



JANUARY 2023

ABSTRACT

The Windham School District undergoes a biennial evaluation, in compliance with requirements outlined in the Texas Education Code, Chapter 19, Sec. 19.0041, to assess the effectiveness of district programming. Windham partnered with the University of Kentucky to analyze district programming data reflective of residents who were released from the Texas Department of Criminal Justice (TDCJ) in the 2017-2018 school years.

The research team identified the following summations:

- Those who completed a Windham program were 17.6% less likely to recidivate than their matched samples.
- Those students who completed the Cognitive Intervention Program (CIP) were 39.1% less likely to recidivate than their matched sample.
- Those who completed CTE and a life skills program were 25.8% less likely to recidivate than their matched sample.
- Those who participated in Windham programs secured employment on average 6.5 weeks sooner than their matched sample. This equates to a 20% reduction in time to employment for Windham program participants compared to their matched sample.
- Of those who completed career and technical education programs:
 - 23.1% were less likely to recidivate than their matched sample.
 - 10% were more likely to retain employment than non-WSD participants.
 - 14.2% had a wage increase after one year of employment than non-WSD participants.
 - 78% secured at least one job related to their training.
- Those who completed academic programming improved reading skills by 2.23 grades, math skills by 2.45 grades and overall scores by 2.36 grades.*

The primary conclusions of the research team can be summarized as:

- Increased academic, career and technical and life skills achievement.
- Enhanced job skills.
- Expanded abilities to secure and retain a job upon reentry.

*as measured by the Tests of Adult Basic Education (TABE)®

Part A

Descriptive statistics and correlational analyses of WSD programming and outcome measures were performed in the following areas:

1. institutional disciplinary violations
2. subsequent arrests
3. subsequent confinements
4. the cost of confinement
5. educational achievement
6. high school equivalency examination passage
7. the kind of training services provided
8. the kind of employment the person obtains on release
9. whether the employment was related to training
10. the difference between the amount of the person's earnings on the date employment is obtained following release and the amount of those earnings on the first anniversary of that date
11. the retention factors associated with the employment

Question Responses

1. institutional disciplinary violations

Although institutional disciplinary violations are not directly related to re-entry experiences, the resident disciplinary profile is relevant to the mission of WSD. Disciplinary violations within TDCJ are divided into two primary categories: major disciplinary violations and minor disciplinary violations. The research team determined that the data were too limited to reach any conclusions about causality. Disciplinary violations are relatively rare: 4.3% of the full release cohort (N=124,946) received a major violation within five years of their FY17-18 release and 9.1% received a minor violation. Additionally, the time frame of the study does not allow for comparisons of an individual's propensity to violate institutional rules before and after program

participation. Moreover, it is possible that participation in a WSD program increases the likelihood of disciplinary violations as residents encounter more rules and regulations as a result of the academic setting compared to non-participants. Although program participation and disciplinary violations are related, we cannot establish whether one causes the other because of the limitations mentioned above.

2. subsequent arrests

Overall, the WSD participants were more likely to be rearrested compared to the non-participants, particularly for academic program participants. Although this may seem contrary to expectations, section 1 of the biennial evaluation and report illustrates the educational deficits of TDCJ residents. Although WSD programs clearly improved educational outcomes for participants, as shown in Section 1 and 2 of the report, released residents are still unlikely to have education levels comparable to their non-TDCJ peers. Educational improvement also does not necessarily change the environmental conditions, peer groups, family dynamics, and labor market constraints that released residents must navigate when they leave TDCJ. Many social factors that contribute to criminal behavior initially are still present upon release. Nonetheless, WSD students who completed CTE training programs or the CIP life skills program were less likely to be rearrested within three years of release compared to the matched sample.

3. subsequent confinements (re-incarceration)

The positive effects of WSD programs on recidivism are much more apparent with the confinement data than the rearrest data. Completers of all WSD programs, except academic, were statistically significantly less likely to be reincarcerated within three years of release compared to the matched samples. Additionally, non-completers of CHANGES and CIP programs were less likely to return to TDCJ compared to their matched samples.

4. cost of confinement

The LBB currently calculates the cost of confinement for correctional institutions. The Windham School District cost per day \$9.54 for FY2018 (the cohort on which this report is based) was reported by the LBB in the Uniform Cost Report to the 86th Texas Legislature.

5. educational achievement

The differences between a typical public-school student and the typical WSD student extend beyond the obvious age and setting differences. WSD structures its classes into three basic academic levels, which roughly correlate to public school grade levels: Academic 1 (roughly correlates to public school grade levels 1-5 (grade school)), Academic 2 (roughly correlates to public school grade levels 6-8 (middle school/junior high)); Academic 3 (roughly correlates to public school grade levels 9-12 (high school)). The academic level is reported on grade level and month of the grade level. A student who reflects a score of 8.6 in reading has demonstrated commensurate skills of a typical 8th grade student in his/her 6th month of the eighth-grade year.

The Tests of Adult Basic Education (TABE®) is administered on one of four different levels; each measures ability appropriate skills. The TABE® is widely accepted in adult education settings throughout the nation and has been established as an externally and internally valid test. Therefore, the TABE® yields academic results with a high degree of confidence.

The research team analyzed numerous TABE® results of the cohort. Each student must have taken at least two valid tests in order to measure progress from one test episode to another. These results were broken down to measure initial Reading, Math, Language, and Composite scores in yearly/monthly increments (0.0-0.9, 1.0-1.9, etc.).

On average, students who completed at least two TABE® tests gained about 1.7 grade levels in reading, 2 in math, and 1.8 overall on TABE® scores. However, WSD program participants who completed an academic or CTE program exhibited even greater gains. On average, CTE completers improved reading skills by 1.98 grades, math by 2.42 grades, and overall scores by 2.21 grades. Academic program completers exhibited even higher gains than CTE completers, with 2.23 grades for reading, 2.45 for math, and 2.36 overall.

6. high school equivalency examination passage

WSD requires students to display a proficiency level in all areas of the TABE® for eligibility for HSE testing. Given that many students do not attain the requisite proficiency level, there are many students who do not attain an HSE before release due to length of sentence. Consequently, determination of optimal paths to the HSE is critical to student success.

Of the full release cohort (N=124,946), 40% had already earned an HSE/HSD outside of TDCJ. Of those without an outside HSE/HSD, 33% participated in an academic program through WSD

and 42% of program participants completed their HSE/HSD while enrolled in a WSD academic program.

7. the kind of training services provided

The CTE training programs are designed to offer basic occupational skills in a multitude of areas, often known as career pathways or clusters. WSD currently offers training in approximately 40 CTE programs. Many students complete CTE programming in more than one course.

The number of courses offered has changed throughout the years, as well as the nature of the CTE training programs. The average number of participation hours differed greatly from course to course.

WSD CTE courses for this release cohort included the following career pathways or clusters:

- Agriculture, Food & Natural Resources
- Architecture & Construction
- Arts, A/V Technology & Communications
- Hospitality & Tourism
- Information Technology
- Manufacturing
- Science, Technology, Engineering & Mathematics
- Transportation, Distribution & Logistics
- Work & Career Readiness

Many CTE programs also offer additional certification known as industry-based certification. This industry-based certification requires knowledge and skills consistent with the workforce. By offering these industry-based certifications, the student is better able to compete for jobs post-release.

8 the kind of employment the person obtains on release

The research team identified 20 types of employment obtained by formerly incarcerated individuals upon their release. The data was based on the North American Industry Classification System (NAICS) codes. The employment categories and the number of all individuals who were employed in these categories during the three-year follow-up period can be seen below. (Note: Individuals can hold more than one job. In those instances, the individual is counted in every applicable category).

Job Description	Any job post-release
Agriculture	27,060
Accommodation and food services	38,944
Administrative support and waste management	1,563
Arts, entertainment, and recreation	1,346
Construction	15,708
Educational services	190
Finance and insurance	895
Health care and social assistance	4,834
Information	458
Management of companies and enterprises	324
Manufacturing	17,228
Mining, quarrying, and oil and gas extraction	3,821
Other services (except public administration)	6,247
Professional, scientific, and technical services	3,594

Public administration	423
Real estate and rental and leasing	1,927
Retail trade	11,958
Transportation and warehousing	5,677
Utilities	138
Wholesale trade	6,587

9. employment related to training

To extend the post-release employment discussion, the next logical area looks at whether the released individual has obtained employment related to his/her training experience while incarcerated. By doing so, the relevance and effectiveness of correctional training programs (i. e. WSD CTE training programs) can be better evaluated. This type of data is valuable not only to measure past post-release outcomes, but can also serve as valuable predictive data, thereby impacting future programming options.

The research team examined former WSD CTE students* who were employed within a year of his/her release. These individuals were then crossed-matched with data from the Texas Workforce Commission (TWC). The two data sources (WSD and TWC) were then paired using NAICS codes of WSD CTE courses and NAICS codes of employers. The NAICS codes are used, essentially, as the common denominator between WSD CTE courses and post-release employers. 78% of CTE Completers and 80% of CTE non-completers secured at least one job related to their training. Further, 79% of industry-based certificate earners secured at least one job related to their industry-based certificate. Continuing the trend, 81% of students who completed both CTE and an academic program secured at least one job related to their training, and 80% of those who completed both CTE and life skills programs held at least one job related to their CTE training.

*participation is based on a minimum of 60 hours of instruction in a WSD CTE course.

10. the difference between the amount of the person's earnings on the date employment is obtained following release and the amount of those earnings on the first anniversary of that date

Wage data were collected by the Texas Workforce Commission (TWC) from the Unemployment Insurance Database and other government sources. Data were recorded as quarterly earnings for each job held by each employed former resident. The average quarterly wages for the first quarter of employment after release was \$2,058 for all employed former residents. It is not possible to determine how many weeks within the first quarter that former residents worked, so this average reflects a wide range of time worked, number of jobs per person, and wages per job. To isolate the effects of WSD programming on earnings, WSD students were compared to matched samples on three outcomes: average wages for their first quarter of employment, average quarterly wages for their one-year employment anniversary, and average change in earnings between those two time periods. The main findings of this wage analysis, is that WSD program completers were significantly more likely to earn higher average wages during their first quarter of employment after release and during the fourth quarter (one year) after they secured employment. Additionally, the average increase in wages during the first year of employment after release was significantly higher for WSD program completers than their matched samples. Notably, students who completed CTE or life skills courses earned more during their first quarter of employment on average than their matched samples. Students who completed a WSD program were significantly more likely to earn higher one-year quarterly wages than their matched samples, with the exception

of academic completers. CTE completers had considerably higher average wages after one year of employment.

11. the retention factors associated with the employment

Job retention is defined as holding employment for any four straight quarters during the 3-year follow up period. The employment does not have to be with the same employer. For example, an individual might have four different jobs in four different quarters, but if those quarters occur sequentially, the individual is considered to have retained employment for one year. 68% of the WSD program completers successfully secured employment during the three-year follow up period. Furthermore, 66% of the WSD program completers maintained employment for four consecutive quarters during the three years post release. Those holding a high school diploma or equivalent also retained employment at higher levels than those who did not hold these credentials.

Part B - Program Changes

This program evaluation indicates that Windham School District (WSD) is meeting its statutory goals to:

- 1) Reduce Recidivism;
- 2) Reduce the cost of confinement;
- 3) Increase the success of former inmates in obtaining and maintaining employment; and
- 4) Provide an incentive to inmates to behave in positive ways during confinement or imprisonment.

The research team's findings indicate that WSD programming has a positive relationship to many post-release experiences.

- Re-incarceration data exhibited a positive relationship for students who completed WSD programs.
- Those who completed a WSD program were 17.6% less likely to recidivate than their matched samples. Those who completed the career and technical education (CTE) program were 23.1% less likely to recidivate than their matched sample.
- Program completion data reflects a positive relationship to program and outcome measures for the report.
- Those who participated in WSD programs secured employment on average 6.5 weeks sooner than their matched sample. This equates to a 20% reduction in time to employment for WSD program participants compared to their matched sample.
- 78% of the career and technical education (CTE) students who were employed were employed in jobs related to their CTE training.
- Academic progress for WSD students reflected substantial growth in all tested areas. Those who completed academic programming improved reading skills by 2.23 grades, math skills by 2.45 grades, and overall scores by 2.36 grades.

WSD evaluated its programs, and the following changes have been made:

- WSD revised its regional principal model from 10 to 6 regions: 51 principals support 85 campuses and manage day-to-day operations. Each region has a regional principal to provide technical assistance, support and guidance to better serve students and is responsible for community outreach, staff recruitment and employment connections.
- All WSD educators, administrative assistants, principals, and student advisors participated in three regional training sessions hosted by the Professional Development department in March and April 2022 in Huntsville, San Antonio, and Lubbock. Professional development topics included: instructional best practices for academic, life skills, and CTE instructors, technology

use in the classroom, campus accountability, assessment proctoring, diversity in the workplace and conflict resolution.

- WSD continued conducting motivational interviewing training that provided new principals, student advisors, and diagnosticians the tools to work with resistant learners. This strategy has aided in the recruitment and retention of students.
- WSD hosted the annual Correctional Education Association's (CEA) International Conference. Approximately 200 WSD educators and administrators attended the conference with education directors and vendors from across the country to discuss innovative ideas and best practices in correctional education.
- WSD CTE conferences in 2021 and 2022 focused on career pathways and best practices in CTE instruction. All CTE teachers, principals, and student advisors were in attendance.
- All academic teachers were provided laptops and training to enhance their access to technology in the classroom to better educate students.
- WSD converted from paper-based to computer-based educational assessments to ensure students obtain the needed digital literacy skills to succeed upon release.
- WSD piloted student technology in the classroom to ensure a smooth transition upon reentry that included: virtual reality headsets that simulate real-life activities, augmented reality laptops with a strong curriculum focus in science, technology, engineering, and mathematics (STEM), welding simulators, and trucking driving simulators.
- WSD purchased and utilized all-in-one video-enabled computer monitors for the Family Literacy program to enhance the virtual parent-teacher conferences and reading activities for incarcerated parents of school-age children.
- WSD established two standard high school diploma programs, Matthew Gains High School, at the Ferguson Campus for men, and the Jovita Gonzalez de Mireles High School, at the Woodman State Jail for women. This program establishes a method for eligible men and women to earn a high school diploma and industry-based certification(s) in an environment that meets the needs of each student.
- WSD launched the Finding Understanding Through Using Resources in Education (F.U.T.U.R.E.) program that provides educational services to students in restrictive housing. Students in this program have the opportunity to earn a high school equivalency (HSE) and prepare themselves for future opportunities.
- WSD received Governor's Emergency Education Relief (GEER) grant funds to address COVID-19 related learning loss experienced during distance learning protocols. WSD used the funds to hire enrichment teachers and purchase handheld internet-free learning devices for student use.
- WSD received a grant from the Texas Workforce Commission (TWC) to implement and expand Integrated Education and Training (IET). The use of IET engages adult learners through contextualized literacy instruction concurrently with workforce activities in preparation for specific occupations.
- An ongoing comprehensive review of CTE course curriculum resulted in expanded opportunities for students. New courses include Cosmetology, RV Service Technician, Automotive and Diesel

Fundamentals, Business Information Management, Construction Technology, Introduction to Construction Careers, Introduction to Culinary Arts, and Medical Office Support Specialist.

- WSD expanded apprenticeship programs to include 26 occupations and over 500 registered apprentices.
- WSD purchased and introduced new academic instructional software and curriculum to enhance alignment with current adult education standards.
- WSD introduced a Civics curriculum into academic classes to educate and promote civic responsibility and understanding.
- WSD awarded a contract to update module 4, Drug Education, within the Changing Habits and Achieving New Goals to Empower Success (CHANGES) program to update terminology and develop current content related to substance use.
- WSD awarded a contract to update Life Skills classes' (Cognitive Intervention Program (CIP) and CHANGES) supplemental instructional videos with current content.
- WSD is actively building partnerships and career connections with industry professionals to create successful employment opportunities for students and graduates.
- WSD continues to partner with the Texas Department of Criminal Justice (TDCJ) in providing Skills Demonstrations and Career Expos. These expos allow students to demonstrate to employers the technical skills they have acquired in WSD CTE programs. These expos also include the opportunity for current and former students to interview with potential employers.
- WSD partnered with the Department of Family Protective Services (DFPS) to facilitate DFPS case management referrals of TDCJ residents with open Child Protective Services (CPS) cases to complete the WSD parenting program.
- Texas Department of Licensing and Regulation (TDLR) provided training to WSD's student advisors on the agency's conviction background screening process to ensure students enrolled in a specific career and technical education program would be eligible to obtain occupational licenses in their trained field upon reentry into their communities.
- TDCJ was awarded the Hospitality Opportunities for People (Re)Entering Society (HOPES) grant. WSD partnered with the TDCJ Reentry Division to assist with locating and scheduling meetings for students that are within six months of release. The students are required to complete work readiness and industry-specific training.
- WSD continues to establish partnerships centered around collaboration, progress, and student accomplishments, including the Texas Workforce Commission, Workforce Solutions, TDLR, DFPS, Texas Association of Business, Bulkley Trucking, WM (formerly Waste Management), and Aquaponics Association.

The *WSD Biennial Evaluation and Report* can be viewed at www.wsdtx.org.

University of Kentucky Sociology Evaluation Research Team

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Executive Summary

Windham School District
Biennial Report 2023

The goal of educational programs for incarcerated individuals is to improve their life chances upon reentry, reducing the likelihood of recidivism. This benefits both the individual and society, alleviating the social and economic costs associated with crime, and improving the workforce. As the educational provider for residents of the Texas Department of Criminal Justice (TDCJ), Windham School District (WSD) is required to complete a biennial evaluation and report on the effectiveness of its programs.

Based on WSD educational data for all Texas Department of Criminal Justice (TDCJ) residents released during the 2017-2018 school years (N = 124,946), a research team from the University of Kentucky led by Dr. Tony Love performed a comprehensive analysis of WSD's educational programs. These programs included academic programs (e.g., high school diploma, high school equivalency), career and technical education (CTE) programs, and life skills programs (Cognitive Intervention Program (CIP) and Changing Habits and Achieving New Goals to Empower Success (CHANGES)).

Using descriptive and inferential statistics, the team carefully evaluated the impact of these programs on recently released residents' educational achievement and attainment, institutional disciplinary violations, recidivism, and employment and earnings. The team organized the data by WSD program participation and completion, as well as other factors such as residents' race, gender, age, and offense type (see Appendix B).

Based on these analyses, the research team found that WSD programs improved post-release outcomes of former students in several ways:

- WSD programs improved participants' academic and technical skills. On average, academic program completers improved reading skills by 2.23 grades, math by 2.45 grades, and overall composite score by 2.36 grades.
- WSD participants secured employment quickly after release. WSD program participants secured employment on average 6 weeks sooner than non-participants.
- WSD participants were more likely to desist from crime. WSD completers were significantly less likely to recidivate compared to non-participants.

In addition to these benefits, the analysis revealed other positive impacts of WSD programs. The research team thus concluded that WSD is fulfilling its goal of providing valuable educational experiences for participants. WSD's educational programs have clear, tangible impacts on many outcomes, including obtaining gainful employment and avoiding reincarceration.

The following report elaborates on these and other findings. We represent the results in the body of this report using basic statistics, tables, and charts for clarity. Technical details about the types of analyses performed are located in the Appendices.



“Growing international evidence suggests that policies designed to increase educational attainment can significantly reduce crime rates.”
(Hjalmarsson and Lochner, 2012)

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1. Academic Achievements

WSD offers a broad range of academic programs, including programs for high school equivalency or diploma (HSE/HSD), and English as a Second Language (ESL). The academic effectiveness of educational programs at WSD was assessed using several measures of achievement and attainment. The research team also evaluated the participation and completion rates of several specific educational programs offered by WSD.

- 01 Academic program completers improved composite TABE® scores by 2.36 grades on average.
- 02 Completers of both an academic and CTE program improved composite TABE® scores by 2.54 grades on average.
- 03 42% of academic participants completed an HSE/HSD while incarcerated.



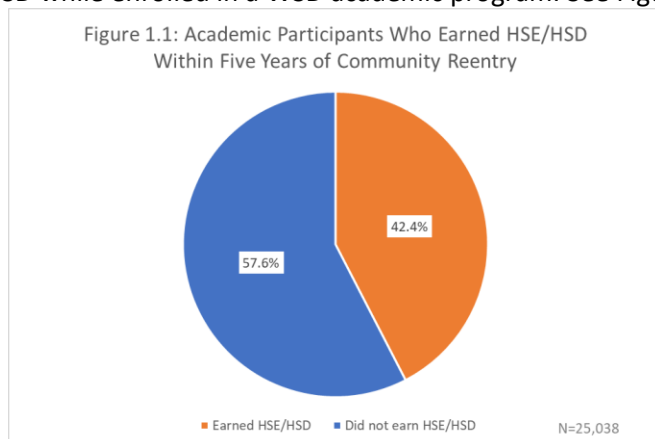
Note: Throughout this report “N” represents the number of former residents included in the analysis displayed. See Appendix A: Definitions for more information.

Educational Background of Residents

Research shows that, nationwide, a lack of educational attainment is highly correlated with incarceration (Western 2006, National Research Council 2014, Duke 2018, Lochner 2020), and this pattern is no different for residents in this sample. In the general U.S. population, close to 50% of adults aged 20-29 hold an Associate’s degree or higher, and over 94% earned a high school diploma or equivalent or higher (National Center for Education Statistics 2022). Upon incarceration, less than 1% of the release cohort for this study had a college degree, most of which were Associate’s degrees. Even high school diplomas or the equivalent were much lower than the national average. The average years of education that residents reported receiving was 10 prior to incarceration, the average Tests of Adult Basic Education (TABE®) composite score upon arrival at TDCJ was a grade equivalency of 7th grade, and only 40% had earned an HSE/HSD outside of TDCJ. This educational shortfall among residents entering TDCJ is important to note because, as demonstrated below, residents in WSD programs showed strong academic growth and completion, despite entering programs with significant academic limitations.

High School Equivalency (HSE) and High School Diploma (HSD)

Of the full release cohort (N=124,946), 40% had already earned an HSE/HSD outside of TDCJ. Of those without an outside HSE/HSD, 33% participated in an academic program through WSD and 42% of program participants completed their HSE/HSD while enrolled in a WSD academic program. See Figure 1.1.



Reasons that a student might not complete their HSE/HSD include the sentence length did not allow enough time for the student to complete the process, the student experienced a change in custody level, or the student began a parole voted program.

TABE® Scores

Residents' academic skill levels were measured using the Tests of Adult Basic Education (TABE®). The TABE® is a valid, reliable, and widely used assessment of the skills and knowledge of adult learners. Comparison of scores on the TABE® examination revealed improvement of participants' academic skills over time. On average, residents who completed at least one TABE® test exhibited 8th grade reading skills, 7th grade math skills, and 7th grade composite skills upon arrival at TDCJ for their current sentence (Figure 1.2). On average, students who completed at least two TABE® tests gained about 1.7 grade levels in reading, 2 in math, and 1.8 overall on TABE® scores. However, WSD program participants who completed an academic or CTE program exhibited even greater gains (Figure 1.3).

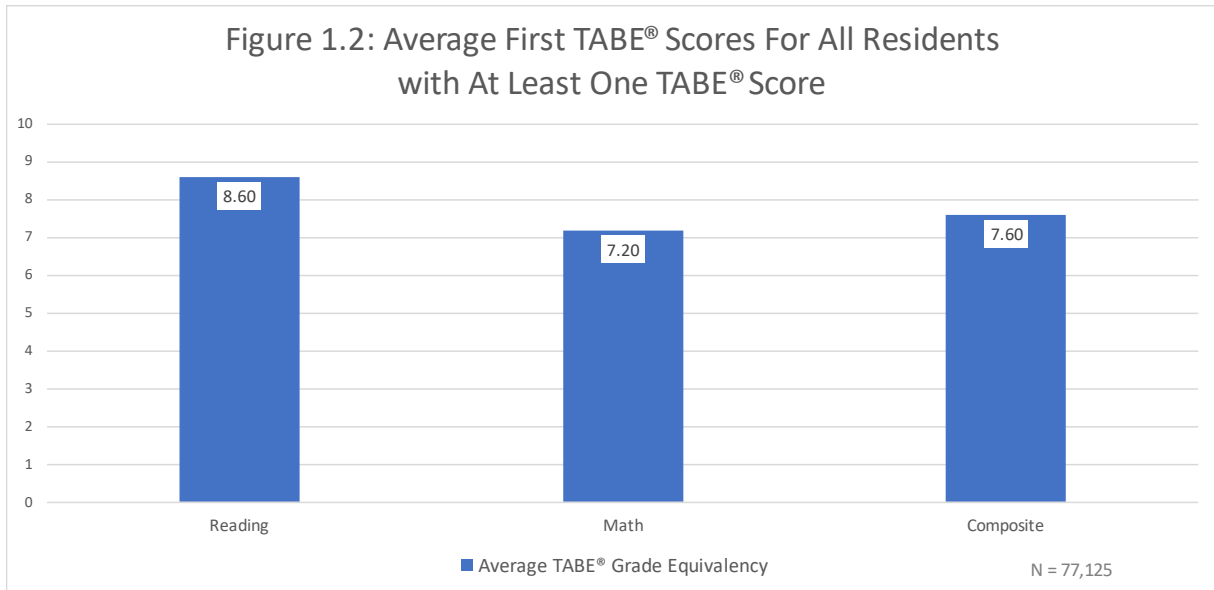
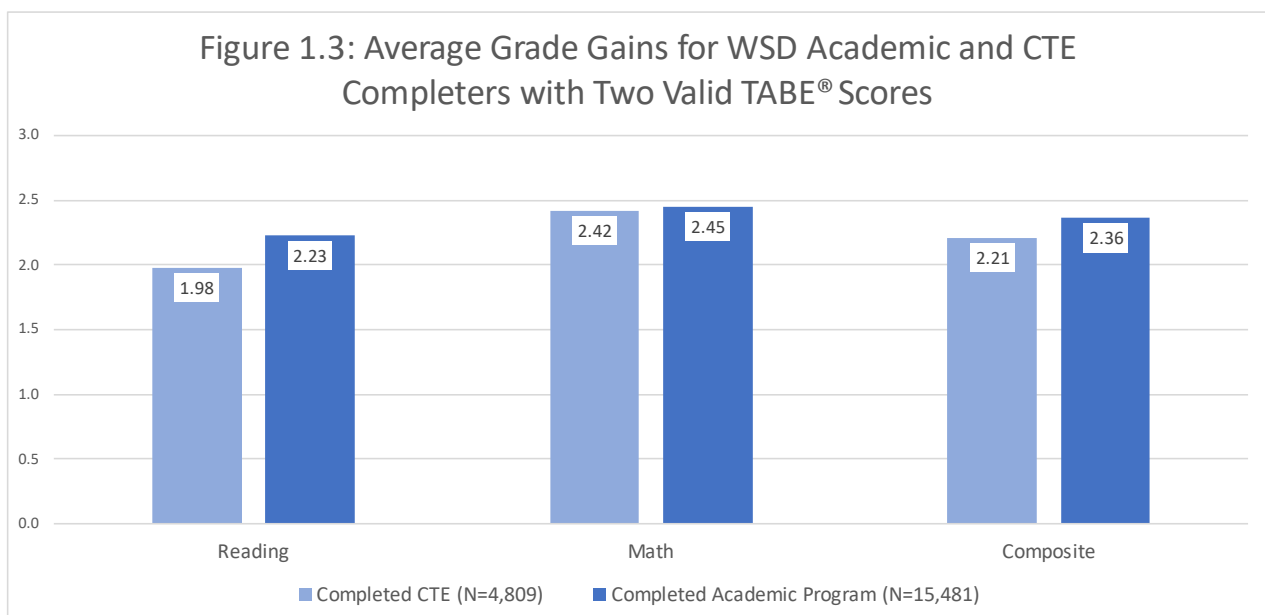


Figure 1.3 displays the fact that TABE® scores in math and reading showed noteworthy gains for WSD academic and CTE program completers, which are noticeably higher than the gains for all residents. On average, CTE completers improved reading skills by 1.98 grades, math by 2.42 grades, and overall scores by 2.21 grades. Academic program completers exhibited even higher gains than CTE completers, with 2.23 grades for reading, 2.45 for math, and 2.36 overall.



WSD Academic Program Participation and Completion

Students participated in many academic course offerings provided by WSD, including courses for high school equivalency or diploma, and English as a Second Language. For the purpose of this evaluation, program participation was defined as 30 or more hours in WSD academic courses. Program completion criteria varied depending on the type of academic program.

Of all WSD program participants (N=57,099), 34% were enrolled in at least 30 hours of an academic course (N=19,490). Almost 75% of all academic participants completed at least one academic achievement.

Of the students who participated in a WSD academic program, nearly 42% earned a high school equivalency or diploma and almost 40% gained at least one grade on the TABE® test. Table 1.1 shows the percentage of academic program participants who completed different types of academic achievements.

Table 1.1 Completion Rates for WSD Academic Program Participants

Subgroup	Percent
Earned HSE/HSD	41.95%
TABE® grade gains	39.53%
Improved literacy levels	21.56%
Met THEA [†] college-ready criteria	13.29%

N=25,686
[†]THEA = Texas Higher Education Assessment



2. Career and Technical Education (CTE)

In addition to academic courses, WSD also offers a wide variety of career and technical education courses. The most attended area of training for students was construction.

01

33% of WSD program participants completed at least 60 hours of CTE training.

02

93% of students who participated in CTE training completed their program.

03

51% of CTE participants who completed an industry-based certification exam earned more than one certification.

For the purpose of this evaluation, program participation was defined as 60 or more hours in WSD CTE courses. There were two types of program completion criteria. First, students earned a CTE certificate from WSD for completing the specified requirements of a CTE course. Second, students could earn an industry-based certification for a particular skill or subject area.

About 33% of all WSD participants (N=57,099) were CTE participants. Completion rates for CTE participants were especially high (Table 2.1), with more than 93% of participants completing WSD program requirements and over 87% earning an industry-based certification. Additionally, more than half of those students who earned industry-based certifications earned more than one (Table 2.2).

Table 2.1: Percentage of WSD CTE Participants Who Completed Training

Subgroup	Percent
CTE participants who completed CTE training	93.27%
CTE participants who earned industry-based certification(s)	87.57%
N=19,096	

Table 2.2: Number of Industry-Based Certificates Earned by CTE Completers

Number of Certificates	Percentage
1	49.24%
2	15.69%
3	16.97%
4	11.52%
5	3.23%
6	1.25%
7 or more	2.1%
N=16,723	

Program participants engaged in a variety of CTE courses. The most attended courses taken by students included construction, electrical, food safety, heating, ventilation, and air conditioning (HVAC), and basic computing. A complete list of all CTE courses and industry-based certificates completed by the 2017-18 release cohort can be found in Appendix E and F, respectively.

3. Life Skills

Students participated in specific curricula to enhance life skills. Life skills programs provide knowledge and skills to help participants moderate reactions to stress and build healthy social relationships. Such programs have been linked to improved employment and behavioral outcomes post-release.

01

62% of all WSD program participants completed at least 30 hours of a life skills program.

02

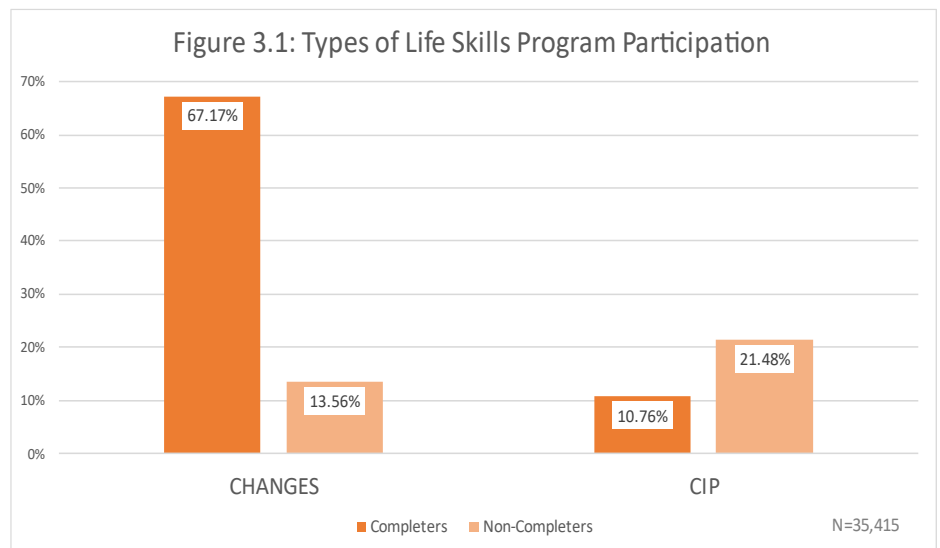
52% of all life skills students participated in at least 30 hours of CIP programming.

03

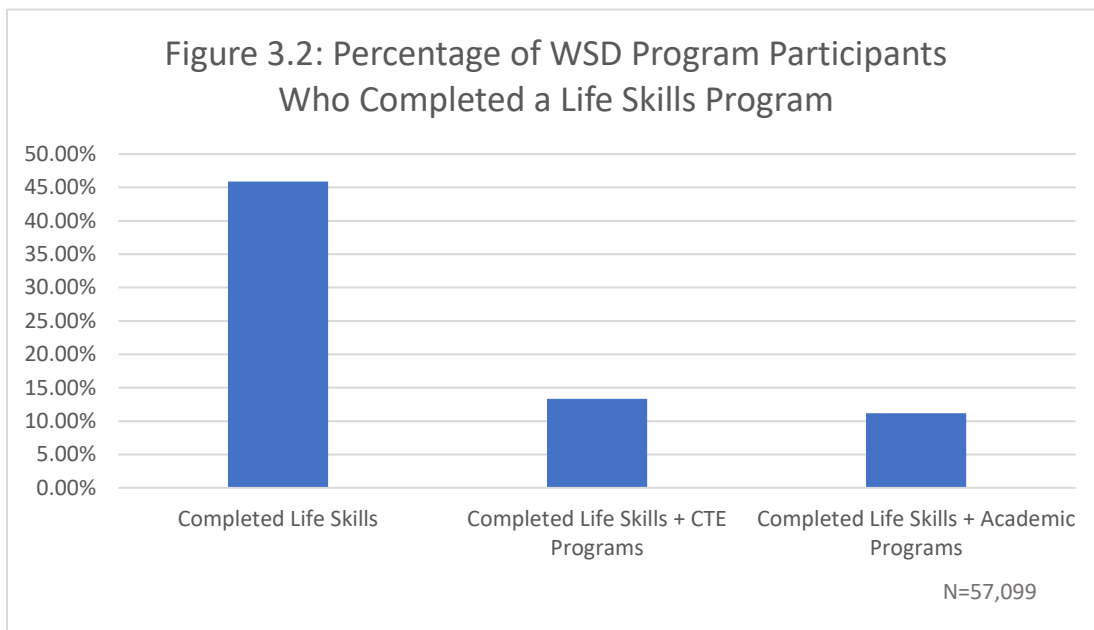
67% of all life skills students completed the CHANGES program.

Two life skills programs were evaluated in this report: (1) Changing Habits and Achieving New Goals to Empower Success (CHANGES) is available to residents who are expected to be released within two years. It is a 180 hour life skills program designed to prepare residents for release; (2) Cognitive Intervention Program (CIP) is a 150 hour program that teaches students to meet their needs without trespassing on the rights of others. It is a communication-based, interactive program that supports the development of healthy relationships.

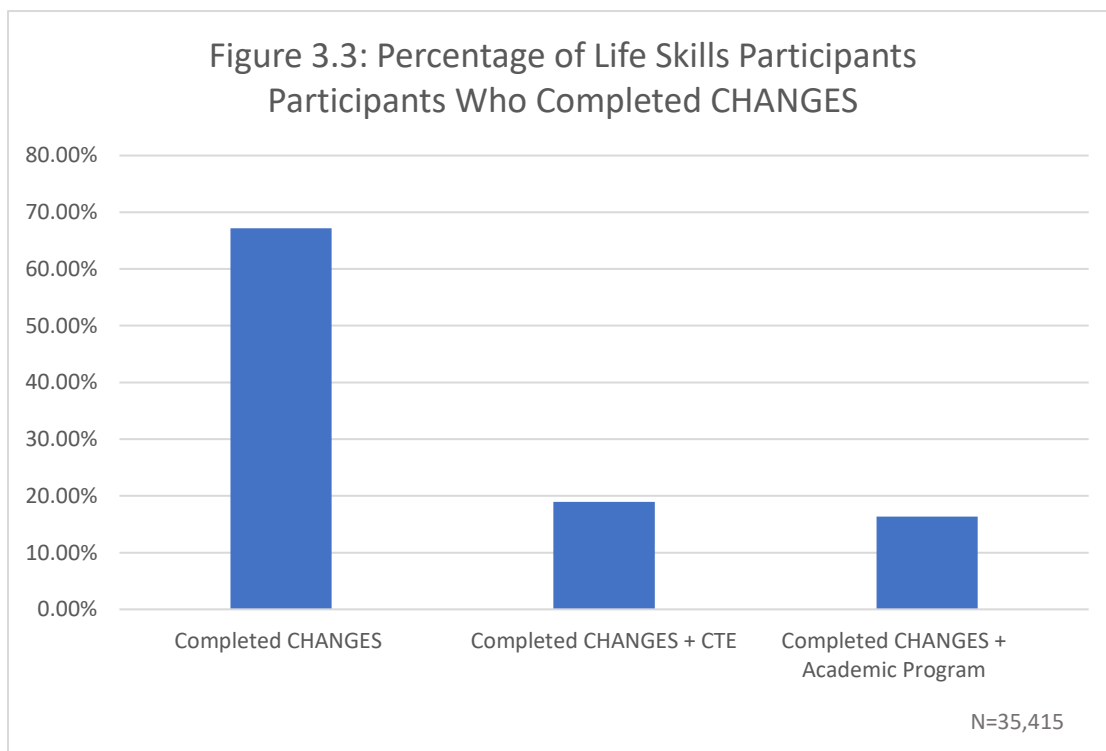
For the purpose of this evaluation, program participation was defined as 30 or more hours in a WSD life skills program. Program completion criteria varied depending on the type of life skills program. Figure 3.1 shows the percentage of all life skills students who completed CHANGES or CIP programs. Of the 35,415 students who participated in any life skills program, 81% participated in the CHANGES program, and 32% participated in CIP. These percentages sum to greater than 100%, because some students participated in both programs. Of all life skills students, 67% completed CHANGES and 11% completed CIP.



Of all WSD participants (N=57,099), 62% were life skills participants and 46% completed a life skills program (Figure 3.2). 13% of participants completed a life skills program and a CTE program, and 11% completed a life skills program and an academic program.



More than 67% of the life skills participants completed the CHANGES program (Figure 3.3). Additionally, about 19% of CHANGES completers also completed a CTE program, and 16% also completed an academic program.



4. Behavioral Outcomes

According to past research, participation in educational programs should reduce the likelihood of deviant and criminal activity (National Research Council 2014). For this report, the research team analyzed whether or not program participation and completion decreased the likelihood of disciplinary actions within TDCJ, rearrest after release in 2017-18, or return to incarceration after release in 2017-18.

01

CTE and CIP completers were less likely to be rearrested compared to their matched samples.

02

CTE, CHANGES, and CIP program completers were less likely to return to TDCJ than their matched samples.

03

Life skills participants were less likely to return to TDCJ than their matched samples, regardless of program completion.

Propensity score matching was used to systematically compare WSD participants and completers with residents who did not participate in the particular WSD program, but who were similar to participants and completers in other respects, such as age or sentence length, thereby isolating the effect of WSD programs on the outcome (see Appendix C for more information on propensity score matching). The analysis revealed that WSD programs deterred return to TDCJ confinement, although some programs showed stronger preventative effects than others. In particular, CTE and CIP completers had the lowest rates of recidivism.

Institutional Disciplinary Violations

While it may be reasonable to assume that WSD program participants would have fewer disciplinary violations than non-participants due to a desire to continue in the program or better management of problem behaviors, this study did not find that to be the case. The research team determined that the data were too limited to reach any conclusions about causality. Disciplinary violations are relatively rare: 4.3% of the full release cohort (N=124,946) received a major violation within five years of their FY17-18 release and 9.1% received a minor violation. Additionally, the time frame of the study does not allow for comparisons of an individual's propensity to violate institutional rules before and after program participation. Moreover, it is possible that participation in a WSD program increases the risk of disciplinary violations as residents encounter more rules and regulations as a result of the academic setting compared to non-participants. Although program participation and disciplinary violations are related, we cannot establish whether one causes the other because of the limitations mentioned above. The full results for this behavioral outcome can be found in Appendix D.



Rearrest

Data from the Texas Department of Public Safety were used to determine whether or not a resident was rearrested within three years after their 2017-18 release date. Slightly more than half of the release cohort (N=64,622) was rearrested within this time period. It is not uncommon for the formerly incarcerated to be rearrested for suspicion of criminal activity or for violations of conditions of release (Kirk and Wakefield 2018), but it should be noted that an arrest is not proof of criminal behavior.

Table 4.1 shows the percentage of WSD program completers and non-completers who were rearrested within three years of release and compares those percentages with matched samples of residents from the release cohort who did not participate in the respective program but who were similar to WSD participants in other ways (see Appendix C for a full list of matching criteria).

Overall, the WSD participants were *more likely* to be rearrested compared to the non-participants, particularly for academic program participants. Although this may seem contrary to expectations, section 1 of this report illustrated the educational deficits of TDCJ residents. Although WSD programs clearly improved educational outcomes for participants, as shown in Section 1 and 2 of this report, released residents are still unlikely to have education levels comparable to their non-TDCJ peers. Educational improvement also does not necessarily change the environmental conditions, peer groups, family dynamics, and labor market constraints that released residents must navigate when they leave TDCJ. Many social factors that contribute to criminal behavior initially are still present upon release.

Nonetheless, WSD students who completed CTE training programs or the CIP life skills program were *less likely* to be rearrested within three years of release compared to the matched sample (Table 4.1).



Table 4.1 WSD Participants Rearrested Within Three Years of SY17-18 Release

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	52.73%*** (N=47,246)	51.30%*** (N=47,246)	58.04%*** (N=9,189)	55.48%*** (N=9,189)
Academic programs	56.88%*** (N=19,177)	54.38%*** (N=19,177)	62.0%*** (N=6,477)	57.48%*** (N=6,477)
CTE program	49.56%* (N=18,580)	50.88%* (N=18,580)	57.08% (N=487)	52.77% (N=487)
CHANGES program	52.94% (N=23,760)	53.54% (N=23,760)	55.19%** (N=18,991)	53.73%** (N=18,991)
CIP program	47.52%*** (N=3,805)	52.38%*** (N=3,805)	50.2% (N=10,211)	49.88% (N=10,211)
Academic + CTE program	53.37% (N=4,941)	52.92% (N=4,941)		
Academic + life skills program	58.8% (N=6,364)	56.63% (N=6,364)		
CTE + life skills program	51.15% (N=7,594)	52.34% (N=7,594)		

*p < 0.05; **p < 0.01; ***p < 0.001

See Appendix C for a brief discussion of statistical significance.

Return to Texas Department of Criminal Justice

Data from the Texas Department of Public Safety were used to determine whether or not a former resident returned to TDCJ confinement within three years after their 2017-18 release date. About 24% of the release cohort (N=124,946) recidivated within this time period.

Table 4.2 shows the percentage of WSD program completers and non-completers who returned to TDCJ within three years of release and compares those percentages with a matched sample of other residents from the release cohort who did not participate in the respective program.

The positive effects of WSD programs on recidivism are much more apparent with the confinement data in Table 4.2 than the rearrest data from Table 4.1. Completers of all WSD programs, except academic, were statistically significantly less likely to be reincarcerated within three years of release compared to the matched samples. Additionally, non-completers of CHANGES and CIP programs were less likely to return to TDCJ compared to their matched samples.

Table 4.2: WSD Participants Returned to TDCJ Within Three Years of FY17-18 Release

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	23.34%*** (N=47,246)	26.31%*** (N=47,246)	27.89% (N=9,189)	26.86% (N=9,189)
Academic programs	26.19% (N=19,177)	26.54% (N=19,177)	30.43%** (N=6,477)	28.22%** (N=6,477)
CTE program	20.91%*** (N=18,580)	25.73%*** (N=18,580)	24.64% (N=487)	26.49% (N=487)
CHANGES program	23.05%*** (N=23,760)	24.64%*** (N=23,760)	23.78%** (N=18,991)	25.13%** (N=18,991)
CIP program	17.50%*** (N=3,805)	24.34%*** (N=3,805)	21.22%*** (N=10,211)	23.89%*** (N=10,211)
Academic + CTE program	22.95%* (N=4,941)	24.63%* (N=4,941)		
Academic + life skills program	24.39%*** (N=6,364)	27.23%*** (N=6,364)		
CTE + life skills program	20.61%*** (N=7,594)	25.92%*** (N=7,594)		

*p < 0.05; **p < 0.01; ***p < 0.001

See Appendix C for a brief discussion of statistical significance.

5. Employment Outcomes

Criminal justice research shows that employment is a key contributor to reduced recidivism. More specifically, recidivism is most likely reduced when people with incarceration histories secure employment soon after reentry into the community, and the higher the wage, the lower the likelihood of recidivism. (Visher, et al. 2008, Tripodi, et al. 2010, Berg and Huebner 2011, Bunting, et al. 2019, Kolbeck, et al. 2022).

01 WSD program completers secured employment sooner than the matched sample of non-completers.

02 78% of all CTE participants secured at least one job related to their training after release.

03 68% of all WSD program completers retained a job for four consecutive quarters during the three-year follow up period.

Participation in educational programs should enhance opportunities for employment. The research team assessed the employment success of the release cohort on time to first job, wages after one quarter, wages after one year, and the difference in earning from the first quarter of employment to one year after employment was obtained. As with the behavioral outcomes from Section 4, propensity score matching was used to systematically compare WSD participants with residents who did not participate in WSD programs (see Appendix C), thereby isolating the effect of WSD programs. The results revealed a strong, positive impact of WSD programs on residents' ability to secure and maintain employment. Importantly, those who completed WSD programs as opposed to those who participated but did not complete, were most likely to benefit in employment outcomes.

Employment and wage information was obtained by WSD from the Texas Workforce Commission (TWC), which gathers data from the Unemployment Insurance Data Base (UIDB) and other government sources, such as the Bureau of Labor Statistics data on employment and unemployment and the U.S. Department of Treasury data on state unemployment insurance trust fund activities. The data are maintained by the Division of Actuarial Services, Office of Income Support, U.S. Department of Labor.

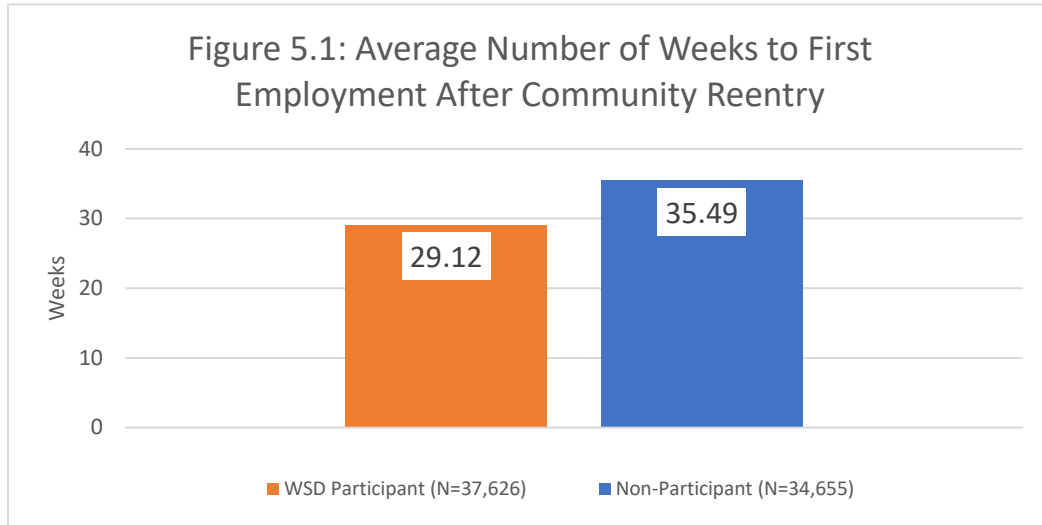
The employment data included quarterly data on earnings and industry employment codes from the North American Industry Classification System (NAICS). Employment data were collected from the third quarter of 2016 through the third quarter of 2021. Fifty-eight percent of all released residents had some wage earnings reported by the Texas Workforce Commission. Former residents could have multiple sources of employment earnings for any quarter in which they were released from TDCJ. TWC wage data do not typically include earnings from contract labor or self-employment.



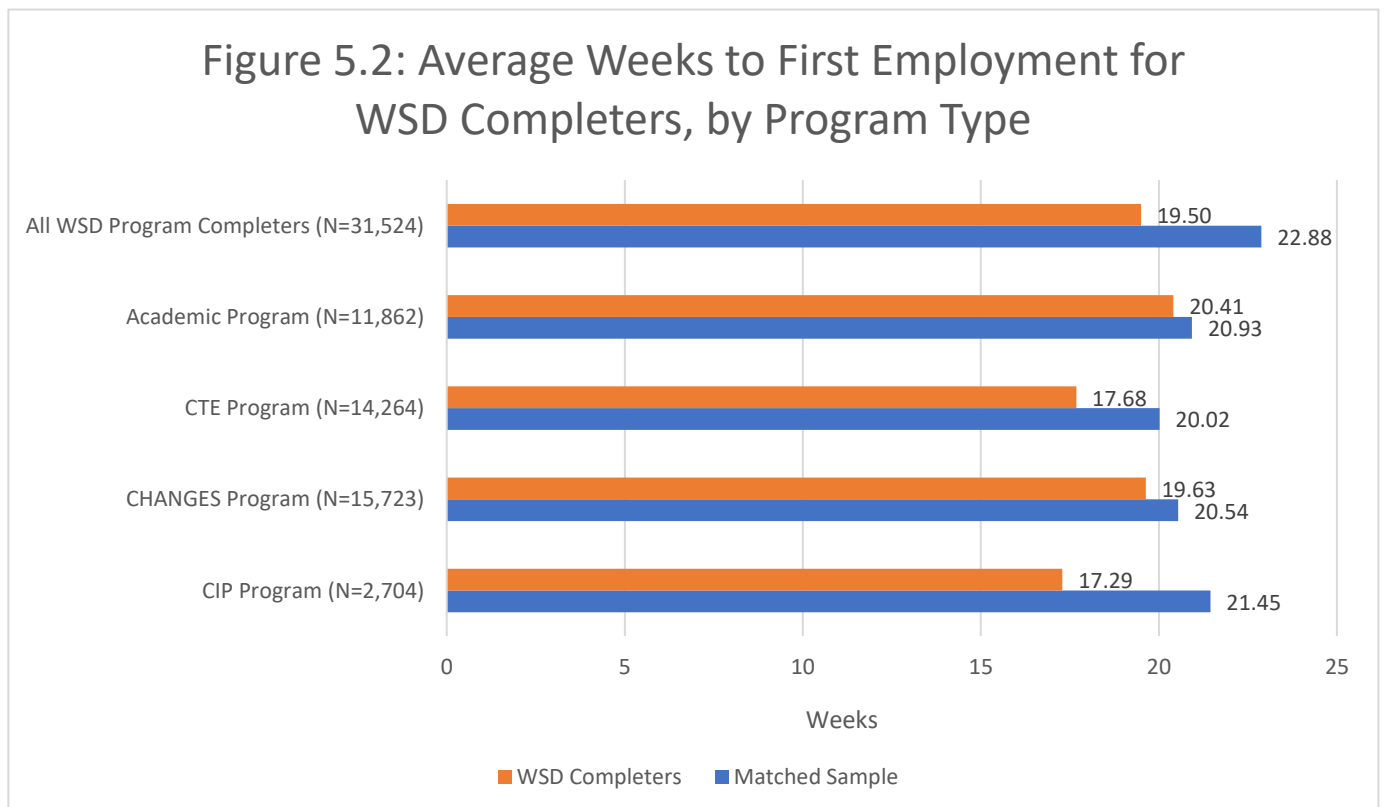
Time to Employment

The TWC employment and wages data are only available by quarters, which the research team converted to weeks for this report. One quarter is equal to thirteen weeks.

All WSD program completers secured employment earlier than their matched sample. On average, all released residents who had wage data from TWC secured employment within 2.5 quarters (32.5 weeks) of release from TDCJ. However, WSD program participants secured employment, on average, 6.5 weeks sooner than the matched sample. This equates to a 20% reduction in time to employment for WSD program participants when compared to the matched sample (Figure 5.1). CTE and CIP program completers had the shortest time to employment.



In general, WSD participants who did not complete their programs did not have significantly shorter time to first employment than their matched sample. As seen in Figure 5.2, students who completed any WSD program secured employment more quickly than those who did not participate in these programs.



Employment Type

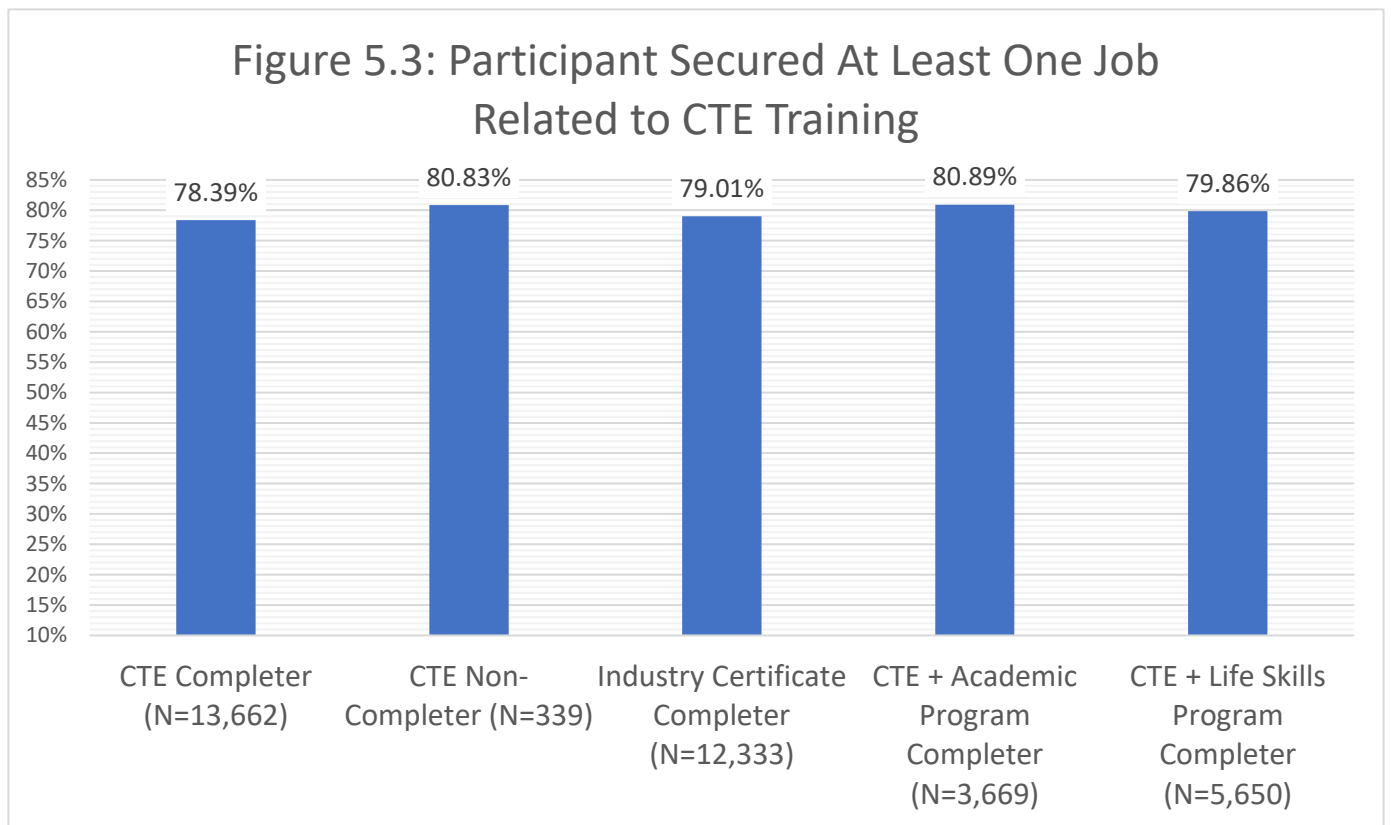
Table 5.1 shows the number of all released residents whose first job was in each specified industry as well as the number of released residents who held any job during the three-year follow-up period that matched the specified industry. (Note: Individuals can hold more than one job. In those instances, the individual is counted in every applicable category).

Table 5.1: Employment Industries Post-TDCJ Release

Name	First job(s) post-release	Any job post-release
Agriculture	754	27,060
Accommodation and food services	17,494	38,944
Administrative support and waste management	25,638	1,563
Arts, entertainment, and recreation	493	1,346
Construction	8,052	15,708
Educational services	73	190
Finance and insurance	433	895
Health care and social assistance	2,275	4,834
Information	219	458
Management of companies and enterprises	96	324
Manufacturing	7,734	17,228
Mining, quarrying, or oil and gas extraction	1,761	3,821
Other services (except public admin)	2,964	6,247
Professional, scientific, and technical services	1,128	3,594
Public administration	2,964	423
Real estate and rental and leasing	597	1,927
Retail trade	4,689	11,958
Transportation and warehousing	19,222	5,677
Utilities	39	138
Wholesale trade	2,320	6,587

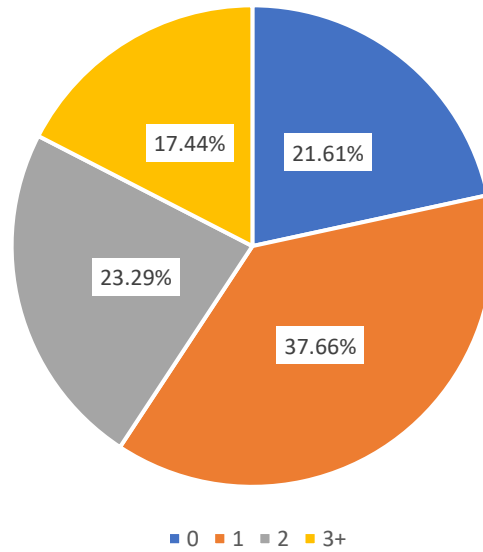
To assess the extent to which WSD training related to subsequent employment, WSD participants were matched to the employment they held within the three-year follow up period, for students who held at least one job during that period. The results show strong fidelity between training and job type for WSD participants. Approximately 80% of those participating in CTE training held employment related to their training.

Figure 5.3 shows the relationship between WSD programs and the percent of students who secured at least one job related to their CTE training. 78% of CTE Completers and 80% of CTE non-completers secured at least one job related to their training. Further, 79% of industry-based certificate earners secured at least one job that was related to their industry-based certificate. Continuing the trend, 81% of students who completed both CTE and an academic program secured at least one job related to their training, and 80% of those who completed both CTE and life skills programs held at least one job related to their CTE training.



While Figure 5.3 shows the percentage of students by program type and completion status who held at least one job related to their training, it is often the case that released WSD participants hold more than one job following release. As such, CTE completers might hold more than one job that matches their training. Figure 5.4 displays the number of jobs that match training for CTE completers. Most notably, almost 38% of CTE completers held one job that matched their training, and over 40% held two or more jobs related to their training.

Figure 5.4: Number of Jobs Related to Training for CTE Completers



N=13,681

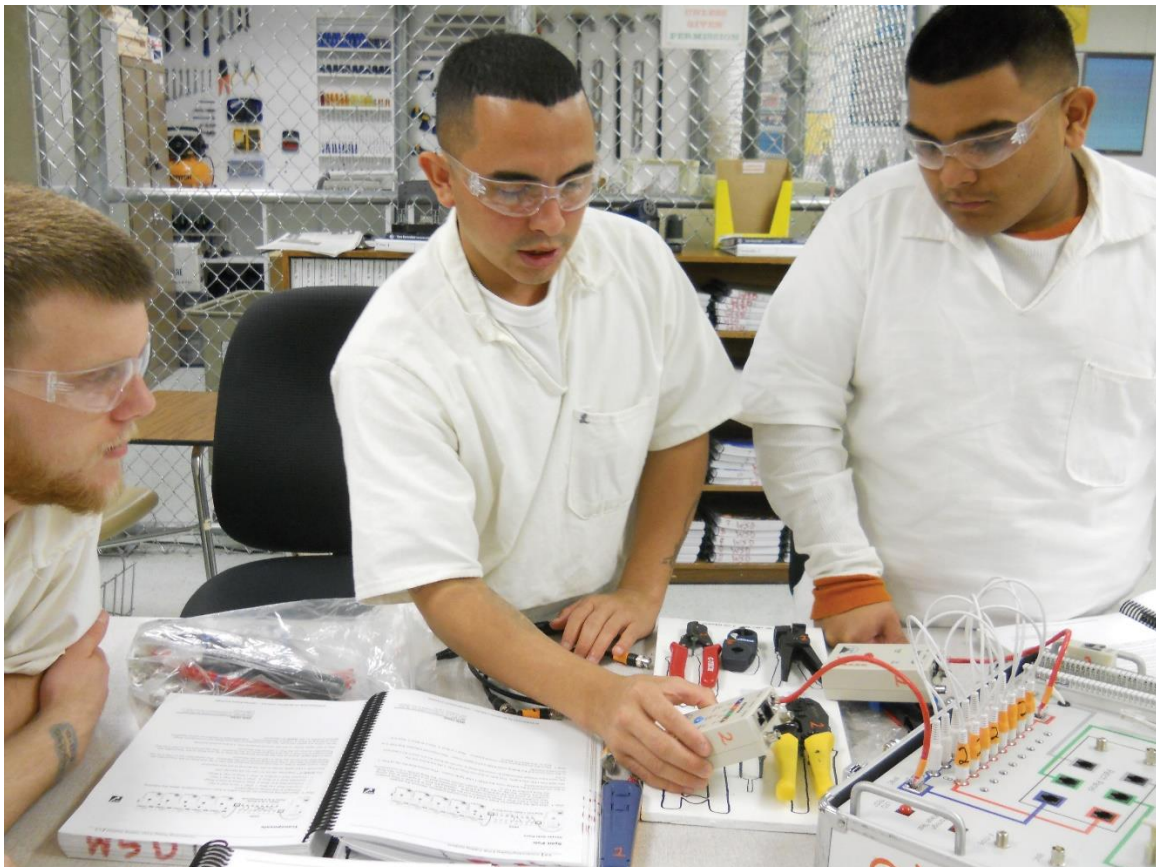


Table 5.2 displays the percentage of CTE completers who secured employment related to their training, broken down for each North American Industry Classification System (NAICS) industry type. The largest percentages can be found in administrative support and waste management, manufacturing, and construction. (Note: These percentages do not add up to 100%, because students can complete more than one kind of training and can hold more than one type of job).

Table 5.2: CTE Completers Who Secured Employment Related to Their Training by Industry Type

Name	Percentage
Agriculture	1.86%
Accommodation and food services	15.40%
Administrative support and waste management	35.93%
Arts, entertainment, and recreation	1.15%
Construction	22.46%
Educational services	0.15%
Finance and insurance	0.23%
Health care and social assistance	4.82%
Information	0.39%
Management of companies and enterprises	0%
Manufacturing	24.98%
Mining, quarrying, or oil and gas extraction	5.23%
Other services (except public admin)	5.91%
Professional, scientific, and technical services	2.32%
Public administration	0.50%
Real estate and rental and leasing	1.62%
Retail trade	10.98%
Transportation and warehousing	5.52%
Utilities	0.22%
Wholesale trade	5.88%

Employment Retention

Job retention is defined as holding employment for any four straight quarters during the three-year follow up period. The employment does not have to be with the same employer. For example, an individual might have four different jobs in four different quarters, but if those quarters occur sequentially, the individual is considered to have retained employment for one year. It is not possible to determine how many weeks within any given quarter that former residents worked, so this calculation of employment retention reflects a wide range of time worked and number of jobs per person.

In addition to difficulties finding employment, research indicates that people with incarceration histories typically struggle to maintain employment (Pager 2007, National Research Council 2014). 68% of the WSD program completers successfully secured employment during the three-year follow up period. Furthermore, 66% of the WSD program completers maintained employment for four consecutive quarters during the three years post-release. Those holding a high school diploma or equivalent also retained employment at higher levels than those who did not hold these credentials. In keeping with national findings, those who retained employment showed low levels of rearrest or reincarceration (National Research Council 2014, Visher 2008).

Figure 5.5 displays the demographics of former residents who were employed post-release and who retained employment for one year during the three-year post-release period.

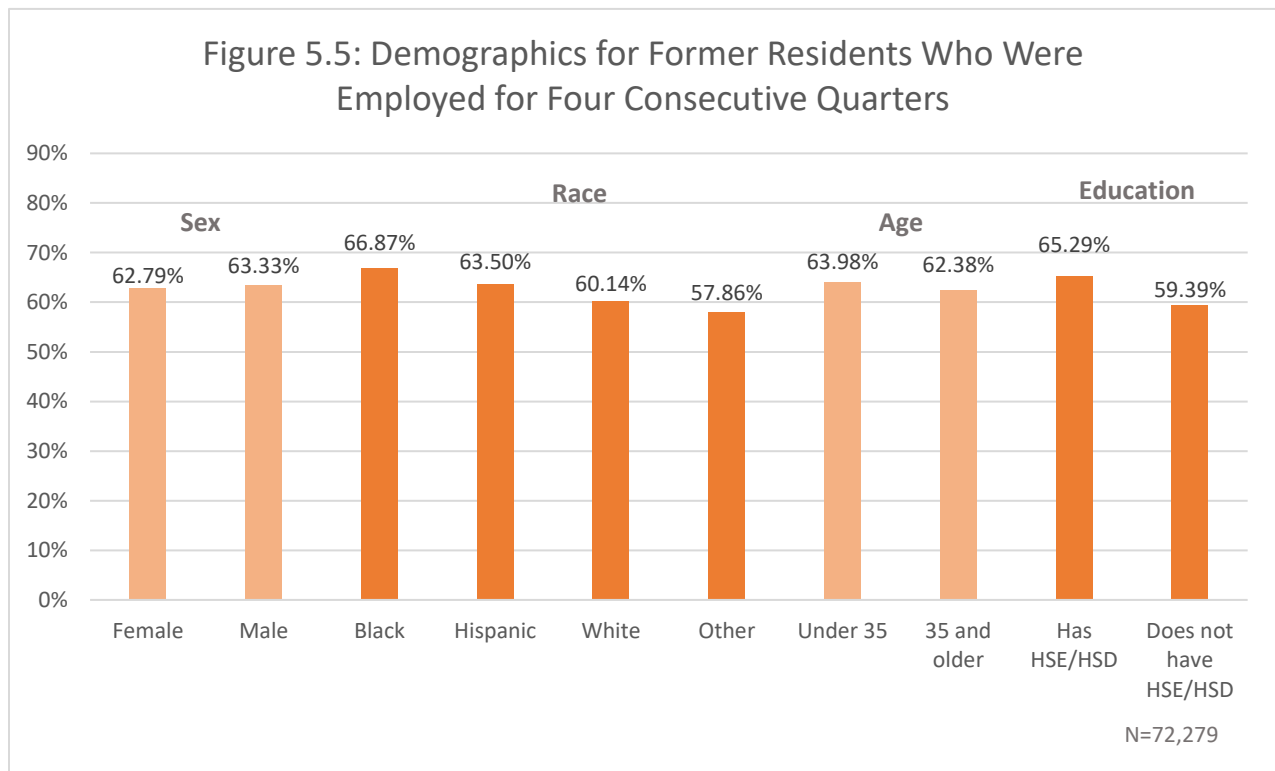


Figure 5.6 displays the criminal justice-related characteristics of those who retained a job for four successive quarters.

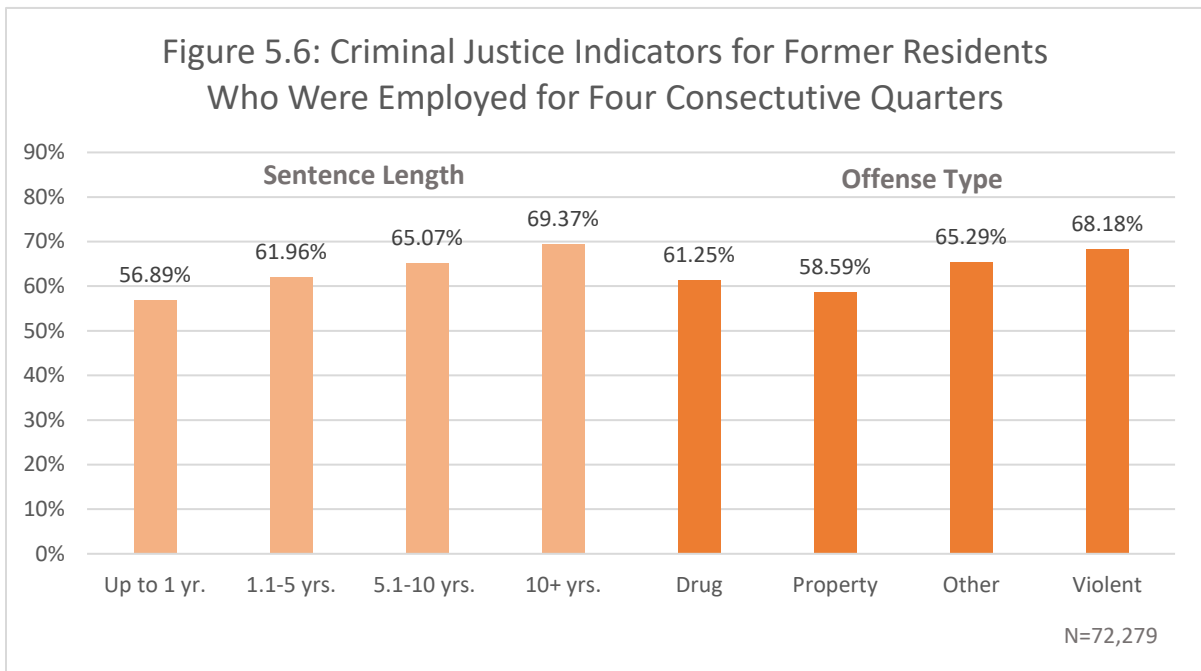
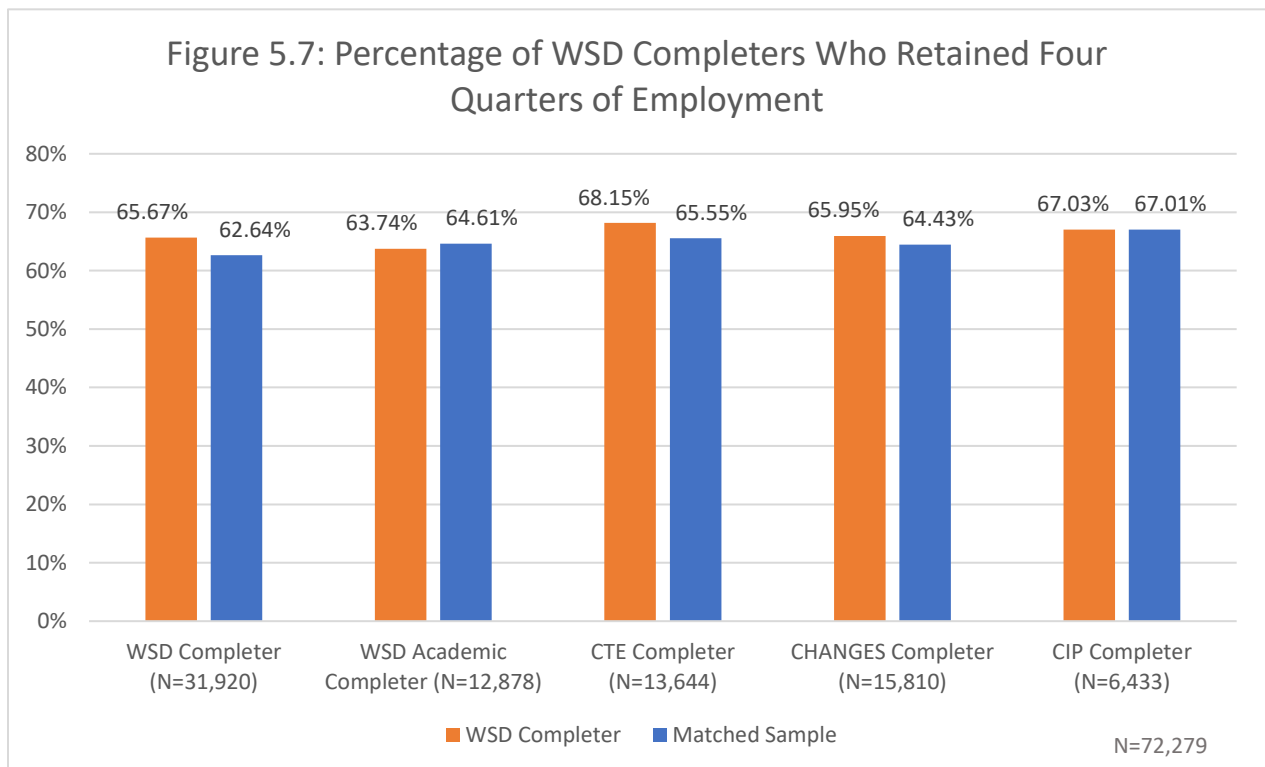


Figure 5.7 displays a comparison of matched samples by WSD program completion status. This figure includes only those who were employed, and the reference category is employed but not retained. For example, 66% of WSD program completers (any program) who were employed at any point during the three-year post-release period retained a job for four consecutive quarters while 34% were employed during that time but not for four consecutive quarters.



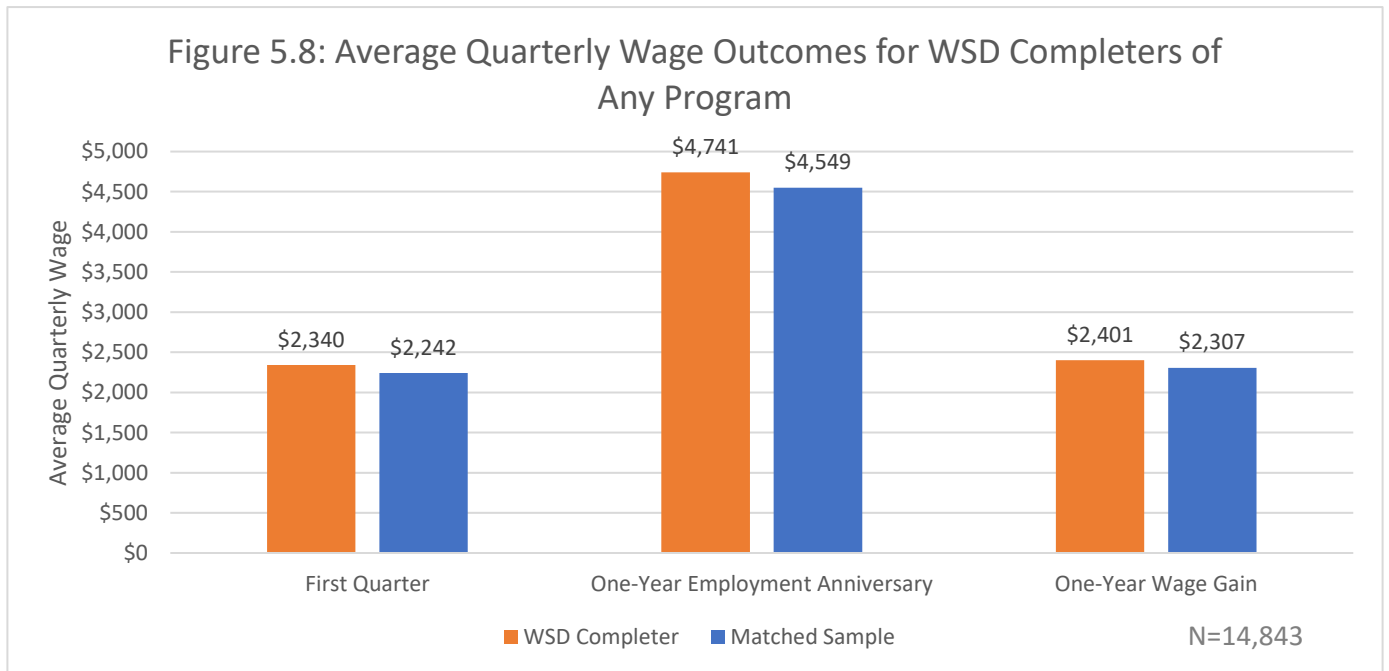
Wages

Wage data were collected by the Texas Workforce Commission (TWC) from the Unemployment Insurance Database and other government sources. Data were recorded as quarterly earnings for each job held by each employed former resident. The number of hours worked and the hourly wage per job were not included in this data file. Earnings for every job worked by each former resident within each quarter were summed to obtain the total amount earned per quarter per former resident. TWC data do not typically include wages from contract labor, self-employment, or informal labor arrangements.

The data from TWC contained wage information for almost 600,000 jobs secured by 72,394 former residents. Initial analysis of the wage data revealed some excessively high values that were likely errors. As a result, we excluded records that were in the top fifth percentile of the wage distribution so that these outliers would not artificially inflate the wage data presented below. This resulted in a sample of 72,281 former residents who secured employment after release from TDCJ, which is 58% of the total release sample.

The average quarterly wages for the first quarter of employment after release was \$2,058 for all employed former residents. It is not possible to determine how many weeks within any given quarter that former residents worked, so these averages reflect a wide range of time worked, number of jobs per person, and wages per job.

To isolate the effects of WSD programming on earnings, WSD students were compared to matched samples on three outcomes: average wages for their first quarter of employment, average quarterly wages for their one-year employment anniversary, and average changes in earnings between those two time periods. Figure 5.8 summarizes the main findings of this wage analysis, which is that WSD program completers were significantly more likely to earn higher average wages during their first quarter of employment after release and during the fourth quarter (one year) after they secured employment. Additionally, the average increase in wages during the first year of employment after release was significantly higher for WSD program completers than their matched samples.



The next three tables provide a breakdown of average quarterly wages for WSD students by program type and completion status compared to their matched samples. Table 5.3 shows the average first-quarter wages for WSD students. WSD participants who did not complete, did not have significantly different average wages than their matched samples, except for CIP participants. However, students who completed a WSD program were significantly more likely to earn higher first-quarter wages than their matched samples. Notably, students who completed CTE or life skills courses earned more during their first quarter of employment on average than their matched samples.

Table 5.3: Average Wages for First Quarter of Employment by Program Completion

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	\$2,340*** (N=14,843)	\$2,242*** (N=14,843)	\$2,135 (N=2,247)	\$2,137 (N=2,247)
Academic programs	\$2,220 (N=5,647)	\$2,185 (N=5,647)	\$2,056 (N=1,437)	\$2,094 (N=1,437)
CTE programs	\$2,389*** (N=6,682)	\$2,289*** (N=6,682)	\$2,540 (N=161)	\$2,424 (N=161)
Any life skills program	\$2,400*** (N=8,194)	\$2,259*** (N=8,194)	\$2,273 (N=2,816)	\$2,308 (N=2,816)
CHANGES	\$2,416+ (N=7,389)	\$2,361+ (N=7,389)	\$2,209 (N=1,305)	\$2,299 (N=1,305)
CIP	\$2,308 (N=1,273)	\$2,260 (N=1,273)	\$2,351+ (N=2,609)	\$2,275+ (N=2,609)

+p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

See Appendix C for a brief discussion of statistical significance.

Of the 72,281 former residents who secured at least one job after release, 44% were employed one-year later. The average quarterly wages at one year of employment was \$4,617, which is more than double the average first quarter wages.

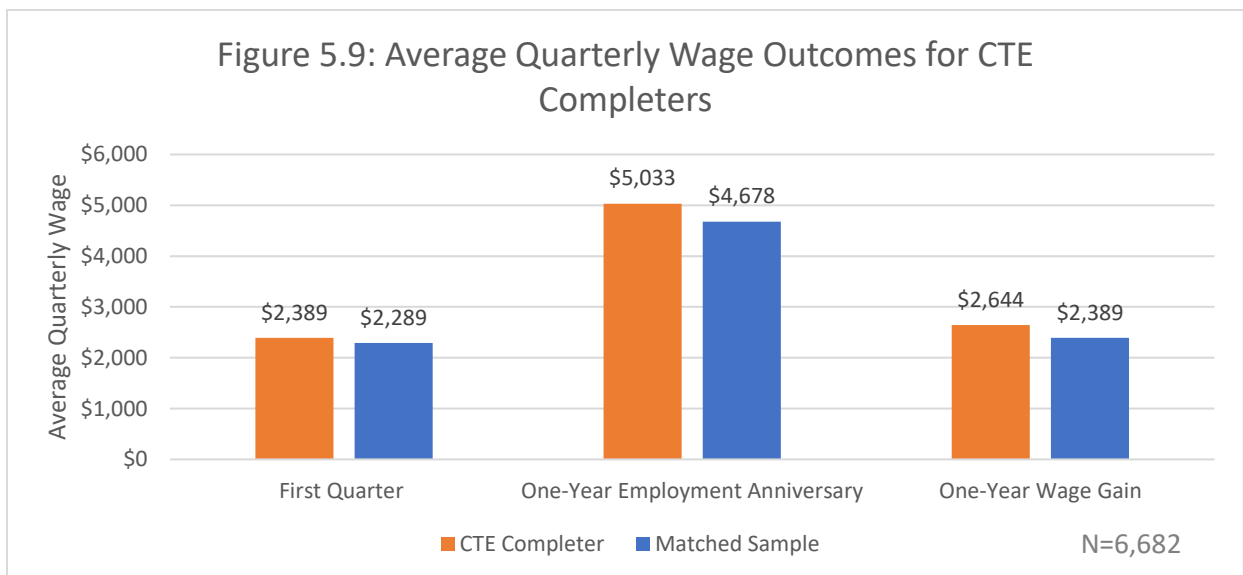
Table 5.4 shows the average wages for WSD students four quarters after their first quarter of employment, which roughly corresponds to their one-year work anniversary. Once again, WSD participants who did not complete did not have significantly higher average quarterly wages than their matched samples, with the exception of CIP students. However, students who completed a WSD program were significantly more likely to earn higher one-year quarterly wages than their matched samples, with the exception of academic completers. CTE completers had considerably higher average wages after one year of employment. Figure 5.9 illustrates how well CTE completers did compared to their matched sample on all three wage outcomes.

Table 5.4: Average Wages for Quarter of One-Year Employment Anniversary by Program Completion

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	\$4,741** (N=14,843)	\$4,549** (N=14,843)	\$4,313 (N=2,247)	\$4,208 (N=2,247)
Academic programs	\$4,317+ (N=5,647)	\$4,414+ (N=5,647)	\$3,789* (N=1,437)	\$4,003* (N=1,437)
CTE programs	\$5,033*** (N=6,682)	\$4,678*** (N=6,682)	\$4,374* (N=161)	\$4,994* (N=161)
Any life skills program	\$4,812** (N=8,194)	\$4,664** (N=8,194)	\$4,728 (N=2,816)	\$4,724 (N=2,816)
CHANGES	\$4,786+ (N=7,389)	\$4,703+ (N=7,389)	\$4,394 (N=1,305)	\$4,478 (N=1,305)
CIP	\$4,917* (N=1,273)	\$4,637* (N=1,273)	\$4,973+ (N=2,609)	\$4,836+ (N=2,609)

+p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

See Appendix C for a brief discussion of statistical significance.



Lastly, Table 5.5 shows the average difference in quarterly wages between the first quarter of employment and one-year later, for residents who were employed after one year. CTE program completers had the largest average increase in earnings, which was significantly larger than their matched sample.

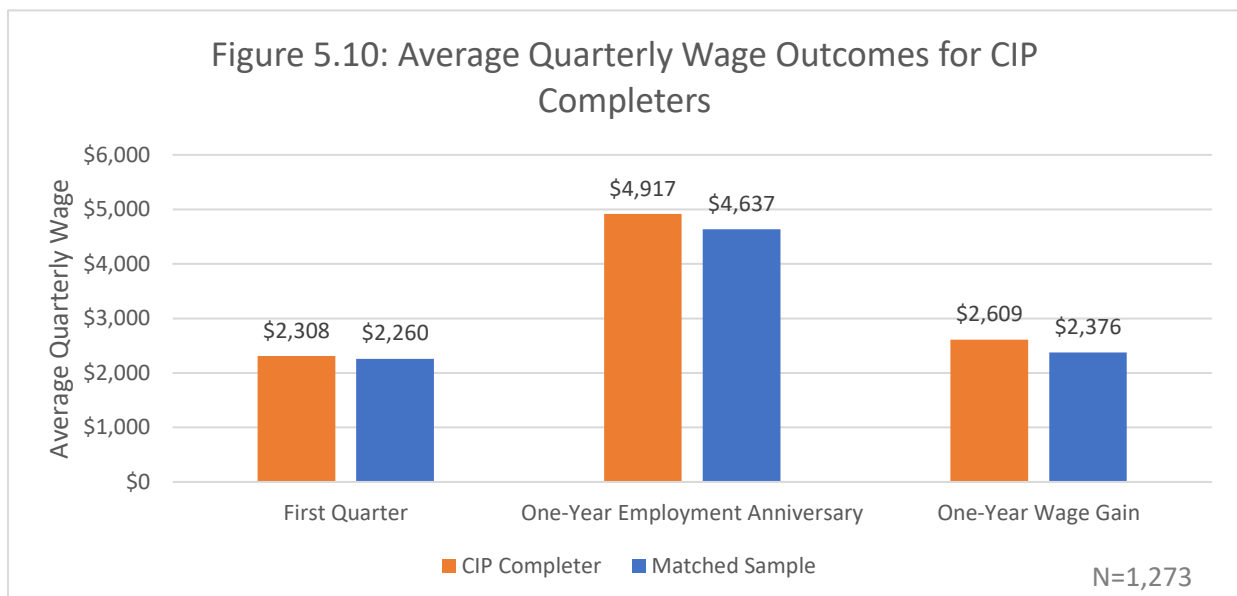
Table 5.5: Average Differences in Quarterly Earnings between First Quarter of Employment and One-Year Employment Anniversary by Program Completion

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	\$2,401** (N=14,843)	\$2,307** (N=14,843)	\$2,178 (N=2,247)	\$2,071 (N=2,247)
Academic programs	\$2,097* (N=5,647)	\$2,229* (N=5,647)	\$1,732+ (N=1,437)	\$1,909+ (N=1,437)
CTE programs	\$2,644*** (N=6,682)	\$2,389*** (N=6,682)	\$1,834* (N=161)	\$2,571* (N=161)
Any life skills program	\$2,412 (N=8,194)	\$2,405 (N=8,194)	\$2,455 (N=2,816)	\$2,416 (N=2,816)
CHANGES	\$2,370 (N=7,389)	\$2,341 (N=7,389)	\$2,186 (N=1,305)	\$2,179 (N=1,305)
CIP	\$2,609* (N=1,273)	\$2,376* (N=1,273)	\$2,621 (N=2,609)	\$2,561 (N=2,609)

+p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

See Appendix C for a brief discussion of statistical significance.

Aside from CTE students, life skills program participants also had positive wage outcomes compared to their matched samples. Figure 5.10 illustrates how well CIP completers fared with respect to one-year wage increases. CIP students were also the only group of non-completers to show higher wages than their matched samples.



University of Kentucky Sociology Evaluation Research Team

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Conclusions

Windham School District
Biennial Report 2023

According to past research, the reentry of people with incarceration histories into the community can pose significant challenges (Fader 2013). Newly released individuals may have difficulty adapting to the sensory, behavioral, and interpersonal freedoms presented in everyday life. Moreover, they can easily fall into the same relational and lifestyle patterns that produced their original crimes. National statistics indicate that more than half of those released cannot find employment within one year and as many as three-quarters recidivate within three years (James 2015). However, education is one factor shown to smooth the re-entry process and prevent further criminal activity (Visher 2008, Hjalmarsson and Lochner 2012, Duke 2018, Lochner 2020). Increasing the academic, technical, and communication skills of people with incarceration histories makes them more employable and diminishes the likelihood of criminal behavior. Such educational programs, if successful, are therefore one of the most powerful tools society has to protect itself against crime.

It is the conclusion of our research team that the educational programs provided by WSD are highly successful. We have documented salient benefits in HSE/HSD attainment, gains in academic skills and knowledge, time to employment, wages, and desistance from crime. Based on our research, we offer the following conclusions:

- WSD programs are robust, resulting in marked increases in academic, career and technical, and life skills achievement.
- WSD programs enhance employability, positively impacting time to employment, sustainability of employment, and earnings after release.
- WSD programs significantly reduce the likelihood of reincarceration.

It should be emphasized that these conclusions were reached using statistical techniques that compared participants in WSD programs to other residents who did not participate. This “apples to apples” comparison allows us to isolate the effect of WSD programs. Some of the most remarkable findings from this comparison relate to employment, in which WSD program participants showed clear advantages in a number of employment outcomes, and WSD program completers generally showed advantages over participants who did not complete those programs. This provides strong evidence that these programs enhance employability and job retention. The results for behavioral outcomes are less straightforward, but nevertheless show a substantial impact of WSD programs on reducing reincarceration. Individuals in the release cohort were significantly more likely to recidivate if they did not complete a WSD program.

National and international research consistently finds that education is one of the most important factors in reducing crime (Hjalmarsson and Lochner 2012, Duke 2018, Lochner 2020). This report further substantiates that finding in the form of educational programs offered by WSD.

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Appendix A: Definitions

Academic completer: A WSD student who completed a high school equivalency, high school diploma, and/or completed the program requirements for specific academic programs within five years of release from TDCJ.

Academic participant: A WSD student who completed a minimum of 30 combined official attendance hours in one or more WSD academic course within five years of release from TDCJ.

Academic program: Any WSD course with an “academic” designation, including high school equivalency, high school diploma, literacy, English as a Second Language, and special education.

CHANGES: Changing Habits and Achieving New Goals to Empower Success (CHANGES) is available to residents who are expected to be released within two years. It is a 180-hour life skills program designed to prepare students for release.

CHANGES participant: A WSD student who completed a minimum of 30 official attendance hours in a CHANGES course within five years of release from TDCJ.

CHANGES completer: A WSD student who completed all requirements for the CHANGES program.

CIP: Cognitive Intervention Program (CIP) is a 150-hour program that teaches students to meet their needs without trespassing on the rights of others. It is a communication-based, interactive program that supports the development of healthy relationships.

CIP participant: A WSD student who completed a minimum of 30 official attendance hours in a CIP course within five years of release from TDCJ.

CIP completer: A WSD student who completed all requirements for the CIP program.

CTE: Career and technical education programs offered by WSD. See Appendix E for course offerings.

CTE participant: A WSD student who completed at least 60 official attendance hours in a WSD CTE course within five years of release from WSD.

CTE completer: A WSD student who completed the requirements of a specific CTE course.

Industry-based certification: WSD CTE students who meet specified minimum criteria for an industry may take an industry-based certification test. If the student passes the test, they will receive recognition from the certifying agency for that industry.

Life skills programs: WSD programs designed to assist residents with the development of skills that will improve success post-release, such as decision-making, social values, communication, healthy interpersonal relationships, etc. Two life skills programs were included in this study: CHANGES and CIP.

Matched sample: TDCJ residents who were similar to WSD program participants in terms of demographics and criminal justice history, but who differ in terms of WSD program participation and/or completion. See Appendix C for a full discussion of how matched samples were created.

N: Designates sample size, or the number of cases (released residents) included in a particular analysis

NAICS: The North American Industry Classification System (NAICS) is the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. See www.census.gov/naics for more information.

Non-participant: A TDCJ resident who did not participate in any WSD programming.

P-value: The probability that the result of a statistical test might be the result of a random occurrence rather than a meaningful difference. Most social scientists consider a p-value of $\leq .05$ to be statistically significant. See Appendix C for a brief discussion of statistical significance.

Program participants: Met the minimum participation requirements for a given program and may or may not have completed all of the program requirements.

Program completers: Program participants who completed all of the program requirements.

Program non-completers: Program participants who met the minimum participation requirements for a given program, but who did not complete all of the program requirements.

Release cohort: TDCJ residents who were permanently released from physical incarceration from a TDCJ facility. The released resident could have been discharged, paroled, or subjected to mandatory supervision post-release. The release cohort for this study includes individuals released from TDCJ during the 2017-2018 school year.

Resident: Individuals incarcerated in the TDCJ, including state jails, prisons, and substance abuse felony punishment facilities.

Student: A TDCJ resident who participates in WSD programming.

TABE®: Tests of Adult Basic Education is a nationwide assessment of basic reading, math, and language skills. See www.tabetest.com for more information.

Appendix B: Descriptive Statistics

The sample consisted of all residents released during the years 2017-2018. The original data provided for analysis contained 130,848 cases, however the same resident could appear more than once depending on how many “releases” from incarceration they had during the release cohort window. Thus, the data were reformatted so that each case corresponded to a unique person, resulting in a final total of 124,946. The tabulation below presents mean values unless otherwise noted as percentage or other measure.

Table AB.1: Descriptive Statistics for Full Release Cohort and All WSD Program Participants

	Full Release Cohort (N=124,946)	All WSD Program Participants (N=57,099)
Demographics		
Gender	F: 16.55% M: 83.45%	F: 17.66% M: 82.34%
Race	Black: 28.73% Hispanic: 32.46% White: 38.27% Other: 0.55%	Black: 30.00% Hispanic: 32.35% White: 37.25% Other: 0.40%
U.S. Citizenship	94.00%	97.68%
Age at First Arrest	21.86	20.96
Age at Offense	32.80	30.89
Age at Release	37.38	35.70
Sentencing Information		
Offense Type	Drug: 29.91% Property: 24.94% Violent: 25.70% Other: 19.46%	Drug: 27.73% Property: 23.04% Violent: 29.72% Other: 19.51%
Sentence Length	Up to 6 mos.: 7.93% 6.1 mos.-1 yr.: 12.53% 1.1-2 yrs.: 20.48% 2.1-5 yrs.: 19.81% 5.1-10 yrs.: 22.77% 10.1-25 yrs.: 12.27% 25.1-50 yrs.: 3.36% 50.1 yrs.-life: 0.84%	Up to 6 mos.: 3.05% 6.1 mos.-1 yr.: 8.02% 1.1-2 yrs.: 17.24% 2.1-5 yrs.: 23.55% 5.1-10 yrs.: 29.62% 10.1-25 yrs.: 14.62% 25.1-50 yrs.: 3.17% 50.1 yrs.-life: 0.73%
Median Sentence Length in Years	3.00	4.00
Resident Type	ID: 64.24% SAFPF: 9.78% SJ: 25.98%	ID: 76.48% SAFPF: 7.39% SJ: 16.14%
Education		
Years of Education	10.19	10.17
HSE/HSD	Outside TDCJ: 39.53% Inside TDCJ: 18.38% Did not complete: 42.09%	Outside TDCJ: 36.04% Inside TDCJ: 28.53% Did not complete: 35.42%
TABE® First Reading Score	8.39	8.43
TABE® First Math Score	6.94	6.99
TABE® First Language Score	7.10	7.24
TABE® First Composite Score	7.47	7.55
TABE® Maximum Reading Score	8.91	9.33
TABE® Maximum Math Score	7.53	7.99
TABE® Maximum Language Score	7.76	8.34
TABE® Maximum Composite Score	8.02	8.48

Table AB.1 (cont.)

	Full Release Cohort (N=124,946)	All WSD Program Participants (N=57,099)
TABE® Reading Score Gain	1.71	1.85
TABE® Math Score Gain	1.96	2.08
TABE® Language Score Gain	2.18	2.30
TABE® Composite Score Gain	1.81	1.94
Behavioral Outcomes		
Major disciplinary violations	4.29%	5.25%
Minor disciplinary violations	9.07%	11.28%
Rearrested within 3 years post-release	51.72%	53.62%
Recidivated	24.23%	24.17%
Employment		
Had at least one quarter of post-release employment income	57.85% (N=72,281)	65.90% (N=37,626)
Of those who secured employment:		
Secured employment in the same quarter as release	30.04%	32.06%
Secured employment one quarter after release	30.53%	31.98%
Number of quarters between release and first wages	Mean: 2.47 Median: 1	Mean: 2.24 Median: 1
Had four consecutive quarters of employment	63.23%	64.88%
Had at least one job related to CTE training	16.64%	30.78%
Average wages for the first quarter of employment	\$2,057.90	\$2,098.25
Average wages for the quarter one year after securing first employment	\$4,617.20	\$4,692.37
Average difference in quarterly earnings 1 year after securing first employment vs. 1 st quarter of employment	\$2,327.74	\$2,376.50

Table AB.2: Descriptive Statistics of All WSD Completers, Non-Completers, and Non- Participants

	All WSD Program Completers (N=47,310)	All WSD Program Non-Completers (N=9,789)	All Non-Participants (N=67,847)
Demographics			
Gender	F:18.02% M: 81.98%	F: 15.93% M: 84.07%	F: 15.61% M: 84.39%
Race	Black: 29.17% Hispanic: 32.09% White: 38.34% Other: 0.40%	Black: 34.04% Hispanic: 33.61% White: 31.95% Other: 0.40%	Black: 27.65% Hispanic: 32.54% White: 39.13% Other: 0.67%
U.S. Citizenship	97.96%	96.33%	90.91%
Age at First Arrest	20.98	20.88	22.62
Age at Offense	30.72	31.72	34.42
Age at Release	35.60	36.23	38.78
Sentencing Information			
Offense Type	Drug: 28.01% Property: 22.17% Violent: 30.17% Other: 19.65%	Drug: 26.39% Property: 27.23% Violent: 27.53% Other: 18.85%	Drug: 31.74% Property: 26.53% Violent: 22.32% Other: 19.41%
Sentence Length	Up to 6 mos.: 2.40% 6.1 mos.-1 yr.: 6.92% 1.1-2 yrs.: 16.48% 2.1-5 yrs.: 24.37% 5.1-10 yrs.: 31.01% 10.1-25 yrs.: 14.99% 25.1-50 yrs.: 3.13% 50.1 yrs.-life: 0.71%	Up to 6 mos.: 6.20% 6.1 mos.-1 yr.: 13.34% 1.1-2 yrs.: 20.90% 2.1-5 yrs.: 19.58% 5.1-10 yrs.: 22.94% 10.1-25 yrs.: 12.81% 25.1-50 yrs.: 3.38% 50.1 yrs.-life: 0.85%	Up to 6 mos.: 12.05% 6.1 mos.-1 yr.: 16.33% 1.1-2 yrs.: 23.22% 2.1-5 yrs.: 16.66% 5.1-10 yrs.: 17.00% 10.1-25 yrs.: 10.29% 25.1-50 yrs.: 3.53% 50.1 yrs.-life: 0.93%
Median Sentence Length in Years	4.00	3.00	2.00
Resident Type	ID: 78.54% SAFPF: 7.27% SJ: 14.19%	ID: 66.50% SAFPF: 7.93% SJ: 25.57%	ID: 53.95% SAFPF: 11.80% SJ: 34.25%
Education			
Years of Education	10.20	10.01	10.22
HSE/HSD	Outside TDCJ: 37.05% Inside TDCJ: 32.51% Did not complete: 30.44%	Outside TDCJ: 31.19% Inside TDCJ: 9.31% Did not complete: 59.51%	Outside TDCJ: 42.46% Inside TDCJ: 9.83% Did not complete: 47.70%
TABE® First Reading Score	8.60	7.55	8.35
TABE® First Math Score	7.15	6.14	6.89
TABE® First Language Score	7.44	6.17	6.95
TABE® First Composite Score	7.74	6.54	7.39
TABE® Maximum Reading Score	9.63	7.73	8.42
TABE® Maximum Math Score	8.29	6.40	6.99
TABE® Maximum Language Score	8.70	6.49	7.08
TABE® Maximum Composite Score	8.82	6.68	7.48
TABE® Reading Score Gain	2.04	0.50	0.84

Table AB.2 (cont.)

	All WSD Program Completers (N=47,310)	All WSD Program Non-Completers (N=9,789)	All Non-Participants (N=67,847)
TABE® Math Score Gain	2.27	0.73	1.17
TABE® Language Score Gain	2.49	0.87	1.42
TABE® Composite Score Gain	2.15	0.38	0.99
Behavioral Outcomes			
Major disciplinary violations	4.71%	7.81%	3.48%
Minor disciplinary violations	10.77%	13.74%	7.20%
Rearrested within 3 years post-release	52.67%	58.23%	50.12%
Recidivated	23.32%	28.26%	24.29%
Employment			
Had at least one quarter of post-release employment income	67.55% (N=31,960)	57.88% (N=5,666)	51.08% (N=34,655)
Of those who secured employment:			
Secured employment in the same quarter as release	32.60%	29.03%	27.84%
Secured employment one quarter after release	32.33%	29.70%	28.95%
Number of quarters between release and first wages	Mean: 2.17 Median: 1	Mean: 2.66 Median: 1	Mean: 2.73 Median: 1
Had four consecutive quarters of employment	65.69%	60.29%	61.44%
Had at least one job related to CTE training	35.44%	4.48%	N/A
Average wages for the first quarter of employment	\$2,138.05	\$1,873.77	\$2,014.09
Average wages for the quarter one year after securing first employment	\$4,742.71	\$4,379.33	\$4,529.00
Average difference in quarterly earnings 1 year after securing first employment vs. 1 st quarter of employment	\$2,401.90	\$2,218.53	\$2,270.54

Table AB.3 Descriptive Statistics for WSD Academic Program Participants, Completers, and Non-Completers

	WSD Academic Program Participants (N=25,686)	WSD Academic Program Completers (N=19,202)	WSD Academic Program Non-Completers (N=6,484)
Demographics			
Gender	F: 18.92% M: 81.08%	F: 19.66% M: 80.34%	F: 16.70% M: 83.30%
Race	Black: 31.08% Hispanic: 37.78% White: 30.78% Other: 0.36%	Black: 28.74% Hispanic: 37.02% White: 33.86% Other: 0.38%	Black: 38.02% Hispanic: 40.02% White: 21.65% Other: 0.31%
U.S. Citizenship	97.19%	97.59%	96.02%
Age at First Arrest	20.34	20.36	20.26
Age at Offense	28.42	27.83	30.16
Age at Release	32.60	32.13	33.99
Sentencing Information			
Offense Type	Drug: 26.99% Property: 24.57% Violent: 30.56% Other: 17.87%	Drug: 27.28% Property: 23.22% Violent: 31.79% Other: 17.71%	Drug: 26.14% Property: 28.59% Violent: 26.91% Other: 18.35%
Sentence Length	Up to 6 mos.: 3.86% 6.1 mos.-1 yr.: 9.24% 1.1-2 yrs.: 17.54% 2.1-5 yrs.: 24.25% 5.1-10 yrs.: 31.18% 10.1-25 yrs.: 12.03% 25.1-50 yrs.: 1.63% 50.1 yrs.-life: 0.28%	Up to 6 mos.: 2.88% 6.1 mos.-1 yr.: 7.42% 1.1-2 yrs.: 16.03% 2.1-5 yrs.: 24.85% 5.1-10 yrs.: 34.15% 10.1-25 yrs.: 12.89% 25.1-50 yrs.: 1.55% 50.1 yrs.-life: 0.25%	Up to 6 mos.: 6.77% 6.1 mos.-1 yr.: 14.63% 1.1-2 yrs.: 22.00% 2.1-5 yrs.: 22.48% 5.1-10 yrs.: 22.39% 10.1-25 yrs.: 9.49% 25.1-50 yrs.: 1.87% 50.1 yrs.-life: 0.39%
Sentence Length in Years	4.00	4.00	3.00
Resident Type	ID: 71.09% SAFPF: 10.26% SJ: 18.65%	ID: 73.80% SAFPF: 10.56% SJ: 15.64%	ID: 63.03% SAFPF: 9.39% SJ: 27.58%
Education			
Years of Education	9.70	9.75	9.54
HSE/HSD	Outside TDCJ: 2.52% Inside TDCJ: 41.82% Did not complete: 55.65%	Outside TDCJ: 2.62% Inside TDCJ: 55.72% Did not complete: 41.66%	Outside TDCJ: 2.24% Inside TDCJ: 0.68% Did not complete: 97.09%
TABE® First Reading Score	7.71	8.02	6.74
TABE® First Math Score	6.43	6.74	5.45
TABE® First Language Score	6.54	6.91	5.38
TABE® First Composite Score	6.83	7.18	5.72
TABE® Maximum Reading Score	9.17	9.85	7.02
TABE® Maximum Math Score	8.06	8.76	5.86
TABE® Maximum Language Score	8.33	9.11	5.86
TABE® Maximum Composite Score	8.35	9.12	5.90
TABE® Reading Score Gain	1.91	2.23	0.48
TABE® Math Score Gain	2.14	2.45	0.71
TABE® Language Score Gain	2.35	2.68	0.85
TABE® Composite Score Gain	1.99	2.36	0.32
Behavioral Outcomes			
Major disciplinary violations	6.60%	5.66%	9.39%
Minor disciplinary violations	13.63%	12.89%	15.79%

Table AB.3 (cont.)

	WSD Academic Program Participants (N=25,686)	WSD Academic Program Completers (N=19,202)	WSD Academic Program Non-Completers (N=6,484)
Rearrested within 3 years post-release	58.14%	56.81%	62.06%
Recidivated	27.24%	26.17%	30.41%
Employment			
Had at least one quarter of post-release employment income	64.38% (N=16,536)	67.14% (N=12,892)	56.20% (N=3,644)
Of those who secured employment:			
Secured employment in the same quarter as release	31.47%	32.17%	29.01%
Secured employment one quarter after release	31.05%	31.86%	28.18%
Number of quarters between release and first wages	Mean: 2.38 Median: 1	Mean: 2.28 Median: 1	Mean: 2.71 Median: 1
Had four consecutive quarters of employment	62.44%	63.76%	57.77%
Had at least one job related to CTE training	22.13%	25.36%	10.68%
Average wages for the first quarter of employment	\$1,925.39	\$1,989.01	\$1,700.29
Average wages for the quarter one year after securing first employment	\$4,209.53	\$4,316.97	\$3,786.84
Average difference in quarterly earnings 1 year after securing first employment vs. 1 st quarter of employment	\$2,022.94	\$2,097.44	\$1,729.85

Table AB.4 Descriptive Statistics for CTE Program Participants, Completers, and Non-Completers

	WSD CTE Program Participants (N=19,096)	WSD CTE Program Completers (N=18,609)	WSD CTE Program Non-Completers (N=487)
Demographics			
Gender	F: 19.13% M: 80.87%	F: 19.29% M: 80.71%	F: 13.14% M: 86.86%
Race	Black: 27.37% Hispanic: 31.04% White: 41.27% Other: 0.32%	Black: 27.34% Hispanic: 31.12% White: 41.21% Other: 0.33%	Black: 28.54% Hispanic: 27.93% White: 43.53% Other: 0%
U.S. Citizenship	98.54%	98.56%	97.74%
Age at First Arrest	21.02	21.03	20.42
Age at Offense	30.82	30.85	29.63
Age at Release	36.20	36.23	35.23
Sentencing Information			
Offense Type	Drug: 28.16% Property: 20.78% Violent: 32.61% Other: 18.45%	Drug: 28.27% Property: 20.66% Violent: 32.48% Other: 18.59%	Drug: 24.02% Property: 25.46% Violent: 37.58% Other: 12.94%
Sentence Length	Up to 6 mos.: 1.97% 6.1 mos.-1 yr.: 6.70% 1.1-2 yrs.: 13.11% 2.1-5 yrs.: 19.45% 5.1-10 yrs.: 33.86% 10.1-25 yrs.: 20.23% 25.1-50 yrs.: 3.89% 50.1 yrs.-life: 0.79%	Up to 6 mos.: 1.96% 6.1 mos.-1 yr.: 6.64% 1.1-2 yrs.: 13.14% 2.1-5 yrs.: 19.44% 5.1-10 yrs.: 33.85% 10.1-25 yrs.: 20.25% 25.1-50 yrs.: 3.91% 50.1 yrs.-life: 0.80%	Up to 6 mos.: 2.26% 6.1 mos.-1 yr.: 9.03% 1.1-2 yrs.: 12.11% 2.1-5 yrs.: 19.92% 5.1-10 yrs.: 34.09% 10.1-25 yrs.: 19.10% 25.1-50 yrs.: 3.08% 50.1 yrs.-life: 0.41%
Sentence Length in Years	5.00	5.00	5.00
Resident Type	ID: 79.42% SAFPF: 6.17% SJ: 14.41%	ID: 79.39% SAFPF: 6.29% SJ: 14.33%	ID: 80.70% SAFPF: 1.64% SJ: 17.66%
Education			
Years of Education	10.31	10.31	10.15
HSE/HSD	Outside TDCJ: 48.95% Inside TDCJ: 32.94% Did not complete: 18.11%	Outside TDCJ: 48.99% Inside TDCJ: 32.80% Did not complete: 18.21%	Outside TDCJ: 47.23% Inside TDCJ: 38.60% Did not complete: 14.17%
TABE® First Reading Score	9.38	9.37	9.66
TABE® First Math Score	7.73	7.72	8.01
TABE® First Language Score	8.24	8.24	8.59
TABE® First Composite Score	8.51	8.50	8.85
TABE® Maximum Reading Score	10.14	10.14	10.50
TABE® Maximum Math Score	8.67	8.66	8.92
TABE® Maximum Language Score	9.25	9.24	9.57
TABE® Maximum Composite Score	9.37	9.36	9.70
TABE® Reading Score Gain	1.98	1.98	2.18
TABE® Math Score Gain	2.42	2.42	2.37
TABE® Language Score Gain	2.59	2.59	2.56
TABE® Composite Score Gain	2.21	2.21	2.23
Behavioral Outcomes			
Major disciplinary violations	3.68%	3.55%	8.62%
Minor disciplinary violations	8.33%	8.19%	13.55%

Table AB.4 (cont.)

	WSD CTE Program Participants (N=19,096)	WSD CTE Program Completers (N=18,609)	WSD CTE Program Non- Completers (N=487)
Rearrested within 3 years post-release	49.68%	49.49%	57.08%
Recidivated	20.99%	20.89%	24.64%
Employment			
Had at least one quarter of post-release employment income	73.32% (N=14,001)	73.42% (N=13,662)	69.61% (N=339)
Of those who secured employment:			
Secured employment in the same quarter as release	34.52%	34.67%	28.61%
Secured employment one quarter after release	33.78%	33.79%	33.04%
Number of quarters between release and first wages	Mean: 1.94 Median: 1	Mean: 1.93 Median: 1	Mean: 2.32 Median: 1
Had four consecutive quarters of employment	68.10%	68.19%	64.60%
Had at least one job related to CTE training	78.45%	78.39%	80.83%
Average wages for the first quarter of employment	\$2,246.15	\$2,247.79	\$2,180.02
Average wages for the quarter one year after securing first employment	\$5,019.27	\$5,034.81	\$4,373.51
Average difference in quarterly earnings 1 year after securing first employment vs. 1 st quarter of employment	\$2,626.19	\$2,645.25	\$1,833.73

Table AB.5 Descriptive Statistics for WSD Life Skills Participants, Completers, and Non-Completers

	WSD Life Skills Program Participants (N=35,415)	WSD Life Skills Program Completers (N=26,208)	WSD Life Skills Program Non-Completers (N=9,207)
Demographics			
Gender	F: 16.17% M: 83.83%	F: 16.57% M: 83.43%	F: 15.01% M: 84.99%
Race	Black: 31.11% Hispanic: 30.61% White: 37.87% Other: 0.41%	Black: 30.98% Hispanic: 30.47% White: 38.13% Other: 0.42%	Black: 31.49% Hispanic: 31.01% White: 37.15% Other: 0.36%
U.S. Citizenship	98.26%	98.38%	97.90%
Age at First Offense	21.02	21.07	20.87
Age at Offense	31.42	31.40	31.50
Age at Release	36.46	36.33	36.84
Sentencing Information			
Offense Type	Drug: 26.81% Property: 22.27% Violent: 30.44% Other: 20.48%	Drug: 27.15% Property: 22.15% Violent: 29.51% Other: 21.20%	Drug: 25.86% Property: 22.62% Violent: 33.09% Other: 18.42%
Sentence Length	Up to 6 mos.: 1.94% 6.1 mos.-1 yr.: 5.80% 1.1-2 yrs.: 17.31% 2.1-5 yrs.: 25.43% 5.1-10 yrs.: 30.77% 10.1-25 yrs.: 14.56% 25.1-50 yrs.: 3.35% 50.1 yrs.-life: 0.85%	Up to 6 mos.: 1.51% 6.1 mos.-1 yr.: 5.00% 1.1-2 yrs.: 17.56% 2.1-5 yrs.: 27.80% 5.1-10 yrs.: 31.33% 10.1-25 yrs.: 13.04% 25.1-50 yrs.: 3.00% 50.1 yrs.-life: 0.77%	Up to 6 mos.: 3.16% 6.1 mos.-1 yr.: 8.08% 1.1-2 yrs.: 16.60% 2.1-5 yrs.: 18.69% 5.1-10 yrs.: 29.17% 10.1-25 yrs.: 18.88% 25.1-50 yrs.: 4.34% 50.1 yrs.-life: 1.08%
Sentence Length in Years	4.00	4.00	5.00
Resident Type	ID: 84.93% SAFPF: 3.15% SJ: 11.92%	ID: 86.47% SAFPF: 3.02% SJ: 10.51%	ID: 80.53% SAFPF: 3.53% SJ: 15.94%
Education			
Years of Education	10.32	10.34	10.25
HSE/HSD	Outside TDCJ: 44.95% Inside TDCJ: 26.08% Did not complete: 28.98%	Outside TDCJ: 45.39% Inside TDCJ: 25.97% Did not complete: 28.64%	Outside TDCJ: 43.68% Inside TDCJ: 26.38% Did not complete: 29.93%
TABE® First Reading Score	8.68	8.70	8.59
TABE® First Math Score	7.18	7.21	7.09
TABE® First Language Score	7.48	7.52	7.37
TABE® First Composite Score	7.79	7.83	7.67
TABE® Maximum Reading Score	9.40	9.43	9.33
TABE® Maximum Math Score	8.02	8.06	7.91
TABE® Maximum Language Score	8.41	8.44	8.29
TABE® Maximum Composite Score	8.57	8.61	8.44
TABE® Reading Score Gain	1.86	1.88	1.82
TABE® Math Score Gain	2.15	2.20	2.01

Table AB.5 (cont.)

	WSD Life Skills Program Participants (N=35,415)	WSD Life Skills Program Completers (N=26,208)	WSD Life Skills Program Non-Completers (N=9,207)
TABE® Language Score Gain	2.37	2.41	2.26
TABE® Composite Score Gain	1.99	2.03	1.89
Behavioral Outcomes			
Major disciplinary violations	4.81%	4.50%	5.68%
Minor disciplinary violations	10.72%	10.61%	11.04%
Rearrested within 3 years post-release	53.40%	52.83%	55.03%
Recidivated	22.99%	22.45%	24.51%
Employment			
Had at least one quarter of post-release employment income	66.53% (N=23,560)	66.73% (N=17,489)	65.94% (N=6,071)
Of those who secured employment:			
Secured employment in the same quarter as release	32.48%	32.82%	31.49%
Secured employment one quarter after release	32.14%	32.09%	32.30%
Number of quarters between release and first wages	Mean: 2.18 Median: 1	Mean: 2.13 Median: 1	Mean: 2.30 Median: 1
Had four consecutive quarters of employment	65.65%	65.98%	64.70%
Had at least one job related to CTE training	27.86%	28.31%	26.57%
Average wages for the first quarter of employment	\$2,166.12	\$2,196.23	\$2,079.33
Average wages for the quarter one year after securing first employment	\$4,792.83	\$4,814.42	\$4,729.87
Average difference in quarterly earnings 1 year after securing first employment vs. 1 st quarter of employment	\$2,425.18	\$2,414.39	\$2,456.64

Appendix C: Methods

Analytical Techniques

Data cleaning, merging, tabulation, and analyses were conducted through utilization of the STATA® statistical package. Information regarding the specific STATA® commands and routines utilized to produce this report are freely available from the University of Kentucky Sociology Evaluation Research Team.

Statistical Significance

To achieve some measure of certainty about findings associated with samples, social scientists use statistical tests to determine if a relationship is statistically significant. That is, the certainty with which a pattern found in the data would likely continue to exist in subsequent observations. Traditionally, social scientists accept that a significance level of 0.05 or lower is the acceptable level of evidence to claim that patterns in the data are not likely due to chance. In the matched samples analyses presented in this report, significance levels are clearly marked and noted at the foot of each table. Non-statistically significant results should be interpreted as no difference between matched and WSD samples even when the values are not exactly the same for both groups.

Logistic Regression

Logistic regression, also called a logit model, is used to predict dichotomous outcome variables, that is outcomes that only have two categories. In the model below, the outcome is retaining work for four quarters. If an individual retained work for four quarters, they were coded as 1. If an individual did not retain work for four quarters, they were coded as 0. Thus, the results presented here are predicting the likelihood that an individual person would retain employment for four quarters given the predictor variables included in the analysis.

In a logistic regression model, the log odds of the outcome are modeled as a linear combination of the predictor variables. These log odds can also be converted into odds ratios. Odds ratios report the odds of the outcome coded as 1 as a result of an increase of one unit of each predictor variable. For dichotomous or categorical predictor variables, the odds ratios relate the difference in odds between the category reported and the reference category.

In the analysis at hand, the outcome value coded as 1 is retention of employment for four quarters. Table AC.1 shows that being male reduces the likelihood of work retention for four quarters. Odds ratios below 1 indicate a reduction in likelihood. This gendered finding is echoed in Figure AC.2. Race results were modeled with White as the reference category. Black members of the release cohort were 1.44 times as likely as White members to retain work for four quarters. That is, the odds that a Black member of the release cohort retained employment for four consecutive quarters during the three-year follow up period are 44% higher than White members of the release cohort. The odds that a Hispanic member of the release cohort retained employment for four consecutive quarters during the three-year follow up period are 17% higher than White members of the release cohort. Other racial group members were about the same as Whites when it comes to likelihood of retaining work for four quarters, indicated by an odds ratio of approximately 1 and lack of statistical significance. Regarding sentence length, the reference category was 1 to 5 years. Members of the release cohort who served less than 1 year, 5 to 10 years, or over 10 years all were slightly more likely than the reference category to retain work for four quarters. Releasees who were convicted of a violent crime were more likely to retain work than those who were convicted of drug crimes. Those who were convicted of property crime were less likely to retain work. Older individuals are slightly less likely than younger ones to retain work for four quarters. If the resident had an HSE/HSD, they were more likely to retain work.

Table AC.1: Logistic Regression Model of Predictors of Retaining Work for Four Quarters

	Odds Ratio	Confidence Interval
Male***	0.81	[0.77, 0.84]
Race		
White (reference)	---	---
Black***	1.44	[1.39, 1.50]
Hispanic***	1.17	[1.12, 1.22]
Other	0.99	[0.77, 1.26]
Sentence length		
Up to 1 year*	1.06	[1.01, 1.11]
1 – 5 years (reference)	---	---
5 – 10 years**	1.06	[1.02, 1.10]
Over 10 years***	1.24	[1.17, 1.30]
Offense category		
Violent crime***	1.25	[1.19, 1.31]
Property crime**	0.93	[0.89, 0.97]
Drug crime (reference)	---	---
Other***	1.16	[1.11, 1.22]
Age of release***	0.991	[0.990, 0.992]
Resident has HSE/HSD***	1.15	[1.11, 1.19]
First quarter wages***	1.000152	[1.000143, 1.000160]
Number of quarters between release and first wages***	0.81	[0.81, 0.82]
All academic participants and completers***	0.90	[0.86, 0.94]
All CTE participants and completers*	1.05	[1.01, 1.10]
All Life Skills participants and completes	1.00	[0.97, 1.04]

*significant at 0.05

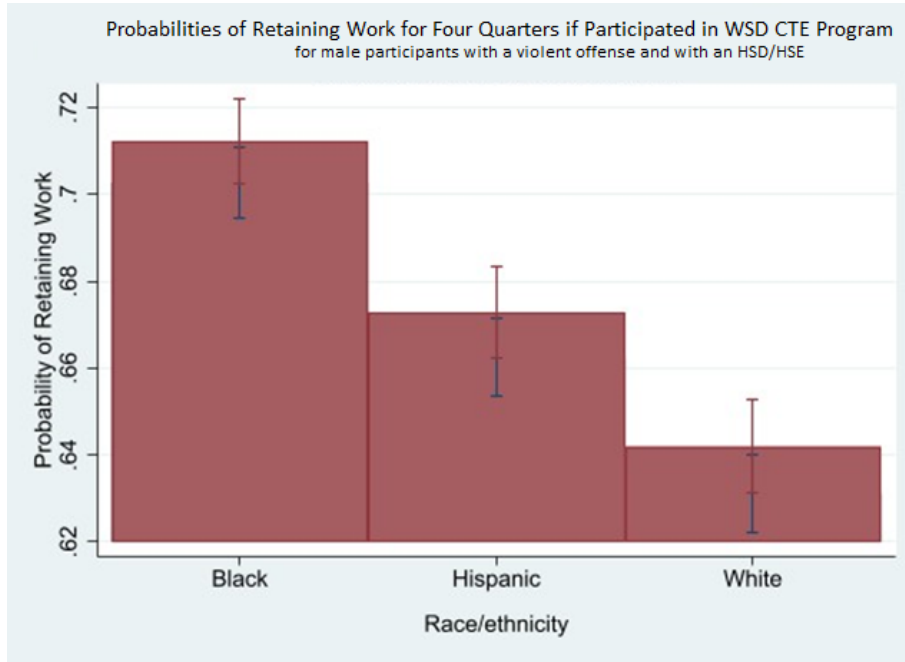
**significant at 0.01

***significant at <0.001

Predicted Probabilities

One strength of logistic regression modelling is the ability to produce probabilities of the outcome variable given particular values of the predictor variables. Figure AC.1 presents the predicted probability of retaining work for four quarters by race if the individual in question was male with a violent offense, with a HSE/HSD, and participated in WSD CTE programming. The results show that, under these criteria, Black members of the release cohort have the highest probability of retaining work for four quarters, followed by Hispanic and White, respectively.

Figure AC.1

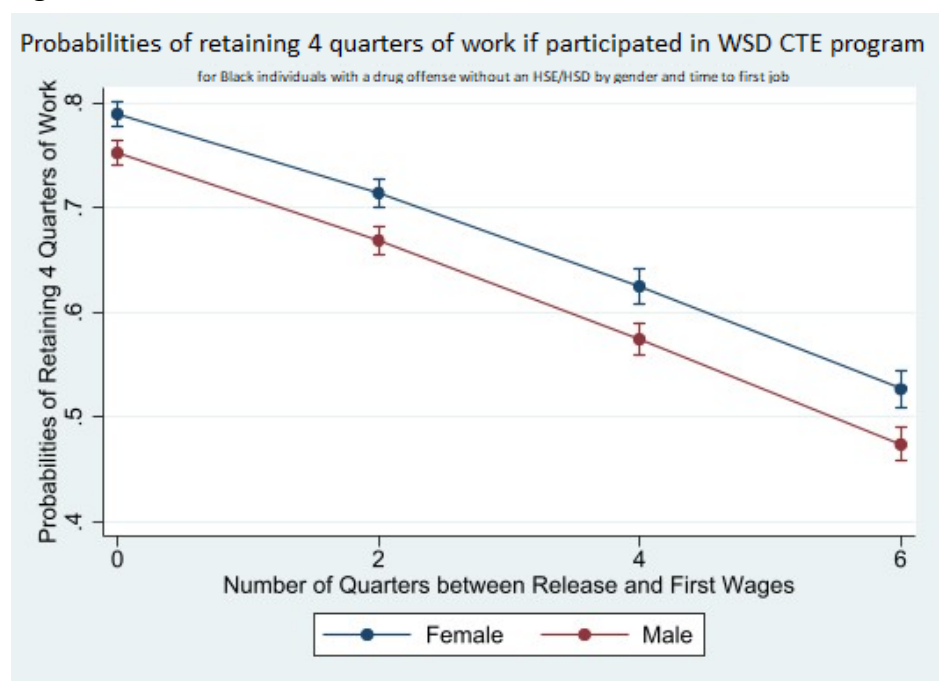


Perhaps the most striking result of this model is the relationship between job retention and the length of time it takes a former resident to secure their first employment. For every quarter after release that a former resident does not obtain their first job, the likelihood of retaining work for four quarters decreases dramatically. Figure AC.2 presents the predicted probabilities of retaining employment for four quarters for participants in WSD CTE programming for Black individuals with a drug conviction and without an HSE/HSD by gender and time to first male employment. If a Black male

former resident who had a drug conviction and no HSE/HSD does not have work after six quarters post release, the probability of retaining work for four quarters is less than .5. That is, he has a less than 50% chance of retaining employment for one full year.

Figure AC.2

The general trend supports the notion that as time increases between release and first employment, the likelihood of retaining employment for four quarters declines. Of note, women who meet these criteria are more likely to retain employment than men, and this difference between genders increases as time increases between release and first employment.



Propensity Score Matching

Propensity score matching is a method for creating comparison groups within a single sample for the sake of isolating the effects of a treatment administered to one group. In this instance, the treatment of interest is participation in or completion of WSD programming. In order to identify the effects of WSD programming on various outcomes, residents who participated in or completed WSD programming were compared to residents who were similar to WSD program participants in terms of demographics or criminal justice history, but who were *not similar* in terms of WSD participation.

For this report, WSD participants were compared to residents who did not participate in any WSD programs during the study period. WSD program completers were matched with residents who *did not complete* a WSD program. This could include residents who participated in a program, but who did not complete it. This allowed for a more rigorous evaluation of the effect of *completion* on various outcomes. Finally, WSD program non-completers were matched with non-participants. Matched samples were computed for the entire WSD participant sample, as well as for separate subsamples based on type of program participation (i.e., academic, CTE, life skills).

To make accurate comparisons, the matched group should resemble the treatment group to the greatest extent possible. One way to determine who should match with whom for the sake of statistical comparison is to utilize propensity scores. A propensity score is simply a numerical value assigned to each individual case that quantifies the individual's characteristics on key predictive variables that are specified by the researcher who is conducting the analysis. Once propensity scores are determined for all cases, the researcher can match the treatment group cases to equivalently scored comparison group cases. This results in two groups with the same number of individuals who exhibit very similar characteristics, except for WSD program participation. For this report, the matched samples were based on the following variables: gender, race, age, offense, sentence length, type of TDCJ institution, age at first arrest, number of prior arrests, number of prior incarcerations, and high school equivalency status.

Appendix D: Disciplinary Outcomes

For most comparisons of WSD participants to their matched samples, WSD participants were more likely to have a major or minor violation compared to non-participants. The research team determined that the data were too limited to investigate this pattern further. Disciplinary violations are relatively rare: 4.3% of the full release cohort (124,946) received a major violation within five years of their FY17-18 release and 9.1% received a minor violation. This means that there are not many residents with disciplinary violations across different program types. Additionally, the time frame of the study does not allow for comparisons of an individual’s propensity to violate institutional rules before and after program participation. For example, if a CIP program participant has a disciplinary violation, we cannot determine whether the violation led to CIP participation or if it occurred during or after program participation. Moreover, it is possible that participation in a WSD program increases the likelihood of disciplinary violations as residents encounter more rules and regulations as a result of the academic setting compared to non-participants. In general, program participants and completers were more likely to receive disciplinary violations compared to their matched samples. We believe that these results should be interpreted with caution.

Table AD.1: Summary of Disciplinary Violations for Full Release Cohort

Disciplinary violation	Percent	Mean
<i>Disciplinary case included a major offense</i>	4.29%	0.14
Resident had 0 major disciplinary violations	95.71%	
Resident had only 1 major disciplinary violation	2.05%	
<i>Disciplinary case included a minor offense</i>	9.07%	0.32
Resident had 0 minor disciplinary violations	90.93%	
Resident had only 1 minor disciplinary violation	2.90%	
Resident had 2 minor disciplinary violations	1.88%	

N=124,946

Table AD.2: Major Disciplinary Violations by Participation and Completion in WSD Programs

	WSD Completers	Matched Sample for Completers	WSD Non- Completers	Matched Sample for Non- Completers
All WSD programs	4.72%*** (N=47,246)	3.62%*** (N=47,246)	7.76%*** (N=9,189)	4.92%*** (N=9,189)
Academic programs	5.66%*** (N=19,177)	3.55%*** (N=19,177)	9.39%*** (N=6,477)	5.62%*** (N=6,477)
CTE programs	3.55% (N=18,580)	3.64% (N=18,580)	8.62%** (N=487)	4.11%** (N=487)
CHANGES	4.76%*** (N=23,760)	3.82%*** (N=23,760)	5.28%*** (N=18,991)	3.94%*** (N=18,991)
CIP participants	2.08%*** (N=3,805)	3.81%*** (N=3,805)	3.41% (N=10,211)	3.90% (N=10,211)

*p < 0.05; **p < 0.01; ***p < 0.001

Table AD.3: Minor Disciplinary Violations by Participation and Completion in WSD Programs

	WSD Completers	Matched Sample for Completers	WSD Non-Completers	Matched Sample for Non-Completers
All WSD programs	10.78%*** (N=47,246)	7.46%*** (N=47,246)	13.72%*** (N=9,189)	10.32%*** (N=9,189)
Academic programs	12.91%*** (N=19,177)	7.23%*** (N=19,177)	15.79%*** (N=6,477)	10.75%*** (N=6,477)
CTE programs	8.21% (N=18,580)	8.49% (N=18,580)	13.55% (N=487)	10.68% (N=487)
CHANGES	11.16%*** (N=23,760)	7.75%*** (N=23,760)	11.40%*** (N=18,991)	8.47%*** (N=18,991)
CIP participants	5.70%*** (N=3,805)	8.57%*** (N=3,805)	8.76% (N=10,211)	8.36% (N=10,211)

*p < 0.05; **p < 0.01; ***p < 0.001

Appendix E: Career and Technical Education (CTE) Courses

Below is a list of CTE courses completed by the 2017-18 release cohort sorted by most completions to fewest completions (N=25,387). Students can complete multiple courses, thus the unit of analysis is courses and not participants.

Table AE.1: Career and Technical Education (CTE) Course Completions

Course	Frequency	Percentage
OSHA Construction	7600	29.94%
OSHA General	3475	13.69%
Construction Fundamentals	2416	9.52%
Electrical Trades	936	3.69%
Construction Carpentry (Building Trades II)	902	3.55%
BCIS Word/Excel	887	3.49%
Heating, Ventilation, Air Cond. & Refrig.	693	2.73%
Telecommunications Technologies	605	2.38%
Copper Network Cabling	581	2.29%
Fiber Optic Network Cabling	581	2.29%
BCIS Outlook/Access	475	1.87%
Business Computer Information Systems I	451	1.78%
Welding	381	1.50%
Construction Fundamentals	377	1.48%
Culinary Arts	320	1.26%
Energy Management	319	1.26%
Restaurant Management	283	1.11%
Painting & Decorating	254	1.00%
Landscape Design, Construction & Maintenance	243	0.96%
Piping Trades/Plumbing	242	0.95%

Table AE.1 (cont.)

Course	Frequency	Percentage
Major Appliance Service Technology	38	0.15%
Printing & Imaging Technology	36	0.14%
Custodial Technician	24	0.09%
Introduction to Construction Careers	23	0.09%
CNC Machining	21	0.08%
Sheet Metal	21	0.08%
Culinary Arts Short Course	20	0.08%
Food Production, Management, and Services	17	0.07%
Horticulture	15	0.06%
VCP-COM and Media Systems-Literacy	11	0.04%
Plant Maintenance	8	0.03%
Building Trades I	7	0.03%
VCP-COM and Media Systems-Math	7	0.03%
Personal & Family Dev. (Skills for Living)	6	0.02%
VCP-COM and Media Systems-Tactile	5	0.02%
VCP-COM and Media Systems-Textbook Formatting	5	0.02%
Defensive Flagger	4	0.02%
HVAC Maintenance Technician	4	0.02%
Cabinetmaking/CNC	1	0.00%
HVAC Service Technician	1	0.00%

Appendix F: Industry-Based Certificates

Below is a list of industry-based certificates earned by the 2017-18 release cohort sorted from most often earned to least often earned (N=36,431). Students can earn multiple industry-based certificates, thus the unit of analysis is certificates and not participants.

Table AF.1: Industry-Based Certificates Earned

Industry-Based Certificate	Frequency	Percent
OSHA, 10-Hour Construction	9752	26.77%
Const. Site Safety	5540	15.21%
NCCER, Core	5523	15.16%
OSHA, 10-Hour Industry	3907	10.72%
ServSafe Food Handler	1101	2.75%
NCCER, Electrical Level-1	801	2.20%
NCCER, Carpentry Level-1	739	2.03%
MOS Word	602	1.65%
C-Tech Telecommunications	566	1.55%
NCCER, Heating, Ventilation & Air Conditioning, Level-1	556	1.53%
C-Tech Copper and Cabling	510	1.40%
Certified Customer Service Specialist (CSS)	479	1.31%
C-Tech Fiber Optics	441	1.21%
MOS Excel	400	1.10%
ServSafe	400	4.10%
EPA Section 608 Type I	352	0.97%
EPA Universal Refrigerant Handling	343	0.94%
EPA Section 608 Type II	326	0.89%
EPA Section 608 Type III	321	0.88%
NCCER, Welding Level-1	320	0.88%

Table AF.1 (cont.)

Industry-Based Certificate	Frequency	Percent
ASE, Painting & Refinishing (B2)	9	0.02%
OPE, Four Stroke Engine	7	0.02%
NCCER, Industrial Level-1	6	0.02%
NCCER Pipefitting Level-2	6	0.02%
Texas Dept. of Agriculture, Private Pesticide Appl. Lic.	6	0.02%
NCCER, Plumbing Level-2	5	0.01%
HVAC Preventive Maintenance Technician	4	0.01%
MOS Expert Word	4	0.01%
NCCER, Green Environment	4	0.01%
OPE, Two Stroke Engine	3	0.01%
Certified Network System Tech (CNST)	2	0.01%
NATE-ACE Service Technician	2	0.01%
NCCER, Carpentry Level-2	2	0.01%
NCCER, Electrical Level-3	2	0.01%
CMMI, Custodial Technician Level-2	1	0.00%
Certified Network Computer Tech (NCT)	1	0.00%
MOS Expert Excel	1	0.00%
NASTEC, National Appliance Service Technician Certification	1	0.00%
NCCER, Electrical Level-4	1	0.00%

Appendix G: Author Bios

Dr. Tony Love is an Associate Professor of Sociology at the University of Kentucky. He earned a PhD in Sociology from Texas A&M University in 2012. Dr. Love's areas of expertise include criminological theory, social psychology, experimental methods, and research design. His scholarship has been published in the top peer-review journals of sociology, including the *American Sociological Review*, *Social Psychology Quarterly*, *Race and Social Problems*, and *Social Problems*.

Dr. Janet Stamatel is a Professor of Sociology at the University of Kentucky. She earned a PhD in Sociology from the University of Chicago in 2004. Dr. Stamatel's areas of expertise include cross-national criminology, macro-level social change, political sociology, and quantitative statistical analysis. Her scholarship has been published in the peer-review journals *Social Forces*, *Homicide Studies*, the *European Journal of Criminology*, and *Criminology and Criminal Justice*. Additionally, Dr. Stamatel authored the book, [Global Viewpoints: Examining Crime and Justice around the World](#).

Dr. Edward Morris is a Professor of Sociology at the University of Kentucky. He earned a PhD in Sociology from the University of Texas at Austin in 2003. Dr. Morris' areas of expertise include the school to prison pipeline, the sociology of education, race, class, and gender, qualitative methods, and masculinity. His scholarship has been published in the peer-review journals the *American Sociological Review*, *Social Problems*, *Gender & Society*, *Violence Against Women*, *Sociology of Education*, and *Race and Social Problems*. Additionally, Dr. Morris is the author of two books, [An Unexpected Minority: White Kids in an Urban School](#) and [Learning the Hard Way: Masculinity, Place, and the Gender Gap in Education](#). He is also an editor, along with Dr. Freedom Blume Oeur, of [Unmasking Masculinities: Men and Society](#).

Marisa Booty is a doctoral student of sociology at the University of Kentucky and research assistant on the HEALing Communities grant to reduce opioid overdose deaths. In 2017 she earned her Master's in Health Science in Mental Health from the John's Hopkins Bloomberg School of Public Health, where she completed a thesis with the Moore Center for the Prevention of Child Sexual Abuse on recidivism outcomes for youth who have sexually offended. She subsequently worked with the Johns Hopkins Center for Gun Violence Prevention and Policy as a Senior Research Data Analyst where she engaged with research that collaborated with community organizations and law enforcement partners. Currently, Marisa is interested in the interaction of vulnerable populations with the criminal justice systems and attitudes and biases of law enforcement.

Desiree LaPeer is a doctoral student of sociology at the University of Kentucky, where she received a prestigious McNair Fellowship for her graduate studies. She specializes in studying inequalities in higher education with the ultimate goal of finding creative solutions to providing more equitable opportunities for first-generation college students. Her most recent work "We Were All Kind of By Ourselves: Understanding the Challenges Faced by First-Generation College Students in Fentress County" was published in the Lee University McNair Journal and focused on giving voice to the struggles and resilience of first-generation Appalachian college students. Desiree is now using this work as a foundation to research how socioeconomic status impacts the ways first-generation college students interact with their collegiate environment.