0.48
Major Disciplinary Incidents	0.54 (1.67)	0.00
Time Lost (Days)	8.95 (37.94)	0.00

There were no relationships found between WSD programs and institutional disciplinary violations, probably because the rate of annual disciplinary violations is so low.

Further complicating trying to correlate WSD programs and institutional disciplinary violations is the varied timing among WSD program participation and when institutional disciplinary violations occur relative to taking programming.

## Educational Achievement

A year of academic instruction is defined as 180 days of instruction x 7 hours per day, or 1,260 hours. A typical WSD student attends academic instruction for 3 hours per day, up to 630 instructional hours per year. “Grade-Level Gains Per Year of Academic Instruction” values can then be used to compare gains made by students in different educational settings, such as public school, juvenile or adult correctional education, etc.

**Grade Gains Per Year of Academic Instruction**

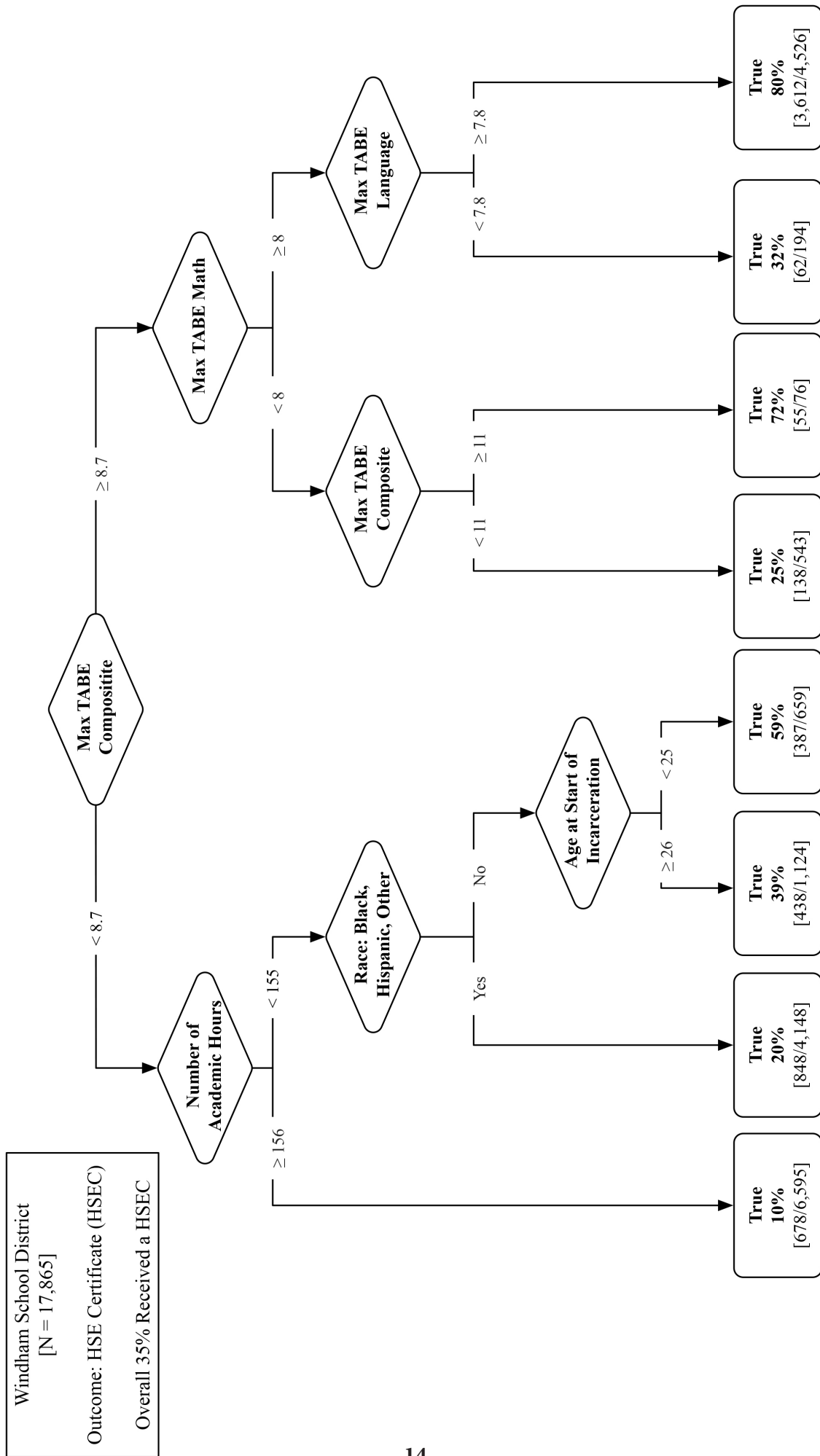
	<b>Count</b>	<b>Mean (Standard Error)</b>	<b>Median</b>
TABE Reading	18,446	17.87 (106.26)	4.10
TABE Math	18,700	20.83 (105.93)	5.90
TABE Composite	18,711	19.18 (106.02)	5.70
TABE Language	18,346	23.47 (128.94)	6.40

To standardize grade-level gains across individuals with different amounts of opportunity (e.g., hours of academic instruction), we computed grade level gains per year of academic instruction (e.g., per 180 days, or 1,260 hours, of instruction). Individuals with <199 hours have exceptionally high gains compared to offenders with more hours of instruction due to the ratio used to standardize grade-level gains; as the denominator gets smaller relative to the numerator, the grade gains per year of instruction go up.

**Grade Gains Per Year of Instruction for Ranges of Academic Hours of Instruction**

<b>Hours of Academic Instruction</b>	<b>Reading</b>	<b>Math</b>	<b>Composite</b>	<b>Language</b>
< 199	9.50	15.70	14.70	15.50
200-299	6.05	8.50	8.20	8.90
300-399	5.70	6.80	6.60	7.20
400-499	5.20	5.90	5.70	7.00
500-599	4.60	5.40	5.20	6.20
600-699	4.30	4.80	5.00	6.30
700-799	4.20	4.70	4.90	6.00
800-899	3.70	4.10	4.20	5.10
900-999	3.50	4.00	3.90	5.05
1000-1099	3.00	3.50	3.50	5.00
1100-1199	3.20	3.40	3.40	4.50
1200-1299	3.10	3.70	3.30	4.50

All four variables (Reading, Math, Composite, and Language) had highly skewed distributions, which means that a few very high values can increase the mean (average), and thus the median is a better measure of “average” effectiveness/impact. The median is reported in these tables.





Types of Training Services Provided (CTE)

<b>Class Name</b>
ASSEMBLER TECHNICIAN (CABINETMAKER)
AUDIO VIDEO ENTERTAINMENT
AUTO COLLISION REPAIR & REFINISHING TECHNOLOGY
AUTOMOTIVE SPECIALIZATION (AIR COND. & HEATING)
AUTOMOTIVE SPECIALIZATION (AUTO FUNDAMENTALS)
AUTOMOTIVE SPECIALIZATION (ENGINE PERFORMANCE)
AUTOMOTIVE SPECIALIZATION (TRANSMISSION)
AUTOMOTIVE TECHNICIAN SPECIALISTS
BAKER
BCIS Outlook/Access
BCIS Word/Excel
BRICKLAYING/STONE MASONRY
BUILDING TRADES I
BUSINESS COMPUTER INFORMATION SYSTEMS I
BUSINESS COMPUTER INFORMATION SYSTEMS II
BUSINESS IMAGE MANAGEMENT AND MULTIMEDIA
CLEANING RELATED
CNC MACHINING
COMPUTER MAINTENANCE TECHNICIAN
CONSTRUCTION CARPENTRY (BUILDING TRADES II)
CONSTRUCTION FUNDAMENTALS
CONSTRUCTION-MAINTENANCE SYSTEMS
COOK
COPPER NETWORK CABLING
CULINARY ARTS
CULINARY ARTS SHORT COURSE
CUSTODIAL TECHNICIAN
DIESEL MECHANICS
DIVERSIFIED CAREER PREP
ELECTRICAL TRADES
ELECTRONIC SYSTEMS TECHNICIAN
ENERGY MANAGEMENT
ENTREPRENEURSHIP
EQUINE SCIENCE (HORSE SHOEING)
FIBER OPTIC NETWORK CABLING
FOOD AND FIBER PRODUCTION
FOOD PRODUCTION, MANAGEMENT, AND SERVICES
GRAPHIC DESIGNER
HEATING, VENTILATION, AIR COND. & REFRIG.
HORTICULTURE
HORTICULTURE SPECIALIST
HOSPITALITY AND TOURISM
HOSPITALITY SERVICES

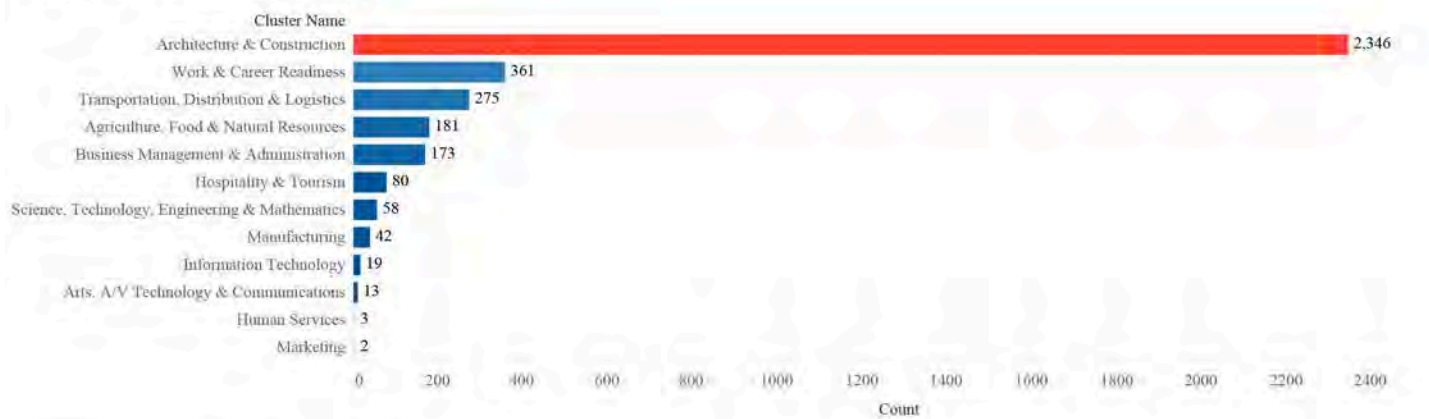
Class Name
INDUSTRIAL & MANUFACTURING SYSTEMS
INTRODUCTION TO CONSTRUCTION CAREERS
LANDSCAPE DESIGN, CONSTRUCTION & MAINTENANCE
LANDSCAPE TECHNICIAN
MAINTENANCE REPAIRER, BUILDING
MAJOR APPLIANCE SERVICE TECHNOLOGY
MILL & CABINETMAKING
OSHA CONSTRUCTION
OSHA GENERAL
PAINTING & DECORATING
PERSONAL & FAMILY DEV. (SKILLS FOR LIVING)
PIPING TRADES/PLUMBING
PLANT MAINTENANCE
PLANT PROCESSING (WAREHOUSE EQUIP. OPERATIONS)
PLUMBING
PRINTING & IMAGING TECHNOLOGY
RESTAURANT MANAGEMENT
SHEET METAL
SMALL ENGINE REPAIR
SMALL ENGINE REPAIR - MOTORCYCLE/ATV
TECH. INTRODUCTION TO COMPUTER-AIDED DRAFTING
TELECOMMUNICATIONS TECHNOLOGIES
TEXTILE & APPAREL PROD., MANAGEMENT, AND SERV.
TRANSPORTATION SYSTEMS
TRUCK DRIVING
VALUE-ADDED & FOOD PROCESSING
VCP-COM AND MEDIA SYSTEMS-LITERACY
VCP-COM AND MEDIA SYSTEMS-MATH
VCP-COM AND MEDIA SYSTEMS-TACTILE
VCP-COM AND MEDIA SYSTEMS-TEXTBOOK FORMATTING
WELDER, COMBINATION
WELDING

## Types of Employment Obtained Upon Release

<b>Job Description</b>	<b>Dot Code</b>	<b>Number of Offenders</b>	<b>%</b>
Company Laborer	939	5,527	17.09%
Construction	869	1,923	5.94%
Cook	313	1,418	4.38%
Landscape	408	848	2.62%
Carpenter	860	714	2.21%
Mechanic	620	665	2.01%
Warehouse	922	632	1.95%
Waiter	350	543	1.68%
Plumber	862	535	1.65%
Service Manager	185	533	1.65%
Cashier	211	516	1.60%
Car Wash	915	475	1.47%
Temp Laborer	520	455	1.41%
Welder	819	445	1.38%
Truck Driver	905	367	1.14%
Fry Cook	526	329	1.01%
Painter	144	300	0.93%
Clerk	222	299	0.92%
Maintenance Repair	899	273	0.84%
Waiter	311	268	0.83%
Other	-----	15,285	47.25%



## Employment Related to Training



42% of CTE students with a vocational course completion found employment related to training.

## Post-Release Employment

	All Released Offenders	Academic Completers	CTE (Vocational) Completers	CIP Completers	CHANGES Completers	Title I Participants	Academic and Vocational Completers	CIP and CHANGES Completers	Academic, CTE, CIP, and CHANGES Completers	No WSD Program
Post-Release Employment	47.9%	49.7%	58.0%	56.3%	53.9%	44.5%	56.7%	58.1%	60.5%	42.0%
Employed at 1 Year	85.5%	84.1%	86.9%	86.0%	85.9%	81.2%	85.5%	85.3%	84.8%	84.7%
Median First Job Hourly Wages	\$13.60	\$13.50	\$13.60	\$13.60	\$13.60	\$12.80	\$12.90	\$13.60	\$13.60	\$13.60
Median Hourly Wages at 1 Year	\$13.90	\$13.80	\$14.40	\$14.50	\$13.90	\$13.60	\$13.60	\$13.60	\$13.60	\$14.50
Time to First Job (Days)	86.0	82.0	84.0	77.0	80.0	106.0	86.0	80.0	79.0	88.0

## Job Retention Analysis

NOTE: Odds/Ratios were used to predict the job retention probabilities for the cohort. Odds/Ratio identifies the association between an outcome (in this case job retention or the likelihood of remaining employed), and exposure (in this case, the various conditions of the cohort [i. e. education, inmate type, gender, etc.]). The association is expressed as a likelihood of an outcome rather than a recording of an outcome. In other words, Odds/Ratio is used as a prediction tool rather than a recording tool.

1. Job retention (or the likelihood of remaining employed) involved more than one external component. As such, logistic regression methodology was used as the predictive model for job retention analysis.
2. Total CTE hours and years of education (defined as “years of education attained before incarceration or attainment of an HSE certificate while incarcerated”) were found to be significant predictors of job retention. Every 100 hours of CTE participation showed a 2% increase in the likelihood of job retention. In addition, each year of education attained increased the likelihood of job retention by about 3.5%. In short, education is predicted to be a significant factor, with the level of education and/or the quantity of exposure showing significant influence.
3. Initial employment wages, generally understood to be the hourly rate of the first job, was found to be highly significant in job retention. Simply put, the higher the initial wage of the first job, the more likely an ex-offender would retain the job. Analysis shows that for each dollar increase in the hourly wage, the likelihood of job retention was positively impacted by 1.4%. For example, an ex-offender whose initial hourly wage was \$10.00 is 2.8% more likely to retain employment than an ex-offender whose initial hourly wage is \$8.00. By extension, the higher the initial wage, the likelihood of remaining employed also increases proportionately.
4. Other significant factors that are not necessarily related to WSD programs were also noted. These included: Total incarcerations, current property offense type and gender of the offender.

Variable	Odds Ratio	p-value
Intercept	2.9175043	0.0000000003582 ***
Sex: Male	1.3595050	0.0000001042005 ***
Sentence Length	0.9999985	0.738153
Total Prison	0.9785252	0.318179
Total State Jail	0.9212972	0.000921 ***
Total SAFF	0.7710816	0.0000000000276 ***
Total ISF	0.9293031	0.018962 *
Fiscal Year: 14	0.9538264	0.325338
Current VPDO: Other	1.0940055	0.102903
Current VPDO: Property	0.762276	0.0000000982355 ***
Current VPDO: Violent	1.0409558	0.460499
ACA Hours	0.9999417	0.218924
CTE Hours	1.0002062	0.016129 *
CIP Hours	1.0003359	0.175701
Changes Hours	0.9999157	0.698442
Years Education	1.0369819	0.004469 **
GED Inside: True	0.9370359	0.149609
First Jobs Wages	1.0135672	0.0000001395671 ***
Lag To Employment	0.9998308	0.415016





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