

2014

Evaluation of the Windham School District Correctional  
Education Programs – SY2010

Submitted by

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## Disclaimer

The research described in this paper was conducted for the Windham School District by researchers from the Department of Criminal Justice and Criminology at Sam Houston State University. Funding to support the research efforts were provided by the District for this project; however, this does not imply the District's endorsement or concurrence with any statement or conclusions contained herein.

## Summary of Findings

During the 83rd legislative session (2013), the Windham School District (WSD) was directed to evaluate the effectiveness of its correctional education programs as per S.B. 213 Sec. 19.0041. This report focuses on an examination of outcomes associated with the 71,063 offenders who were released during the 2009-2010 school year (hereafter referred to as “SY 2010”). Comparisons are made between the 46,702 offenders who participated in WSD Academic programs, and/or Vocational training programs, and/or Life skills programs during any period of incarceration (hereafter referred to as “WSD offenders”), and the 24,361 offenders who have never participated in any WSD programs (hereafter referred to as “non-WSD offenders”). SY 2010 spanned the time period of September 1, 2009 through August 31, 2010. The intent of the current report is to respond to the requirements outlined in S.B. 213 Sec 19.0041 and replicate the analytical approach utilized in an earlier report, *Evaluation of the Windham School District Correctional Education Programs, 2012*, produced by Sam Houston State University (SHSU). This preface summarizes key findings further discussed in this report.

As noted, in SY 2010, 71,063 offenders were released from the Texas Department of Criminal Justice (TDCJ). Of these offenders, 46,702 offenders (65.7%) participated in Academic programs, and/or Vocational training programs, and/or Life skills programs while incarcerated. The Academic programs examined herein include Literacy I, II, and III, English as a Second Language (ESL), Special Education, Title I and Lit I Reading programs (hereafter “Academic”), Career and Technical Education (CTE) programs (hereafter “Vocational”), and Life Skills programs (hereafter referred to as “CHANGES,” and “Cognitive Intervention Program” or “CIP”, both of which are Life Skills programs). For the purposes of this study, program participation was measured as attendance in any one or more of these WSD programs during any incarceration period (i.e., current or prior incarceration).

Of all 71,063 offenders released from TDCJ during the SY2010, 46,702 offenders participated in WSD programs during the current or prior period of incarceration. WSD offenders were older at the time of release, a thirty-six year old male as compared to a thirty-three year old male and more likely to be African American than Hispanic or White. Non-WSD offenders were more likely to be White. WSD offenders were more likely to have been previously incarcerated and to have served longer sentences in comparison to non-WSD offenders who were incarcerated for the first time (55.5%). Given the significant difference between the groups in incarceration history, WSD offenders appear to be a higher risk population than non-WSD offenders.

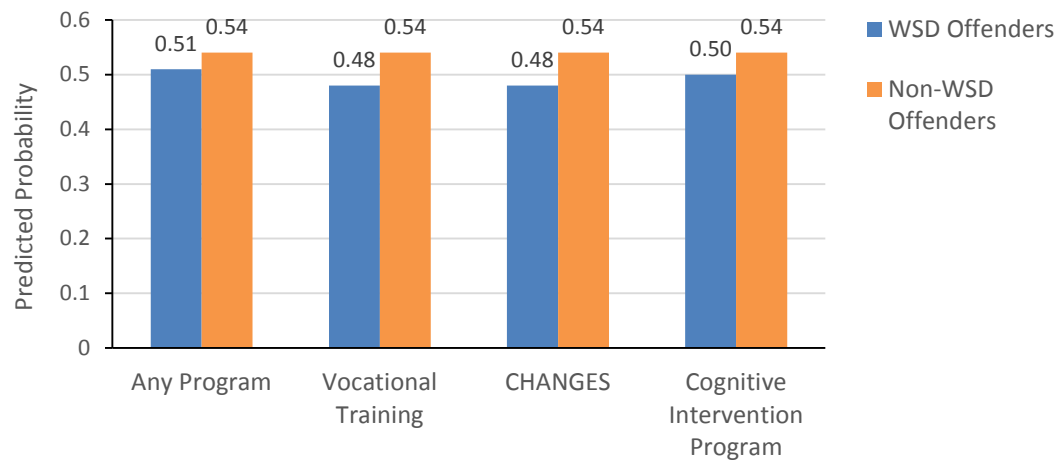
The majority of offenders who participated in a WSD program completed program requirements. For example, of the 30,785 Academic program offenders, 23,583 offenders (or 77% of Academic program participants) completed Academic program requirements. Of the 13,834 offenders who participated in WSD Vocational training, 10,632 offenders (or 77% of Vocational training participants) completed the Vocational training program. Some WSD offenders participated in more than one program during the course of the current, or prior, incarceration period. Analysis indicated that of the 46,702 WSD offenders, 42.6 percent of offenders participated in a single program, 32.3 percent of offenders participated in a total of two WSD programs, 18.4 percent of offenders participated in a total of three WSD programs, and 6.6 percent of offender participated in all four WSD programs.

Analyses demonstrated a number of key benefits of participating, and more importantly completing, WSD programming:

- Greater attendance in WSD academic programs were related to lower institutional disciplinary violation rates for WSD offenders. For offenders who attended more than 1075 hours of academic hours, institutional disciplinary violation rates were lower than non-WSD offenders.

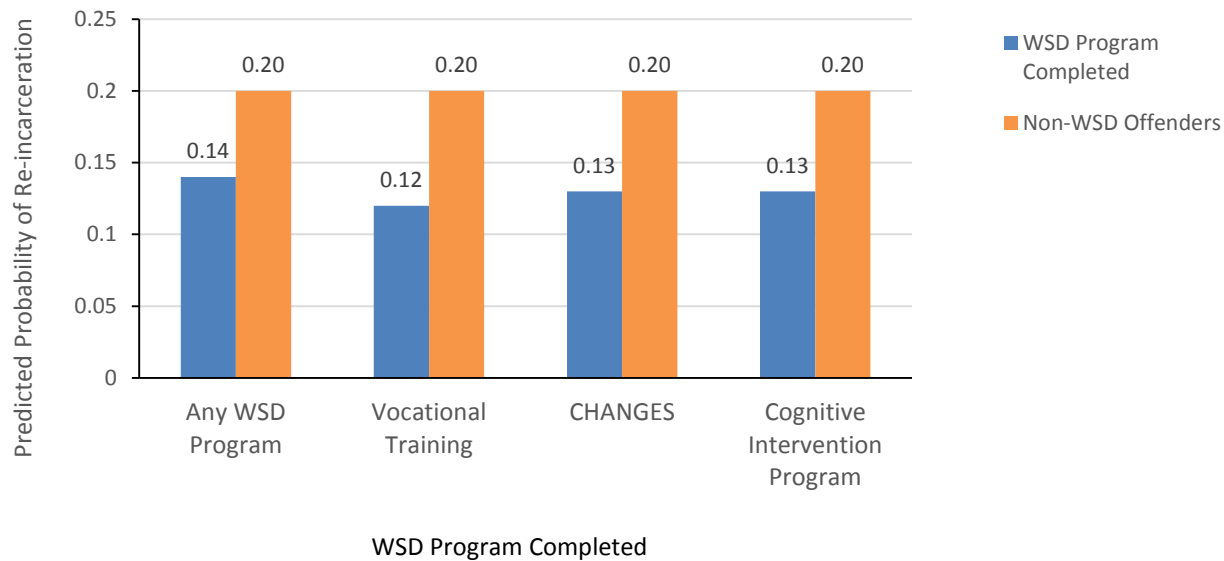
- WSD Vocational training participants had a lower average institutional disciplinary violations rate as compared to non-WSD offenders. WSD offenders who *completed* Vocational training had an even lower rate of institutional disciplinary violations.
- For both CHANGES and CIP, WSD offenders who completed the respective programs demonstrated a lower institutional disciplinary violation rate than WSD offenders who attended but did not complete the program, as well as non-WSD offenders.
- As shown in Figure 1, the predicted probability of re-arrest was significantly lower for offenders who participated in WSD programming compared to offenders who did not participate. Similarly findings were demonstrated among offenders who participated in the highest number of academic education hours. The strongest combined program effect was found among offenders who participated in both vocational and life-skills programming, or cognitive programming.

**Figure 1. Predicted Probability of Re-Arrest by WSD Program Participation, SY2010 Release Cohort**



- Offenders who completed WSD programming were significantly less likely to be re-incarcerated in comparison to non-WSD offenders. On average, WSD offenders had almost half the likelihood of re-incarceration as compared to a non-WSD offender. Specifically, WSD offenders had a 12—14 percent likelihood of re-incarceration as compared to the 20 percent likelihood of re-incarceration among non-WSD offenders. See Figure 4 replicated from the report below. Similar to re-arrest trends, offenders who participated in a combination of vocational and cognitive or life-skills programming were least likely to be re-incarcerated. Those offenders who completed a greater number of academic programming hours were also less likely to be re-incarcerated.

**Figure 4. Predicted Probability of Re-Incarceration by WSD Program completion vs. non-WSD, SY 2010 Release Cohort**



- Offenders who improved their educational abilities through WSD programming (i.e., reading level) were less likely to be re-incarcerated, especially if a 6<sup>th</sup> grade reading level or higher was attained. Improved literacy also had a significant impact on the offender's ability to obtain and retain employment.
- With further regard to employment, 14,940 offenders in the SY 2010 cohort attended vocational training. Of those, 6,762 offenders were employed during the first year subsequent to their release, and 6,286 offenders (93 percent) were employed in positions that were directly related to the Vocational training received.
- Notably, offenders who completed either WSD Vocational training, non-WSD Vocational training, or both Vocational training programs were most likely to report at least one quarter of earnings. Offenders who completed WSD Vocational training alone, or in combination with College Vocational training had significantly higher first quarter reported earnings, and overall average quarterly reported earnings as compared to non-completers and the College Vocational training participants.
- On average, offenders who retained employment had higher educational achievement scores, were somewhat more likely to have achieved an industry certification, and were significantly more likely to have a high school diploma or GED.

## Table of Contents

<b>1</b>	<b>Purpose</b> .....	<b>8</b>
<b>2</b>	<b>Vocational Programs in Corrections</b> .....	<b>10</b>
2.1	Type of Vocational Training Services Provided by the WSD.....	10
2.1.1	Example of Vocational Training Provided: The Ferguson Unit.....	13
2.2	Vocational Training and Institutional Misconduct .....	14
2.3	Vocational Training and Recidivism.....	14
2.4	Vocational Training and Employment .....	15
2.5	Notable Trends in Vocational Education at WSD .....	16
<b>3</b>	<b>Life Skills Programming in Corrections</b> .....	<b>17</b>
3.1	Life Skills Programming provided by the WSD .....	18
3.2	Life Skills Programming and Institutional Misconduct .....	19
3.3	Life Skills Programming and Recidivism .....	19
3.4	Notable Trends in the WSD Life Skills Programming.....	21
<b>4</b>	<b>Overview and Description of SY 2010 Release Cohort</b> .....	<b>22</b>
<b>5</b>	<b>Findings</b> .....	<b>23</b>
5.1	WSD Correctional Education Program Participation .....	23
5.2	Offender Outcomes: Institutional Disciplinary Violations, Re-arrest, and Re-incarceration .....	24
5.2.1	Institutional Disciplinary Violations .....	25
5.2.2	Re-arrest .....	28
5.2.3	Re-incarceration .....	33
5.3	Educational Outcomes: GED Attainment and Educational Advances .....	38
5.3.1	GED Attainment.....	38
5.3.2	Educational Advances: Reading Levels .....	40
5.3.3	Educational Advances and Academic Program Attendance.....	42
5.4	Employment .....	43
5.4.1	Employment Obtained and Vocational Training Participation or Completion.....	43
5.4.2	Employment and Earnings Subsequent to Release .....	44
5.4.3	Earning Levels and Factors Associated with Employment Retention .....	44
5.5	Cost of Confinement.....	47
<b>Appendix – SY 2011 as of December 2013</b> .....		<b>48</b>
<b>1</b>	<b>Overview and Description of SY 2011 Release Cohort</b> .....	<b>49</b>
<b>2</b>	<b>Findings</b> .....	<b>50</b>
2.1	WSD Correctional Education Program Participation .....	50
2.2	Offender Outcomes: Institutional Disciplinary Violations and Educational Outcomes .....	52

2.2.1 Institutional Disciplinary Violations ..... 52  
2.2.2 Educational Outcomes: GED Attainment and Educational Advances ..... 55  
2.3 Educational Advances: Reading Levels ..... 57

# 1 Purpose

During the 83rd legislative session (2013), the Windham School District (WSD) was directed to evaluate the effectiveness of its correctional education programs as per S.B. 213 Sec. 19.0041. This report focuses on an examination of outcomes associated with the 71,063 offenders who were released during the 2009-2010 school year (hereafter referred to as “SY 2010”). Comparisons are made between the 46,702 offenders who participated in WSD Academic programs, and/or Vocational training programs, and/or Life skills programs during any period of incarceration (hereafter referred to as “WSD offenders”), and the 24,361 offenders who have never participated in any WSD programs (hereafter referred to as “non-WSD offenders”). SY 2010 spanned the time period of September 1, 2009 through August 31, 2010. The intent of the current report is to respond to the requirements outlined in S.B. 213 Sec 19.0041 and replicate the analytical approach utilized in an earlier report, *Evaluation of the Windham School District Correctional Education Programs, 2012*, produced by Sam Houston State University (SHSU).

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In addition to presenting academic literature reviews related to correctional education programming, this report presents findings related to participation in Academic programs, Vocational training, and/or Life skills programming regarding the following offender outcomes:

- Institutional Disciplinary Violations
- Subsequent Arrests
- Subsequent Confinements
- Educational Achievement
- Retention Factors associated with Employment
- Cost of confinement
- High school equivalency examination passage
- Differences 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
- Whether the employment was related to training
- The kind of training services provided
- The kind of employment the person obtained upon release.

The data related to program participation and offender demographics were provided to Sam Houston State University (SHSU) researchers by WSD. Data noting institutional disciplinary violations occurring during the current incarceration were provided by TDCJ Executive Services to WSD, who subsequently provided this information to SHSU. To fulfill the requested examination of offender outcomes upon release (i.e., recidivism and employment rates), a minimum three year follow up period was utilized. Recidivism was measured by re-arrest and re-incarceration in a TDCJ facility. Data



identifying subsequent arrests (hereafter referred to as “re-arrest”) were obtained from the Texas Department of Public Safety and included an arrest for an offense that occurred subsequent to the offender’s SY 2010 release date, but prior to August 31, 2013. The offense must have met a minimum threshold of a Class B misdemeanor. Data indicating re-incarceration (hereafter referred to as “re-incarceration”) were provided by the TDCJ Executive Services Division to WSD, who subsequently provided this information to SHSU researchers. Re-incarceration data utilized the same three year follow up period as examined for re-arrest. Data on employment outcomes included earnings reported on a quarterly basis beginning with the first quarter of employment during the first year subsequent to the SY 2010 release date, continuing through the fifth quarter of employment to allow for four full quarters of employment. These data were provided by the Texas Workforce Commission (TWC) to WSD, who subsequently shared these data with SHSU researchers.

## 2 Vocational Programs in Corrections

WSD Offenders participating in vocational training courses may engage in one of 35 career and technical education programs to prepare for possible careers in the labor market upon release. Courses are located in various facilities throughout the State of Texas. The primary focus of vocational training programs in WSD is to identify jobs that are in high demand with a reasonable wage, and train offenders in these industries accordingly. To ensure that vocational programs remain current, WSD adds new courses, modifies existing courses, and discontinues irrelevant courses. Where appropriate, WSD assists offenders in obtaining industry certification. This approach increases an offender's probability of successfully gaining employment when they are competing for jobs with non-offenders upon release.

A number of programming updates occurred during SY 2010, wherein six new vocational classes were added to provide an increased breadth of vocational programming. In addition to a variety of training opportunities, vocational training also provides offenders with the ability to secure industry certification. Specifically, WSD assists eligible offenders with obtaining industry certification by providing financial assistance for testing fees. To ensure offenders are successful in their certification attainment, vocational training curricula are specifically designed to meet industry standards. Offenders who successfully complete the coursework are job-ready.

Vocational courses offered by the WSD utilize teachers certified by the Texas Education Agency's State Board for Educator Certification. To provide offenders with sufficient knowledge in a particular technical field and ensure curricula remains adequately stringent, WSD typically hires teachers who themselves are industry-certified and recently employed within that industry. This type of targeted hiring can also facilitate industry networking between WSD employees that serves to aid offenders with locating employment upon release.

### 2.1 Type of Vocational Training Services Provided by the WSD

The Windham School District was divided into four regions prior to SY 2010. Each of these regions had a mixture of vocational classes and short vocational classes. Vocational classes range from full-length (regular) courses (600 hours) to short courses (up to 200 hours). Short courses are offered periodically to prepare offenders for specific prison jobs or to provide basic occupational skills training for offenders with imminent release dates. See Table 1 for the number of programs by region, and Table 2 for number of programs by facility.

**Table 1. WSD Vocational Training Courses by Region, SY 2010**

	Number of Units with Vocational Programs	Number of Units with Short Courses	Number of Vocational Programs <sup>1</sup>
North Texas	16	1	46
Gulf Coast	18	0	43
West Texas	16	0	38
South Texas	19	2	38
Total	69	3	165

In SY 2010, 69 facilities operated vocational training programs with a total of 10,835 students<sup>2</sup>. Three of those facilities operated both regular vocational and short vocational classes. Offenders in vocational training typically

<sup>1</sup> Some facilities do not operate vocational classes due to the physical limitations of the facilities.

<sup>2</sup> The offenders enrolled in vocational classes at facilities with regular vocational and short vocational classes were included in the overall number of offenders enrolled in vocational classes.

participate in classes for six hours per day, five days per week. They are matched with technical courses in which they have experience prior to incarceration, as well as technical courses in which they have an interest. Although WSD does not discriminate against which technical courses an offender can learn, priority is placed upon those offenders who have not previously participated in vocational training.

**Table 2. Type of WSD Vocational Courses offered by Region and Facility, SY 2010**

Facility	Location	Vocational Courses Offered
<b>Region: North Texas</b>		
Beto	Tennessee Colony	Bricklaying/Stone Masonry, Construction Carpentry, Mill & Cabinetmaking, Piping Trades/Plumbing, Welding
Boyd	Teague	Automotive Specialization (Transmission), Construction Carpentry, Landscape Design, Construction & Maintenance
Cole State Jail	Bonham	Electrical Trades, Heating, Ventilation, Air Conditioning & Refrigeration
Eastham	Lovelady	Automotive Specialization (Engine Performance)
Ellis	Huntsville	Computer Maintenance Technician
Estelle	Huntsville	Bricklaying/Stone Masonry, Business Computer Information Systems II, Horticulture, Painting & Decorating
Ferguson	Midway	Culinary Arts, Diversified Career Preparation (Food Service), Electrical Trades, Mill & Cabinetmaking, Small Engine Repair, Technical Introduction to Computer-Aided Drafting, Welding <i>Short Courses : Equine Science (Horse Shoeing)</i>
Hobby	Marlin	Automotive Specialization (Brakes), Business Computer Information Systems II, Painting & Decorating
Hodge	Rusk	Custodial Technician, Landscape Design, Construction & Maintenance, Personal & Family Development
Holliday	Huntsville	Landscape Design, Construction & Maintenance
Huntsville	Huntsville	Business Image Management & Multimedia
Hutchins State Jail	Dallas	Business Computer Information Systems I, Technical Introduction to Computer-Aided Drafting
Michael	Tennessee Colony	Automotive Specialization (Electronics), Piping Trades/Plumbing, Sheet Metal
Powledge	Palestine	Auto Collision Repair & Refinishing Technology, Painting & Decorating, Welding
Telford	New Boston	Construction Carpentry, Plant Maintenance, Small Engine Repair
Wynne	Huntsville	Computer Maintenance Technician, Diesel Mechanics, Small Engine Repair, Welding
<b>Region: Gulf Coast</b>		
Central	Sugarland	Truck Driving
Clemens	Brazoria	Bricklaying/Stone Masonry, Computer Maintenance Technician, Construction Carpentry
Darrington	Rosharon	Automotive Specialization (Air Conditioning & Heating), Heating, Ventilation, Air Conditioning & Refrigeration
Gist State Jail	Beaumont	Business Computer Information Systems I, Technical Introduction to Computer-Aided Drafting
Goodman	Jasper	Business Computer Information Systems II

Hamilton	Bryan	Building Trades I, Introduction to Construction Careers
Henley	Dayton	Business Computer Information Systems I
Hightower	Dayton	Construction Carpentry, Heating, Ventilation, Air Conditioning & Refrigeration
Jester III	Richmond	Business Computer Information Systems II
Lewis	Woodville	Electrical Trades, Heating, Ventilation, Air Conditioning & Refrigeration, Mill & Cabinetmaking
Luther	Navasota	Automotive Specialization (Brakes), Electrical Trades, Landscape Design, Construction & Maintenance, Welding
Lychner State Jail	Humble	Business Computer Information Systems I, Technical Introduction to Computer-Aided Drafting
Pack	Navasota	Construction Carpentry, Heating, Ventilation, Air Conditioning & Refrigeration
Plane State Jail	Dayton	Business Computer Information Systems, Construction Carpentry, Landscape Design, Construction & Maintenance
Polunsky	Livingston	Automotive Specialization (Transmission), Custodial Technician, Heating, Ventilation, Air Conditioning & Refrigeration, Mill & Cabinetmaking
Ramsey I	Rosharon	Automotive Specialization (Air Conditioning & Heating), Automotive Specialization (Brakes), Diversified Career Preparation, Mill & Cabinetmaking
Stringfellow	Rosharon	Construction Carpentry, Technical Introduction to Computer-Aided Drafting
Terrell	Rosharon	Diversified Career Preparation, Electrical Trades, Welding
Region: West Texas		
Allred	Wichita Falls	Automotive Specialization (Air Conditioning & Heating), Small Engine Repair, Bricklaying/Stone Masonry
Clements	Amarillo	Automotive Specialization (Brakes), Electrical Trades, Horticulture
Dalhart	Dalhart	Construction Carpentry, Piping Trades/Plumbing
Daniel	Snyder	Automotive Specialization (Brakes), Construction Carpentry
Formby State Jail	Plainview	Construction Carpentry, Electrical Trades
Havins	Brownwood	Business Computer Information Systems I
Jordan	Pampa	Electrical Trades, Major Appliance Service Technology
Lynaugh	Fort Stockton	Automotive Specialization (Air Conditioning & Heating), Electrical Trades, Piping Trades/Plumbing
Neal	Amarillo	Business Computer Information Systems II, Construction Carpentry, Plant Maintenance
Roach	Childress	Construction Carpentry, Electrical Trades, Heating, Ventilation, Air Conditioning & Refrigeration, Landscape Design, Construction & Maintenance
Robertson	Abilene	Custodial Technician, Heating, Ventilation, Air Conditioning & Refrigeration, Small Engine Repair
Sanchez State Jail	El Paso	Construction Carpentry, Heating, Ventilation, Air Conditioning & Refrigeration
Smith	Lamesa	Electrical Trades, Mill & Cabinetmaking, Piping Trades/Plumbing
Wallace	Colorado City	Automotive Specialization (Brakes), Automotive Specialization (Engine Performance), Construction Carpentry

Ware	Colorado City	Construction Carpentry, Landscape Design, Construction & Maintenance
Wheeler	Plainview	Business Computer Information Systems I
Region: South Texas		
Briscoe	Dilley	Construction Carpentry, Electrical Trades, Landscape Design, Construction & Maintenance
Connally	Kennedy	Construction Carpentry, Electrical Trades, Piping Trades/Plumbing
Crain	Gatesville	Business Computer Information Systems I, Construction Carpentry, Personal & Family Development
Dominquez State Jail	San Antonio	Computer Maintenance Technician, Technical Introduction to Computer-Aided Drafting <i>Short Course: Plant Processing (Warehouse Equipment Operations)</i>
Garza East	Beeville	Business Computer Information Systems I
Glossbrenner	San Diego	Business Computer Information Systems I
Halbert	Burnet	Business Computer Information Systems I
Hilltop	Gatesville	Business Image Management & Multimedia, Diversified Career Preparation (Food Service)
Hughes	Gatesville	Custodial Technician, Piping Trades/Plumbing
Lopez State Jail	Edinburg	Construction Carpentry, Electrical Trades
McConnell	Beeville	Custodial Technician
Mountain View	Gatesville	Business Computer Information Systems II, Computer Maintenance Technician, Landscape Design, Construction & Maintenance <i>Short Courses: VCP-COM and Media Systems-Literacy, VCP-COM and Media Systems-Textbook Formatting, VCP-COM and Media Systems-Tactile</i>
Murray	Gatesville	Custodial Technician
Ney	Hondo	Business Computer Information Systems I
Segovia	Edinburg	Business Computer Information Systems I
Stevenson	Cuero	Construction Carpentry, Electrical Trades, Piping Trades/Plumbing
Torres	Hondo	Electrical Trades, Heating, Ventilation, Air Conditioning & Refrigeration
Travis County State Jail	Austin	Business Computer Information Systems I, Business Image Management & Multimedia, Landscape Design, Construction & Maintenance
Woodman State Jail	Gatesville	Business Computer Information Systems I, Custodial Technician, Painting & Decorating

### 2.1.1 Example of Vocational Training Provided: The Ferguson Unit

The Ferguson Unit is situated on 5,000 acres of land and offers a variety of vocational and educational opportunities for offenders to learn necessary skills for obtaining and retaining employment after release. WSD vocational training offered at the Ferguson Unit includes welding, small engine repair, mill and cabinetmaking, computer-aided drafting, culinary arts, Diversified Career Preparation: Food Service and electrical trades. All vocational classes meet five days a week, are typically six hours in length, and are designed to teach offenders the basic knowledge necessary for obtaining employment. Offenders are limited to two WSD vocational training classes during their incarceration. Once the offender has successfully completed the vocational course, the offender cannot retake the same course.

A unique vocational class that the Ferguson Unit offers is the Diversified Career Preparation (Food Service). This class utilizes a classroom component for direct instruction and also provides opportunities for students to work in a commercial kitchen at the Ferguson unit. The most popular vocational course offered at Ferguson is welding. The welding course is a 600 hour course that requires approximately six to seven months to complete. Currently, the welding classes are “double-shifted” with one class meeting in the morning and the other in the afternoon. Only 22 students are allowed to enroll in either shift of the welding class. Not only is welding the most popular vocational class offered at Ferguson, but at this time welding jobs are plentiful in Texas increasing the likelihood for an offender to obtain employment upon release.

## **2.2 Vocational Training and Institutional Misconduct**

Although evaluations of correctional education programs such as Vocational training typically focus on post-release outcomes, positive behavioral influences of participation in vocational training also tend to occur during incarceration. Specifically, institutional misconduct is reduced when offenders have an incentive to participate in correctional education programs. A number of studies have reported that offenders participating in vocational training are less likely to participate in offender misconduct (Flanagan, 1983, Gerber & Fritsch, 1995; Saylor & Gaes, 1992). Further, Lahm (2009) demonstrated that institutional misconduct for offenders participating in post-secondary correctional education programs, including vocational training, was lower than for offenders participating in other types of correctional education programs.

## **2.3 Vocational Training and Recidivism**

Finding a solution to the ‘revolving door’ of the correctional system is a goal of researchers and practitioners alike. The high rate of individuals returning to jail or prison subsequent to their release is disconcerting given the totality of resources supporting deterrent and rehabilitative efforts (see Levine, 2009). Vocational training is one aspect of correctional education programs that holds promise in reducing recidivism and increasing post-release opportunities for offenders. The fundamental goal of vocational education programs is to support a significant reduction in recidivism and increase post-release employment of ex-offenders.

- ✓ Researchers have found vocational education programs successfully reduce recidivism.
- ✓ Completion of a vocational education program demonstrated stronger effects on reducing recidivism as compared to program participation alone.

In the state of Texas during the SY 2010, 35 different occupational trades at 69 state facilities were made available to offenders. These programs combine classroom and technical training in order to provide students with skills needed for post-release success. Additionally, the WSD vocational programs are designed to provide offenders with two types of certification upon successful completion of the program. Through partnerships with certification and licensing agencies, WSD provides training and certifications that meet business and industry standards. WSD Vocational training participants can earn certificates of achievement from WSD and industry certificates from various certifying agencies. By offering industry certifications, WSD maintains communication and/or accreditation status with the various certifying entities. This approach also assists WSD in maintaining contact with potential employers and creates more potential opportunities for ex-offenders. In SY2010, 10,835 offenders participated in vocational education with 5,205 vocational certificates issued and 5,100 industry certificates awarded (Windham School District, SY 2009-2010 Annual Performance Report). With such high demand and offender participation, it is important to understand the potential impact of these types of programs.

Meta-analytic approaches to reviewing existing literature have demonstrated that vocational training works to reduce recidivism. Although Bouffard, MacKenzie, and Hickman (2000) found both effective and non-effective vocational training programs, the authors were able to conclude that when a proper methodological approach is utilized to study program effects, vocational training tends to demonstrate a successful reduction of offender recidivism. Meta-analytic findings summarize numerous individual studies that find vocational education programs successfully reduces recidivism (see for example Flinchum et al., 2006; Gordon & Weldon, 2003), and that completion of a vocational education program demonstrates stronger reductions in recidivism as compared to program participation alone (see for example Hull, Stewart, Brown, Jobe, & McCullen, 2000).

Not all studies have detected significant differences in recidivism among offenders who participated in vocational training as compared to offenders who did not participate (Visher, Winterfield, & Coggeshall, 2005). Moreover, Brewster and Sharp (2002) found a decreased time to recidivate for participants of vocational training, despite an overall finding that correctional education led to lower levels of recidivism rates. That is, while correctional education participants were less likely to recidivate, among those offenders who did recidivate, vocational training participants did so the quickest. Findings such as these necessitate continued examination of the effects of vocational training on offender recidivism in different jurisdictions. Specifically, some areas warranting further exploration include whether the effect of vocational education on recidivism is impacted by the level of program exposure (i.e., program dosage), and whether participation in vocational training influences outcomes other than recidivism (e.g., reported earnings).

## **2.4 Vocational Training and Employment**

An offender's success is typically measured by an offender's ability to refrain from contact with the criminal justice system (whether through technical violation, re-arrest, reconviction, or re-incarceration). Given that vocational training aims to support offenders in developing an employable skillset, success for offenders who participate in vocational training can also be defined in terms of obtaining gainful employment upon release. It is important to note that the two measures of success are not necessarily mutually exclusive. Researchers have found offenders who obtain meaningful, quality employment upon release have lower recidivism rates than offenders who obtain employment of lesser quality (Uggen & Staff, 2001).

A variety of alternative employment outcomes can be considered such as ability to obtain employment, obtaining employment that is more meaningful than would otherwise be available, and the level of earnings (Jenkins, Steurer, & Pendry, 1995). In their meta-analysis of correctional education, Wilson and colleagues (2000) considered employment outcomes as a measure of vocational training success. After controlling for the methodological rigor of the studies examined, Wilson and colleagues found offenders who participated in vocational training programs had significantly higher rates of employment. These earlier findings were more recently confirmed by researchers at the RAND Corporation. Davis, Bozick, Steele, Saunders and Miles (2012) conducted a review of existing correctional education studies including all available studies completed since 1980 in the United States. Eighteen of the studies focused on vocational training. Not surprisingly, Davis and colleagues found offenders who participated in vocational training programs had 28 percent higher odds of obtaining employment upon release as compared to offenders who did not participate in vocational training (Davis, Bozick, Steele, Saunders, & Miles, 2012).

When considering the totality of research on correctional education programs, methodological issues within some studies of correctional education stem from poor data collection methods, ultimately affecting the validity of the study (Duguid, Hawkey, & Pawson, 1996). For example, Lichtenberger and Ogle (2006) assert that outcome measures vary by source, data sources are often incomplete, and merging data sources is simply difficult without adequate identifying information and funds to attempt follow-up interviews. Additionally, issues exist in variable definitions across studies with recidivism definitions varying between re-arrest, reconviction, and re-incarceration (Davis et al, 2012). Although

variance in the approach to measuring recidivism exists, correctional education has been shown to reduce rates of re-arrest, reconviction, and re-incarceration (Steuer & Smith, 2003). Finally, other methodological limitations exist as a result of research designs. Without equal comparison and treatment groups, observed variation may be due to some extraneous factor such as whether participation is voluntary, or variation in motivation to change that may confound the outcomes.

Through literature reviews and meta-analytic techniques, researchers have noted ongoing methodological shortcomings, and consequently devised a system to weigh research finding based on the scientific merit of a study. Even after weighing these methodological shortcomings, existing research tends to support the effects of vocational training, and correctional education in general, as part of the ‘what works’ in correctional programming. Future research can benefit from abridging these methodological shortcomings at the outset, as well as evaluating multiple outcome measures that may not be reflected directly in recidivism measures. Since correctional education may transform costly would-be offenders into productive, tax-paying, employed ex-offenders, it is necessary to continue to provide the means by which this transformation may be occurring. Moreover, it is critical to continue evaluation efforts within programs to ensure that participants and/or completers are benefitting under the goals set forth by the programs.

## 2.5 Notable Trends in Vocational Education at WSD

As a component of this evaluation, a review of recent Windham School District reports was completed in addition to brief interviews with stakeholders. From these sources, a few highlights from the SY 2009-2010 Annual Performance Review (APR) were warranted for reiteration in this report as well:

- In SY 2010, 10,835 offenders participated in vocational training.
- Of 10,835 participating offenders, 10,599 offenders participated in full-length vocational courses, 126 offenders were short-course participants, and 116 offenders were apprenticeship related training participants.
- During SY 2010, 5,205 WSD vocational completion certificates were issued and 5,100 industry certifications were awarded.
- In comparison to the prior school year, a notable increase in the number of industry certificates awarded was found. This increase in certifications is attributed to the receipt of funds to facilitate industry certification testing and payment. WSD payment for industry certification began in January 2010.
- In comparison to the prior school year, the notable reduction in the number of students completing apprenticeship programs was attributed to discontinuation of several vocational apprenticeship programs.
- The General Appropriations Act, Article III, Rider 6, 81<sup>st</sup> Legislature, Regular Session set the contact hour rate for vocational education at \$2.96 for SY 2010.



### 3 Life Skills Programming in Corrections

Life skills programs have become increasingly common within U.S. correctional facilities (Phelps, 2011). In 1995, 65 percent of correctional facilities reported having life-skills and community adjustment programs. By 2005, the percentage of correctional facilities with life skills and community adjustment programs had grown to 79 percent (Phelps, 2011). This increased prevalence coincided with an emphasis on offender reentry and determination of the types of deficits returning offenders possessed (MacKenzie, 2006; Phelps, 2011). In 2003, under the Life Skills for State and Local Prisoners Program, the U.S. Department of Education awarded over \$4.7 million to 13 state and county correctional facilities for the development of life-skills programs for offenders (Linton, 2003). While this was not the first or last time the Department of Education awarded funding for correctional based life-skills programs, it was one of the more lucrative awarding periods that helped to spur program growth.

While life skills programs are new to many correctional facilities, such programs have been utilized in other contexts for some time (Schram & Morash, 2002). For instance, life skills programs have been used to reduce the onset of cigarette smoking in youth populations (Botvin, Eng, & Williams, 1980), increase suicide prevention (LaFromboise & Howard-Pitney, 1995), increase skill acquisition for individuals with severe mental illness (Dilk & Bond, 1996), and reduce adolescent sexual risk behaviors (Magnani et al., 2005). In general, life skills programs as they relate to correctional programming refer to “functional skills with general applications in the everyday demands of contemporary life, such skills as the ability to fill out a job application, to read and interpret a bus schedule, or to construct and complete a functional household budget” (Linton, 2005, p. 91). Many correctional based life skills programs use this or a similar definition as they attempt to address the many needs and skill deficits of incarcerated offenders, so they are better equipped to successfully reintegrate back to society and remain crime-free (Bates, 2005; Finn, 1998; Jalazo, 2005; Schwartz, 2005; Scruggs, 2005).

A variety of approaches have been used to implement correctional based life skills programs in U.S. correctional facilities. Some jurisdictions have added life skills classes to existing programs (e.g., substance abuse, domestic violence, vocational, and restorative justice programs) allowing offenders to gain additional life skills while attending their normally assigned program (Bates, 2005; Schwartz, 2005). Other jurisdictions have developed stand-alone life skills programs that are utilized as part of a therapeutic community (Jalazo, 2005; Schram & Morash, 2002; Scruggs, 2005).

Life skills programs include components designed to address the pre-existing needs and deficits found within incarcerated populations. Common components of life skills programs include, but are not limited to, employability skills, money management (e.g., credit and banking), parenting skills, AIDS awareness, communication skills, interpersonal relationship development, stress and anger management, fatherhood classes, family responsibilities, health issues, motor vehicle regulations, social services, and cultural differences (Bates, 2005; Finn, 1998; Jalazo, 2005; Schwartz, 2005). Life skills programs designed specifically for women address similar issues, including problem solving, stress, anger, money, time management, self-esteem, negotiation skills, parenting, employability skills, interpersonal skills, behavior awareness, and life management (Schram & Morash, 2002; Scruggs, 2005).

The structure of life skills programs vary by jurisdiction. For example, one life skills program designed for women required participants to spend three hours a day for at least three days a week over a six month period in life skills sessions (Schram & Morash, 2002). Another life skills program for women required they spend 12 weeks in life skills classes (Scruggs, 2005). In a life skills program for men, programming occurred over a nine week period, with participants attending classes at least eight hours a day for six days a week (Jalazo, 2005). By comparison, another program for men lasted three hours a day for four months (Finn, 1998). This variation is important to consider when

examining program effects as program intensity and duration is directly related to positive outcomes such as recidivism, for certain offenders (Andrews & Bonta, 2010; Lowenkamp, Latessa, & Holsinger, 2006).

Within the umbrella of life skills programs are cognitive-behavioral treatment programs, the predominant therapeutic approach for changing offenders' criminal thinking and ultimately reducing recidivism (MacKenzie, 2006). The utility of cognitive-behavioral treatment across a range of mental illness and behavioral problems has led to its application in several contexts (Butler, Chapman, Forman, & Beck, 2006). Cognitive behavioral interventions target an individual's maladaptive cognitions or thought patterns in order to change the problematic behavior associated with these thoughts (Dobson, 2001). It is assumed that individuals respond to their physical and social environment according to their perceptions and interpretations of events (Beck & Weishaar, 2008). So, if a person has a maladaptive pattern of thinking or tends toward dysfunctional interpretation, their behavioral responses will be impaired accordingly. Through cognitive intervention, individuals are guided through a process to identify their own misperceptions and develop more positive ways of thinking about themselves and life situations (Beck & Weishaar, 2008). Within corrections, programs address cognitions that precipitate criminal behavior with the goal of reducing recidivism.

Despite small differences in theory and implementation among cognitive-behavioral programming, in general programs attempt to adjust behavior through modifying maladaptive or criminal thinking among offenders. Most programs are administered in a group setting with a small number of participants, often between six and eight (MacKenzie, 2006). Since the curricula of cognitive behavioral interventions are typically standardized for similar implementation across groups, such programs can be facilitated by a range of individuals with adequate training. Some programs, such as R&R, were designed for potential administration by correctional officers or other prison personnel (MacKenzie, 2006). Strategies utilized in cognitive-behavioral treatments often include workbook exercises (Wilson et al., 2005) and role-playing and discussion groups (Ross, Fabiano, & Ewles, 1988). While the length of participation will vary among correctional institutions and according to the type of program utilized, most cognitive-behavioral programs are relatively short-term, typically lasting no longer than twelve weeks (MacKenzie, 2006).

### **3.1 Life Skills Programming provided by the WSD**

Within the Windham School District, two key Life skills programs exist, the Cognitive Intervention Program (CIP) and the Changing Habits and Achieving New Goals to Empower Success (CHANGES) program. The CIP is a 60-day program offered at 76 different facilities during SY 2010. CIP teaches offenders to "meet their needs without trespassing on the rights of others." The program structure allows for participant entry at any point during the course of the curriculum. A benefit to this approach is that offenders who are further along in the curriculum serve as mentors and role models to incoming participants. The CIP's internally developed cognitive-based curriculum combines teaching and classroom exercises to help offenders strengthen their problem-solving skills, develop accountability and responsibility, manage anger and impulsive behavior, overcome criminal thinking, create positive attitudes and beliefs, and set goals. Specifically, the CIP emphasizes class discussions and role-playing exercises to assist offenders in critically reviewing past harmful behaviors and developing methods to control such behaviors as well as implement pro-social actions in the future. Particular emphasis is placed on changing maladaptive thinking patterns that precipitate antisocial behavior into more adaptive and appropriate cognitions. This emphasis is expected to decrease recidivism rates and improve institutional behavior. The Cognitive Intervention Program utilizes the Criminal Sentiments Scale for pre- and post-assessments of criminal thinking among participants.

The CIP accepts male and female participants who have committed a violent or nonviolent offense such as drug-related offenses, theft, burglary, assault, robbery, sex offenses, and homicide. In other words, participants are not screened based on the nature of their offense alone (i.e., violent or nonviolent), resulting in a waiting list of individuals who voluntarily wish to participate in the program. Offenders may also be referred to the cognitive intervention program for a

variety of reasons, one of which is a pattern of disruptive behavior. These types of referrals can be made by WSD staff members, including teachers, counselors, or TDCJ personnel.

A second Life skills program implemented in the Windham School District is the CHANGES program, which is a 60-day pre-release program designed to prepare offenders for successful release into the community setting. Offenders who are within two years of projected release are eligible to participate in the program. Offenders who are notified by parole (FI-3R report) that they will be released from prison upon completion of the CHANGES program are given highest priority for entrance into CHANGES. The program content includes family relationships and parenting, civic and legal responsibilities, victim sensitivity, health maintenance, employability, money management, and other related life skills. The program consists of seven modules with five lessons per module, totaling 35 lessons. The modules include: personal development, healthy relationships, living responsibilities, drug education, living well, putting together a new start, and going home. Although CHANGES addresses many important aspects of offender re-entry, CHANGES II, which was implemented February 26, 2009, has a larger cognitive behavioral component than the original CHANGES program. According to WSD administrative staff, the program normally takes approximately four months to complete and targets offenders at the end of their sentence. Teachers determine whether or not the offender exhibited progress in a particular module and whether the offender passed the module. The offenders released in SY 2010 were exposed to the revised version of the CHANGES program, which includes the cognitive-behavioral based component of the curriculum.

### **3.2 Life Skills Programming and Institutional Misconduct**

Although the reduction of recidivism rates is the primary focus among life skills programs, such cognitive-behavioral based interventions can also function to decrease problematic institutional behaviors. Baro (1999) examined the effects of a cognitive restructuring program on the number of disciplinary infractions committed by adult male offenders in Michigan. Results indicated inmates who had participated in the program longer (i.e., at least six months) were significantly less likely to disobey direct orders or assault others than those who had been in the program less than six months, or inmates who were participating in other self-help programming. More than half of offenders in cognitive restructuring did not disobey a direct order in the follow-up period as compared to only 34 percent of inmates in the other self-help group. With regard to assaults, only 12 percent of those inmates who had participated in six-or-more months of cognitive restructuring committed an assault on another person during the follow-up year. Conversely, 25 percent of offenders in other forms of self-help committed at least one assault during the follow-up period. There were, however, no significant differences between groups regarding the total number of major misconducts.

In a meta-analysis of 68 studies to explore the effectiveness of correctional treatment programs, French and Gendreau (2006) found prison treatment programs decreased the incidence of institutional misbehavior. Programs considered included behavior modification and cognitive intervention approaches. Interestingly, French and Gendreau (2006) found programs that had greater therapeutic integrity and addressed more of participants' criminogenic needs were associated with the strongest effect sizes. This finding underscores others (see Armstrong, 2004) who find well-implemented correctional programming is a key factor in reducing criminal behavior among offenders upon release, as well as diminishing the prevalence of institutional misconduct.

### **3.3 Life Skills Programming and Recidivism**

The inclusion of cognitive-behavioral based principles and concepts in life skills programming is critical. Numerous studies of the cognitive treatment program effects within offender populations that exhibit a range of problematic behaviors (e.g., aggression and violence, drug and alcohol use, domestic violence) have been conducted (MacKenzie, 2006). While some studies have found no significant differences in rates of recidivism between cognitive-behavioral treatment and comparison groups, a review of methodologically sound research demonstrates cognitive-behavioral

treatment, when properly implemented is effective in decreasing criminal behavior (Armstrong, 2004; MacKenzie, 2006). The efficacy of cognitive-behavioral treatment success extends to a variety of groups including juvenile offenders (e.g., Andrews et al., 1990) and incarcerated female populations (Lipsey, Landenberger, & Wilson, 2007).

In a meta-analysis, Pearson, Lipton, Cleland, and Yee (2002) compared the effects of behavioral programs (e.g., involving token economies) with cognitive-behavioral programs in reducing recidivism among adults and juveniles in prison, jail, probation, and parole settings. Although exposure to treatment of either kind was effective in reducing recidivism, participants of cognitive-behavioral programs were less likely to engage in criminal behavior than participants in programs addressing behavior without a cognitive component. Similarly, Wilson and colleagues (2005) examined 20 structured, group-oriented cognitive-behavioral programs for offenders and found that cognitive-behavioral treatments, in several variations, were effective in reducing criminal behavior. Specifically, they found support for the utility of MRT, R&R, and a range of cognitive restructuring approaches in decreasing recidivism. Finally, Landenberger and Lipsey (2005) reviewed 58 experimental and quasi-experimental studies of the efficacy of cognitive-behavioral therapy in reducing recidivism among juvenile and adult offenders. Moreover, they examined moderators to distinguish factors associated with effective treatment.

Landenberger and Lipsey's findings have significant implications for implementation of cognitive-behavioral correctional programs. Landenberger and Lipsey (2005) identified the following factors as producing the greatest reductions in recidivism: "(a) the treatment of high-risk offenders, (b) high quality treatment implementation, and (c) cognitive-behavioral programs that included anger management and interpersonal problem-solving components" (p. 451). Thus, cognitive-behavioral treatments may be most beneficial when used with offenders at high risk for recidivism, when implemented in a manner that includes intensive, high quality administration, and targets multiple criminogenic needs (e.g., antisocial values and beliefs). Studies also reveal program components that diminish the effects of cognitive-behavioral intervention. For example, Landenberger and Lipsey (2005) found that components addressing victim impact and behavior modification decreased the efficacy of treatment. Conversely, they identified anger control and interpersonal problem solving modules as enhancing treatment effects, illustrating the utility of integrating these components in current and future programs.

Findings that life skills programs are effective reducing recidivism are not completely consistent in the literature (MacKenzie, 2006). Though some programs have a positive impact on participants, especially if cognitively based (Bates, 2005; Jalazo, 2005; Schwartz, 2005; Scruggs, 2005), other studies find inconclusive results (MacKenzie, 2006; Schram & Morash, 2002). In a special issue of the *Journal of Correctional Education* in 2005, a series of four articles discussed life-skills programs implemented in various U.S. jurisdictions with varying levels of scientific rigor. All programs examined had received funding from the U.S. Department of Education under the Life Skills for State and Local Prisoners Program. Interestingly, each of the respective life-skills programs effectively reduced recidivism rates. Limited information on the methodology or statistical techniques utilized in the studies was provided, so caution is needed when considering the positive conclusions. Among the studies, Jalazco (2005) found life-skills program graduates had a 13-14 percent lower recidivism level and remained in the community for 25 percent longer as compared to control groups. Schwartz (2005) noted lower re-arrest rates for violent crimes among life-skills participants as compared to a control group. Bates (2005) indicated almost a 24 percent decrease in recidivism rates of program completers as compared to all offenders booked into the county jail, and an almost 44 percent reduction in recidivism compared to all offenders booked into the county jail and who remained in custody for over 48 hours. Finally, Scruggs (2005) indicated that female offenders who participated in a life-skills program and were released for at least six months had a 21 percent re-arrest rate compared to a 70 percent re-arrest rate in the general population offenders.

Other positive program effects were also noted for the above mentioned studies. For example, in-prison violence for offenders in special cell blocks (i.e., those receiving rehabilitation programming) was lower as compared to control

cellblocks (Schwartz, 2005). Results also indicated that program participants who maintained employment, established credit, or opened a checking or savings account upon release (implemented skills taught as part of the curriculum) were significantly less likely to recidivate compared to those who did not (26.3 percent re-arrest rate for those gainfully employed vs. 38.6 percent re-arrest rate for those not employed; Jalazo, 2005). Furthermore, results from an evaluation of one life-skills program found offenders who participated in the program demonstrated increased knowledge of life-skill components such as employment skills, money management, and parenting skills (Bates, 2005).

While most life skills programs focus on adult male offenders, researchers and program developers note the importance of gender specific life-skills programming in correctional settings (Linton, 2003; Schram & Morash, 2002; Scruggs, 2005). To date, positive effects of life skills programming seems to be most apparent among female life-skills program participants. Schram and Morash (2002) found that 60 days after release, women who participated in the life-skills program were significantly less likely to return to the correctional system (approximately 10 percent) as compared to a control group (approximately 25 percent). Additionally, after comparing pre- and post-test scores, participants in the life-skills program scored higher on a coping with problems scale after completion of the program and participants had “more realistic expectations of their children as a result of participating in the program” (Schram & Morash, 2002, p. 64). Furthermore, an evaluation of a life-skills program implemented at four correctional facilities in Delaware found the recidivism rate for the first cycle of program participants to be 19 percent, while the control group experienced a recidivism rate of 27 percent (Finn, 1998). Two years after release, female participants had a 15 percent recidivism rate (charge or conviction) compared with 51 percent of the comparison group, while male participants had a 23 percent recidivism rate compared with 50 percent of the comparison group (Finn, 1998). Overall, these life-skills programs indicate positive results, with significantly reduced recidivism rates when compared to control groups.

More comprehensive meta-analytical techniques have been conducted on life skills programs as well but given the relatively weak methodological rigor of the existing studies, authors have recommended cautious interpretation. As part of a report to the U.S. Congress, MacKenzie (2000, 2006) and her colleagues conducted a meta-analysis of four life-skills programs (Melton & Pennel, 1998; Miller, 1995; 1997; Ross, Fabiano, & Ewles, 1988). Only two of the programs (Melton & Pennel, 1998; Miller, 1997) utilized statistical tests and “neither reported significant differences in recidivism between participants and control groups” (MacKenzie, 2006, p. 77). MacKenzie (2006) noted that participants in the life skills programs generally had lower recidivism rates than comparison groups; however, because half the studies did not utilize statistical tests, MacKenzie (2006) states there is “insufficient evidence” (p. 77) to determine whether life skills programs are effective in reducing recidivism.

### **3.4 Notable Trends in the WSD Life Skills Programming**

As a component of this evaluation, a review of recent Windham School District reports was completed in addition to brief interviews with stakeholders. From these sources, a few highlights from the SY 2009-2010 Annual Performance Report were warranted for reiteration in this report as well:

- ✓ In SY 2010, a total of 16,622 offenders participated in the Cognitive Intervention Program.
- ✓ In SY 2010, 28,396 offenders participated in the CHANGES pre-release program, which incorporates a cognitive behavioral approach to life-skills programming.

## 4 Overview and Description of SY 2010 Release Cohort

This section describes the typical offender who was released during SY 2010 and includes a comparison between offenders released in SY 2010 who participated in WSD programming (WSD offenders) and offenders who did not participate in WSD programs (non-WSD offenders). As noted earlier, of all 71,063 offenders released from TDCJ during the SY2010, 46,702 offenders participated in WSD programs during the current or prior period of incarceration. As indicated in Table 3, a few notable differences exist between the WSD offenders and non-WSD offenders. Specifically, WSD offenders were older at the time of release, a thirty-six year old male as compared to a thirty-three year old male. WSD offenders were more likely to be African American than Hispanic or White, whereas non-WSD offenders were more likely to be White. WSD offenders were more likely to have been previously incarcerated, whereas more than half of the non-WSD offenders were incarcerated for the first time (55.5%). Finally, WSD offenders were more likely to serve a longer sentence for the current offense as compared to non-WSD offenders. Given the significant difference between the groups in incarceration history, WSD offenders appear to be a higher risk population than non-WSD offenders.

**Table 3. Offender Characteristic, SY 2010 Release Cohort**

	SY 2010 Release Cohort (N= 71,063)	Non-WSD Offenders (N=24,361)	WSD Offenders (N=46,702)
Gender (% male)	85.8	84.2	86.6
Race			
African American	35.0	29.4	37.9
White	32.3	35.1	30.8
Hispanic	32.3	30.9	30.9
Other	0.5	0.4	0.4
Age at Release <u>M</u> , (SD)	35.3 (10.9)	33.5 (11.1)	36.2 (10.7)
Prior Incarcerations,%			
0 (1 <sup>st</sup> incarceration)	38.2	55.5	29.2
1	26.1	26.2	26.0
2	15.7	10.8	18.2
3	8.9	4.2	11.3
4 or more	11.1	3.4	15.3
Time Served for Current Offense, %			
6 months or less	28.9	47.6	19.2
>6 months to 1 year	27.5	30.1	26.2
>1 year to 2 years	19.0	13.8	21.7
>2 years to 5 years	15.2	6.2	19.9
>5 years to 10 years	5.7	1.6	7.8
>10 years	3.7	.7	5.2

## 5 Findings

This evaluation considered multiple aspects of WSD programs in accordance with SB 213. First, the extent to which offenders released in SY 2010 participated in WSD programs was assessed. The first consideration of this assessment examines the type(s) and extent of WSD program participation as measured by program attendance for offenders during any period of incarceration. This measure includes the current and prior incarceration periods. Next, this report examines the impact of WSD program attendance on offender outcomes including institutional disciplinary violations, re-arrest, re-incarceration, educational achievement, and employment.

### 5.1 WSD Correctional Education Program Participation

WSD program attendance data were used to examine the extent to which offenders released during SY 2010 attended WSD correctional education programs. Program attendance and program completion<sup>3</sup> for all offenders released during SY 2010 was examined. To account for variation in sentence length and incarceration history that could impact WSD program attendance or completion, and in turn affect offender outcomes, all correctional education program attendance that occurred during *any* incarceration, either as part of the offender's current incarceration or during a prior incarceration(s) was included. Other correctional education program evaluations often fail to consider whether offenders have participated in more than one correctional education program as well as account for program attendance in previous periods of incarceration. For example, in the WSD an offender may attend Academic programming or Vocational training, and concurrently participate in the CHANGES program. Alternatively with intensive programs, such as WSD Vocational training, an offender may only be able to participate in that single program; yet, attendance hours are significant. Our inclusive approach is important as the academic literature suggests that a higher program dosage tends to increase the impact of program effects on offender outcomes. Our scope examines the extent to which offenders in the SY 2010 release cohort participated in two or more WSD programs during *any* period of incarceration.

Of the 71,063 offenders released in SY 2010, 46,702 offenders participated in one or more WSD programs while incarcerated. The majority of offenders who participated in a WSD program completed program requirements. As indicated in Table 4, 30,785 offenders participated in Academic programs. Of the 30,785 Academic program offenders, 23,583 offenders (or 77% of Academic program participants) completed Academic program requirements. Additionally, of the 13,834 offenders who participated in WSD Vocational training, 10,632 offenders (or 77% of Vocational training participants) completed the Vocational training program.

**Table 4. WSD Program Attendance and Completion, SY2010 Release Cohort**

	WSD Offenders (N=46,702)			
	Attended		Completed	
	N	WSD Offenders (%)	N	WSD offenders (%)
Academic	30,785	65.9	23,583	77
Vocational	13,834	29.6	10,632	77
Cognitive Intervention	13,666	29.3	9,555	70
CHANGES	30,050	64.3	22,086	73

<sup>3</sup> An important caveat that should be recognized within this section of the report is that some of the current WSD programs have undergone program modifications. One example is that significant curricular changes occurred in the CHANGES program in 2009.

Significant variation existed in the number of WSD Academic program hours attended by WSD offenders with hours ranging from very limited attendance (30 hours) to the highest attendance of 13,987 hours. As indicated in Table 5, the average number of Academic program hours attended by WSD offenders in the SY 2010 release cohort was 625 hours.

**Table 5. WSD Offender Participation – Academic Attendance Hours, SY 2010 Release Cohort**

	N	Average Academic attendance hours	Median - Academic attendance hours	Standard Deviation
WSD Participants	30,785	625.0	316	872.5

As noted earlier in Table 3, almost 62 percent of the offenders in the SY 2010 release cohort were previously incarcerated; therefore, it was important to consider WSD program attendance during *any* incarceration period. Second, consideration of whether the offender attended a single or multiple WSD programs was important. Analysis indicated that of the 46,702 WSD offenders, 42.6 percent of offenders participated in a single program, 32.3 percent of offenders participated in a total of two WSD programs, 18.4 percent of offenders participated in a total of three WSD programs, and 6.6 percent of offender participated in all four WSD programs.

Table 6 displays the WSD program combinations and associated percentage of offenders who attended the programs indicated by the intersection of each row and column. For example, while many offenders participated in Academic alone (20.7 percent) *or* Life skills programming (19.7 percent) (Note: Cognitive Intervention program and CHANGES are two distinct life skills courses), 15.9 percent of WSD offenders participated in both CHANGES and Academic programs during current and/or prior periods of incarceration.

**Table 6. Percent of WSD Offenders by Correctional Education Program Participation, SY 2010 Release Cohort**

Program Participation Overlap (% of WSD Offender group)	WSD Offenders (N=46,702)			
	Academic	Vocational	CHANGES	Cognitive Intervention
<i>1 WSD Program Only (42.6%)</i>	20.7	2.2	16.7	3.0
<i>2 WSD Programs in Total (32.3%)</i>				
Academic		3.6	15.9	3.1
Vocational		---	3.6	1.0
CHANGES		---	---	5.1
<i>3 WSD Programs in Total (18.4%)</i>				
Academic + CIP		2.0	5.9	---
Academic + CHANGES		8.0	---	---
Vocational + CHANGES		---	---	2.5
<i>4 WSD Programs (6.6%)</i>				

## 5.2 Offender Outcomes: Institutional Disciplinary Violations, Re-arrest, and Re-incarceration

This section compares the impact of WSD program participation on outcomes for the SY 2010 release cohort, with a focus on comparisons between WSD offenders and non-WSD offenders while accounting for offender characteristics.



Three outcomes are examined: institutional disciplinary violations, re-arrest, and re-incarceration. Institutional disciplinary violations are measured as the rate of institutional disciplinary violations per year during the offender's current incarceration period. Data provided by the TDCJ Executive Services was used to calculate each offender's rate of institutional disciplinary violations for their current incarceration period, which accounts for varying lengths of stay. Re-arrest was measured as arrest for a new offense (Class B misdemeanor or more serious) occurring subsequent to the offender's release date, but prior to August 31, 2013. Data were provided by the Texas Department of Public Safety for this component of the analysis. Using data provided by TDCJ Executive Services, re-incarceration was measured as re-incarceration in a TDCJ facility in the three years subsequent to offender's release.

### 5.2.1 Institutional Disciplinary Violations

WSD offenders who received an institutional disciplinary violation had a lower rate of institutional disciplinary violations per year. Specifically, WSD offenders had a reported average of 2.9 institutional disciplinary violations per year, compared to non-WSD offenders who had an average of 3.9 institutional disciplinary violations per year<sup>4</sup>. Descriptive statistics indicate that when considering all offenders released during SY 2010 including a zero for offenders who did not incur any violations, the rate of institutional disciplinary violations among WSD offenders was slightly higher than non-WSD offenders<sup>5</sup> (1.8 and 1.7 institutional disciplinary violations per year, respectively). This is a statistical artifact of the larger population of WSD offenders versus non-WSD offenders.

Additional analysis examined whether the institutional disciplinary violation rate varied based on the type and number of WSD programs in which WSD offenders participated. It is important to note that results examining WSD program attendance and institutional disciplinary violations presented here can only be interpreted as correlational, or having a relationship with program participation, but WSD participation cannot be used to predict the rate of institutional disciplinary violations. This caveat exists because an institutional disciplinary violation may have occurred prior to, concurrently, or subsequent to participation in a correctional educational program.

As displayed in Table 7, each value in the second column indicates the average number of institutional disciplinary violations per year during the current incarceration period for offenders in each program combination group. For example, offenders who only participated in Academic programming had a rate of 2.5 institutional disciplinary violations per year; yet, offenders who only participated in Vocational programming only had a rate of 1.5 institutional disciplinary violations per year. On average in the majority of programs WSD offenders have a lower rate of institutional disciplinary violations in comparison to non-WSD offenders. The lowest institutional disciplinary violation rate was found among offenders who participated in Vocational training and some form of Life Skills programming, either CIP or CHANGES. Note that no overlap exists in offenders between the various groupings listed in Table 7.

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<sup>4</sup> Given the variation in length of time that offenders were incarcerated, institutional disciplinary violations are examined as a rate of violations per year. This rate was computed with the formula: (total number of institutional disciplinary violations during current incarceration/ total number of days incarcerated) \* 365 (days per year).

<sup>5</sup> Institutional Disciplinary Violation code 25.1 pertaining to refusal to attend school, refusal to do assigned school work, sleeping in the classroom, and late turnout was not considered as this code was only applicable to the WSD offender group.

**Table 7. Institutional Disciplinary Violations per year by Type and Number of WSD programs, SY 2010 Release Cohort**

	Institutional Disciplinary Violations per year	Rate compared to Non-WSD offenders	Offenders in Reference Group
<b>Non-WSD participants who received violations</b>	3.9		
<b>Non-WSD participants, Total group</b>	1.7		24,361
<b>WSD participants who received violations</b>	2.9	Lower	
<b>WSD participants, Total group</b>	1.8	Higher	46,702
<b>Participation in 1 WSD program:</b>			
Academic program only	2.5	Higher	9,671
Vocational program only	<b>1.5</b>	<b>Lower</b>	1,039
CHANGES only	<b>1.5</b>	<b>Lower</b>	7,779
CIP only	<b>1.5</b>	<b>Lower</b>	1,397
<b>Participation in 2 WSD programs:</b>			
Academic + Vocational	<b>1.6</b>	<b>Lower</b>	1,700
Academic + CHANGES	2.0	Higher	7,434
Academic + CIP	2.4	Higher	1,425
Vocational + CHANGES	<b>1.3</b>	<b>Lower</b>	1,671
Vocational + CIP	<b>1.4</b>	<b>Lower</b>	478
CHANGES + CIP	<b>1.6</b>	<b>Lower</b>	2,386
<b>Participation in 3 WSD programs:</b>			
Academic + CIP + CHANGES	2.1	Higher	2,776
Academic + CIP + Vocational	1.9	Higher	942
Academic + CHANGES + Vocational	<b>1.4</b>	<b>Lower</b>	3,742
Vocational + CHANGES + CIP	<b>1.5</b>	<b>Lower</b>	1,167
<b>Participation in 4 WSD programs:</b>	<b>1.5</b>	<b>Lower</b>	3,095

Importantly, results indicate the high risk nature of participants that comprise the WSD Academic participant group. Disciplinary challenges evident in this group are likely attributable to the same characteristics that result in mandated WSD attendance in Academic programs. A significant proportion of offenders attending Academic programming are mandated to do so because they have not obtained either their high school diploma or their GED prior to incarceration. Risk factors that contributed to historical academic failure in the free world, and/or failure to thrive in an academic institutional environment (i.e., low socioeconomic status, a lack of pro-social values, and poor school behavior), are also likely to have contributed to poor institutional behavior in the correctional setting. Noticeably, for offenders who attended multiple WSD programs that did not include Academic program attendance, the rate of institutional disciplinary violations is much lower than non-WSD offenders.

Further examination of institutional disciplinary violations was considered by program participation. For Academic programming, institutional disciplinary violation rates by attendance hours were considered. For WSD Vocational training, the Cognitive Intervention Program, and CHANGES, program completion and attendance were both examined in relation to the same outcome. Table 8 presents the average institutional disciplinary violation rate for offenders who have attended the program at any level, followed by offenders who attended and completed the program, and offenders who attended, but did not complete the program. This examination included offenders in each program category who

were exposed to each program, as well as potentially other programs. That is, Table 8 targets the differential effect of the program itself rather than a cross program comparison.

**Table 8. Institutional Disciplinary Violations by WSD program attendance and completion groups, SY 2010 Release Cohort**

	Institutional Disciplinary Violations per year	Rate compared to Non-WSD offenders	Number of Offenders in Reference Group
Non-WSD participants, Total group	1.7		24,361
Academic Attendance Hours			
<325 hours	2.3	Higher	15,600
325-749 hours	1.9	Higher	7,828
750-1074 hours	1.8	Higher	2,390
<b>&gt;1075 hours</b>	<b>1.5</b>	<b>Lower</b>	<b>4,881</b>
Vocational Programs			
Attended	<b>1.5</b>	<b>Lower</b>	13,384
Attended and completed	<b>1.3</b>	<b>Lower</b>	10,632
Attended but did not complete	<b>2.0</b>	Higher	3,202
CHANGES Program			
Attended	<b>1.7</b>	<b>Same</b>	30,050
Attended and completed	<b>1.5</b>	<b>Lower</b>	22,086
Attended but did not complete	2.3	Higher	7,964
Cognitive Intervention Program			
Attended	1.8	Higher	13,666
Attended and completed	<b>1.6</b>	<b>Lower</b>	9,555
Attended but did not complete	2.2	Higher	4,111

Results indicated greater attendance in WSD academic programs were related to lower institutional disciplinary violation rates for WSD offenders. For offenders who attended more than 1075 hours of academic hours, institutional disciplinary violation rates were lower than non-WSD offenders. WSD Vocational training participants had a lower average institutional disciplinary violations rate as compared to non-WSD offenders. WSD offenders who *completed* Vocational training had an even lower rate of institutional disciplinary violations. For both CHANGES and CIP, WSD offenders who completed the respective programs demonstrated a lower institutional disciplinary violation rate than WSD offenders who attended but did not complete the program, as well as non-WSD offenders.

The final step in examining the institutional disciplinary violation rate utilized a multiple regression model that accounted for the confounding effects of offender characteristics such as age, gender, and incarceration history. The first column of Table 9 presents a comparison between WSD offenders who have *ever* participated in *any* WSD program and non-WSD offenders. WSD offenders released in SY 2010 had a higher rate of institutional disciplinary violations during their current incarceration than non-WSD offenders. Importantly, younger offenders, women, and those with a history of incarceration had an overall higher institutional disciplinary violation rate. Yet, as indicated in the subsequent analyses, when accounting for the level of Academic program attendance and program completion, the opposite is true. WSD offenders with a high level of Academic program attendance hours and WSD program completers had a lower institutional disciplinary violation rate.

The second column of results in Table 9 examines the relationship between varying levels of participation in academic programming with institutional disciplinary violation rate. This model focuses only those offenders who participated in Academic programming. The comparison here is between WSD offenders in the following 4 attendance hour groups: [1] fewer than 325 hours, [2] 325-749 hours, [3] 750-1074 hours, and [4] greater than 1075 hours. In this model, factors such as the highest reading score obtained during any assessment while the offender was incarcerated, age of the offender (under 35 compared with 35 and older), gender, and whether the offender was previously incarcerated are taken into account. A measure of WSD participation is excluded for the remaining models since only WSD offenders are examined.

**Table 9. Relationship between Institutional Disciplinary Violation and WSD Program Attendance, SY 2010 Release Cohort**

	WSD any vs. non-WSD (N=71,057)	WSD Academic (N=30,696)	WSD Vocational <sup>6</sup> (N=71,057)	WSD CHANGES (N=71,057)	Cognitive Intervention (N=71,057)
WSD Participation	.28**	---	.37**	.55**	.32**
Attendance Hours	---	-.10**	---	---	---
WSD Program Completed	---	---	-.44**	-.59**	-.21**
Younger than 35	1.50**	1.57**	1.46**	1.45**	1.49**
Gender	-.24**	-.36**	-.22**	-.22**	-.24**
First Time Incarceration	-.31**	.04	-.32**	-.32**	-.30**
Nagelkerke R <sup>2</sup>	.06	.07	.06	.07	.06

Note: “N” represents the number of offenders included in this analysis. Offenders who did not have information available for any variables were excluded from the analysis. Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no. \* p < .05; \*\* p < .01.

As indicated in Table 9, congruent with results presented in Table 8, WSD Academic offenders who attend a greater number of academic hours had a lower rate of institutional disciplinary violations. The offender’s history of incarceration was not statistically significant in this instance. A comparison of WSD program completers with non-WSD offenders are shown in Columns 3 through 5 indicating WSD offenders who completed either WSD Vocational training, CHANGES, or the Cognitive Intervention Program had a significantly lower rate of institutional disciplinary violations than non-WSD offenders.

### 5.2.2 Re-arrest

This section examines the impact of WSD correctional education program attendance (Academic programs) or program completion (Vocational training, the Cognitive Intervention Program, and/or the CHANGES program) on the likelihood of re-arrest for offenders in the SY 2010 release cohort. The WSD offender population included all WSD offenders released during SY 2010 who participated in some form of WSD correctional education programming prior to their release in SY 2010. As noted earlier, re-arrest was measured as any new offense that was at least a class B misdemeanor (or a more serious offense) that was committed after the offender’s release date. Data to examine this outcome were provided by the Texas Department of Public Safety. All offenses were confirmed as having occurred between the offender’s release date and prior to August 31, 2013.

<sup>6</sup> For WSD Vocational Program, CHANGES, and Cognitive Intervention Program, WSD offenders who completed the program (equal to 1) were compared to those who did not complete the program (equal to 0).

In examining the influence of correctional education on both offender re-arrest and offender re-incarceration rates, it is important to be mindful of several complexities that may assert influence on the outcomes, yet are unmeasured in most program evaluations. Factors such as local level policies and processes, fiscal approaches of jurisdictions to reduce incarceration or related initiatives, and fluctuations due to economic factors are just some examples of factors known to influence offender arrest rates. Further, discretion exerted by key actors at the individual-level can vary between persons and over time making predictions of their influence difficult (JFA Institute & Pew Charitable Trusts, 2007).

Economic theory posits that the underlying fiscal arena of a jurisdiction is a driving force affecting criminal behavior and subsequent stages in processing (i.e., arrest, prosecution, incarceration). As this multi-pronged argument explains, income inequalities and poverty can encourage crime while making the underclass appear “different.” As such, economic conditions impact the discretion of officials throughout the criminal justice process, relaying some degree of indirect economic and environmental convergence (Pfaff, 2008). Demographic-based theories postulate that individuals of color and between the ages of 25 and 34 have higher chances of incarceration. Although some researchers argue that this is a result of the war on drugs and other aspects of institutional racism, it is hard to disentangle the relationship between race and class. Politically-based explanations theorize that changes in the correctional population over time are at least partially related to complex interactions between moral panic and cyclic views on crime, such as “tough on crime” or “smart on crime” policies. In addition to political climate, other important factors varying by jurisdiction may include urbanization, poverty rates, and deinstitutionalization of the mentally ill.

With this broad caveat in mind, we turn to examining the influence of WSD correctional education program participation on the probability of re-arrest. Throughout this section, we compare WSD offenders and non-WSD offenders to determine whether a difference exists between the two groups in the probability of re-arrest. In both the graphical and tabular information that follows, statistical models account for offender characteristics that may also influence the outcomes. For example, in the analyses examining the effect of WSD correctional education program attendance and/or program completion on the probability of re-incarceration, statistical controls account for individual offender characteristics such as history of incarceration, gender, and age (younger than 35 versus 35 and older). We examine the relative influence of Academic hours attended (e.g., Academic programs), as well as program completion for Vocational training, CHANGES, and CIP on the likelihood of re-arrest for WSD offenders as compared to non-WSD offenders. Finally, analyses examine the effect of offender participation in multiple programs throughout any period of incarceration on likelihood of re-arrest, while accounting for the offender characteristics noted earlier.

Figure 1 demonstrates that the average WSD offender who participated in any WSD program had a significantly lower probability of re-arrest than non-WSD offenders (51 percent versus 54 percent, respectively). On average, WSD offenders who completed Vocational training or a Life skills program (CHANGES or the Cognitive Intervention Program) exhibited a lower probability of re-arrest than non-WSD offenders. WSD offenders who completed Vocational training or CHANGES had a 48 percent probability of re-arrest, whereas the average non-WSD offender had a 54 percent probability of re-arrest. WSD offenders who completed the Cognitive Intervention Program had a 50 percent probability of re-arrest, which was also lower than the non-WSD offender probability of re-arrest.

**Figure 1. Predicted Probability of Re-Arrest by WSD Program Participation, SY2010 Release Cohort**

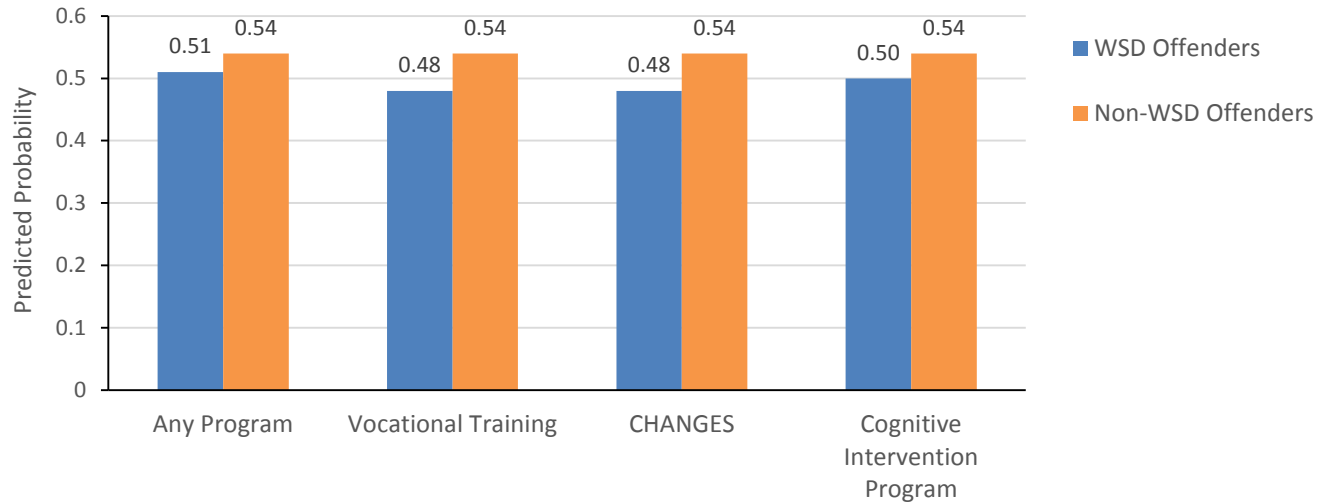
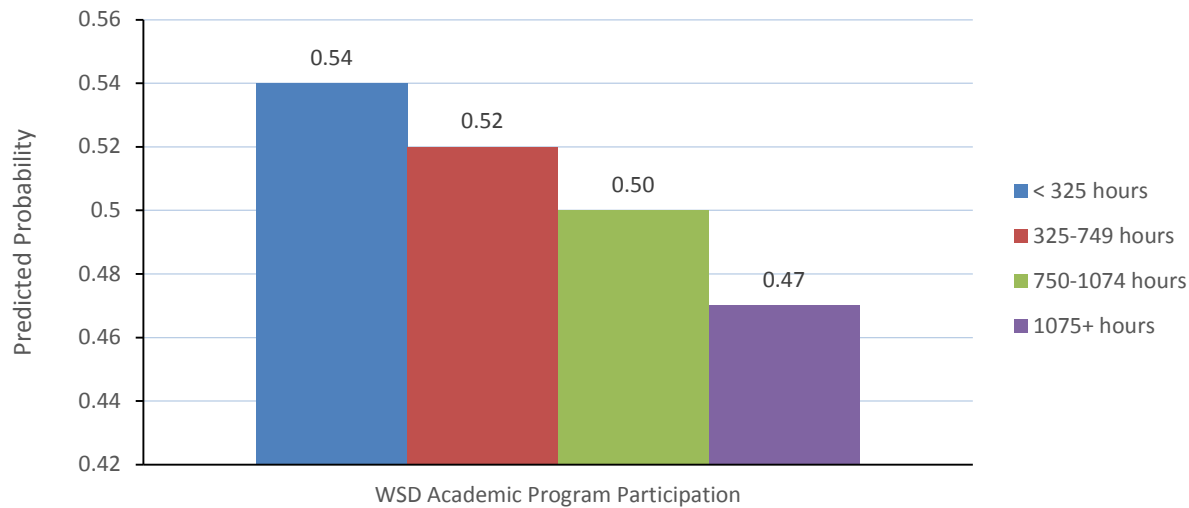


Figure 2 displays predicted probabilities of re-arrest grouped by level of Academic attendance hours. The probability of re-arrest for the typical offender who participated in Academic programming ranged from .47 to .54 (or 47 to 54 percent). These results indicate that WSD offenders exposed to a greater number of hours of Academic programming are less likely to be re-arrested as compared to WSD offenders exposed to fewer hours of Academic programming.

**Figure 2. Predicted Probabilities of Re-Arrest by Academic Program Participation Level, SY 2010 Release Cohort**



Results from multivariate regression analyses shown in Table 10 allow for important distinctions between the influence of program attendance and offender characteristics on re-arrest. Binary logistic regression analyses were used since re-arrest is dichotomous (re-arrested = 1; not re-arrested = 0). The magnitude and statistical significance of the program impact on the likelihood of re-arrest is indicated by coefficients in Row 1 and 2 of Table 10. A likelihood coefficient greater than 1.0 indicates that program participation increased the likelihood of an offender's re-arrest. A likelihood coefficient less than 1.0 indicates that program participation decreased the likelihood of re-re-arrest. WSD

program participation was measured in a binary manner for each program (WSD offender = 1; non-WSD offender = 0) <sup>7</sup>. Results indicate WSD participation reduces the likelihood of re-arrest to a statistically significant degree, with the most robust impact in Academic program attendance, Vocational training completion, or CIP program completion. Importantly, WSD offenders who were male, younger, and had a more extensive history of incarceration were significantly more likely to be re-incarcerated.

**Table 10. Relative Risk of Re-Arrest: Impact of WSD Program Participation, SY2010 Release Cohort**

	WSD Participation (any program) (N=71,057)	WSD Academic <sup>8</sup> (N=30,696)	WSD Vocational <sup>9</sup> (N=71,057)	WSD CHANGES (N=71,057)	Cognitive Intervention (N=71,057)
WSD Program Participation	.88**	---	.90**	.91**	.90**
Program Attendance/Completion	---	.92**	.87**	.93**	.88**
Age	2.29**	2.18**	2.26**	2.28**	2.28**
Gender	1.06**	1.11**	1.07**	1.07**	1.07**
1 <sup>st</sup> Time Incarceration	.25**	.25**	.25**	.25**	.25**
Nagelkerke R <sup>2</sup>	.15	.13	.15	.15	.15

Note: Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no. \* p < .05; \*\* p < .01.

**Figure 3. Predicted Probability of Re-arrest by WSD Program completion vs. non-WSD, SY 2010 Release Cohort**

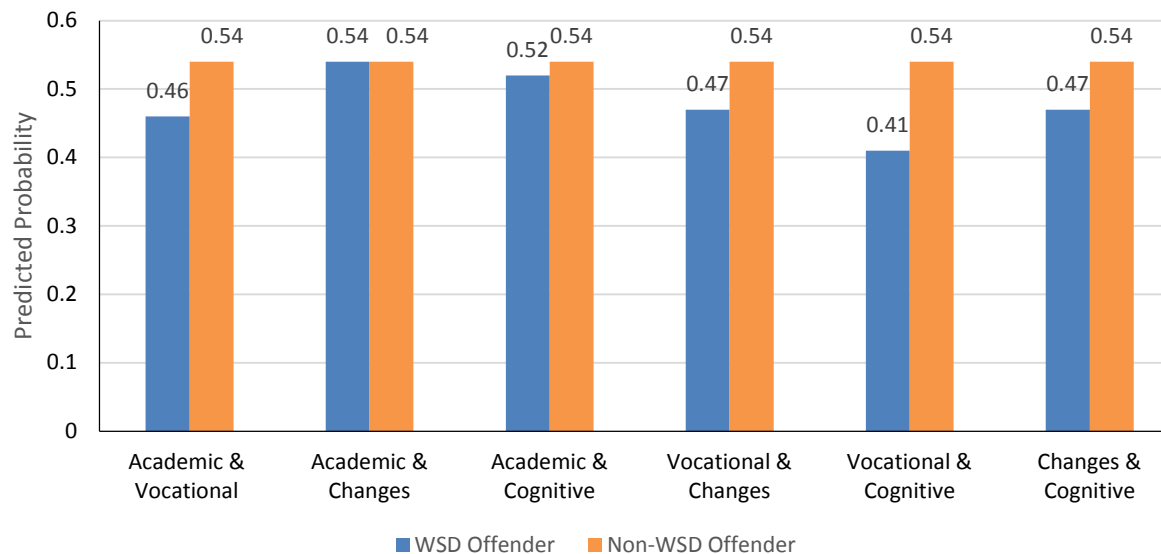


Figure 3 illustrates the probability of re-arrest for WSD offenders who participated following combination of two programs or more programs (e.g., participation in Academic programs AND Vocational training programs), as compared

<sup>7</sup> For WSD Vocational Program, CHANGES, and the Cognitive Intervention Program, a measure of whether WSD offenders attended the program was used rather than attendance hours.

<sup>8</sup> WSD Academic Program Attendance is grouped into 4 groups by hours as presented earlier in this section (<325, 325-749, 750-1074, >1075) and only includes a comparison between these groups rather than with non-WSD offenders.

<sup>9</sup> For WSD Vocational Program, CHANGES, and the Cognitive Intervention Program, WSD offenders who completed the program (equal to 1) were compared to those who did not complete the program (equal to 0), while controlling for participation in WSD programming.

to non-WSD offenders. It should be noted that an offender could participate in multiple courses within one program area (Example: participates in two distinct vocational courses) as well as a third or fourth WSD program.

The positive impact of WSD program participation and/or completion on reducing the probability of re-arrest is evident. The strongest program effects on the reduction of the probability of re-arrest existed for the combination of completed Vocational training and the Cognitive Intervention Program. While the average non-WSD offender had a 54 percent likelihood of re-arrest accounting for age, gender, and incarceration history, a WSD offender who engaged in the Vocational training/CIP combination had only a 41 percent likelihood of re-arrest. Across all program combinations, WSD offenders had a lower probability of re-arrest than non-WSD offenders, with the exception of the Academic and CHANGES program combination wherein both groups were similar in re-arrest.

Table 11 displays the regression coefficients illustrating the influence of participating in program combinations of 2 or more programs on the likelihood of re-arrest among the SY 2010 release cohort. Similar to the Figures above, overall offenders who participated in WSD programs were less likely to be re-arrested than non-WSD offenders. As indicated in the row of coefficients for Program Combination, four of the six program models demonstrated a reduced likelihood of re-arrest beyond singular program completion of WSD programs (Note: Academics was measured as attendance versus non-attendance for WSD offenders in these models rather than attendance hours as in prior models).

**Table 11. Impact of WSD Program Participation (2 or More Programs) on Relative Risk of Re-arrest, SY2010 Release Cohort**

	Number of WSD Programs (N=71,057) <sup>10</sup>	Academic & Vocational (N=71,057)	Academic & CHANGES (N=71,057)	Academic & CIP (N=71,057)	Vocational & CHANGES (N=71,057)	Vocational & CIP (N=71,057)	CHANGES & CIP (N=71,057)
WSD Participation	.87**	.84**	.85**	.84**	.93**	.92**	.93**
No. of Programs Attended	1.0	---	---	---	---	---	---
Program Combination <sup>11</sup>	---	.90*	1.16**	1.12**	.98**	.82*	.96**
Academic	---	1.14*	1.07**	1.11**	---	---	---
Vocational	---	.87**	---	---	.88**	.89**	---
CHANGES	---	---	.92**	---	.94**	---	.94**
CIP	---	---	---	.88**	---	.90**	.89**
Age	2.29**	2.26**	2.23**	2.27**	2.26**	2.26**	2.27**
Gender	1.06**	1.07**	1.07**	1.07**	1.07**	1.07**	1.07**
1 <sup>st</sup> Time Incarceration	.25**	.26**	.26**	.26**	.25**	.25**	.25**
Nagelkerke R <sup>2</sup>	.15	.15	.15	.15	.15	.15	.15

(Note: WSD participation is coded 1 = WSD offender; 0 = non-WSD offender; Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no; \* p < .05; \*\* p < .01.)

Vocational training most robustly reduced the likelihood of re-arrest, especially in combination with a Life Skills program (either CHANGES or CIP). The high risk nature of offenders who participate in Academic programs is evident in these models. Although participation in Vocational training had a strong enough impact to overcome the high risk

<sup>10</sup> Non-WSD offenders are compared with WSD offenders who participated in 1, 2, 3, or 4 WSD programs regardless of program type.

<sup>11</sup> WSD offenders who attended both programs noted in row heading (equal to 1) were compared to those who did not attend both programs (equal to 0).



factors stemming from the characteristics of the offenders who comprise this group, the Life Skills programs were not able to offset these same risk factors for re-arrest.

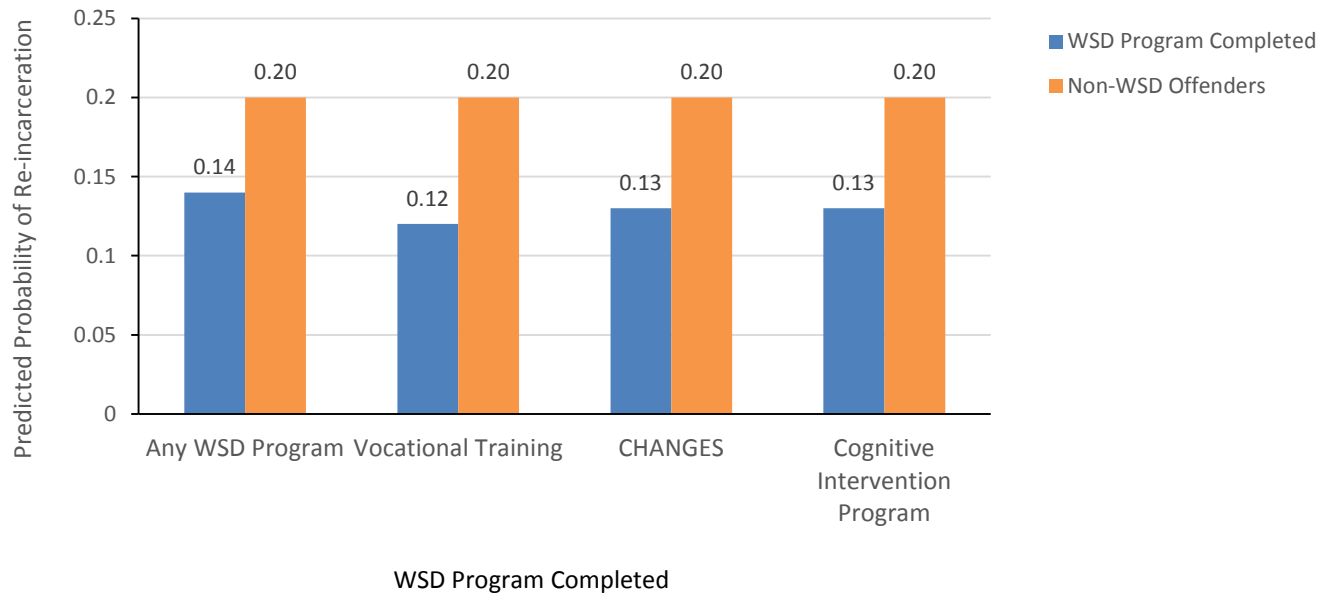
### 5.2.3 Re-incarceration

As noted earlier in this report, contextualizing factors that influence the likelihood of re-incarceration above and beyond correctional education program attendance must be considered when interpreting findings in this report. While some of the factors that contribute to an offender's criminal desistance are examined in this study, additional factors that may influence the likelihood of re-incarceration remain unmeasured. Examples of other factors include crime trends in a jurisdiction which in turn influence certainty of arrest, demographic and socio-economic composition of the jurisdiction's population influencing criminal opportunities, and offender motivation for criminal acts. Further, policy decisions and modifications may affect criminal justice processing, and the extent of discretion exerted by key actors at the individual-level can vary between persons and over time (JFA Institute & Pew Charitable Trusts, 2007) making it difficult to measure these types of confounding factors.

With this caveat in mind, we examine whether differences exist in the probability of re-incarceration between WSD offenders and non-WSD offenders. Statistical models are utilized to account for offender characteristics that vary between these two groups. Specifically, analyses focus on the overall effect of WSD correctional education program attendance and/or program completion on the probability of re-incarceration, while accounting for individual offender characteristics such as history of incarceration, gender, and age (younger than 35 versus 35 and older). Next, analyses assess the influence of individual WSD programs on probability of re-incarceration. Finally, analyses examine the effect of offender participation in multiple programs throughout any period of incarceration on likelihood of re-incarceration, while accounting for the offender characteristics noted earlier. The graphical displays that follow illustrate the comparison of the probability of re-incarceration for the average offender in each group examined. Subsequently, detailed results from regression analyses used to develop the graphs are presented. In both instances, the same statistical controls for individual characteristics of the offender that may also influence the outcomes are incorporated.

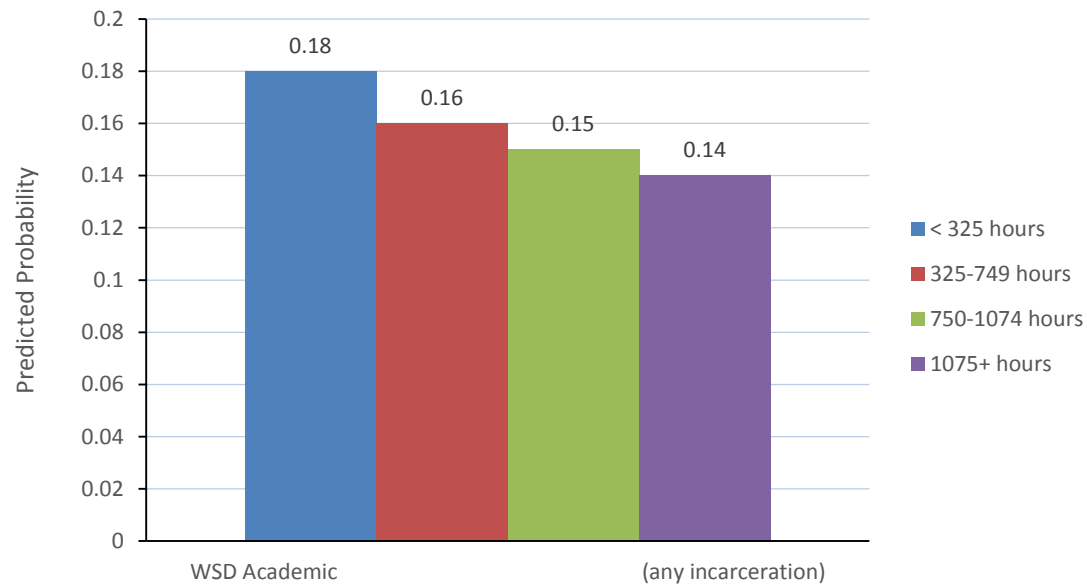
As indicated in Figure 4, the average offender in the SY 2010 release cohort who participated in a WSD program has a 14 percent probability of re-incarceration as compared to the non-WSD offender who has a 20 percent probability of re-incarceration. The WSD offender group ("Any WSD Program") considers all offenders who participated at any level in any WSD program, during the current or prior periods of incarceration. Subsequent columns in this Figure indicate the probability of re-incarceration by distinct WSD programs. Offenders who completed Vocational training, CHANGES, or CIP were found to have even lower probabilities of re-incarceration (12, 13, and 13 percent, respectively).

**Figure 4. Predicted Probability of Re-Incarceration by WSD Program completion vs. non-WSD, SY 2010 Release Cohort**



The probability of re-incarceration for offenders who attended WSD Academic programming is presented in Figure 5 grouped by hours of class attendance. As illustrated in Figure 5, WSD Academic program participants had a lower probability of re-incarceration than non-WSD offenders, ranging from 18 percent to 14 percent. As the number of WSD Academic attendance hours increased, the probability of re-incarceration decreased. For example, WSD offenders who participated in 1075 or more hours of Academic programming had a 14 percent probability of re-incarceration.

**Figure 5. Predicted Probabilities of Re-Incarceration by Academic Program Participation Level, SY 2010 Release Cohort**



Results from logistic regression models are displayed in Table 12. These analyses utilized logistic regression models given the binary nature of re-incarceration. Models examine the impact of WSD program attendance (any) on the likelihood of re-incarceration, while accounting for the covariates of offender age, gender, and incarceration history. Due

to the binary nature of the outcome variable (re-incarcerated yes or no), coefficients greater than 1.0 in Table 12 demonstrate that an increase in the variable displayed in the first column results in an increase in the likelihood of re-incarceration results; whereas, coefficients less than 1.0 demonstrate that with an increase in the variable displayed in the first column, a decrease in the likelihood of re-incarceration results. Asterisks next to the coefficient confirm that coefficient is statistically significant and meaningful for interpretation.

**Table 12. Relative Risk of Re-incarceration: Impact of WSD Program Participation, SY2010 Release Cohort**

	WSD program attendance (any) (N=71,057) Exp (B)	WSD Academic <sup>12</sup> (N=30,696) Exp (B)	WSD Vocational <sup>13</sup> (N=71,057) Exp (B)	WSD CHANGES (N=71,057) Exp (B)	Cognitive Intervention (N=71,057) Exp (B)
WSD Participation	.68**	---	.72**	.75**	.71**
Program Attendance hours/ Completion	---	.90**	.80**	.83**	.88**
Age	2.17**	1.94**	2.12**	2.13**	2.16**
Gender	1.12**	1.11**	1.12**	1.13**	1.12**
1st Time Incarceration	.01**	.01**	.01**	.01**	.01**
Nagelkerke R <sup>2</sup>	.42	.31	.43	.43	.42

(Note: WSD participation is coded 1 = WSD offender; 0 = non-WSD offender; Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no; \* p < .05; \*\* p < .01.)

Similar to the graphical results presented earlier, coefficients demonstrate that offenders who attended WSD programs are significantly less likely to be re-incarcerated than non-WSD offenders as indicated by the .68 coefficient (less than 1.0). Additionally, offenders who are younger than 35, male offenders and offenders with a prior history of incarceration are significantly more likely to be re-incarcerated. The most robust covariate in this model is incarceration history. Offenders incarcerated for the first time are significantly less likely to be re-incarcerated than offenders who have a history of incarceration.

Additional post-hoc analysis shown in Table 13 provides an example of the strong influence of incarceration history on the likelihood of re-incarceration by WSD program participation. It is notable that a significant proportion of the non-WSD population is comprised of offenders incarcerated for the first time (13,529 of the 24,361 non-WSD offenders as compared to only 13,614 of the 46,696 WSD offenders). Further, very few of the offenders incarcerated for the first time were re-incarcerated in either the WSD offender or non-WSD offender groups. Results in Column 2 of Table 13 indicate that 6,382 of the 10,832 non-WSD offenders (59 percent) with a history of incarceration were re-incarcerated, whereas 15,420 of the 33,082 WSD offenders (45.6 percent) who were previously incarcerated were re-incarcerated. Given the differences in the composition of offenders based on incarceration history between the WSD and non-WSD groups, and the influence of this factor on re-incarceration history, it is important to ensure that equivalent groups are compared when making conclusions regarding program effects on outcomes. The models included in these analyses account for these differences.

<sup>12</sup> WSD Academic Program Attendance was grouped into 4 groups by hours as presented earlier in this report (<325, 325-749, 750-1074, >1075 hours).

<sup>13</sup> For WSD Vocational Program, CHANGES, and cognitive intervention, WSD offenders who completed the program (equal to 1) were compared to those who did not complete the program (equal to 0) as well as accounting for whether the offender participated in any other WSD programs or not.

**Table 13. Re-incarceration by Incarceration History and WSD Program Attendance, SY 2010 Release Cohort**

	Offenders incarcerated for the first time (n=27,143)	Offenders previously incarcerated (n=43,914)
Non-WSD offenders (n=24,361)	1.3% (170 of 13,529)	59.0% (6,382 of 10,832)
WSD offenders (n=46,696)	1.5% (211 of 13,614)	45.6% (15,420 of 33,082)

Returning to the interpretation of Table 12, when examining the influence of program completion on re-incarceration in each WSD program, it is evident that program attendance level and program completion matters. Academic program participation is grouped by attendance hours for all WSD offenders who attended a minimum of 30 hours of Academic programming. Results indicated that with an increasing number of Academic program attendance hours, significant reductions in the likelihood of re-incarceration occurred. Beyond academic program attendance, WSD offenders who completed the subsequently listed respective programs (columns 3-5) were less likely to be re-incarcerated than non-WSD offenders. That is, offenders who completed Vocational training, CIP, or the CHANGES program were respectively less likely to be re-incarcerated than non-WSD offenders. In summary, greater levels of Academic program attendance, as well as program completion of Vocational training, CIP, or CHANGES each contributed to a statistically significant decrease in the likelihood of re-incarceration. Further, the incarceration history, age and gender of the offender mattered. Offenders with a history of incarceration, males, and younger offenders were more likely to be re-incarcerated.

Next, a graphical representation of the impact of participation in more than one WSD program on the likelihood of re-incarceration for WSD offenders as compared to non-WSD offenders is shown in Figure 6. As noted earlier, the probability of re-incarceration for a non-WSD offender is 20 percent. For WSD offenders, with each additional program attended the probability of re-incarceration declined. For WSD offenders who attended all four WSD programs at some point during incarceration, the probability of re-incarceration was the lowest at 12 percent.

**Figure 6. Predicted Probability of Re-Incarceration by Number of WSD Programs, SY 2010 Release Cohort**

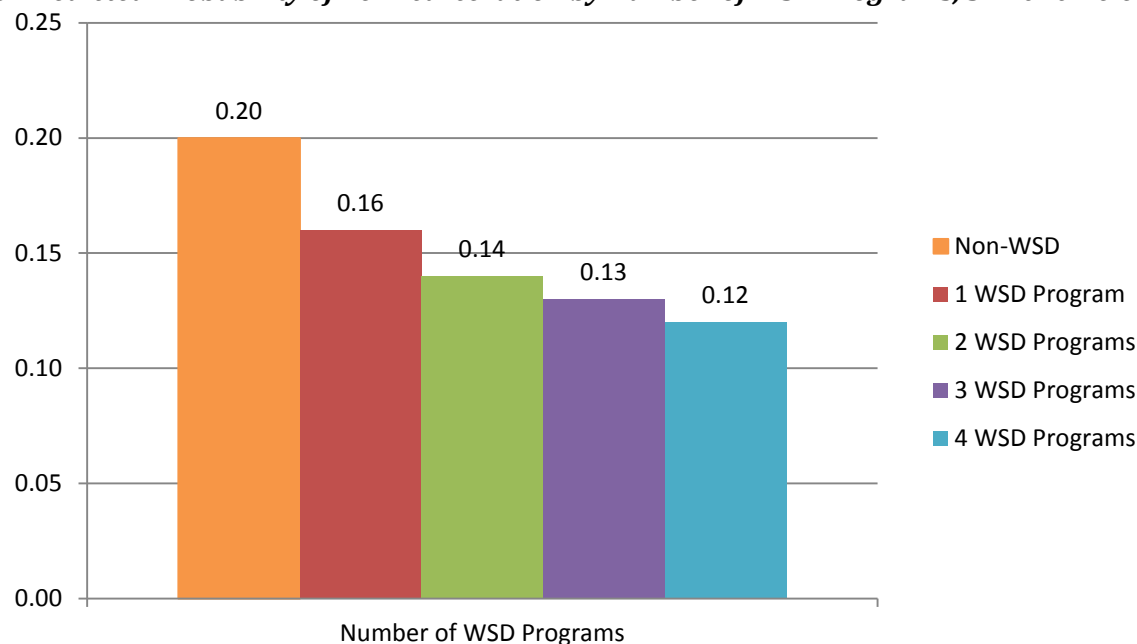
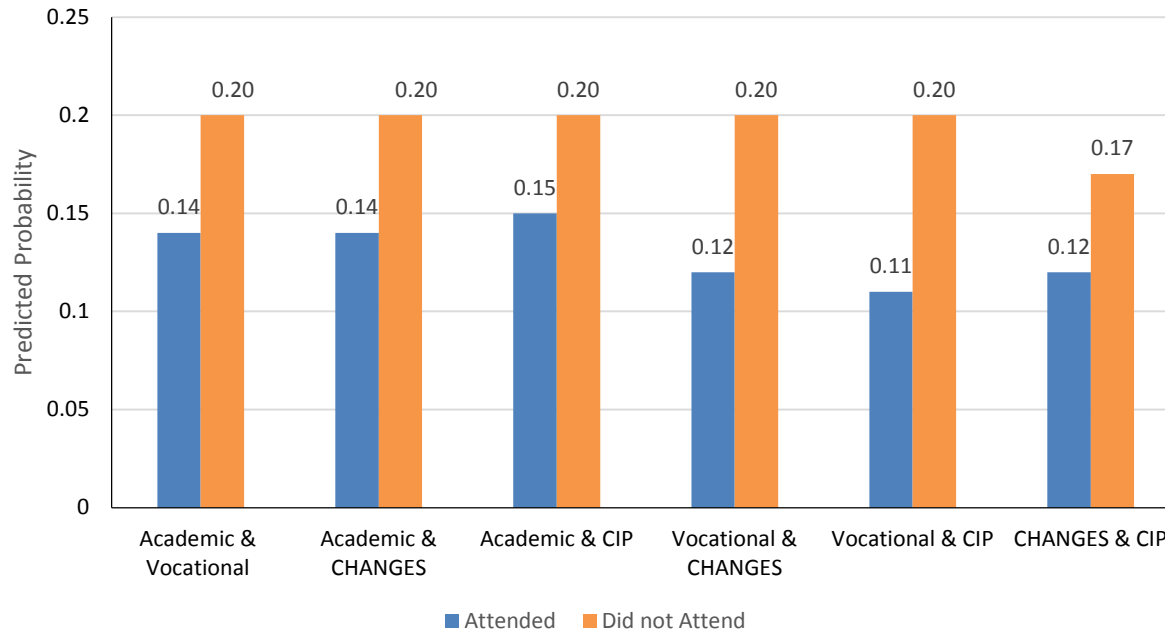


Figure 7 displays the probability of re-incarceration for various program combinations with a focus on WSD offender participation in *at least* the two WSD programs listed on the horizontal axis. As indicated in Figure 7, for the average offender, all six WSD program combinations resulted in a probability of re-incarceration that was lower than the probability of re-incarceration for non-WSD offenders. The program combination that resulted in the lower probability of re-incarceration was completion of Vocational training along with completion of CIP.

**Figure 7. Predicted Probability of Re-Incarceration by WSD Program, SY 2010 Release Cohort**



These same results are evident in tabular form based on regression model results. As indicated in the first column of Table 14, WSD offenders who participated in one or more WSD programs had a lower probability of re-incarceration as compared to non-WSD offenders. Moreover, the higher the number of WSD program participation, the lower the likelihood of re-incarceration. With the exception of Academic program attendance in some models, the influence of all other WSD programs on reducing the likelihood of re-incarceration was consistent. Further, a multiplicative program effect was found for Academic and CHANGES such that participation in both programs significantly reduced an offender's likelihood of re-incarceration beyond participation in either Academic programs or CHANGES alone. It is important to note that these models did not distinguish Academic participation by attendance hours rather all WSD Academic offenders were grouped together. Once again in these statistical models, the statistical significance of the covariates included was evident. Younger offenders, males, and offenders with a history of incarceration were also more likely to be re-incarcerated.

**Table 14. Impact of WSD Program Participation (2 or More Programs) on Relative Risk of Re-incarceration, SY2010 Release Cohort**

	Number of WSD Programs (N=71,057) <sup>14</sup>	Academic & Vocational (N=71,057)	Academic & CHANGES (N=71,057)	Academic & CIP (N=71,057)	Vocational & CHANGES (N=71,057)	Vocational & CIP (N=71,057)	CHANGES & CIP (N=71,057)
WSD Participation	.84**	.71**	.78**	.70**	.79**	.74**	.77**
No. of Programs Attended	.89**	---	---	---	---	---	---
Program Combination <sup>15</sup>	---	1.07	1.08**	1.14	.99	.92	.96
Academic	---	1.03	.96**	1.01	---	---	---
Vocational	---	.82**	---	---	.84**	.84**	---
CHANGES	---	---	.83**	---	.87**	---	.87**
CIP	---	---	---	.87**	---	.91**	.90**
Age	2.12**	2.12**	2.14**	2.16**	2.10**	2.11**	2.14**
Gender	1.13**	1.13**	1.13**	1.12**	1.14**	1.13**	1.12**
1 <sup>st</sup> Time Incarceration	.01**	.01**	.01**	.01**	.01**	.01**	.01**
Nagelkerke R <sup>2</sup>	.43	.43	.42	.42	.43	.45	.42

Note: WSD Participation is coded 1 = WSD offender; 0 = non-WSD offender; Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no. \* p < .05; \*\* p < .01.

### 5.3 Educational Outcomes: GED Attainment and Educational Advances

This section of the report presents an assessment of the impact of WSD correctional education program participation on offender educational achievement. Educational data were provided by WSD for the SY 2010 release cohort offenders who participated in WSD Academic programs. Overall, findings indicated significant improvements in education as measured through GED attainment and grade level equivalencies. In this section, the numbers of WSD offenders who obtained their GED is examined, as well as changes in literacy levels from initial assessment to highest level of achievement.

#### 5.3.1 GED Attainment

Across the entire SY 2010 release cohort, 25,686 offenders (36.1 percent) possessed their GED or high school diploma (HSD) at the time they were incarcerated (33.8 percent of WSD offenders, 40.7 percent of non-WSD offenders). At the time of release, 36,614 of the 71,063 offenders (51.5 percent) possessed their GED or high school diploma. As shown in Table 15, 10,928 offenders earned their GED or high school diploma while participating in WSD programming all of whom participated in WSD Academic programming. For clarification, the only offenders who are provided the opportunity to complete GED tests are those offenders who do not have a GED or HSD, and are enrolled in academic courses.

<sup>14</sup> Comparison of Non-WSD offenders with WSD offenders who participated in 1, 2, 3, or 4 WSD programs respectively regardless of program type.

<sup>15</sup> WSD offenders who attended both programs noted in row heading (equal to 1) were compared to those who did not attend both programs (equal to 0).

**Table 15. Educational Outcomes: GEDs attained while attending WSD academic programming, SY 2010 Release Cohort**

	Had GED/HSD prior to incarceration	Obtained GED/HSD while attending WSD Academic programs	GED/HSD at time of release
WSD offenders (n=46,702)	15,772	10,928	26,700
Non-WSD offender (n=24,361)	9,914	0	9,914
Total SY 2010 cohort (n=71,063)	25,686	10,928	36,614

The remainder of this section is focused on the 30,785 offenders in the SY 2010 release cohort who have ever participated in Academic programming. Non-WSD offenders are not appropriate comparisons in this section since educational gains would not be anticipated without participation in Academic programming. Although WSD adult basic education programs focus on numerous skills, advances in reading levels are highlighted for comparison within the broader literature as well as earlier evaluation reports (See *Evaluation of the Windham School District Correctional Education Programs, 2012* and the Criminal Justice Policy Council Report at: [http://www.lbb.state.tx.us/PubSafety\\_CrimJustice/PubSafety\\_CrimJustice.htm](http://www.lbb.state.tx.us/PubSafety_CrimJustice/PubSafety_CrimJustice.htm)).

As part of the intake process, offenders typically are assessed for their current education levels with results provided as grade equivalency scores for each skill area, and an overall composite score. WSD offenders participating in adult basic education programs are re-assessed a maximum of three times per year, at least six weeks apart. Resulting grade equivalency (GE) scores range from below 1.0 to 12.9, and coincide with grade level and month during the academic year. For example, 3.8 is equivalent to third grade, eighth month of the academic calendar. Here we focus on the offender's grade equivalency levels in their reading and composite score, which combines math, reading, and writing grade equivalencies.

Offenders who participated in WSD Academic programs made significant educational gains. On average, WSD offenders in the SY 2010 cohort who participated in Academic programming had an average initial reading score of 7.05. After attending WSD Academic programs (at varying levels of attendance), the same group attained an average highest reading score of 8.80. This same group of offenders had an average initial composite score of 6.10, and attained an average highest composite score of 7.92. It is important to note that significant variation among offenders existed with respect to their increase academic grade levels. Some offenders exhibited large gains, with other offenders making improvements, even though they already had a reasonably strong skill set. As shown in Table 16, at the time of release, WSD offenders are more academically prepared and literate by almost two full grade levels in comparison to their ability as demonstrated at intake.

**Table 16. WSD Offenders in Academic Programs: Average Educational Attainment, SY 2010 Release Cohort**

Educational Attainment	WSD Academic Program Participants	
	Initial Grade Equivalency	Highest Grade Equivalency
Composite EA	6.1	7.92
Reading EA	7.05	8.80

### 5.3.2 Educational Advances: Reading Levels

Focusing more specifically on literacy in this next section, WSD offenders were categorized into one of four groups based on their reading level. WSD offenders who demonstrated a reading level of 3.9 grade equivalency or lower were categorized as “Non-readers.” Offenders who demonstrated a reading level that ranged between 4.0 and 5.9 were labeled “Readers.” Offenders who demonstrated a reading level of 6.0 through 8.9 were labeled “Literate.” Finally, offenders who demonstrated a reading level of 9.0 or higher were labeled “Advanced readers.” The initial reading level was typically based on assessment at or near the time of intake. Highest reading levels achieved were measured as the highest reading score obtained by WSD offenders during any subsequent reading assessments given to the offender.

- ✓ Significant improvement in reading ability occurred among WSD offenders in the SY 2010 release cohort.

As indicated in Table 17, among WSD offenders in the SY 2010 release cohort who participated in Academic programs during any incarceration period, 40.8 percent were less than literate at initial assessment during the current incarceration. Specifically, 18.2 percent of WSD offenders were considered “non-readers” possessing reading skills below a fourth grade level and 22.6 percent of WSD offenders were considered “readers.” Further, 30.7 percent of this same offender group was considered “literate” at initial assessment whereas 28.6 percent were considered “advanced readers” at a 9<sup>th</sup> grade level or higher. Subsequent to WSD Academic program participation, WSD offenders significantly improved their reading level. Within the SY 2010 cohort, nearly 80 percent the population was considered to be “literate” or “advanced readers” upon release, as compared to the initial assessment that indicated 59.3 percent of the population was “literate” or “advanced readers”. Approximately 7.5 percent of offenders remained in the non-reader classification group, although notable improvements in grade equivalencies were achieved.

**Table 17. WSD Academic Programs Participants: Initial and Highest Reading Level Achieved (Any Incarceration), SY 2010 Release Cohort**

Reading level	WSD Academic Programs Participants (N=30,339)			
	Frequency at Intake	% at Intake	Frequency at release	% at Release
Non-reader	5,512	18.2	2,275	7.5
Reader	6,860	22.6	3,815	12.6
Literate	9,301	30.7	8,277	27.3
Advanced reader	8,666	28.6	15,972	52.6

Table 18 presents the extent of change in reading group classification as a result of participation in WSD Academic programs. Overall, the percentages in Table 18 indicate offenders improved their average reading ability to a significant extent. For example, among offenders who were initially classified as **non-readers**, 58% became **readers, literate, or advanced readers** while incarcerated. For offenders who initially possessed some reading ability labeled as “readers,” significant gains were also made. Specifically, among offenders initially classified as **readers**, 69.3% of those offenders increased their reading levels to become fully **literate** or **advanced readers** during incarceration. Finally, among offenders who were initially classified as **literate**, 55.2% became **advance readers**. Notably, 52.6% of the offenders who participated in WSD Academic programs were advanced readers as measured by their highest reading level assessment prior to release.

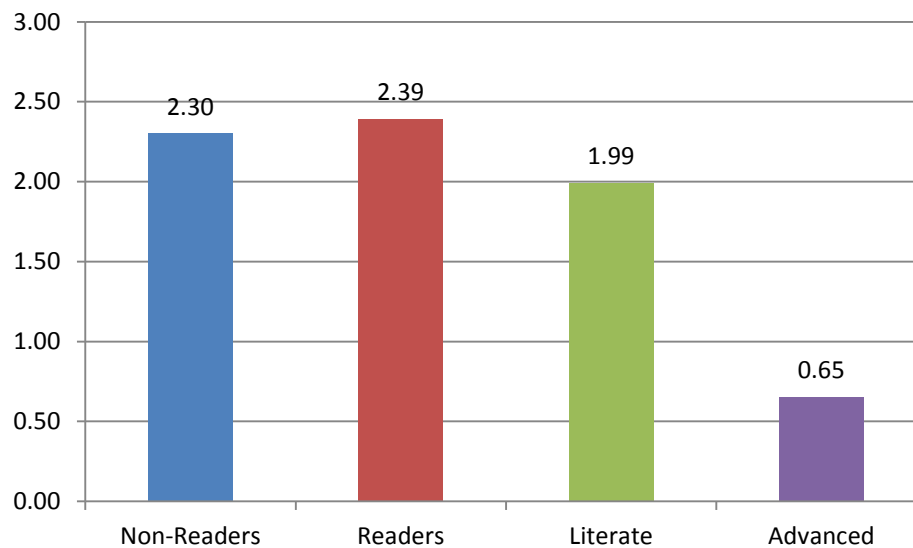


**Table 18. Change in group classification, SY2010 Release Cohort**

WSD Academic Programs Participants (N=30,339)		
Reading level	Frequency at release	% at Release
No change – Non-reader (NR)	2,275	7.5
NR to Reader	1,710	5.6
NR to Literate	1,109	3.7
NR to Advanced Readers	418	1.4
Readers, no change	2,105	6.9
Readers to Literate	3,004	9.9
Readers to Advanced Readers	1,751	5.8
Literate, no change	4,164	13.7
Literate to Advanced Readers	5,137	16.9
Advanced Readers, no change	8,666	28.6

In examining improvements in literacy for WSD offenders who participated in Academic programs, Figure 8 displays the average reading grade level change occurring during the any incarceration aggregated by initial reading level group. The horizontal axis label in Figure 8 displays the incoming reading ability based on classifications described earlier. The vertical graph bars represent the average reading grade level increase. As a group, WSD offenders in the Readers group demonstrated the most improvement with an average 2.39 reading grade level increase during incarceration. Those offenders who were Non-readers made similar significant gains of a 2.30 grade level increase in reading skills. Offenders who were literate increase their reading ability almost two full grade levels. Those offenders in the highest reading group initially had the least amount of increase possible since the assessment score tops out at 12.9, yet still demonstrated almost a full grade level increase (.65) based on their attendance in WSD Academic classes.

**Figure 8. WSD Academic Programs participants: Average reading level grade gains by initial reading level, SY 2010 Release Cohort**



### 5.3.3 Educational Advances and Academic Program Attendance

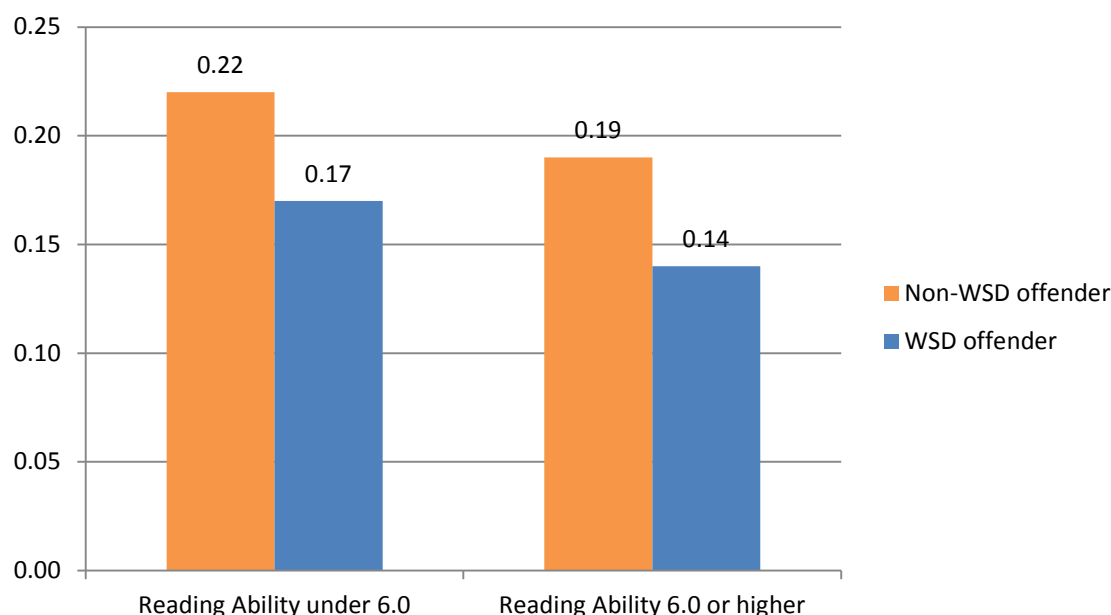
Data on WSD program attendance in the SY 2010 release cohort was examined across four levels of Academic program attendance. The aim of this analysis was to determine the minimum level of Academic program attendance required to result in measurable educational gains. Offenders were categorized according to the following attendance levels: [1] <325 hours, [2] 325-749 hours, [3] 750–1074 hours, and [4] >1075 hours. The average advancement in reading grade equivalencies by level of academic program attendance is displayed in Table 19. As expected, on average WSD offenders who had lower initial reading grade levels tended to attend a higher number of Academic program hours. This finding indicates offender educational needs are accurately matched with higher levels of Academic programming. Next, as indicated Column 3 of Table 19, the greatest average increase in reading levels coincided with the highest levels of academic program attendance as measured by program attendance hours.

**Table 19. Average Reading Grade Levels by Academic Attendance Hours, SY 2010 Release Cohort**

Program Attendance Hours	WSD Academic Programs Participants			
	Number of Offenders	Average Initial Reading Grade Level	Average Highest Reading Grade Level	Average Reading Grade Change
<325 hours	15,317	7.9	9.0	1.05
325 – 749 hours	7,778	6.8	8.9	2.09
750 – 1074 hours	2,376	6.1	8.7	2.57
1075 or more hours	4,868	5.0	8.0	3.02

The impact of the reading grade level increase was also found to significantly influence offender outcomes. As Figure 9 indicates, for both WSD offenders and non-WSD offenders, offenders who had a higher reading level at the time of release had a lower probability of re-incarceration upon release. Offenders who had were assessed as having a higher reading level at the time of release, measured as 6.0 or above, had a 14 percent probability of re-incarceration for WSD offenders, and 19 percent for non-WSD offenders, respectively. In comparison, offenders who had a reading level below 6.0 had a 17 percent probability of re-incarceration for WSD offenders, and 22 percent probability for non-WSD offenders. These findings indicate that not only is educational achievement levels linked to a lower probability of re-incarceration, the average SY 2010 release cohort offender who attended WSD programs within the respective reading groups have an even lower probability of re-incarceration.

**Figure 9. Probability of Re-incarceration by Reading Level and WSD Program Attendance, SY 2010 Release Cohort**



## 5.4 Employment

The section examines employment outcomes for offenders released in SY 2010. The focus here was on the type of employment obtained, whether Vocational training programs are offered in the employment areas of offenders, and finally, reported earnings during the first year of post-release employment. Data were obtained from the Texas Workforce Commission (TWC) for all offenders in the release cohort, including those who participated in some form of Vocational training including WSD Vocational training and College Vocational training. An important caveat is that reliance on data from the Texas Workforce Commission to examine these factors is somewhat limited because these data do not include contract labor, day-labor wages, or out-of-state wages earned by offenders; therefore, employment rates and/or earnings may be underestimated. Data on employment outcomes included earnings reported on a quarterly basis beginning with the first quarter of employment during the first year subsequent to the SY 2010 release date, continuing through the fifth quarter of employment to allow for four full quarters of employment data. An offender's earnings during the first quarter of employment do not likely reflect the same level of earnings across other quarters of employment since offender release dates varied throughout the first fiscal quarter.

### 5.4.1 Employment Obtained and Vocational Training Participation or Completion

Data from the Texas Workforce Commission included indicators based on the North American Industry Classification System (NAICS) code in which offenders were employed. The NAICS codes are used by Federal statistical agencies to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. The majority of offenders were employed in multiple positions, some of which had distinct NAICS categories. Almost all of the positions held by WSD Vocational and College Vocational offenders were related to Vocational training received. Specifically, 14,940 offenders in the SY 2010 cohort attended vocational training. Of those, 6,762 offenders were employed during the first year subsequent to their release, and 6,286 offenders (93 percent) were employed in positions that were directly related to the Vocational training received. The SY 2010 WSD offenders gained employment in one of twenty-two different NAICS designated economic sectors listed alphabetically below:

- Accommodation and Food Services
- Administrative and Support and Waste Management and Remediation Services
- Agriculture, Forestry, Fishing and Hunting
- Arts, Entertainment, and Recreation
- Construction
- Educational Services
- Finance and Insurance
- Health Care and Social Assistance
- Information
- Management of Companies and Enterprises
- Manufacturing
- Mining, Quarrying, and Oil and Gas Extraction
- Other Services (except Public Administration)
- Primary Metal Manufacturing
- Professional, Scientific, and Technical Services
- Public Administration
- Real Estate and Rental and Leasing
- Retail Trade
- Transportation and Warehousing
- Utilities
- Wholesale Trade
- Wood Product Manufacturing

### 5.4.2 Employment and Earnings Subsequent to Release

Offenders in the SY 2010 release cohort participated in both WSD Vocational training, and College Vocational training offered by non-WSD entities. Some offenders *completed* either WSD Vocational training (n = 9,074) or College Vocational training (n = 1,580), while other offenders completed training in both (n = 943). Other offenders *participated in, but did not complete* the respective programs (n = 2,862 WSD, n = 396 College) or participated in both WSD and College Vocational training, without completing the programs (n = 85). In Table 20, the total number and percentage of offenders in each resulting Vocational training group that had reported earnings within the first year subsequent to release is shown. Notably, offenders who completed either WSD Vocational training, non-WSD Vocational training, or both Vocational training programs were most likely to report at least one quarter of earnings.

**Table 20. Percent Employed by Vocational Training Participation, SY 2010 Release Cohort**

	Offenders Employed at least one quarter	
	(% of Group)	Number of offenders employed
WSD only Vocational training completion (n = 9,074)	45.4%	4,120
WSD only Vocational training, non-completion (n = 2,862)	40.6%	1,161
WSD and College Vocational training completion (n = 943)	49.5%	467
WSD and College Vocational training participation, non-completion (n = 85)	36.5%	31
College Vocational training completion (n = 1,580)	50%	790
College Vocational training participation, non-completion (n = 396)	48.7%	193
Comparison group, No Vocational training or College Academics (n = 49,544)	34.1%	16,905

### 5.4.3 Earning Levels and Factors Associated with Employment Retention

In addition to considering institutional disciplinary violation rates and recidivism as offender outcomes, average quarterly reported earnings are an equally important outcomes measure to consider. An offender who is released into the community and avoids re-arrest should be considered a success; however, that same offender who avoids re-arrest *and*

becomes a productive member of society by securing legal employment is an even greater success. Ex-offenders who are gainfully employed contribute to the state and society through taxes paid and reduced utilization of social benefits. Higher wage levels for employed offenders further enable offenders to support themselves without aid from the state, to contribute to their own debt management, and adequately support family or dependents. This section of the report presents offender earning levels with additional consideration of factors that influence these levels.

Offenders who completed Vocational training programs were among those offenders who earned the highest wages. The average earnings for the first quarter that offenders were employed (within one year of release) are shown in Table 21. Average quarterly earnings were calculated as earnings across all quarters for which offenders had earnings reported by the TWC, divided by the total number of quarters for which the offender was employed. For most offenders, the first quarter of employment is a partial quarter with some variation in the length of time the offender was employed. Table 21 indicates participation in Vocational training programs was related to the average quarterly wages for offenders who successfully gained employment in the year subsequent to their SY 2010 release. Similar to the earlier results, Table 21 supports the conclusion that completion of Vocational training programs influences average quarterly earnings beyond participation in training alone. The exception is offenders who participated in College Vocational training, but did not fully complete the program. These offenders also had a relatively higher level of average quarterly earnings.

Offenders who completed WSD Vocational training alone, or in combination with College Vocational training had significantly higher first quarter reported earnings, and overall average quarterly reported earnings as compared to non-completers and the College Vocational training participants. The highest earning levels were reported by offenders who completed College Vocational training alone. The final column in Table 21 indicates the average difference among the groups between the first quarter of reported earnings and one year post-employment earnings. This difference was calculated by subtracting the fourth quarter of reported earnings from the first quarter of reported earnings and calculating an average for each of the groups in Table 21. As indicated, results were similar such that offenders in the two College Vocational training groups, both completers and participants only, as well as offenders in the WSD Vocational and College Vocational training completers group demonstrated the greatest gains in their first year of reported earnings subsequent to release.

**Table 21. Average Quarterly Earnings by Vocational Training Participation, SY 2010 Release Cohort**

	Average 1 <sup>st</sup> quarter employment earnings	Average Quarterly Earnings, all quarters employed	Average Difference, 1st quarter and 1 year post-employment earnings
WSD only Vocational training completion	\$1,806.65	\$2,977.35	\$2,416.37
WSD only Vocational training, non-completion	\$1,593.21	\$2,589.13	\$2,250.90
WSD and College Vocational training completion	\$1,936.64	\$3,333.14	\$2,752.86
WSD and College Vocational training participation, non-completion	\$1,566.98	\$2,411.92	\$1,258.26
College Vocational training completion	\$1,953.89	\$3,382.29	\$2,798.13
College Vocational training participation, non-completion	\$1,760.36	\$3,015.53	\$2,811.02
Comparison group, No Vocational training or College Academics	\$1,684.22	\$2,650.80	\$2,167.22

Vocational training programs would be expected to have the most robust impact on subsequent employment; yet, increasing an offender’s literacy levels may also impact employment retention and earnings potential. Such a finding would support further involvement in WSD programs that also contribute to educational gains as an important support for

post-release earnings. Indeed, as indicated in Table 22, for the majority of groups offenders who were at the literate or advanced reading levels (6.0 reading grade equivalency or higher) had average quarterly post-release earnings that were higher than offenders who were non-readers or at the reader level (less than 6.0 reading level equivalency). Similar to the results with other outcomes examined, completion of Vocational training, beyond participation alone, was specifically valuable regarding average quarterly reported earnings. Offenders who had a reading level above 6.0 and completed Vocational training (WSD, College, or a combination of both types of training) had the highest reported average quarterly earnings. The number of offenders with reported earning in comparison to the number of offenders categorically in each group is shown parenthetically adjacent to each figure.

**Table 22. Average Quarterly Earnings by Reading level of Vocational Training Participation, SY 2010 Release Cohort**

	Reading level less than 6.0	Reading level 6.0 or higher
	Average Quarterly Earnings, All quarters employed	Average Quarterly Earnings, All quarters employed
WSD only Vocational training completion	\$2,295.49 (182/595)	\$3,004.86 (3885/8,346)
WSD only Vocational training, non-completion	\$1,878.41 (80/307)	\$2,640.83 (1061/2,488)
WSD and College Vocational training completion	---	\$3,341.77 (462/932)
WSD and College Vocational training participation, non-completion	---	\$2,476.22 (30/77)
College Vocational training completion	\$2,668.30 (9/1,515)	\$3,412.71 (765/24)
College Vocational training participation, non-completion	\$3,235.00 (6/16)	\$2,991.96 (171/345)
Comparison group, No Vocational training or College Academics	\$2,465.49 (3,233/12,497)	\$2,685.02 (12150/30,623)

It is evident in the tables above that completion of Vocational training programs and increased literacy positively contributed to higher earnings levels. A secondary consideration is the extent to which offenders are able to retain employment over time. The concept of “retained employed” is defined in this report as an offender having “earnings in the 1st, 2nd, and 3rd quarters after initial employment for a total of four consecutive quarters of earnings where earnings were greater than zero”. Here, we examine the contribution of offender characteristics to employment retention as defined. We compare offenders who did not have reported earnings, with offenders who were able to gain employment but not retain employment as per the report definition, and offenders who were successful in retaining employment. Specifically, Table 23 presents offender characteristics by the number of quarters employed where the fourth quarter of employment is where the offender is by definition considered an offender successfully having “retained employment.”

**Table 23. Factors related to Retention of Employment, SY 2010 Release Cohort.**

Offender Characteristic	Earnings Reported, Number of quarters				Retained Employment 4 quarters (n=3,851)
	No earnings Reported (n=45,096)	1 quarter (n=4,069)	2 quarters (n=4,544)	3 quarters (n=3,748)	
Age (Average, in years)	36.0	33.8	33.3	33.2	33.5
Educational Achievement, (Average Composite Score)	7.5	8.2	8.4	8.5	8.7
Industry Certification Received (% yes)	2.9	4.5	4.7	4.5	5.1
GED or High School Diploma (% yes)	45.5	55.9	60.2	60.9	62.1
Completed College Courses (% yes)	.6	.7	.7	.6	1.1

As indicated in Table 23, important group differences existed between offenders who did not have reported earnings upon release (shown in Column 1), and offenders who were able to successfully obtain and retain employment (shown in Column 5). Offenders who did not have reported earnings on average were significantly older, had lower educational achievement scores, were less likely to have earned an industry certification, and were less likely to have a high school diploma or GED in comparison to offenders who were able to successfully retain employment (as per the definition stated above).

Offenders who reported earnings but did not meet the definition of employment retention were not significantly different in age from offenders who successfully retained employment. Yet on average, offenders who retained employment had higher educational achievement scores, were somewhat more likely to have achieved an industry certification though not to a statistically significant degree, and were significantly more likely to have a high school diploma or GED. Data indicated only limited number of offenders both completed College Academic courses and had reported earnings. Offenders who retained employment were twice as likely to have completed College Academic courses as compared to offenders who did not report any earnings, or gained but did not retain employment. From these findings it is evident that both academic and vocational education contributed to successful employment retention among offenders released in SY 2010.

## 5.5 Cost of Confinement

The final component of this report summarizes the cost of confinement as it relates to the WSD programs provided during SY 2010. Drawing on the Texas Legislative Budget Board (LBB) *Criminal Justice Uniform Cost Report, Fiscal Years 2010 to 2012* (submitted to the 83<sup>rd</sup> Texas Legislature January 2013). In examining cost of confinement, the LBB utilized the following formula to calculate cost per day per offender for the Windham School District:

$$\text{Cost per Day} = ([\text{Program Expenditures}/\text{Average Daily Population}]/\text{Days in a Fiscal Year})$$

As noted in the LBB report, agencies were asked to report salary expenditures without benefits. Estimates of 18.23 percent and 19.35 percent for fiscal years (FY) 2010 and 2011 were reported. No indirect costs for TDCJ were included in the program expenditure calculations since WSD received the majority of its funding from the Texas Education Agency (TEA). This is a distinct consideration from other TDCJ entities examined in the above referenced report. Specific program expenditures of the WSD used to calculate the final cost per participant were not reported in the LBB report, only the average daily population and resulting cost per day per offender. The average daily population of WSD was 25,162 during FY 2010. Cost per day per offender participating in WSD programs during FY 2010 was \$8.58.

## **Appendix – SY 2011 as of December 2013**



## 1 Overview and Description of SY 2011 Release Cohort

Data collection for the SY 2011 cohort concluded December, 2013. Complete data for a three year follow up period required for an analysis of subsequent arrest, subsequent confinement, and employment related issues was not available. As a result, this Appendix presents a truncated analysis of the SY 2011 cohort as compared to the analysis performed for the SY 2010 cohort. The Appendix presents a summary of the SY 2011 release cohort demographics, institutional violation rates, and educational achievement levels. The first section includes a description of the typical offender released in SY 2011, including offenders who participated in any WSD program (Academic programs, Vocational training, CHANGES, or the Cognitive Intervention Program) during the current or prior incarceration. Hereafter, these offenders are referred to as “WSD offenders.” WSD offenders are compared to offenders who never participated in any form of WSD programming and were also released in SY 2011, hereafter referred to as “Non-WSD offenders.”

Of the 70,916 offenders released from TDCJ during the SY2011, 45,745 were WSD offenders and 25,171 were Non-WSD offenders. As indicated in Table 1, WSD offenders demonstrated notable differences from non-WSD offenders. Specifically, a typical offender among the 45,745 offenders participating in WSD programs was a thirty-six year old male who was more likely to be African American than Hispanic or White. Many of these offenders were incarcerated for the first time (36.5%). In comparison to non-WSD offenders, WSD offenders were more likely to be older, have a history of incarceration, and be serving a longer sentence for the current offense. WSD offenders were somewhat more likely to be male and African American than non-WSD offenders.

**Table 1. Demographic and Legal Characteristics, SY 2011 Release Cohort**

	All Offenders (N=70,916)	WSD Offenders (N=45,745)	Non-WSD Offenders (N=25,171)
Gender (% male)	85.5	86.4	83.9
Race			
African American	33.5	36.5	27.9
White	32.5	31.6	34.2
Hispanic	33.6	31.6	37.3
Other	0.5	.4	.6
Age at Release <i>M</i> , (SD)	35.5 (11.1)	36.4 (10.9)	33.9 (11.1)
Prior Incarcerations (%)			
0 (1 <sup>st</sup> incarceration)	49.1	36.5	71.8
1	22.6	25.1	18.2
2	12.7	16.4	5.9
3	7.1	9.7	2.3
4 or more	8.4	6.6	.9
Time Served for Current Offense (%)			.8
6 months or less	31.4	21.0	50.2
>6 months to 1 year	27.0	25.7	29.5
>1 year to 2 years	18.1	21.2	12.5
>2 years to 5 years	14.7	19.6	5.8
>5 years to 10 years	5.6	7.9	1.3
>10 years	3.3	4.7	.7

## 2 Findings

This evaluation considered multiple aspects of WSD programs in accordance with SB 213. First, the extent to which offenders released in SY 2011 participated in WSD programs was assessed. The first consideration of this assessment examines the type(s) and extent of WSD program participation as measured by program attendance for offenders during any period of incarceration. This measure includes the current and prior incarceration periods. Next, this report examines the impact of WSD program attendance on institutional disciplinary violations, and educational achievement.

### 2.1 WSD Correctional Education Program Participation

WSD program attendance data were used to examine the extent to which offenders released during SY 2011 attended WSD correctional education programs. Program attendance and program completion<sup>16</sup> for all offenders released during SY 2011 was examined. To account for variation in sentence length and incarceration history that could impact WSD program attendance or completion, and in turn affect offender outcomes, all correctional education program attendance that occurred during *any* incarceration, either as part of the offender's current incarceration or during a prior incarceration(s) was included. Other correctional education program evaluations often fail to consider whether offenders have participated in more than one correctional education programs as well as account for program attendance in previous periods of incarceration. For example, in the WSD an offender may attend Academic programming or Vocational training, and concurrently participate in the CHANGES program. Alternatively with intensive programs, such as WSD Vocational training, an offender may only be able to participate in that single program; yet, attendance hours are significant. Our inclusive approach is important as the academic literature suggests that a higher program dosage tends to increase the impact of program effects on offender outcomes. Our scope examines the extent to which offenders in the SY 2011 release cohort participated in two or more WSD programs during *any* period of incarceration.

Of the 70,916 offenders released in SY 2011, 45,745 offenders participated in one or more WSD programs while incarcerated. The majority of offenders who participated in a WSD program completed program requirements. As indicated in Table 2, 30,083 offenders participated in Academic programs. Of the 30,083 Academic program offenders, 22,923 offenders (or 76.2% of Academic program participants) completed Academic program requirements. Additionally, of the 13,344 offenders who participated in WSD Vocational training, 10,116 offenders (or 75.8% of Vocational training participants) completed the Vocational training program.

**Table 2. WSD Program Attendance and Completion, SY2011 Release Cohort**

	WSD Offenders (N=45,745)			
	Attended		Completed	
	N	WSD Offenders (%)	N	WSD offenders (%)
Academic	30,083	65.8	22,923	76.2
Vocational	13,344	29.2	10,116	75.8
Cognitive Intervention	13,600	29.7	9,606	70.6
CHANGES	29,255	64.0	21,821	74.6

<sup>16</sup> An important caveat that should be recognized within this section of the report is that some of the current WSD programs have undergone program modifications. One example is that significant curricular changes occurred in the CHANGES program in 2009.

Significant variation existed in the number of WSD Academic program hours attended by WSD offenders with hours ranging from very limited attendance (30 hours) to the highest attendance of 13,142 hours. As indicated in Table 3, the average number of Academic program hours attended by WSD offenders in the SY 2011 release cohort was 607 hours.

**Table 3. WSD Offender Participation – Academic Attendance Hours, SY 2011 Release Cohort**

	N	Average Academic attendance hours	Median - Academic attendance hours	Standard Deviation
WSD Participants	30,083	605.8	307	847.9

As noted earlier in Table 1, almost 51 percent of the offenders in the SY 2011 release cohort were previously incarcerated; therefore, it was important to consider WSD program attendance during *any* incarceration period. Second, consideration of whether the offender attended a single or multiple WSD programs was important. Analysis indicated that of the 45,745 WSD offenders, 42.8 percent of offenders participated in a single program, 32.6 percent of offenders participated in a total of two WSD programs, 18.0 percent of offenders participated in a total of three WSD programs, and 6.7 percent of offender participated in all four WSD programs.

Table 4 displays the WSD program combinations and associated percentage of offenders who attended the programs indicated by the intersection of each row and column. For example, while many offenders participated in Academic alone (20.9 percent) *or* Life skills programming (Note: Cognitive Intervention program and CHANGES are two distinct life skills courses), 16.2 percent of WSD offenders participated in both CHANGES and Academic programs during current and/or prior periods of incarceration.

**Table 4. Percent of WSD Offenders by Correctional Education Program Participation, SY 2011 Release Cohort**

Program Participation Overlap (% of WSD Offender group)	WSD Offenders (N=45,745)			
	Academic	Vocational	CHANGES	Cognitive Intervention
<i>1 WSD Program Only (42.8%)</i>	20.9	2.3	16.4	3.1
<i>2 WSD Programs in Total (32.6%)</i>				
Academic		3.5	16.2	3.1
Vocational		---	3.5	1.0
CHANGES		---	---	5.3
<i>3 WSD Programs in Total (18%)</i>				
Academic + CIP		2.1	5.8	---
Academic + CHANGES		7.5	---	---
Vocational + CHANGES		---	---	2.6
<i>4 WSD Programs (6.7%)</i>				

## 2.2 Offender Outcomes: Institutional Disciplinary Violations and Educational Outcomes

This section compares the impact of WSD program participation on outcomes for the SY 2011 release cohort, with a focus on comparisons between WSD offenders and non-WSD offenders while accounting for offender characteristics. The outcome of institutional disciplinary violations is measured as the rate of institutional disciplinary violations per year during the offender's current period of incarceration. Data provided by the TDCJ Executive Services was used to calculate each offender's rate of institutional disciplinary violations for their current incarceration period. This method accounts for varying lengths of the current incarceration period.

### 2.2.1 Institutional Disciplinary Violations

WSD offenders who received an institutional disciplinary violation had an average rate of 3.0 institutional disciplinary violations per year, whereas non-WSD offenders had an average of 4.2 institutional disciplinary violations per year during their current period of incarceration<sup>17</sup>. Descriptive statistics indicate that when considering all offenders released during SY 2011 and grouped by WSD participation (yes or no), the rate of institutional disciplinary violations among WSD offenders was slightly higher than non-WSD offenders<sup>18</sup> (1.9 and 1.6 institutional disciplinary violations per year, respectively). This second rate is an average across each group that includes in its calculation a zero for offenders who did not incur any violations.

Additional analysis examined whether the institutional disciplinary violation rate varied based on the type and number of WSD programs in which WSD offenders participated. It is important to note that results examining WSD program attendance and institutional disciplinary violations presented here can only be interpreted as correlational, or having a relationship with program participation, but WSD participation cannot be used to predict the rate of institutional disciplinary violations. This caveat exists because an institutional disciplinary violation may have occurred prior to, concurrently, or subsequent to participation in a correctional educational program.

As displayed in Table 5, each value in the second column indicates the average number of institutional disciplinary violations per year during the current incarceration period for offenders in each program combination group. For example, offenders who only participated in Vocational programming only had a rate of 1.6 institutional disciplinary violations per year, although offenders who only participated in Academic programming had a rate of 2.4 institutional disciplinary violations per year. In the majority of programs, on average WSD offenders have a lower rate of institutional disciplinary violations in comparison to non-WSD offenders. The lowest institutional disciplinary violation rate was found among offenders who participated in Vocational training and some form of Life Skills programming (either CIP or CHANGES), as well as offenders who participated in a combination of Academic, CHANGES, and Vocational training. Note that no overlap exists in offenders between the various groups listed in Table 5.

Taken together, results indicate WSD participants have fewer infractions than non-WSD offenders with the exception being WSD Academic participants who exhibited behavioral challenges within the institution. This behavioral difference may be attributable to the same offender characteristics that resulted in mandated WSD attendance in Academic programs. That is, a large proportion of offenders attending Academic programming are mandated to do so because they

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<sup>17</sup> Given the variation in length of time that offenders were incarcerated, institutional disciplinary violations are examined as a rate of violations per year. This rate was computed with the formula: (total number of institutional disciplinary violations during current incarceration/ total number of days incarcerated) \* 365 (days per year).

<sup>18</sup> Institutional Disciplinary Violation code 25.1 pertaining to refusal to attend school, refusal to do assigned school work, sleeping in the classroom, and late turnout was not considered as this code was only applicable to the WSD offender group.

have not attained either their high school diploma or GED prior to incarceration. Risk factors that contribute to this type of historical academic underachievement and/or failure to thrive in an academic institutional environment (i.e., low socioeconomic status, a lack of pro-social values, and poor school behavior) are also likely to contribute to poor institutional behavior in the correctional setting. Noticeably, for offenders who attended multiple WSD programs that did not include Academic program attendance, the rate of institutional disciplinary violations is comparatively lower than non-WSD offenders.

**Table 5. Institutional Disciplinary Violations per year by Type and Number of WSD programs, SY 2011 Release Cohort**

	Institutional Disciplinary Violations per year	Rate compared to Non-WSD offenders	Offenders in Reference Group
Non-WSD participants who received violations	4.2		10,021
Non-WSD participants, Total group	1.66		25,171
WSD participants who received violations	3.0	<b>Lower</b>	29,361
WSD participants, Total group	1.89	<b>Higher</b>	45,745
<b>Participation in 1 WSD program:</b>			
Academic program only	2.4	<b>Higher</b>	9,572
Vocational program only	1.6	<b>Same</b>	1,062
CHANGES only	1.6	<b>Same</b>	7,487
CIP only	1.5	<b>Lower</b>	1,446
<b>Participation in 2 WSD programs:</b>			
Academic + Vocational	1.6	<b>Same</b>	1,584
Academic + CHANGES	2.3	<b>Higher</b>	7,423
Academic + CIP	2.4	<b>Higher</b>	1,398
Vocational + CHANGES	1.4	<b>Lower</b>	1,599
Vocational + CIP	1.4	<b>Lower</b>	473
CHANGES + CIP	1.5	<b>Lower</b>	2,404
<b>Participation in 3 WSD programs:</b>			
Academic + CIP + CHANGES	2.1	<b>Higher</b>	2,671
Academic + CIP + Vocational	1.6	<b>Lower</b>	955
Academic + CHANGES + Vocational	1.4	<b>Lower</b>	3,418
Vocational + CHANGES + CIP	1.5	<b>Lower</b>	1,191
<b>Participation in 4 WSD programs:</b>			
	1.5	<b>Lower</b>	3,062

Further examination of institutional disciplinary violations was considered by program participation. For Academic programming, institutional disciplinary violation rates by attendance hours were considered. For WSD Vocational training, the Cognitive Intervention Program, and CHANGES, program completion and attendance were both examined in relation to the same outcome. Table 6 presents the average institutional disciplinary violation rate for offenders who have attended the program at any level, followed by offenders who attended and completed the program, and offenders who attended but did not complete the program. This examination included offenders in each program category who were exposed to each program, as well as potentially other programs. That is, Table 6 targets the differential effect of the program itself rather than a cross program comparison.

Results displayed in Table 6 indicated that greater attendance in WSD academic programs were related to lower institutional disciplinary violation rates for WSD offenders. For offenders who attended more than 1075 hours of academic hours, institutional disciplinary violation rates were lower than non-WSD offenders. WSD Vocational training participants had a lower average institutional disciplinary violations rate as compared to non-WSD offenders. WSD offenders who *completed* Vocational training had an even lower rate of institutional disciplinary violations. For both CHANGES and CIP, WSD offenders who completed the respective programs demonstrated a lower institutional disciplinary violation rate than WSD offenders who attended but did not complete the program, as well as non-WSD offenders.

**Table 6. Institutional Disciplinary Violations by WSD program attendance and completion groups, SY 2011 Release Cohort**

	Institutional Disciplinary Violations per year	Rate compared to Non-WSD offenders	Number of Offenders in Reference Group
Non-WSD participants, Total group	1.66		
Academic Attendance Hours			
<325 hours	2.35	Higher	15,746
325-749 hours	2.02	Higher	7,405
750-1074 hours	1.78	Higher	2,456
>1075 hours	1.41	<b>Lower</b>	4,476
Vocational Programs			
Attended, all participants	1.49	<b>Lower</b>	13,334
Attended and completed	1.34	<b>Lower</b>	10,116
Attended but did not complete	1.96	Higher	3,228
CHANGES Program			
Attended, all participants	1.76	Higher	29,255
Attended and completed	1.55	<b>Lower</b>	21,821
Attended but did not complete	2.38	Higher	7,434
Cognitive Intervention Program			
Attended, all participants	1.72	Higher	13,600
Attended and completed	1.55	<b>Lower</b>	9,606
Attended but did not complete	2.13	Higher	3,994

The final step in examining the institutional disciplinary violation rate is to utilize a multiple regression model that accounts for the confounding effects of other offender characteristics such as age, gender, and incarceration history. The first column of Table 7 presents a comparison between WSD offenders who have *ever* participated in *any* WSD program and non-WSD offenders. WSD offenders released in SY 2011 had a higher rate of institutional disciplinary violations during their current incarceration than non-WSD offenders. Importantly, younger offenders, women, and those with a history of incarceration also had an overall higher institutional disciplinary violation rate. Yet, as indicated in the subsequent analyses, when accounting for the level of Academic program attendance and program completion, the opposite is true. WSD offenders with a high level of Academic program attendance and WSD program completers had a lower institutional disciplinary violation rate.

The second column of results in Table 7 examines the relationship between varying levels of participation in academic programming with institutional disciplinary violation rate. This model focuses only those offenders who participated in

Academic programming. The comparison is made between the following 4 groups of attendance hours: [1] fewer than 325 hours, [2] 325-749 hours, [3] 750-1074 hours, and [4] greater than 1075 hours to determine whether an increased level of program participation is related to the offender's rate of institutional disciplinary violations. In this statistical model, a number of other factors are accounted for such as the highest reading score obtained during any assessment while the offender was incarcerated, age of the offender (under 35 compared with 35 and older), gender, and whether the offender was previously incarcerated. A measure of WSD participation is excluded for the remaining models since only WSD offenders are examined.

As indicated in Table 7, congruent with results presented earlier in Table 6, WSD Academic participants who attended a greater number of academic programming as indicated by total attendance hours tend to have a lower rate of institutional disciplinary violations. The offender's history of incarceration was not statistically significant in this instance. Results from a comparison of WSD program completers to non-WSD offenders are shown in Columns 3 through 5. Findings indicating WSD offenders who completed either WSD Vocational training, CHANGES, or the Cognitive Intervention Program had a significantly lower rate of institutional disciplinary violations as compared to non-WSD offenders.

**Table 7. Relationship between Institutional Disciplinary Violation and WSD Program Attendance, SY 2011 Release Cohort**

	WSD vs. non-WSD (N=70,916)	WSD Academic (N=30,083)	WSD Vocational <sup>19</sup> (N=70,907)	WSD CHANGES (N=70,916)	Cognitive Intervention (N=70,916)
WSD Participation	.374**	-.536**	.462**	.601**	.434**
Attendance Hours	---	-.115**	---	---	---
WSD Program Completed	---	---	-.450**	-.503**	-.283**
Younger than 35	1.50**	1.59**	1.47**	1.47**	1.49**
Gender	-.12**	-.06	-.11**	-.11**	-.12**
First Time Incarceration	-.04	.21**	-.06**	-.06**	-.03
Nagelkerke $R^2$	.06	.08	.06	.06	.06

Note: "N" represents the number of offenders included in this analysis. Offenders who did not have information available for any variables were excluded from the analysis. Age is coded <35 = 1; 35+ = 0; Gender is coded 1 = male; 0 = female; First time incarceration is coded 1 = yes; 0 = no. \* p < .05; \*\* p < .01.

## 2.2.2 Educational Outcomes: GED Attainment and Educational Advances

This section of the report presents an assessment of the impact on WSD correctional education program participation on offender educational achievement. Educational data were provided by WSD for the SY 2011 release cohort offenders who participated in WSD Academic programs. Overall, findings indicated significant improvements in education as measured through GED attainment and grade level equivalencies. In this section, the numbers of WSD offenders who obtained their GED is examined, as well as changes in literacy levels from initial assessment to highest level of achievement.

<sup>19</sup> For WSD Vocational Program, CHANGES, and the Cognitive Intervention Program, WSD offenders who completed the program (equal to 1) were compared to those who did not complete the program (equal to 0).

### 2.2.3 GED Attainment

Across the entire SY 2011 release cohort, 25,576 offenders (36.1 percent) possessed their GED or high school diploma at the time they were incarcerated (34.2 percent of WSD offenders, 39.5 percent of non-WSD offenders). At the time of release, 36,423 of the 70,916 offenders (51.4 percent) possessed their GED or high school diploma. As shown in Table 8, 10,847 of the 30,083 offenders who participated in WSD Academic programming earned their GED while incarcerated. For clarification, the only offenders who are provided the opportunity to complete GED tests are those offenders who do not have a GED or HSD, and are enrolled in academic courses.

**Table 8. Educational Outcomes: GD attained while attending WSD Academic Programming, SY2011 cohort**

	Had GED/HSD prior to incarceration	Obtained GED/HSD while attending WSD Academic programs	GED/HSD at time of release
WSD offenders (n=45,745)	15,644	10,847	26,491
Non-WSD offender (n=25,171)	9,932	0	9,932
Total SY 2011 cohort (n=70,916)	25,576	10,847	36,423

The remainder of this section is focused on the 30,083 offenders in the SY 2011 release cohort who participated in Academic programming. Non-WSD offenders are not appropriate comparisons in this section since educational gains would not be anticipated without participation in Academic programming. Although WSD adult basic education programs focus on numerous skills, advances in reading levels are highlighted for comparison within the broader literature as well as earlier evaluation reports (See *Evaluation of the Windham School District Correctional Education Programs, 2012* and the Criminal Justice Policy Council Report at: [http://www.lbb.state.tx.us/PubSafety\\_CrimJustice/PubSafety\\_CrimJustice.htm](http://www.lbb.state.tx.us/PubSafety_CrimJustice/PubSafety_CrimJustice.htm)).

As part of the intake process, offenders typically are assessed for their current education levels with results provided as grade equivalency scores for each skill area, and an overall composite score. WSD offenders participating in adult basic education programs are re-assessed a maximum of three times per year, at least six weeks apart. Resulting grade equivalency (GE) scores range from below 1.0 to 12.9, and coincide with grade level and month during the academic year. For example, 3.8 is equivalent to third grade, eighth month of the academic calendar. Here we focus on the offender's grade equivalency levels in their reading and composite score, which combines math, reading, and writing grade equivalencies.

Offenders who participated in WSD Academic programs made significant educational gains. On average, WSD offenders in the SY 2011 cohort who participated in Academic programming had an average initial reading score of 7.07. After attending WSD Academic programs (at varying levels of attendance), the same group attained an average highest reading score of 8.85. This same group of offenders had an average initial composite score of 6.11, and attained an average highest composite score of 7.97. It is important to note that significant variation among offenders existed with respect to their increase academic grade levels. Some offenders exhibited large gains, with other offenders making improvements, even though they already had a reasonably strong skill set. As shown in Table 9, at the time of release, WSD offenders are more academically prepared and literate by almost two full grade levels in comparison to their ability as demonstrated at intake.



**Table 9. WSD Offenders in Academic Programs: Average Educational Attainment, SY 2011 Release Cohort**

Educational Attainment	WSD Offenders (N=45,745)	
	Intake	Highest Score
Composite EA	6.11	7.97
Reading EA	7.07	8.85

### 2.3 Educational Advances: Reading Levels

Focusing more specifically on literacy in this next section, WSD offenders were categorized into one of four groups based on their reading level. WSD offenders who demonstrated a grade equivalency reading level of 3.9 or lower were categorized as “Non-readers.” Offenders who demonstrated a reading level that ranged between 4.0 and 5.9 were labeled “Readers.” Offenders who demonstrated a reading level of 6.0 through 8.9 were labeled “Literate.” Finally, offenders who demonstrated a reading level of 9.0 or higher were labeled “Advanced readers.” The initial reading level was typically based on assessment at or near the time of intake. Highest reading levels achieved were measured as the highest reading score obtained by WSD offenders during any subsequent reading assessments given to the offender.

- ✓ Significant improvement in reading ability occurred among WSD offenders in the SY 2011 release cohort.

As indicated in Table 10, among WSD offenders in the SY 2011 release cohort who participated in Academic programs, 40.4 percent were less than literate at initial assessment during the current incarceration. Specifically, 17.7 percent of WSD offenders were considered “non-readers” possessing reading skills below a fourth grade level and 22.7 percent of WSD offenders were considered “readers.” Further, 31 percent of this same offender group was considered “literate” at initial assessment whereas 28.5 percent were considered “advanced readers” at a 9<sup>th</sup> grade level or higher. Subsequent to WSD Academic program participation, WSD offenders significantly improved their reading level. Within the SY 2011 cohort, nearly 80 percent the population was considered to be “literate” or “advanced readers” upon release, as compared to the initial assessment that indicated 59.5 percent of the population was “literate” or “advanced readers”. About 7.5 percent of this offender group remained in the non-reader classification group, although notable improvements in grade equivalencies were achieved.

**Table 10. WSD Academic Programs Participants: Initial and Highest Reading Level Achieved, SY 2011 Release Cohort**

Reading level	WSD Academic Programs Participants (N=30,083)			
	Frequency at Intake	% at Intake	Frequency at release	% at Release
Non-reader	5,252	17.5	2,217	7.4
Reader	6,752	22.4	3,564	11.8
Literate	9,210	30.6	7,995	26.6
Advanced reader	8,466	28.1	15,904	52.9

Table 11 presents the extent of change in reading group classification as a result of participation in WSD Academic programs. Overall, the percentages indicate offenders improved their average reading ability to a significant extent. For example, among offenders who were initially classified as **non-readers**, 57.8% became **readers**, **literate**, or **advanced readers** while incarcerated. For offenders who initially possessed some reading ability labeled as “readers”, significant gains were also made. Specifically, among offenders initially classified as **readers**, 70.4% of those offenders increased

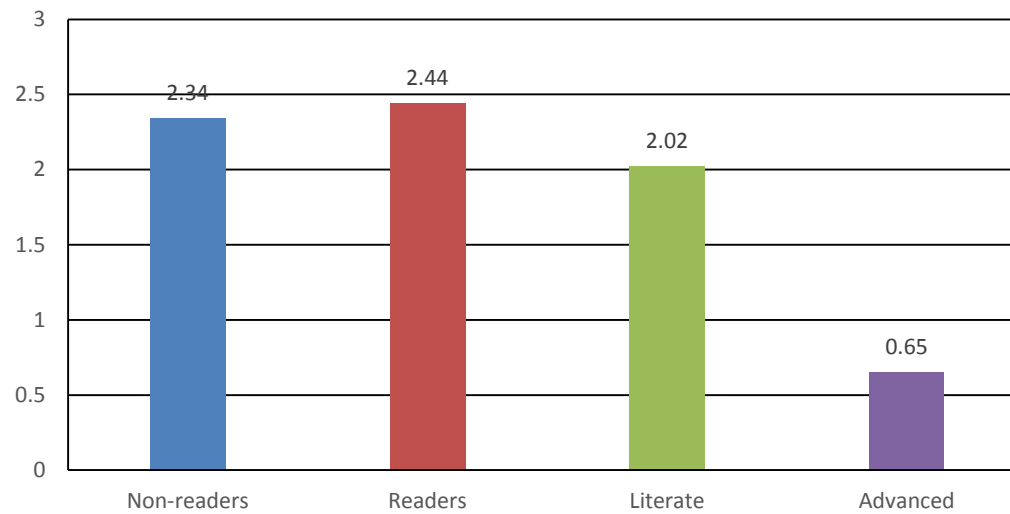
their reading levels to become fully **literate** or **advanced readers** during incarceration. Finally, among offenders who were initially classified as **literate**, 17% became **advance readers**. Notably, 52.9 percent of the offenders who participated in WSD Academic programs were advanced readers as measured by their highest reading level assessment prior to release.

**Table 11. Change in group classification, SY2011 Release Cohort**

Reading level	WSD Academic Programs Participants (N=30,083)	
	Frequency at release	% of offenders at Release
No change – Non-reader (NR)	2,217	7.4
NR to Reader	1,564	5.2
NR to Literate	1,019	3.4
NR to Advanced Readers	452	1.5
Readers, no change	2,000	6.6
Readers to Literate	2,894	9.6
Readers to Advanced Readers	1,858	6.2
Literate, no change	4,082	13.6
Literate to Advanced Readers	5,128	17.0
Advanced Readers, no change	8,466	28.2

In examining improvements in literacy for WSD offenders who participated in Academic programs, Figure 1 displays the average reading grade level change occurring during any incarceration aggregated by initial reading level group. The horizontal axis label in Figure 1 displays the incoming reading ability based on classifications described earlier. The vertical graph bars represent the average reading grade level increase. As a group, WSD offenders in the Readers group demonstrated the most improvement with an average 2.44 reading grade level increase during incarceration. Those offenders who were Non-readers made similar significant gains of a 2.34 grade level increase in reading skills. Offenders who were literate increase their reading ability slightly over two full grade levels. Those offenders in the highest reading group initially had the least amount of increase possible since the assessment score tops out at 12.9, yet still demonstrated almost a full grade level increase (.65) based on their attendance in WSD Academic classes.

**Figure 1. WSD Offenders in Academic Programs: Reading level gains (grade equivalencies) grouped by incoming reading level**



## 2.4 Educational Advances and Academic Program Attendance

Data on the WSD program attendance in the SY 2011 release cohort was examined across four levels of Academic program attendance. The aim of this analysis was to determine the minimum level of Academic program attendance required to result in measurable educational gains. Offenders were categorized according to the following attendance levels: [1] <325 hours, [2] 325-749 hours, [3] 750–1074 hours, and [4] >1075 hours. The average advancement in reading grade equivalencies by level of academic program exposure is displayed in Table 12. As expected, on average WSD offenders who had lower initial reading grade levels tended to attend a higher number of Academic program hours. This finding indicates offender educational needs are accurately matched with higher levels of Academic programming. Next, as indicated Column 3 of Table 12, the greatest average increase in reading levels coincided with the highest levels of academic program attendance as measured by program attendance hours.

**Table 12. Average Reading Grade Levels by Academic Attendance Hours**

Program Attendance Hours	WSD Academic Programs Participants			
	Number of Offenders	Average Initial Reading Grade Level	Average Highest Reading Grade Level	Average Reading Grade Change
<325 hours	15,415	8.1	9.1	1.09
325 – 749 hours	7,356	6.7	8.9	2.15
750 – 1074 hours	2,440	6.0	8.7	2.67
1075 or more hours	4,469	5.0	8.1	3.08

Note: Analysis of subsequent arrest, subsequent confinement, and employment related issues were not performed. Complete data for a three year follow up period required for an analysis of subsequent arrest, subsequent confinement, and employment related issues was not available.