



**January, 2019**

## **Abstract**

The following report addresses specific questions as required by statute. The research team identified the following summations on selected subgroups.

- Those who completed Cognitive Intervention Program (CIP) during the current incarceration were 3.3% less likely to be re-arrested, 10.6% less likely to recidivate, and 8.2% more likely to obtain employment than those with no WSD programs.
- Those who completed vocational (referred to as CTE) programs during the current incarceration were 8.2% less likely to be re-arrested, 18.7% less likely to recidivate, and 9.0% more likely to obtain employment than those with no WSD programs.
- Those who completed academics during the current incarceration were 3.0% less likely to recidivate and 4.2% more likely to obtain employment than those with no WSD programs.
- Those who completed CHANGES during the current incarceration were 9.0% less likely to recidivate and 5.6% more likely to obtain employment than those with no WSD programs.
- Those who completed multiple programs (two or more) averaged to be 7.3% less likely to be re-arrested, 19.0% less likely to recidivate, and 6.9% more likely to obtain employment than those with no WSD programs.
- Of those ex-offenders who maintained employment over a one year period, WSD students met or exceeded the average wage increase based on US Dept. of Labor 2014 statistics for Texas for employees in like jobs.
- The primary conclusion of the research team can be summarized as: The sample of students who received WSD services saw their academic achievement go up, their job skills increased, and they were better able to find and retain a job upon release.

# Part A - WSD programming and outcome measures

## Introduction

The following report outlines the 2019 findings for Texas Education Code, Chapter 19, Sec. 19.0041, which requires a biennial evaluation and report assessing the effectiveness of Windham School District (WSD) programming. Texas Tech University College of Human Sciences Institute for Measurement Methodology, Analysis, and Policy (TTU), led by Dr. Eugene Wang, Ph. D., conducted extensive data analysis of WSD programming data (Program Evaluation Report) as it related to the offenders who released from the Texas Department of Criminal Justice (TDCJ) in the 2013 and 2014 school years (SY 2013, SY 2014), which encompasses releases from 9/1/12 – 8/31/14. TTU's data analysis serves as the foundation of this report. For reasons of uniformity and pragmatics, the Legislative Budget Board (LBB) definition of recidivism was used. The 2015 Legislative Budget Board's (LBB) report to the 84<sup>th</sup> Legislature entitled, *Statewide Criminal and Juvenile Justice Recidivism and Revocation Rates*, states, "To calculate a recidivism rate, a group of individuals exposed to a treatment or sanction are followed during a certain period. The number in the group who return to criminal or delinquent activity within the specified time period divided by the total number in the group is used to determine the recidivism rate. The typical follow-up period for individuals in the criminal or juvenile justice system is three years, the period in which the largest percent of offenders are likely to recidivate." (p. 43). This same time horizon standard is applied to all relevant sections hereafter. The research methodology employs some of the most current statistically sound processes available, as well as expertise in behavioral outcomes research. In addition, the research team utilized the most sophisticated software at their disposal to optimize the data mining process. Because of this expertise and increased access to data sources, the research team could encompass parole data, arrest records, wage data, and more relevant and timely employment data.

WSD programming and outcome measures were examined 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

WSD program attendance data were used to identify correlations between WSD programming and outcome measures. Program participation is comprised of those who attended and completed WSD programs.

Methodology:

The study focuses on approximately 135,227 distinct offenders released in SY 2013 and SY 2014. Of those 135,227, post-release information was available for 53,441 ex-offenders. The data mining methodology used by the team factored for previously uncontrollable issues such as timing between arrests, reasons for re-arrest, crime(s) of reconviction, and violent/non-violent crimes to produce valid data that was issue specific.

The resulting data is applied to the following subgroups: Career and Technical Education (CTE, also referred to as vocational), high school equivalency certificate (HSEC, previously referred to as the GED<sup>®</sup>), and life skills classes (Changing Habits and Achieving New Goals to Empower Success (CHANGES) and Cognitive Intervention Program (CIP)). In addition, those who attained an industry certification through CTE programming also yielded positive results.

Insofar as the report addresses post-release employment as the primary focus, the data represented herein may differ from many previous reports. The parameters that yielded the data herein, however, were purposeful and intentional, and shaped for this specific report. The most easily discernable point may reveal a smaller number of study subjects. The two primary differences in the data mining process for these study subjects include information germane to the current incarceration period and only course completions during the current incarceration as related to program outcomes for this cohort. Both of these differences relate to program exposure (often referred to as dosage). First, multiple components of the Program Evaluation Report focus directly on the training the offender received while incarcerated and on the relationship of this training to post-release employment. Many ex-offenders may have hours of enrollment(s) and/or course completions in other programs prior to the cohort incarceration period; some of those ex-offenders may have received some program exposure more than one decade prior to the cohort's release dates. For this reason, it is often difficult to ascertain if the post-release employment is related to training received during the cohort's current incarceration or from a previous incarceration. Analysis solely regarding the current incarceration period provides a much clearer, and therefore more relevant, snapshot of the training's role in post-release employment. Secondly, the data-mining deals with course completion vs. course participation. Again, this element is related to program exposure. Although many offenders do complete programs, there are also many who never finish a course (often referred to as non-completers). The reasons for these non-completions are numerous, and often out of the offender student's control. These non-completers display program exposure in varying degrees. For instance, some students may only have a minimal number of hours in a vocational course while other non-completers may have over six months in a course but were unable to finish for whatever the

reason(s) (i.e., offender released from TDCJ prior to course completion; offender transferred to a different TDCJ facility for a parole voted program prior to course completion; etc.). To that end, the data cannot easily establish at which time and/or exposure threshold the training is determined to be the most effective. By focusing specifically on those who complete any given course, the data presents a more focused course exposure (i. e. dosage) as it relates to post release success. In short, the exclusive use of course completions provide a higher likelihood of revealing results that are more easily and directly linked to training during an offender's most recent incarceration.

In addition to the dosage issue, the report addresses post release success within a three-year period, a time horizon that is relatively current. Data involving the current incarceration and current course completion is much more consistent with the LBB's parameters as opposed to trying to capture an offender's training that may be several years old. One other significant factor to consider in the data mining parameters has to do with the ever-increasing vocational and technological advances. This thought may perhaps best be explained through illustration. For instance, if an offender received training in an automotive technology course over 10 years prior to release, there is a high likelihood the most current electronic systems, diagnostic tools, and content knowledge were not even available at the time of his/her CTE enrollment. If said offender cannot find a job in the auto repair industry because he/she lacks the training in those newer systems, the training would be deemed in this report as not effective. The training may indeed be ineffective, but only because of the time that had elapsed between the training and the offender's release. However, if that same offender receives training in the current incarceration there is a much higher likelihood the offender will have exposure to the most current technology available at the time, thus increasing the chance for post-release employment. In this vein, the training is much more relevant to the time horizon in question. As a result of these more specific and relevant data mining processes, the effectiveness of WSD programming and training as they relate to post release success provides a clearer and more focused analysis than some previous studies.

Much of this report addresses post-release employment. In order to better establish accurate and verifiable employment comparisons, the research team used employment information from the US Department of Labor. This employment information was matched by the job codes as entered by parole personnel to employment information of similar job codes of all persons regardless of incarceration history. The job codes used by parole personnel to record the type of employment the offender had are from the Dictionary of Occupational Titles (DOT). Consequently, the ex-offender may/may not be compared to an individual who was never incarcerated. However, the US Department of Labor information was limited to Texas for FY 2014 (the compatible date range for the cohort). Insofar as this report specifically addresses post-release employment, the focus obviously extends beyond recidivism. Recidivism is often viewed as a cost-avoidance issue. Post-release employment, in addition to being arguably the best indicator of successful reentry and reintegration, is a positive economic contribution for the ex-offender, as opposed to strictly a cost-avoidance. This positive economic contribution speaks directly to the missions of WSD and TDCJ: successful assimilation upon release. Formulas to determine the re-circulation of a dollar are complicated and often vary in results. Economists' opinions differ as to how much a single dollar earned contributes to a local economy. There are various economic models

and results that attempt to determine the impact of what a dollar earned has on any given economy. However, all indicate that one dollar earned typically generates more than one dollar toward positive economic contribution. Therefore, successful post-release employment not only positively impacts recidivism, the positive economic contributions of the released offender are undeniable. In essence, the report approaches post release employment not as a cost avoidance issue, but rather a positive economic contribution perspective. This report attempts to capture the success and positive contribution of ex-offenders as they assimilate after their release.

As with any analysis, there are certain limitations and assumptions that merit consideration. The same is true for this report. Arguably the most significant assumption deals with a “control” group. Typically, the target population (in this case, WSD students) is compared to a similar group who did not experience the variable (in this case, WSD programming). Since the WSD student is identified as a high-risk offender based on his/her demographics, there is not a readily available compatible comparison group. To account for this comparison difficulty, the research team employed a method known as Propensity Score Matching (PSM). This technique has been established as methodologically sound and valid, and it serves the ensuing analysis well. Essentially, PSM establishes several baseline characteristics (age at first arrest, race, and days served for current offense to name but a few). Each ex-offender who is identified in this cohort as a WSD student who has completed a program is assigned a “score.” These ex-students were then “matched” based on the baseline characteristics with a non-WSD student sharing the same baseline characteristics - a process known as the “nearest neighbor technique” (Coca-Perralon, 2006), thus establishing the pseudo-control group for this report. In doing so, the study reflects a one-to-one pairing. Most notably, however, this type of matching best allowed for the outcomes to be a direct reflection of programming versus non-programming effects. Insofar as the number of individuals who participated in WSD programming is significant, the number of individuals who could be “matched” in the PSM may seem disproportionately small. However, the specificity of the PSM technique establishes a high degree of confidence and reliability. The understanding of this PSM technique is fundamental to the content of much of this report as it establishes the statistical validity of the outcomes. Terminology in the report often refers to “matched” and “non-matched.” This nomenclature simply refers to the two population's resultant from the PSM process, thereby establishing the control group element against which the target population is measured. The term “rate” is used throughout and is determined as the percentage difference between the groups being compared. PSM is employed for many data elements, but the PSM findings may not be presented on all questions herein where sample size would have a direct impact on the statistical significance.

In addition to PSM, the research team employed many other data mining practices including Random Sampling, Decision Trees, Classification Trees, and Whole Group Comparisons. Arguably the most noted additional practice employed in this report is Odds/Ratio methodology. Odds/Ratios were used to predict the job retention probabilities for the cohort. Odds/Ratio identifies the association between an outcome (in this case job retention), and exposure (in this case, the various conditions of the cohort [i. e. inmate type, education, gender, etc.]). The association is expressed as a likelihood of an outcome rather than a recording of an outcome. In other words, Odds/Ratio is used as a predictor of rather than a

recorder of phenomenon. This methodology actually goes beyond merely recording an outcome; it establishes a predictability factor to the relationship between an ex-offenders WSD programming and the likelihood of post-release success. These aforementioned techniques may be further explained in the applicable sections in order to provide context to the results.

Another significant assumption deals with sample size. Because of the enhanced data access, the sample size is more robust than many previous reports. The volume of the sample size gives more data, making the trends more reliable and the predictors more accurate. In specific reference to WSD, this large sample size gives a more relevant and accurate picture of the effects of its programs involving released offenders from a two year cohort, thereby providing a type of linear picture.

Lastly, and arguably most significantly, the level of educational achievement has been shown to influence offender behavior(s) and outcomes in numerous studies. As a result, those offenders who have not achieved a HSEC inherently present a higher risk student. In simple terms, they are the ones who need the services the most. This fundamental thought gives an over-arching perspective to all question responses insofar as offenders who have not participated in any WSD programs, in general, have not displayed the need for services. Moreover, since 59% of the cohort had at least one WSD course completion during the current incarceration, comparisons between the various subgroups of program participation may/may not reflect identical characteristics. Attempts to isolate impacts against a disproportionate non-WSD group may display trends but may not display definitive conclusions. This assumption further substantiates the need for PSM and Odds/Ratio methodology.

An important limitation deals with sample selection. Insofar as parole data was used, only ex-offenders on the current parole register at the time were selected for post-release employment related analysis. The advantages of using parole employment and wage data (as opposed to Social Security employment and wage data) far outweigh the negative impacts of the sample selection.

While there may be other assumptions and limitations, these few conditions give a brief, yet necessary, foundational understanding that provide better context to the findings hereafter. The selection rationales, coupled with the sophisticated research methodology, clearly indicate WSD and the research team have attempted to glean the most relevant and substantive results possible. In doing so, it is the belief that the outcomes herein provide the most accurate and comprehensive picture of WSD programs provided to this cohort during the current incarceration as they relate to ex-offenders' reintegration success.

### *Programmatic Information*

WSD programs may be grouped into three primary areas:

1. Academic (includes all Literacy classes)
2. Vocational (includes full length and short/specialized courses)
3. Life Skills (only includes CIP and CHANGES).

These three program areas will be discussed in greater detail in various report sections; however, the framework for WSD programs is important in that the data often differs from program area to program area.

#### *Academic:*

WSD academic programs are required by both policy and statute for eligible offenders who have not attained a high school diploma or HSEC. As such, these offenders are not placed in academic programs by choice. Mandated attendance in this instance often carries a certain degree of attitudinal inherency; consequently, every offender may not necessarily want to attend school.

WSD academic programs are conducted in an open enrollment manner. The number of students in academic programs differs daily because new offenders may be enrolled every day. These factors, discretely and collectively, may contribute to the disparity in data.

The WSD also provides supplemental academic programs at designated campuses for students under age 22 that are designed to enhance literacy, leadership, and employability skills, and are referred to as Lead & Achieve Academy. These programs are funded by the Title I, Part D, and Subpart 1 grant. Students in these courses are concurrently enrolled in another academic, Life Skills or CTE course. The program is referred to as Title 1 in this analysis.

#### *Life Skills:*

The WSD life skills programs CHANGES and CIP serve unique offender concerns through an affective, or thought process, approach. As such, there are certain assumptions associated with this type of program that stem from the address of the thought patterns of the offender(s).

The CHANGES program targets offenders whose anticipated release date is within two years. Participation in the CHANGES program will also satisfy a mandatory condition of early parole release known as FI3R. This program requires that eligible offenders within two years of release be enrolled and typically spans approximately three months. The enrollment pattern generally allows for three to four cycles in a school year. The enrollment pattern for CHANGES is, in general, open. Therefore, the population of each class is relatively fluid. As a pre-release program, the CHANGES program addresses various areas that may present unique challenges for the offender as he/she re-prepares for life outside of prison. For many offenders, this program provides insights into a world not seen for many years. The program makes no distinction in academic ability level, so there may be students on the first grade reading level in the same class as students who have college degrees.

The CIP directly addresses the criminal thinking patterns and seeks to “re-channel” the thought process behind the criminal behavior. This course generally spans about three to four months. Much like CHANGES, there is little, if any, distinction in ability level. In fact, the course functions best with a wide diversity of abilities and ethnicities. CIP is an intense course wherein students are encouraged to

think through behaviors and the consequences of those behaviors. By doing so, the offender is facilitated to realize the outcomes of his/her behaviors. The offenders take a pre-test and post-test, known as the Criminal Sentiment Scale, to evaluate the changes in the individual thought processes from the outset of the course to the end of the course. The Criminal Sentiments Scale (Andrews & Wormith, 1984) is a 41-item paper-and-pencil measure divided into three subscales. Subscale one measures Attitudes Toward the Law, Courts, and Police. Subscale two measures Tolerance for Law Violation, and subscale three measures Identification With Criminal Others. Items are scored using a five point Likert-type scale, one (or A) = strongly agree to five (or E) = strongly disagree, and scaled in positive and negative directions. This course also serves as a required component of the GRAD program (gang renouncement) but is taught in that instance in the GRAD environment.

*Vocational:*

Career and Technology Education (CTE), commonly known as vocational programming, is offered at multiple TDCJ facilities, but not every class is offered at every unit simply because of space, demand, and expense limitations. WSD offers over 40 vocational courses. The course offerings are intended to fit the profile of the host unit (i. e. shorter courses at facilities that house offenders with shorter sentences). There are certain realistic and pragmatic issues that may preclude offenders from participation. For example, offenders with a history of DWI convictions are not placed in a truck driving class. WSD and TDCJ personnel work closely together to determine appropriate vocational placement for offenders. The intent of this rigorous screening placement goes to the core of TDCJ's and WSD's mission: public safety.

All vocational courses are competency based and focus on relevant job skills. Offenders who complete these courses are often placed in related TDCJ jobs on units throughout Texas. The CTE courses are generally semi-closed enrollment, meaning the enrollment pattern may/may not allow for students to enter at random points in the course. CTE students who do not have a high school diploma or an HSEC must be concurrently enrolled toward such as the schedule and class availability allows. CTE courses encompass formal classroom knowledge; as such, these courses typically require a requisite educational attainment level. This level is not necessarily absolute and differs with the occupational area.

Full length CTE courses for this cohort typically spanned about six months and met six hours a day. Since not every trade is offered on every unit, offenders often temporarily transfer to take various courses. This transfer process is coordinated through WSD and TDCJ. As such, offenders must be transferred to custody-based compatible units. Offenders housed at state jail, Substance Abuse Felony Punishment (SAFP) facilities, and transfer facilities do not typically transfer for CTE purposes since the sentence length on these types of facilities is much shorter and course availability is limited. The number of short courses is currently very fluid, as WSD is expanding this arena on a continual basis.

All CTE courses afford students the opportunity to attain at least one industry recognized certification. For example, the National Center for Construction Education and Research (NCCER) is widely recognized in construction related areas to be the common competency standard. WSD offers multi-

level industry certification through NCCER in numerous vocational courses. To illustrate this process, an offender who attains the NCCER industry certification in WSD's Construction Carpentry class can go with this certification in hand to a company that builds houses, and the potential employer can know with confidence that the ex-offender has ably demonstrated the skills necessary to perform the related tasks in the same manner as a potential employee who was not incarcerated. There are multiple additional agencies (e. g. Automotive Service Excellence [ASE], *SERV Safe*) through which industry certification is offered - each intended to provide WSD vocational students enhanced opportunities for post-release employment.

# Question Responses

## 1. Institutional Disciplinary Violations

Although institutional disciplinary violations are not directly related to re-entry experiences, the offender 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. By definition, major discipline violations are regarded as more serious. As a result, this type of violation often carries some type of privilege sanction, a loss of days previously earned as credit toward sentence length (commonly referred to as “good time”), and/or a reduction in time-earning status, and/or a demotion of offender classification status. The disciplinary data collection is based on an annual cumulative history. Insofar as behavior often evolves and program length often differs, the annualizing of the data is the most appropriate collection method. Moreover, annualizing the data gives a much more consistent reflection. In short, every offender is looked at using the same time horizons, thereby making the group much more homogenous and the measurements more valid. Arguably the most notable assumption regarding the disciplinary violations is that all disciplinary violations throughout the offender’s history are included in the data collection. Certain disciplinary violations apply exclusively to school; therefore, offenders not enrolled in school are not subject to these specific disciplinary violations. The institutional disciplinary results reflect the mean and for offenders throughout his/her cumulative incarceration. Additional calculation of the median, as well as the mean, somewhat mitigates the skewed results (commonly known as outliers). The data regarding institutional discipline produced data regarding major disciplinary incidents, minor disciplinary incidents, and time lost (reported as days lost).

The research team found there to be no relationship between institutional disciplinary incidents, either major or minor, and WSD participation. The team deduced that the low frequency of incidents was the probable reason for the relationship absence. The annualized mean for minor disciplinary incidents reflected 1.4 incidents throughout the incarceration period(s), thus illustrating the low frequency. Major disciplinary annualized mean incidents reflected 0.54 incidents throughout the incarceration period(s), making the major disciplinary incidents throughout an offender’s incarceration(s) statistically insignificant. Days lost as a result of major disciplinary incidents reflected 8.95 days lost as a mean. The same frequencies, when calculated as median scores reflect even lower rates. Minor disciplinary incidents occurred at a .48 frequency, major disciplinary incidents occurred at .00 frequency, and time lost was calculated to be 0.0 days. In summary, the research team found there is no statistical relationship between WSD programs and TDCJ institutional disciplinary violations.

## 2. Subsequent Arrests

### *Statistical Analysis:*

Approximately 52% of the cohort experienced subsequent arrests (hereafter referred to as re-arrest(s)). While this percentage may seem high, only 27% of those re-arrests were re-incarcerated for a new offense.

PSM was utilized in order to gain relevant detail of post-release data. Offenders who complete academic programming are matched to a correspondingly similar group. Further detail of the various matched subgroups identified some distinct points of comparison regarding re-arrest rates as depicted in the following graphs.

The data also revealed a significant positive re-arrest relationship to program completion. Individual program data for CIP and CTE reflected a lower re-arrest relationship than academic programs. The data revealed no difference in the CHANGES students and the non-students to whom they were matched. Academic programming did not reflect a positive relationship to re-arrest.

### *Re-arrest summary:*

The data reveals that completion of a WSD course is of significant merit. Not surprisingly, the CIP data reflects a positive outcome related to the course intent to re-shape the typical offender's thought patterns. It is important to note that academic programs may/may not reflect an immediate positive impact regarding re-arrest when viewed in isolation. However, the academic program serves as a literacy foundation for the other programs by providing offenders with literacy tools to better experience optimal benefit of these additional WSD programs. Perhaps the most relevant data showed that completion of more than one WSD program had a significant positive impact. Moreover, when a program in each of the four areas (Academic, CTE, CHANGES, and CIP) was completed successfully, the re-arrest rate was substantially lower than any of the other comparison groups.

### 3. Subsequent Confinements (Re-Incarceration)

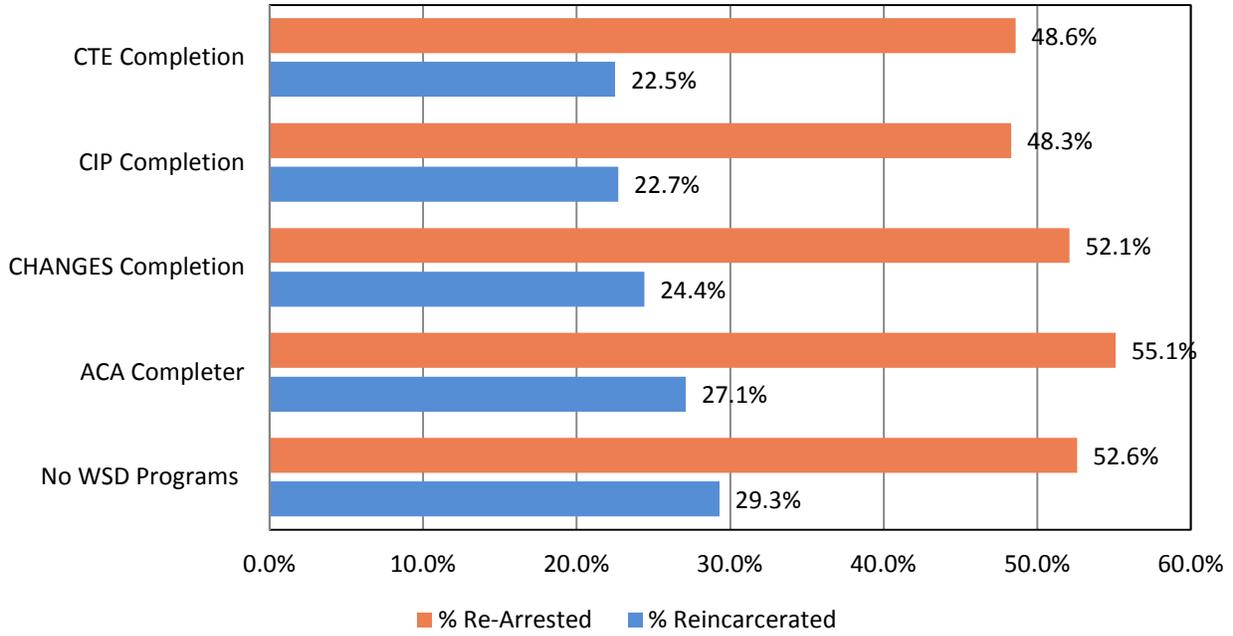
#### *Statistical Analysis:*

Many of the same trends displayed in re-arrest data were also reflected in re-incarceration data, albeit in different rates. However, the rates were somewhat lower for re-incarceration than for re-arrest. In other words, fewer ex-offenders were re-incarcerated than re-arrested. Only one of the measured areas showed a less than positive relationship (academic completions 27.9%: 27.4%). The following graph using PSM illustrates that those offenders who completed WSD programs trended toward a positive relationship regarding re-incarceration. Offenders who completed a CTE course were re-incarcerated at a significantly lower rate than the matched group. The data reflects that those who completed academic or CHANGES were also re-incarcerated at a lower rate than those who did not complete a WSD program.

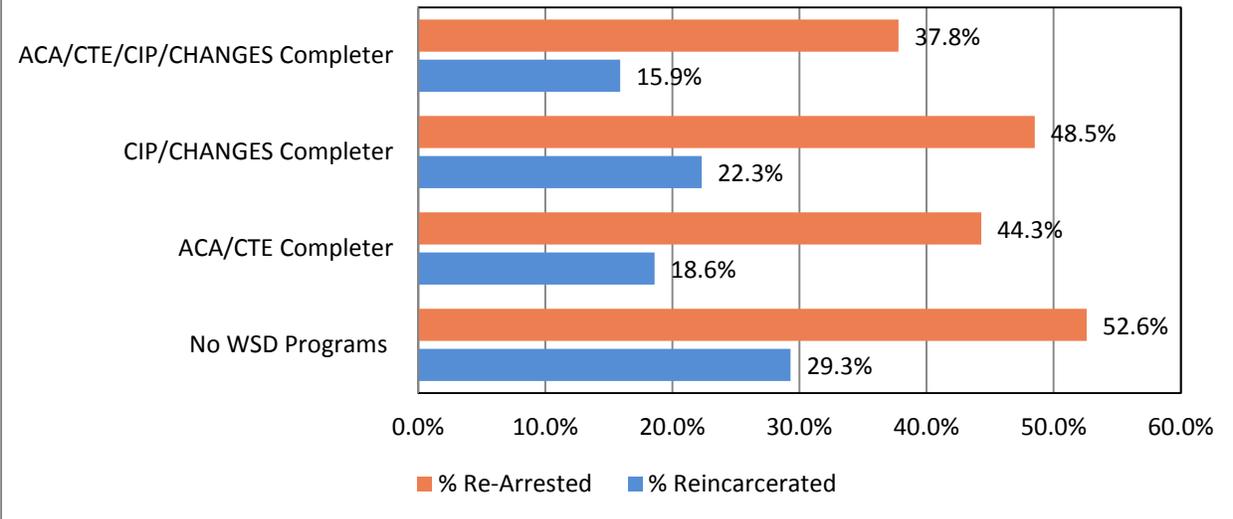
#### *Re-incarceration summary:*

In general, offenders who participated in WSD programs displayed clear indicators as to the positive impacts of the program completion. As with the re-arrest data, academic programming may not reflect full impacts when viewed in isolation. Also consistent with re-arrest results is the positive relationship between multiple course completions and re-incarceration. As with the re-arrest trend, those who completed a program in each of the four areas showed a significantly lower re-incarceration rate.

### Re-Arrest and Re-Incarceration % by Individual Program and No WSD Program for Offender Groups



### Re-Arrest and Re-Incarceration % by Program Dosage and No WSD Program for Offender Groups



#### 4. Cost of Confinement

The LBB currently calculates the cost of confinement for correctional institutions. The Windham School district cost per day of \$8.75 for FY2014 (the cohort on which this report is based) was reported by the LBB in the Uniform Cost Report to the 84<sup>th</sup> 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 literacy levels, which roughly correlate to public school grade levels: Literacy one (roughly correlates to public school grade levels one through five (grade school)), Literacy two (roughly correlates to public school grade levels six through eight (middle school/junior high)); Literacy three (roughly correlates to public school grade levels nine through twelve (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 eighth grade student in his/her sixth month of the eighth-grade year. The Test 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.

A significant difference between WSD and the typical public school is the school schedule itself. The following comparison chart illustrates some of the major differences in the school schedule. Students attend a single three hour bloc and teachers are assigned two blocs of classes per day.

<b>Academic Student Schedule Comparison</b>	
<b><i>Public School</i></b>	<b><i>WSD</i></b>
Approximately 180 days	Approximately 210 days
7 hours per day	3 hours per day
Multiple 1 hour blocs	Single 3-hour bloc

To normalize the data, the research team addressed this variance of school schedule as hours of instruction, as opposed to days of instruction. The academic progress was then determined by taking 180 days of instruction for seven hours a day. This calculation resulted in a standard reference point of 1,260 hours of instruction to represent a year of academic instruction. By doing so, values can then be used to compare students' academic progress in various educational settings (i.e. public school, juvenile correctional education, and/or adult correction education).

The research team analyzed over 18,000 TABE results of the cohort. 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.) and hours of instruction reported in 100's (0-199, 200-299, etc.) This methodology

allowed visibility of multiple factors that somewhat individualized scores. The team's results were reported as median scores to mitigate outliers.

The research team's employment of the 1,260-hour model reflected significant annual grade gains. The patterns and trends that emerged from the data are consistent across all ability levels. Due to the broad ability level, making a single and all-encompassing statement about academic progress is difficult. For example, a non-reader who learns to read may progress multiple grade levels quickly while a student who has a very high TABE score may be deficient in only one area of math and show little progress.

The 1,260-hour yearly instructional model results revealed a median grade gain of over four grade levels for each testing area analyzed (Reading, Math, Language and Composite), which translates to a median grade gain of over two grade levels based on WSD's 630-hour school year instructional model.

These progress rates, however, were not necessarily the most revealing data. The team's sophisticated data mining methodology produced data that yielded some distinct trends and patterns that may serve as valuable predictors, as well as information for programming. One of the variables that predicted substantive progress was initial academic level. In short, the lower the initial academic level of a student, the more progress he/she made in the 1,260-hour model. However, the team noted that while initial academic level was, indeed, important, the number of instructional hours to which he/she is exposed is arguably the most important factor. In each level (0.0-0.9, 1.0-1.9, etc.), progress was steady and continual throughout the year. Consistent with the "lower student makes more progress" observation, the lower academic levels showed the most significant progress while the highest academic level (11.0-12.9) showed very little/no progress. The most significant gains were consistently seen in the first 600 hours of instruction. After such, progress continued, but at a less significant rate. These trends held true across all ability levels and all subject areas. At first glance, this observation may seem counter-intuitive, but the observation is indeed quite logical. For example, if a student reads at a very low level, he/she has vast room for improvement and typically needs improvement in all areas. In contrast, if a student reads at a very high level, the room for improvement is marginal, and the deficiency may be limited to a specific sub-area on which he/she needs improvement. As stated in the most recent WSD Annual Performance Report, the typical WSD student functions at approximately the sixth grade level. As such, the substantive rates of annual progress strongly suggest consistent academic instructional focus as measured by the TABE.

## 6. High School Equivalency Examination Passage

WSD requires students to display a proficiency level in all areas of the TABE for eligibility for HSEC testing. The content on the HSEC test is commensurate with the required proficiency level. Many offenders are incarcerated in TDCJ for less time than is required to attain an achievement level high enough to test for the HSEC. Consequently, determination of optimal paths to the HSEC is critical to student success. These predictors were one of the focal points of the team's research.

The research team used decision trees to path the data along race/ethnicity characteristics, age ranges, programmatic options, and academic achievement (ability) levels. This level of detail provided distinct patterns regarding HSEC pass rates. Historically, WSD has a HSEC pass rate from 78%-83%.

Several factors impacted HSEC passage. However, the data yielded several consistent trends. These correlations hold across race/ethnicity determinants and academic achievement (ability) levels and the correlations tend to be more pronounced for younger students. That over-arching profile serves as a backdrop, of sorts, for further analysis.

The research team analyzed almost 18,000 TABE results for this cohort. This cohort includes academic completers and non-completers in the current incarceration. All of the TABE results were analyzed, with or without an academic completion. From an academic ability perspective, in general, students who exhibited academic proficiency levels in either Language, Math, or Composite scores of 8.0 or greater reflected at least a 70% likelihood of HSEC passage. For students with a max TABE composite score < 8.7, with relation to demographic profiles, the age of an offender student at the start of his/her incarceration appeared to have great significance. One other interesting piece of data revealed that approximately 35% of these WSD students received an HSEC.

## 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 occupational training in over 40 vocational programs. Many students complete vocational programming in more than one course.

The number of courses offered has changed throughout the years, as well as the nature of the vocational training programs. The comprehensive data mining methodology produced a wide range of vocational programs that have been offered throughout the years, as the cohort showed participation and/or completion in vocational training in courses other than those currently offered. The average number of participation hours differed greatly from course to course. There was a significantly large standard deviation in all courses, indicating that the participation hours of each and every course were widely dispersed. This large standard deviation makes it difficult to make single assumptions about the vocational training experience in and of itself. Subsequent question responses discuss these courses as they relate to post-release outcomes.

Most vocational programs also offer additional certification known as industry certification. This industry certification requires knowledge and skill consistent with the workforce outside of prison. By offering this industry certification, the offender is better able to compete for jobs post-release. Approximately 37% of the PSM matched CTE student offenders in this cohort attained an Industry Certification along with a CTE course completion during the current incarceration.

Academic and Life Skills programs provide valuable skills that compliment vocational training to enable the offender to compete and function better in the post-release workplace. Academic skills often provide a baseline (i.e., HSEC) that makes one eligible for employment, and Life Skills programs emphasize “soft skills” necessary for obtaining and sustaining employment.

8. The Kind of Employment the Person Obtains on Release

The research team identified over 20 types of employment obtained by paroled offenders upon their release. The data was based on the Dictionary of Occupational Titles (DOT) codes. The association of employment to DOT code is obtained and input by the parole officer based on wage earning documentation and direct offender interview with the parole officer, with additional information obtained from the employer where necessary. The types of employment based on those DOT codes are as follows:

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

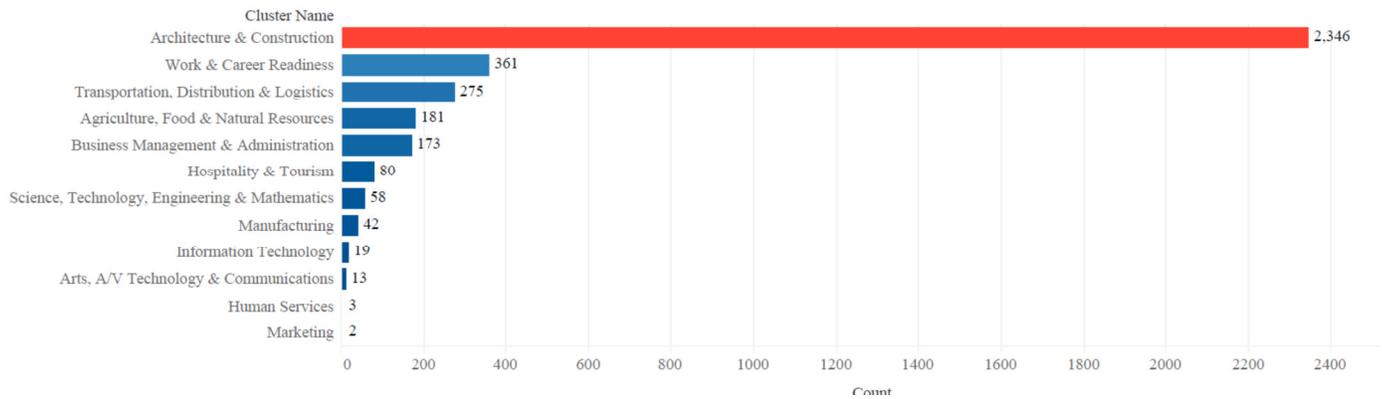
9. Whether the employment was related to training

To extend the post-release employment discussion, the next logical area looks at whether the released offender 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 used random sampling of the employed parolee cohort and determined the areas of employment obtained upon release. This finding was then cross-matched to individual offender’s WSD vocational training while he/she was incarcerated. The resultant data revealed that overall, approximately 42% of the individuals who had completed at least one WSD vocational course had obtained post-release employment related to his/her WSD vocational training.

A graphic detail of the types of employment related to training is shown below:

Employment Related to Training



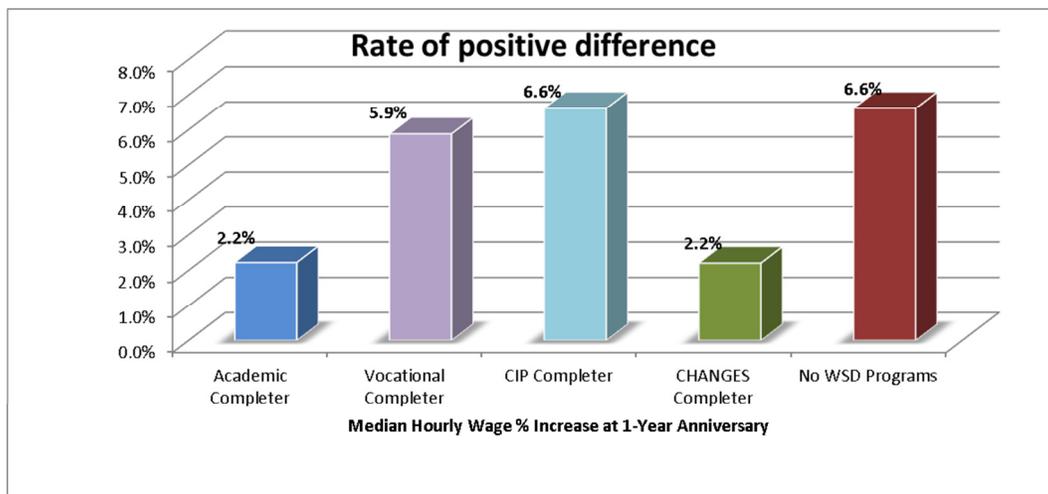
10. The difference between the amount of the person’s earnings on the date employment is obtained following release and the amount of those earnings on the first anniversary of that date

Obtaining employment upon release presents unique challenges for an offender. Moreover, sustaining employment is equally challenging, if not more so, than obtaining initial employment. Numerous studies have found positive correlations between sustained employment and reincarnation. Analyzing wage data, employment information, and time horizons is integral to program evaluation as well as forecasting future WSD programming.

Overall, approximately 48% of ex-offenders on parole obtained post-release employment with an average length of time until employment of about 86 days. Approximately 86% of that group was still employed one year later (referred to hereafter as the anniversary date). The research team viewed those meeting the one-year time horizon independently by WSD program participation and in aggregate.

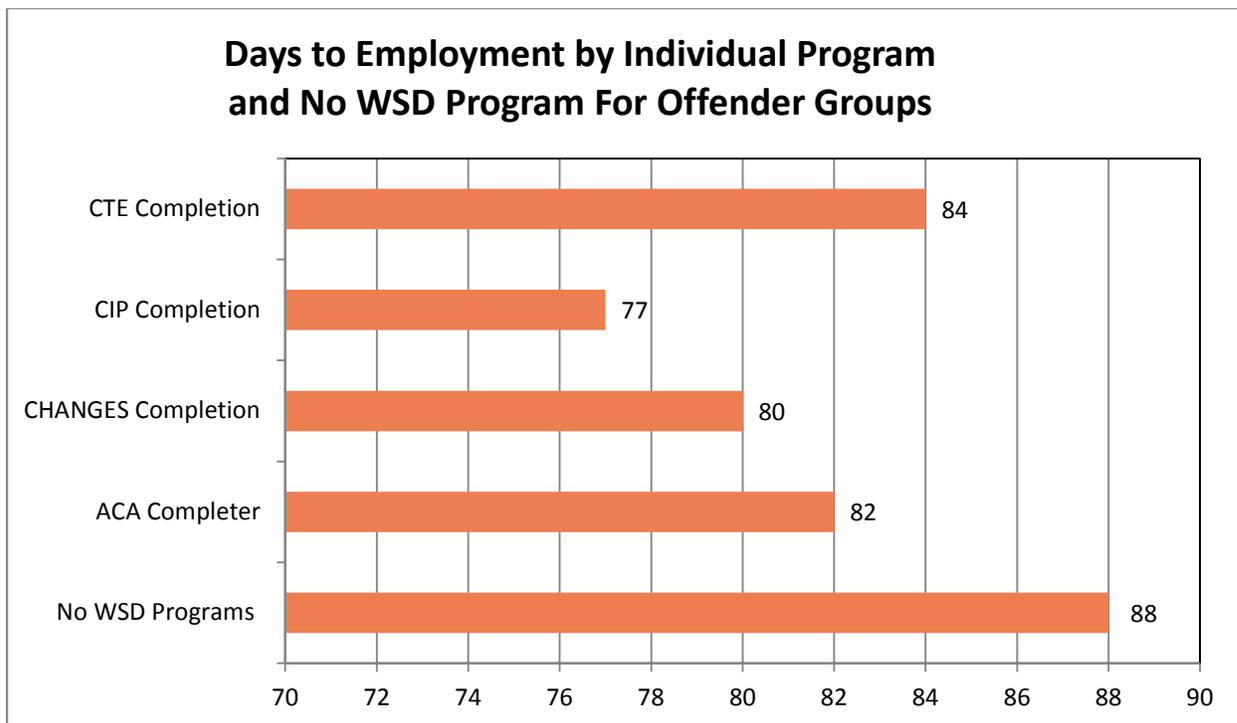
Specific wage data is also critical in the evaluation of post-release employment. The overall median hourly wage for those offenders obtaining employment (irrespective of WSD involvement) was about \$13.60. Although monthly median income was not specifically analyzed by the research team, extrapolation of the hourly wage determines a median monthly wage of the same group of approximately \$1,400-\$1,700. The research team detailed the data in order to establish monetary relationships to the various WSD programs/subgroups. The detailed statistics are reflected in the following graph.

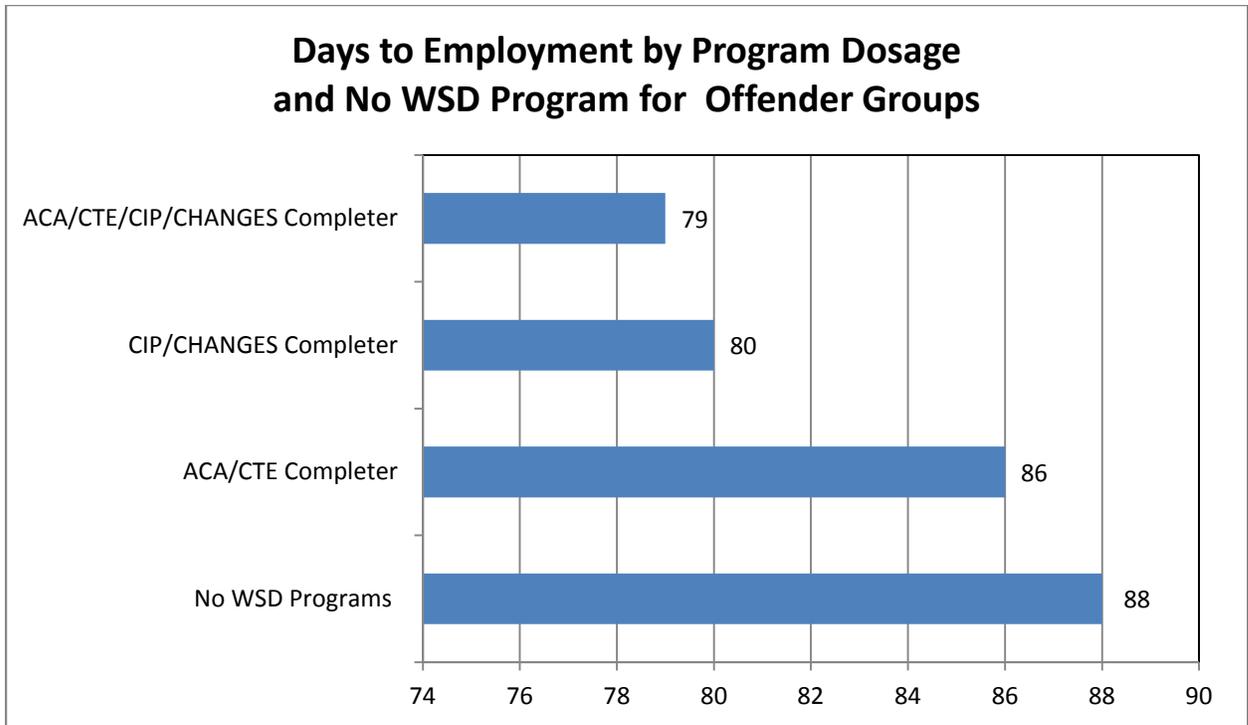
The resultant data reflects that those paroled offenders who obtained post-release employment and participated in no WSD programs were employed at about the same initial hourly wage as those who participated in WSD programs. However, analysis of wage increase rates on the anniversary date can be measured with the available data, and that analysis yielded interesting results. These rates of increase are of significant note in that they help construct a linear picture of the post-release employment experience. The rate of first year wage increase is depicted by program in the graph below.



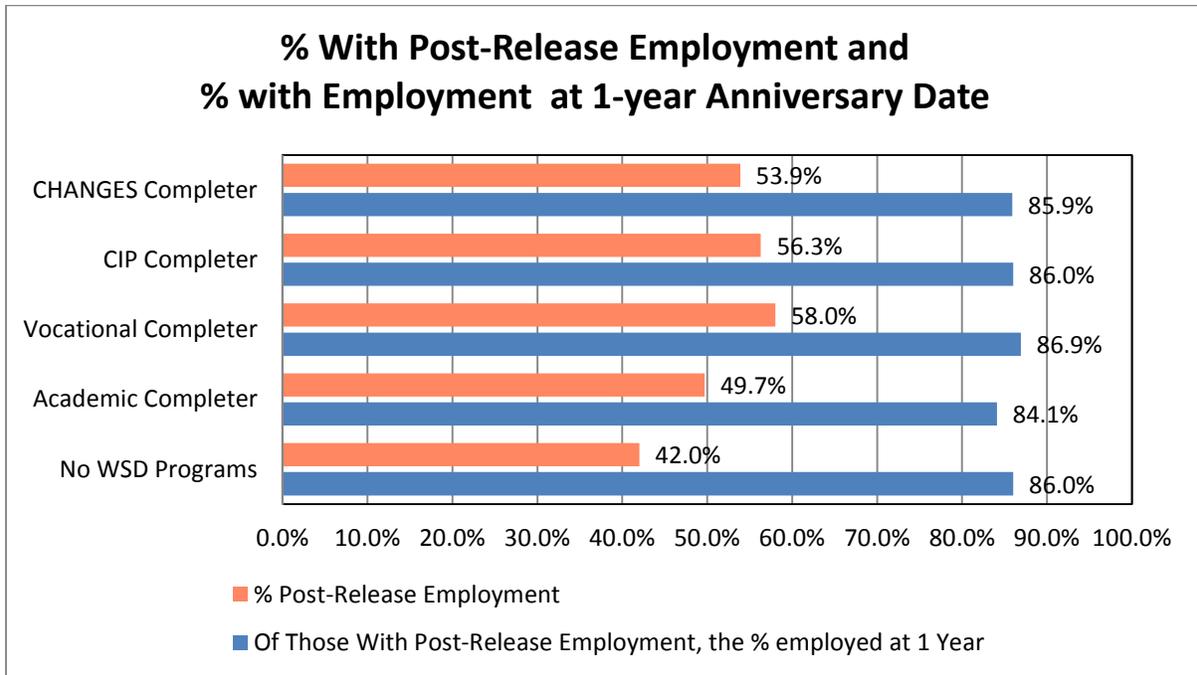
The employment results illustrate four salient-points with respect to post-release employment and WSD programs:

- All programs considered offenders who completed one or more WSD programs during the current incarceration obtained initial post-release employment in fewer days than those who did not participate in WSD programming. Those who completed CIP showed 77 days until initial employment (approximately seven days quicker than non-WSD offenders). CHANGES completers found initial employment within approximately eight days quicker than non-WSD offenders. CTE completers exhibited 84 days until initial employment. Consistent with previous data, those offenders who completed more than one WSD program generally found employment in significantly fewer days.





- Offenders who completed WSD programs in the current incarceration obtained initial post-release employment at a slightly higher rate than those who did not participate in WSD programming. In all measured subgroups, those who participated in WSD programs were employed at a higher rate (ranging from 44.5% to 60.5%). Approximately 42% of the offenders who did not complete a WSD program in the current incarceration obtained initial employment.
- Of those who were employed at the anniversary date, WSD completer's, in general, were more likely to be employed and retained employment more often. This positive relationship better provides an optimal framework for the ex-offender to avoid re-incarceration. Research has demonstrated that a positive employment history is a prime indicator that a released offender will not return to prison. This positive work history is often reflected as a cost-avoidance. Perhaps, more importantly, a positive work history provides a better opportunity for the ex-offender to assimilate more effectively. See the graph below of initial employment percentage and percent still employed at the anniversary date.



- In multiple groups depicted in the wage related graphs (Median Hourly Wage of Offenders At Initial Post-Release Employment Compared to Same Offenders Employed at one Year), those ex-offenders who participated in WSD programs experienced a wage increase rate at or near the same rate as those who did not participate in WSD programs at the one year anniversary. In order to provide a more meaningful context, it is important to remember the wage comparisons and retention comparisons involve comparison of ex-offenders to those who may/may not have been incarcerated since the comparison group is established by the US Department of Labor averages for Texas. Compensation consultant Towers Watson forecast (as stated in a September 8, 2014 *USA Today* article) that in 2014 (a year that might realistically encompass this cohort), annual pay raises were anticipated at approximately a 3% average. The yearly wage rate increases reflected by WSD completers could easily be viewed as commensurate to non-felons' annual employee wage increase rates after one year of continual employment.

In summary, the research team found that WSD participants demonstrated positive employment and wage-earning experiences upon release and through the first year of release. These positive patterns are consistent with research and exhibited profiles of ex-offenders who do not return to prison.

## 11. The retention factors associated with the employment

To extend the previous question response, the research team lastly examined employment retention. For the sake of consistency, the anniversary date established previously was used as the time horizon to frame employment retention. Overall, approximately 48% of the paroled offenders were employed post-release. Of that group, numerous ex-offenders could not be evaluated for various reasons (e. g. unknown ending date of employment, parole case closed, death). Of those paroled offenders whose employment could be accurately evaluated, approximately 86% were employed at the one-year anniversary date.

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

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

## Part B - Program Changes

This program evaluation indicates that 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-arrest and re-incarceration data exhibited a positive relationship for offenders who completed WSD programs.
- Program completion data reflects a positive relationship to program and outcome measures for the report.
- The data indicates that exposure to more than one WSD program reflects positive post-release experiences in employment, wages, and job retention.
- Over 40% of the cohort who were employed had jobs related to his/her training while incarcerated.
- Wage increases during the first year employment cycle exhibited greater gains for all WSD programs than those individuals who did not participate in any WSD programs.
- Academic progress for WSD students reflected substantial growth in all tested areas.

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

- WSD educators were given opportunities to enhance their personal teaching strategies, use of computer-assisted learning resources, reading curriculum strategies, and efforts at developing leadership characteristics in their students through staff development events.
- Literacy teachers were provided with a curriculum focused on improving student reading levels: Reading Horizons. The WSD literacy curriculum incorporates employability skills and labor market research, integrating academic and vocational programs enabling students to set goals for employment upon release.
- The WSD collaborated with the Flippen Group to develop the Lead & Achieve Academy (LAA) at selected sites for students age 21 and under, focusing on leadership, literacy, and employability soft skills. Young offenders participating in this program build skills needed for academic success, personal development and future employability. Participation in the program provides an incentive for offenders to behave in positive ways during and after confinement.
- The WSD expanded educational opportunities for offenders by continuing Elective Personal Enrichment Courses (EPEC) for year-round school. Classes are focused on giving offenders

skills and certificates supporting employability and successful reentry into society. Classes are voluntary and open to all minimum custody offenders in the general population. WSD continues to work with Acceleron to update curriculum and add new courses as needed.

- The CIP and CHANGES curricula were re-written in consultation with Dr. Robert Morgan, a nationally-recognized expert and Chair of Psychology at Texas Tech University. This program evaluation and revision reflects WSD's desire and commitment to employ a contemporary and dynamic approach to Life Skills programming.
- CTE programming continues to focus on and expand industry certification opportunities for offenders. These industry certificates provide WSD vocational students enhanced opportunities for post-release employment. All courses were reviewed and, where possible, revised to add additional industry related certifications.
- A comprehensive revision of the CTE course curriculum resulted in expanded opportunities for vocational students.
- WSD has increased CTE course offerings since 2013. The course offering for males has increased approximately 41%, and for females by 100% (11 vocational opportunities for females in 2013 : 22 vocational opportunities for females in 2018).
  - The number of females who have attained a CTE course completion certificate has increased by over 400% over the same time period.
  - All course offerings are designed to better equip the offender student with current training while he/she is incarcerated to make the post-release employment process more effective.
- The WSD is actively building partnerships and career connections with industry professionals to create successful employment opportunities for ex-offenders.
- Expanded partnerships with workforce boards, and worked collaboratively on grants to tailor training for job availability in their service area.
- WSD partners with the TDCJ to provide opportunities for offenders to gain valuable information prior to release. These events provide current job information to help soon-to-be-released offenders successfully transition into viable employment.

The *WSD Biennial Evaluation and Report* (TTU) report can be viewed in its entirety at [www.wsdtx.org](http://www.wsdtx.org).