



Overview of Educational and Vocational Programs Fiscal Year 2012



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INTRODUCTION

Pursuant to House Bill 10-1112 and Colorado Revised Statute (C.R.S.) 17-32-100(105), this report presents information about the educational and vocational programs offered at Colorado Department of Corrections (CDOC) facilities. Included in this report are programs offered at each facility, the number of staff, and the estimated annual capacity for each program. Using data from fiscal year (FY) 2012, the report details the number of offenders who participated in these programs, including completions and failures, and the length of the average wait until admission into a program. In addition, the employment rates of parolees and the budget of educational and vocational programs are described.

HISTORY

The Correctional Education Program Act of 1990 established an educational division in the CDOC and defined a correctional education program as a “comprehensive competency-based education program for persons in custody of the department.” This act charged the CDOC with building a program that would address the high rates of illiteracy among incarcerated persons. The objective was to increase educational and vocational proficiency to allow for better reintegration into society and to reduce recidivism. The statute specifies that CDOC offenders who are expected to release within 5 years receive first priority for placement in education programs, so they may have greater vocational opportunities upon reentry and have greater chances of success in the community. The authors of the statute, recognizing the need for offender and staff safety, excluded offenders posing a security risk from participating in this program.

In 2010, additions were made to the statute that encouraged the use of a vocational skills assessment to determine program provisions and consideration of offenders’ educational needs before relocating them to another facility. The CDOC educational and vocational curricula must be approved by the Department of Education or the State Board for Community College and Occupational Education. Furthermore, the CDOC must provide offenders with training and competency in marketable skills that are relevant and in demand. The correctional education statute also requires CDOC to utilize the Department of Labor and Employment labor trend report to determine career and technical education programming. Finally, the last section of the bill mandated an annual report from the CDOC summarizing the activities of the education program. This report speaks to that mandate, specifically C.R.S. 17-32-102 (8), which states:

- 8) The department shall annually report the following information concerning educational and vocational programs offered pursuant to this article:
 - a) A list of the specific programs offered at each state-operated facility and private prison that houses offenders on behalf of the department;
 - b) The number of instructors and the number of instructor vacancies, by program and facility;
 - c) The annual capacity of each program;
 - d) The annual enrollment of each program, including the number of offenders who were placed on a waiting list for the program and the average length of time spent on the waiting list by each such offender;

- e) The number of offenders who successfully completed each program in the previous fiscal year;
- f) The number of offenders who enrolled in each program but failed to successfully complete the program in the previous fiscal year, including for each such offender the reason for the offender's noncompletion;
- g) The percentage of parolees who are employed full-time, employed part-time, or unemployed at the end of the previous fiscal year;
- h) A summary of the results of any program evaluations or cost-benefit analyses performed by the department;
- i) And the total amount of state and federal funding allocated by the department during the most recently completed fiscal year for vocational and educational programs, including information concerning the allocation of each source of funding and the amount of funding.

A. PROGRAMS OFFERED

This section describes the educational opportunities within the CDOC's Division of Education (DOE) and explains how the educational needs of offenders are assessed. The policies set by the CDOC to determine offenders' educational priorities during incarceration are described along with the variety of programs offered to offenders.

ASSESSMENT AND REFERRAL

All adult offenders enter the CDOC at the Denver Reception and Diagnostic Center (DRDC), which has staff that assess the medical, mental health, and educational needs of offenders. Offenders complete several standardized assessments to determine their individual needs in each of these areas. The assessment tool used by the DOE to determine educational level is the Test of Adult Basic Education (TABE). This timed, multiple-choice assessment measures reading, math, and language skills. TABE scores correspond to educational grade levels. For example, a 4.2 on the TABE reading portion indicates a fourth-grade second-month reading level. An offender receives three separate TABE scores for reading, math, and language. An offender who earns a TABE score of zero might need further assessment to determine educational needs. The Department assesses both non-English and English-speaking offenders and offers non-English-speaking offenders with the opportunity to develop English language skills at select facilities.

Several assessment scores help program staff determine an offender's educational and vocational needs. The offender's level of need, scored on a 1-to-5 rating scale, determines the type of intervention required. A needs level of 5 designates a severe need and a needs level of 1 indicates the offender has a verified high school diploma or General Education Diploma (GED), of an associate's degree or higher with no need for further academic education. The academic needs level is generally determined using the offender's verified level of education and TABE score. For example, an academic needs level of 4 indicates the offender does not have a high school diploma or GED and scored between 3.0 and 5.9 on the TABE; this means the offender is functionally illiterate. This offender would be recommended for Adult Basic Education (ABE) courses. Another needs level ascertained during admission into the CDOC is the vocational needs level. This level is determined using the offender's work history. For instance, a vocational needs level of 3 indicates that an offender has some vocational skills but needs more training. Table 1 lists the meaning for each needs level.

Table 1. Academic and Vocational Needs Levels

Level	Academic	Vocational
1	AA/AS degree or higher	Established skills
2	High school diploma or GED	Adequate skills
3	Literate, needs GED	Skilled, but needs training
4	Functionally illiterate, needs ABE	Unskilled, needs training
5	Illiterate or needs English learning	Special needs

The DOE provides oversight in the management of policies and provision of education for offenders. Students without a verified high school diploma or GED will complete an initial academic assessment and be placed in an education class. In addition, offenders who lack basic

communication and functional literacy skills are also referred to the education program (CDOC Administrative Regulation [A.R.] 500-01). Offenders serving a life sentence (with or without parole) and those who have been sentenced to death are exempt from mandatory participation. In addition, offenders who pose a health or security risk are also exempt from this policy. Finally, offenders have the option of declining education programs by submitting their refusals in writing.

POPULATION NEEDS

As of June 30, 2012, there were 18,062 offenders incarcerated in Colorado's state and private prisons. Table 2 lists the percentage of offenders within each category of academic and vocational needs.

Table 2. Needs Levels for June 30, 2012, Offender Population

	1	2	3	4	5
Academic	2%	75%	1%	11%	12%
Vocational	14%	32%	23%	30%	1%

Note. Percentages do not match FY12 Statistical Report because this table includes offenders incarcerated in state and private prisons only, whereas the Statistical Report includes the inmate jurisdictional population.

PROGRAM CATEGORIES

The DOE offers programming to help offenders meet their individual educational or vocational goals and obtain entry-level job skills in a marketable field. Thirty-five programs exist within the state facilities and 10 programs are provided in the private prisons. A program is defined as a broad classification of courses and several courses are offered within each program. Each program teaches the offender key skills that he or she can utilize once in the community. These programs fall into four categories: career and technical education (CTE), Colorado Correctional Industries (CCI)¹, academic, and social and behavioral sciences (SBS). Table 3 presents the programs offered at each facility that were active as of June 30, 2012 (see Appendix A for a definition of facility acronyms). Additionally, the number of courses taught under each program is noted in parentheses after the program name in Table 3.

¹ CCI is a division of CDOC separate from the DOE.

Table 3. Programs by Facility

Programs (# COURSES)		State												Private							
		AVCF	BVCF/ BVMC	CCC	CCF/ CSP	CMC	CTCF	DCC	DWCF	FCF	LCF	LVCF	RCC	SCCF	SCF	TCF	BCCF	CCCF	CMRC	KCCF	
CTE																					
CCENT DISCOVERY (CISCO LEVEL 2) (2)							•		•						•						
CDDOT FLAGGER CERTIFICATION (1)			•			•			•												
COLLISION REPAIR TECHNOLOGY (29)			•																		
COMPUTER INFORMATION SYSTEMS (10)			•							•	•				•	•				•	
COSMETOLOGY (33)							•		•												
CULINARY ARTS (19)		•					•		•						•						
CUSTODIAL TRAINING (6)		•	•		•	•	•		•	•	•			•	•	•					
CUSTOMER SERVICE SPECIALIST (9)							•			•						•					
ELECTRONICS TECHNOLOGY (2)		•													•	•					
FOUNDATIONS OF CTE (3)		•	•			•		•	•	•	•			•	•	•				•	
INTRODUCTION TO CARPENTRY (11)		•	•						•	•	•										
IT ESSENTIALS (CISCO LEVEL 1) (2)		•	•				•		•	•	•				•						
MACHINE TECHNOLOGY (21)			•							•											
NURSERY AND GREENHOUSE MGT (5)																				•	
PERSONAL COMPUTER APPLICATIONS (5)																					
RENEWABLE ENERGY (4)			•							•											
UPHOLSTERY TECHNOLOGY (7)															•						
WELDING TECHNOLOGY (11)		•	•							•											
CCI																					
AQUACULTURE (6)			•																		
BUSINESS MANAGEMENT-CANTEEN (34)						•			•												
CANINE BEHAVIORAL MODIFICATION (24)			•			•	•		•						•	•					
HEAVY EQUIPMENT (14)			•			•									•	•					
HORTICULTURE (23)						•															
PRINT TECHNOLOGY (7)									•												
TRANSPORTATION (19)						•															
WILD HORSE INMATE PROGRAM (5)						•															
WILDLAND FIREFIGHTING (9)			•			•							•								
ACADEMIC																					
ADULT BASIC EDUCATION I (1)		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
ADULT BASIC EDUCATION II (1)		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
ENGLISH AS A SECOND LANGUAGE (1)									•						•	•					
GED (1)		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
PRE-GED (1)		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
SBS																					
SOCIAL SCIENCE EDUCATION (2)									•						•	•					
THINKING FOR A CHANGE (1)			•		•		•		•	•	•			•	•	•					
THINKING FOR A CHANGE AFTERCARE (1)			•		•		•		•	•	•			•	•	•					

In CTE courses, offenders learn skills to obtain entry-level positions in different career fields. Eighteen programs are offered under CTE, with 180 different courses available within those programs. Cosmetology and Customer Service offer certificates from colleges within the Colorado Community College System (CCCS). Other CTE programs issue CDOC certificates approved by CCCS and college credits are entered into the CCCS. The time it takes to complete a program certificate varies, due to the variable number of courses or contact hours for college credit required by each of the programs and the offenders' progress in the program. Program descriptions, types of certificates, and courses offered can be found at <http://www.doc.state.co.us/program-course-descriptions>.

In addition to the aforementioned CTE programs, the National Center for Construction Education Research (NCCER) is a construction training program offering college credit for each course completed. The completion of NCCER courses is also documented on a "blue card" provided to releasing offenders. The "blue card" is a nationally recognized training document accepted by major Colorado construction companies. In 2012, the first Cisco graduates were able to take A+ and Cisco Certified Entry Level Technician (CCENT) tests at Pearson Vue test sites and earned certificates for their programs. Also, the CDOC's DOE received a Bureau of Justice Second Chance Act grant for 14 additional Cisco Network Academy classrooms in seven facilities due to the success of a pilot program at Denver Women's Correctional Facility in 2010. These courses are designed to prepare offenders for careers in technology and allow them to obtain industry-recognized A+ and/or CCENT certifications that meet the goal of preparing offenders for employment upon their release.

The CCI category represents a partnership between DOE and Correctional Industries. CCI is a cash-funded entity with enterprise status and was legislatively established under the Correctional Industries Act (C.R.S. 17-24-101) in 1977. Offenders work in positions designed to mirror their opportunities when returning to the community. CCI's training and work programs cover many areas in industry; however, only CCCS credentialed instructors teaching community college certificate-bearing courses are included in DOE programs. Currently, nine of CCI's programs offer education courses that provide offenders with the opportunity to earn CCCS credit and can be found at <http://www.coloradoci.com>.

The academic category includes courses designed to prepare students for the GED. The sequence includes an English-as-a-Second-Language course (if applicable), two ABE courses, a pre-GED course, and a GED course. Courses are offered in all state and private facilities (at DRDC, minimal services are provided because it is a diagnostic facility). SBS courses assist offenders in identifying "criminal thinking and behavioral patterns" by dealing with "societal and personal awareness" (CDOC A.R. 500-01). Courses in this category include Social Science Education, Thinking for a Change, and Thinking for a Change Aftercare.² Additionally, offenders can work in apprenticeships to earn apprenticeship certificates from the United States Department of Labor. These certificates are diverse. For example, the Electronics Program allows offenders to earn an electronics certification and a clerical certification if they work as an office clerk.

² Anger management, gang awareness, and other educational courses are also offered to offenders in administrative segregation through television.

B. INSTRUCTORS

As of June 30, 2012, the CDOC's 146.8 instructor positions at its facilities included 70.5 CTE instructors, 53.8 academic instructors, and 6.5 SBS instructors. CDOC policy requires academic instructors to be certified by the Colorado Department of Education, and CTE instructors must be credentialed through the CCCS. Also, the DOE contracts with CCI to have 16 part-time staff that are also credentialed through CCCS.

There were 20.5 instructor positions at the private facilities, which were required to meet the same educational standards as DOE. Table 4 lists the number of instructors at each facility in their respective program area.

As of June 30, 2012, the CDOC listed 14 vacant positions, which included five academic positions and nine CTE positions. Table 5 lists the number of staff vacancies at each facility in their respective program area. There were no vacancies at any private facilities.

Table 4. Number of Staff by Facility

Programs	State																Private				
	AVCF	BVCF/	CC	CCF/	CMC	CTCF	DCC	DWCF	FCF	LGF	LVCF	RCC	SCCF	SCF	TCF	SUB-TOTAL	BCCF	CCCF	CMRC	KCCF	SUB-TOTAL
CTE																					
CENT DISCOVERY						0.50		0.50			1.00			2.00		4.00					—
CDOT FLAGGER CERTIFICATION*																—					—
COLLISION REPAIR TECHNOLOGY		2.00								0.50				1.00	1.00	2.00					—
COMPUTER INFORMATION SYSTEMS		***							1.00		2.00			1.00	1.00	3.50				1.00	1.00
COSMETOLOGY						1.00		2.00			2.00			2.00		5.00					—
CULINARY ARTS	1.00					1.00		1.00						2.00		5.00					—
CUSTODIAL TRAINING	1.00	1.00		1.00	1.00	0.50		1.00	1.00	1.00	1.00		1.00	2.00	0.50	12.00	1.00	1.00			2.00
CUSTOMER SERVICE SPECIALIST	1.00					0.50								1.00	1.00	2.50					—
ELECTRONICS TECHNOLOGY	1.00													1.00	1.00	2.75	1.00	1.00			2.00
FOUNDATIONS OF CTE	1.00	1.00			1.00		1.00	0.25	1.00	1.00	0.25			1.00	1.00	9.50		0.50	1.00		1.50
INTRODUCTION TO CARPENTRY	1.00	1.00						0.75	1.00	1.00				1.00	1.00	4.75		0.50			0.50
IT ESSENTIALS	1.00	1.00				0.50		0.50	1.00	1.00	1.00			4.00		9.00					—
MACHINE TECHNOLOGY		1.00							1.00							2.00					—
NURSERY AND GREENHOUSE MGT											1.00					1.00	1.00	1.00			2.00
PERSONAL COMPUTER APPLICATIONS										0.50						0.50					—
RENEWABLE ENERGY		1.00							1.00							2.00					—
UPHOLSTERY TECHNOLOGY														1.00	1.00	1.00					—
WELDING TECHNOLOGY	1.00	1.00							1.00					1.00	1.00	4.00					—
CTE SUB-TOTAL	7.00	9.00	—	1.00	2.00	4.50	1.00	6.00	8.50	3.00	7.00	—	1.00	18.00	2.50	70.50	2.00	4.00	—	3.00	9.00
CCi																					
AQUACULTURE		1.00			1.00											2.00					—
BUSINESS MANAGEMENT-CANTEEN								1.00								1.00					—
CANINE BEHAVIORAL MODIFICATION		0.50			0.50			0.50						0.50	0.50	3.00					—
HEAVY EQUIPMENT		1.00			1.00									1.00		3.00					—
HORTICULTURE					1.00											1.00					—
PRINT TECHNOLOGY								1.00								1.00					—
TRANSPORTATION					1.00											1.00					—
WILD HORSE INMATE PROGRAM					1.00											1.00					—
WILDLAND FIREFIGHTING		1.00			1.00							1.00				3.00					—
CCi SUB-TOTAL	—	3.50	—	—	6.50	0.50	—	2.50	—	—	—	1.00	—	1.50	0.50	16.00	—	—	—	—	—
ACADEMIC																					
ADULT BASIC EDUCATION I	1.00	1.00	0.25	1.20	1.00	0.75	0.50	1.00	0.75	1.00	1.00	0.50	0.25	2.25	0.40	12.85	0.75	0.75	0.25	1.00	2.75
ADULT BASIC EDUCATION II	1.00	1.00	0.25	1.20	1.00	0.75	0.50	1.00	0.75	1.00	1.00	0.50	0.25	2.25	0.40	12.85	0.75	0.75	0.25	1.00	2.75
ENGLISH AS A SECOND LANGUAGE									1.00					1.00	0.40	2.40					—
GED	1.00	1.00	0.25	1.20	1.00	0.75	0.50	1.00	0.75	1.00	1.00	0.50	0.25	2.25	0.40	12.85	0.75	0.75	0.50	1.00	3.00
PRE-GED	1.00	1.00	0.25	1.20	1.00	0.75	0.50	1.00	0.75	1.00	1.00	0.50	0.25	2.25	0.40	12.85	0.75	0.75	0.50	1.00	3.00
ACADEMIC SUB-TOTAL	4.00	4.00	1.00	4.80	4.00	3.00	2.00	4.00	4.00	4.00	4.00	2.00	1.00	10.00	2.00	53.80	3.00	3.00	1.50	4.00	11.50
SBS																					
SOCIAL SCIENCE EDUCATION								1.00			0.50		0.50	1.00		3.00					—
THINKING FOR A CHANGE		**		**		**		**	0.50	**	0.50		0.50	2.00		3.50					—
THINKING FOR A CHANGE AFTERCARE		**		**		**		**	**	**	**		**	**		**					—
SBS SUB-TOTAL	—	—	—	—	—	—	—	1.00	0.50	—	1.00	—	1.00	3.00	—	6.50	—	—	—	—	—

Note: * CDOT flagger certification has no staff because they use existing facility staff. **Thinking for a Change uses facility staff in combination with instructors to teach this course. ***Program was active with a vacant position but no staff.

Table 5. Number of Staff Vacancies

Programs	State												Private			
	AVCF	BVCF/ BVMC	CCC	CCF/ CSP	CMC	CTCF	DCC	DWCF	FCF	LCF	LVCF	RCC	SCCF	SCF	TCF	SUB-TOTAL
CTE																
CCENT DISCOVERY																—
CDOT FLAGGER CERTIFICATION																—
COLLISION REPAIR TECHNOLOGY																—
COMPUTER INFORMATION SYSTEMS		1.00														1.00
COSMETOLOGY						1.00										1.00
CULINARY ARTS	1.00															1.00
CUSTODIAL TRAINING											1.00					1.00
CUSTOMER SERVICE SPECIALIST																—
ELECTRONICS TECHNOLOGY																—
FOUNDATIONS OF CTE										1.00						1.00
INTRODUCTION TO CARPENTRY									1.00					1.00		1.00
IT ESSENTIALS								1.00								2.00
MACHINE TECHNOLOGY																—
NURSERY AND GREENHOUSE MGT																—
PERSONAL COMPUTER APPLICATIONS																—
RENEWABLE ENERGY																—
UPHOLSTERY TECHNOLOGY																—
WELDING TECHNOLOGY									1.00							1.00
CTE SUB-TOTAL	1.00	1.00	—	—	—	1.00	—	1.00	2.00	1.00	1.00	—	—	1.00	—	9.00
CCI																
AQUACULTURE																—
BUSINESS MANAGEMENT-CANTEEN																—
CANINE BEHAVIORAL MODIFICATION																—
HEAVY EQUIPMENT																—
HORTICULTURE																—
PRINT TECHNOLOGY																—
TRANSPORTATION																—
WILD HORSE INMATE PROGRAM																—
WILDLAND FIREFIGHTING																—
CCI SUB-TOTAL	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ACADEMIC																
ADULT BASIC EDUCATION I					0.25			0.50		0.25					0.20	1.20
ADULT BASIC EDUCATION II					0.25			0.50		0.25					0.20	1.20
ENGLISH AS A SECOND LANGUAGE															0.20	0.20
GED					0.25			0.50		0.25					0.20	1.20
PRE-GED					0.25			0.50		0.25					0.20	1.20
ACADEMIC SUB-TOTAL	—	—	—	—	1.00	—	—	2.00	—	1.00	—	—	—	—	1.00	5.00
SBS																
SOCIAL SCIENCE EDUCATION																—
THINKING FOR A CHANGE																—
THINKING FOR A CHANGE AFTERCARE																—
SBS SUB-TOTAL	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

C. ANNUAL PROGRAM CAPACITY

The annual capacity for CTE and CCI programs was determined based on the seat capacity of a class multiplied by the number of contact hours and the estimated courses an instructor can complete in 1 year. CTE and CCI program capacities are based on a credit-hour system. For each credit hour the class is expected to meet for 15 to 22 contact hours, depending upon whether the class is instruction or lab activity based. To estimate the number of weeks in a year it would take to complete a course, the number of contact hours was divided by 30-4 weeks of class to account for administrative time (e.g., facility lockdowns, required annual training, or other non-class days). Next, the number of weeks was divided into a 48-week year, which gave 4 weeks for holidays, vacation, and sick leave. This final number is the number of courses an instructor can teach in 1 year's time. This was then multiplied by the number of students that can be in the course to find an estimate of the annual capacity. Table 6 shows the annual capacity for CTE and CCI programs. The program with the largest capacity was Foundations of CTE, which functioned as a vocational prerequisite and included courses in safety, introduction to construction, math, and communication. Programs that were vacant during the year are noted with a capacity of zero.

Annual capacity is difficult to measure for academic and SBS courses, as offenders' educational levels and skills vary tremendously; some offenders will need more time to complete a course, while others will finish very quickly. With academic courses offenders will enter into programming at different levels and complete courses at their own pace. For example, one offender may enter the CDOC with 11th grade completed and having done well on the TABE would be ready to take the tests for the GED, whereas another offender could have a fourth-grade reading level and would need more time to participate in ABE courses before earning a GED certificate. Academic courses are offered as open entry, which means students may enter classes at any time. With SBS programs, annual capacities may not be accurate because course components, instructional hours and program length vary among facilities and offenders work through the material and different courses at varying rates.

Considering the difficulty in reporting annual capacity for academic and SBS programs, we reported the seat capacity of each class on June 30, 2012 (see Table 7) instead of the annual capacity. Table 7 shows the number of classroom seats available throughout one day for each of these programs. The seat capacity was determined by the number of teachers, which courses are taught, the number of desks available for each classroom, and enrollment data, in combination with facility maximum quotas based on custody level and staffing ratios. Capacities for two half-time students were considered as one full-time student.

Table 6. Annual Program Capacity by Facility

Programs		State														Private							
		AVCF	BVCF/ BVMC	CCC	CCF/ CSP	CMC	CTCF	DCC	DWCF	FCF	LCF	LVCf	RCC	SCCF	SCF	TCF	SUB- TOTAL	BCCF	CCCF	CMRC	KCCF	SUB- TOTAL	
CTE																							
CCENT DISCOVERY							45		45				45			90						225	—
CDOT FLAGGER CERTIFICATION*																						—	—
COLLISION REPAIR TECHNOLOGY			15																			15	—
COMPUTER INFORMATION SYSTEMS			0							85	28					144	85					342	160
COSMETOLOGY								15	18													63	—
CULINARY ARTS		12					29		22							86						149	—
CUSTODIAL TRAINING		119	71		38	67	143		71	109	238	71		90	248		1,265	152	190			1,608	342
CUSTOMER SERVICE SPECIALIST							85			85					171	85	426					405	—
ELECTRONICS TECHNOLOGY		15										13			12		40	33	20			53	—
FOUNDATIONS OF CTE		126	105			140			84	84	244	335	71		307	112	1,608		175		314	489	—
INTRODUCTION TO CARPENTRY		147	96						77	166					102		588		224			224	—
IT ESSENTIALS		45	45				45		45	90		45			90		405					—	—
MACHINE TECHNOLOGY			13							21							34					—	—
NURSERY AND GREENHOUSE MGT												52					52		150		150	300	—
PERSONAL COMPUTER APPLICATIONS											24						24					—	—
RENEWABLE ENERGY			110							117						51		227				—	—
UPHOLSTERY TECHNOLOGY																	51					—	—
WELDING TECHNOLOGY		14	19							26					24		83					—	—
CTE SUB-TOTAL		478	474	—	38	207	362	84	362	943	625	327	—	90	1,325	282	5,597	185	759	—	624	1,568	—
CCi																							
AQUACULTURE			20			50																70	—
BUSINESS MANAGEMENT-CANTEEN									97													97	—
CANINE BEHAVIORAL MODIFICATION			**			**	**		**						**	**	—					—	—
HEAVY EQUIPMENT			46			63									30		139					139	—
HORTICULTURE						987											987					987	—
PRINT TECHNOLOGY									103								103					103	—
TRANSPORTATION						58											58					58	—
WILD HORSE INMATE PROGRAM						31											31					31	—
WILDLAND FIREFIGHTING			243			152							134				529					529	—
CCi SUB-TOTAL		—	309	—	—	1,341	—	—	200	—	—	—	134	—	30	—	2,014	—	—	—	—	—	—

Note. *CDOT flagger certification fills classes as needed and is a one-day course. ** The Canine Program does not award college credits and capacity varies, depending on needs of dog and skill level of trainer.

Table 7. Seat Capacity by Facility for Academic and SBS Programs, as of June 30, 2012

Programs	State													Private							
	AVCF	BVCF/	CCC	CCF/	CMC	CTCF	DCC	DWCF	FCF	LCF	LVCF	RCC	SCCF	SCF	TCF	SUB-TOTAL	BCCF	CCCF	CMRC	KCCF	SUB-TOTAL
ACADEMIC	*			**	*				*				**				*	*		*	
ADULT BASIC EDUCATION I	15	17	5	23	15	13	10	20	20	20	20	10	10	55	10	263	10	10	10	10	40
ADULT BASIC EDUCATION II	15	20	5	23	21	21	15	20	20	20	20	10	10	110	27	357	20	20	12	11	63
ENGLISH AS A SECOND LANGUAGE									20					35	11	66					—
GED	15	15	5	23	22	14	15	20	20	20	20	10	10	30	10	249	20	20	10	11	61
PRE-GED	15	25	5	23	22	12	10	20	22	15	20	10	10	40	12	261	10	13	13	10	46
ACADEMIC SUB-TOTAL	60	77	20	92	80	60	50	80	82	75	80	40	40	270	70	1,196	60	63	45	42	210
SBS								30			46		10	41		127					—
SOCIAL SCIENCE EDUCATION								45	74	100	106		18	64		565					—
THINKING FOR A CHANGE		15		110		15		12	40	45				45		184					—
THINKING FOR A CHANGE AFTERCARE		15		12		15		87	114	145	152	—	28	150	—	876	—	—	—	—	—
SBS SUB-TOTAL	—	30	—	122	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Note. * This facility teaches half and part-time classes. **This facility teaches with a combination of classroom and individual in-cell instruction.

D. ENROLLMENT AND WAITLIST

The CDOC utilizes a database program developed in the early 1990s by the CDOC's Business Technologies Department to track offender programming. This program, known as the master program schedule (MPS), enables prison staff to enter information about an offender's academic and vocational programming while incarcerated. A teacher can assign an offender to his or her class, take attendance, and evaluate the offender's progress via MPS. One key function of MPS is the ability to refer or waitlist an offender for a program. A case manager can refer an offender to educational programming and if the instructor does not have room in the class, the instructor can put the offender on a waitlist.

WAIT TIME

In previous years there were no records of how long an offender spent waiting to enter a program. In May of 2012, the MPS system was modified to allow an offender's waitlist record to remain after the offender was enrolled in a course and to follow an offender from facility to facility instead of being deleted after transfer. This has allowed for increased efficiency due to the ability for instructors to prioritize the students enrolling in their programs. For this section, the time an offender spent on a waitlist or referral list was determined by calculating the amount of time between the date the offender was referred to the program and the date the offender enrolled in the program. Table 8 shows the number of offenders out of the students enrolled in FY 2012 who were on a waitlist during May or June 2012, therefore programs with no waitlist records are not shown. The table also shows the average time offenders spent on the waitlist. The average time waitlisted may be more than two months because students could have been referred before May 2012.

This section summarizes waitlist information in response to C.R.S. 17-32-102 (8d). However, this year's data should be interpreted with caution because the only available data was for offenders who started a course in May or June (although they may have been placed on the waitlist months earlier). It may take several years before trends can be identified, therefore no conclusions should be drawn regarding this FY's waitlist data.

There were 10,913 offenders enrolled as students in education programs in FY 2012. Of these students, 521 were on a waitlist during May or June of 2012. Across all programs, offenders spent an average of 32 days on a waitlist before enrolling in their respective programs. The program with the longest average wait time was GED, with an average of more than 3 months spent on the waitlist. With 154 offenders on the waitlist during FY 2012, ABE II had the highest number of offenders waitlisted. However, the large number of students in ABE I and II may have been due to the class being implemented in May 2012.

Table 8. Number of Offenders on Waitlist and Average Wait Time by Program

Categories	Programs	# Students	Average Wait (Days)
CTE	CCENT DISCOVERY (CISCO LEVEL 2)	1	1
	COMPUTER INFORMATION SYSTEMS	12	36
	FOUNDATIONS OF CTE	10	40
	NURSERY AND GREENHOUSE MGT	2	1
CCi	BUSINESS MANAGEMENT (CANTEEN)	2	69
ACADEMIC	ADULT BASIC EDUCATION I	128	16
	ADULT BASIC EDUCATION II	154	17
	ENGLISH AS A SECOND LANGUAGE	2	26
	GED	109	98
	PRE-GED	101	20

ENROLLMENT

In FY 2012, there were 10,913 offenders enrolled as students. The enrolled students took 384 different courses among the 46 different programs. Table 9 shows the demographic information for students during FY 2012.

Table 9. FY 2012 Student Demographics (N = 10,913)

Characteristic	Percentage
Gender	
Male	90%
Female	10%
Ethnicity	
Caucasian	39%
Latina/Latino	38%
African American	19%
Other ^a	4%

^a Includes Native American and Asian ethnic groups.

Once an offender has completed a course, he or she may attend as a paraprofessional, a position that functions as an aide to the instructor, assisting students with instructions, assignments, and other classroom needs. An offender who obtains a certificate within a program is sometimes offered a position as an apprentice to learn more about the field through on-the-job training or hands-on experience with the trade. An apprentice can also earn training certification through the Department of Labor and Employment.

Table 10 shows the number of offenders enrolled in each program during FY 2012. There were 3,369 students who were enrolled in more than one program during the year and therefore were counted more than once. The GED course had the largest enrollment, with 4,713 students, and Multivideo Video Production had the smallest, with two students.

Table 10. Enrollments by Program

Categories	Programs	# Students
CTE	CCENT DISCOVERY (CISCO LEVEL 2) ^a	66
	CDOT FLAGGER CERTIFICATION	553
	COLLISION REPAIR TECHNOLOGY	38
	COMPUTER INFORMATION SYSTEMS	966
	COSMETOLOGY	86
	CULINARY ARTS	125
	CUSTODIAL TRAINING	1,138
	CUSTOMER SERVICE SPECIALISTS	361
	DRAFTING AND DESIGN TECHNOLOGY ^b	58
	ELECTRONICS TECHNOLOGY	243
	FOUNDATIONS OF CTE	1,422
	GRAPHIC DESIGN ^b	155
	INDUSTRIAL TECHNOLOGY ^b	22
	INTRODUCTION TO CARPENTRY	273
	IT ESSENTIALS (CISCO LEVEL 1) ^c	293
	MACHINE TECHNOLOGY	64
	MULTIVIDEO VIDEO PRODUCTION ^b	2
	NURSERY AND GREENHOUSE MGT	157
	PERSONAL COMPUTER APPLICATIONS	166
	PRINT TECHNOLOGY ^b	42
	RADIO BROADCASTING ^b	21
	RENEWABLE ENERGY	155
	UPHOLSTERY TECHNOLOGY	21
	WELDING TECHNOLOGY	107
	CTE Total	6,534
CCi	AQUACULTURE	9
	BUSINESS MANAGEMENT (CANTEEN)	42
	CANINE BEHAVIORAL MODIFICATION	235
	HEAVY EQUIPMENT	40
	HORTICULTURE	81
	PRINT TECHNOLOGY	31
	TRANSPORTATION	13
	WILD HORSE INMATE PROGRAM	18
	WILDLAND FIREFIGHTING	128
	CCi Total	597
ACADEMIC	ADULT BASIC EDUCATION I ^d	231
	ADULT BASIC EDUCATION II ^d	341
	ENGLISH AS A SECOND LANGUAGE ^d	36
	GED	4,713
	PRE-GED ^d	176
	ACADEMIC Total	5,497
SBS	ANGER MANAGEMENT ^b	226
	CRIME IMPACT ^b	245
	NEW COGNITIVE PATHWAYS ^b	77
	PERSONAL AWARENESS ^b	192
	PRISON LIFE SKILLS ^b	239
	SOCIAL SCIENCE EDUCATION	529
	THINKING FOR A CHANGE	987
	THINKING FOR A CHANGE AFTERCARE	212
	SBS Total	2,707
	TOTAL	15,335

Note. This table does not equal the number of unique offenders who were enrolled in education programs during the fiscal year because one offender can be enrolled in multiple programs. ^a First class began in 3/2012. ^b These programs are no longer offered as of 6/30/2012 but had enrollments in FY 2012. ^c First class began 12/2011. ^d This table only shows 2 months of data for these programs; before that time students were enrolled in the GED program instead of these programs.

E. PROGRAM COMPLETION

CERTIFICATES

Of the 10,913 offenders who were enrolled in an education program during the fiscal year, 40% (i.e., 4,329) earned a certificate or GED. In FY 2012, 4,456³ offenders completed 4,591 certificates and 1,122 GEDs. Table 11 lists the number of offenders who earned certificates in each program. There were 982 offenders who obtained a certificate in more than one program. The GED course awarded the largest number of successful program completions (i.e., GEDs). Several CCI programs did not issue a certificate, as CCI is a work assignment and obtaining a certificate is a secondary goal. Also, some of the certifications take longer than a year to obtain.

MAKING PROGRESS

An offender who completed a program and received a certificate would be considered successful. However, an offender might have begun a program and successfully completed some but not all the courses required for a certificate during the FY. Although these offenders did not complete a certificate program, they successfully made progress toward that goal. Many offenders who have not obtained a certificate are either still enrolled in courses or have been successful in classes so far. There were 3,253 students who had not received a certificate but were still enrolled in a course on June 30, 2012. There were 914 offenders who completed the last course he or she was enrolled in before June 30 but had not yet attained a certificate. Finally, 39 offenders were discharged from an academic course because their GED or high school diploma was verified. The remaining 2,378 offenders who did not successfully complete or make progress in a program will be discussed in the next section.

³ This number also included offenders who may not have been enrolled in an education class during the FY, therefore it will not equal the 4,329 offenders who were enrolled in an education class in the FY and earned a certificate or GED. Also, in FY 2012 2,673 offenders earned 3,383 certificates as paraprofessionals or apprentices, which were not included in this number.

Table 11. Offenders who Earned Certificates by Program ^a

Categories	Programs	# Students
CTE	CCENT DISCOVERY (CISCO LEVEL 2)	0
	CDOT FLAGGER CERTIFICATION ^b	553
	COLLISION REPAIR TECHNOLOGY	22
	COMPUTER INFORMATION SYSTEMS	328
	COSMETOLOGY	26
	CULINARY ARTS	31
	CUSTODIAL TRAINING	560
	CUSTOMER SERVICE SPECIALISTS	184
	DRAFTING AND DESIGN TECHNOLOGY	32
	ELECTRONICS TECHNOLOGY	24
	FOUNDATIONS OF CTE	708
	GRAPHIC DESIGN	73
	INDUSTRIAL TECHNOLOGY	5
	INTRODUCTION TO CARPENTRY	59
	IT ESSENTIALS (CISCO LEVEL 1) ^c	143
	MACHINE TECHNOLOGY	25
	MULTIVIDEO VIDEO PRODUCTION	0
	NURSERY AND GREENHOUSE MGT	63
	PERSONAL COMPUTER APPLICATIONS	63
	PRINT TECHNOLOGY	11
	RADIO BROADCASTING	0
	RENEWABLE ENERGY	64
	UPHOLSTERY TECHNOLOGY	18
	WELDING TECHNOLOGY	56
	CTE Total	3,048
CCi	AQUACULTURE	4
	BUSINESS MANAGEMENT (CANTEEN)	9
	CANINE BEHAVIORAL MODIFICATION	98
	HEAVY EQUIPMENT	18
	HORTICULTURE	11
	PRINT TECHNOLOGY	0
	TRANSPORTATION	0
	WILD HORSE INMATE PROGRAM	0
	WILDLAND FIREFIGHTING	45
	CCi Total	185
ACADEMIC	ADULT BASIC EDUCATION I ^d	0
	ADULT BASIC EDUCATION II ^d	0
	ENGLISH AS A SECOND LANGUAGE ^d	0
	GED	1,122
	PRE-GED ^d	0
	ACADEMIC Total	1,122
SBS	ANGER MANAGEMENT	165
	CRIME IMPACT	188
	NEW COGNITIVE PATHWAYS	67
	PERSONAL AWARENESS	99
	PRISON LIFE SKILLS	173
	SOCIAL SCIENCE EDUCATION	298
	THINKING FOR A CHANGE ^e	602
	THINKING FOR A CHANGE AFTERCARE ^e	194
	SBS Total	1,786
	TOTAL	6,141

Note. ^a This table counts the number of offenders, not the number of certificates with one offender able to show up once in each program if applicable. ^b Includes 36 Forklift certifications. ^c Includes certifications from IT Essentials and A+ Certification. ^d Prior to 5/2012 the progression of these programs to GED courses was not documented so no certificates were recorded. ^e Certificates could not be determined for these programs so successful program completions were used instead.

F. UNSUCCESSFUL PROGRAM COMPLETIONS

ABOUT THE DATA

When a student completes a course of instruction, the instructor assigns a code for the reason the student left the class. This coding system gives managers and researchers the ability to analyze discharge reasons. For example a code of “1” means the offender was successful in the class and a “3” means the offender paroled and could not complete the class. In addition to the code, a grade for the class is given. The combination of these two items should indicate whether or not an offender was successful in the course. A careful review of the data showed that the codes were not being used as designed. Other codes require further review of comments explaining the reason the offender left the class. Additionally, a transfer code was used both to transfer offenders to the next class (a progressive move) and to move an offender to the same class at a different time (a lateral move).

To improve data accuracy, each record was reviewed by hand. The discharge code, the grade, and the instructor’s notes were used to determine a “corrected” discharge reason. These corrected reasons are reported in this section. For 7 records it was too difficult to ascertain why the offender discharged, and therefore these discharge reasons were omitted. Finally, because an offender could potentially have several discharges in a single year, for this section the discharge reason for the last assignment during the fiscal year was used.

PROGRAM DISCHARGES

In order to discuss offenders who were unsuccessful, it is important to clarify the possible reasons why an offender may have left a course without completing it. First, program failures could be directly related to the offender’s behavior, either within the course or the facility. Second, an offender could be making adequate progress but not complete the course because of being transferred out of the facility⁴ or having an ongoing legal, medical, or mental health issue. The reasons for non-completion may be outside of the offender’s control. This section details the 2,371 offenders who did not earn a certificate and did not successfully complete any courses during the fiscal year. All students will be discussed collectively first, followed by a breakdown for each of the four categories.

PROGRAM INCOMPLETES

There are two primary reasons for unsuccessful program completion related directly to the student’s behavior: program behavior or institutional behavior. Program behavior that can result in a course failure may include disruptive behavior, such as failure to attend the class. The offender also may have failed the class because of poor work or failure to make progress. Another reason for program non-completion can be behavior within the institution. For example, if a student breaks a facility rule and is placed on restricted movement or in punitive segregation, this offender will not be able to attend class and may be discharged. Some of these offenders can continue their education, but it will depend on whether the teacher can accommodate the student within the constraints of the

⁴Some offenders may be moved out of a facility because of their behavior, but it was difficult to distinguish between these types of moves.

facility. Finally, some offenders do not complete due to an extended medical or legal issue. For FY 2012, 969 offenders did not complete classes. Of these, 566 were removed for behaviors in the classroom, 213 were removed for institutional behavior, and 39 were discharged because of an extended medical or legal issue, which could mean the offender was away from the facility for an indefinite amount of time. Another 151 were discharged for administrative reasons, such as the class was cancelled due to an unexpected instructor absence or course closure.

TRANSFERS

An offender also may not complete a class because he or she was transferred out of the facility or program. The offender may be releasing to parole or community corrections, discharging his or her sentence, or moving to another facility. There were 1,402 offenders who did not complete a program because they were transferred out of the program or facility. Of these, 126 were transferred for a facility need (e.g., moved to a job in the kitchen), to begin treatment, or to begin another program and the remaining 1,276 offenders were transferred out of the facility. As of June 30, 2012, 144 had discharged their sentences, 776 were on parole or community corrections, and 482 were still in a facility.

Table 12 lists the enrollments and discharge reasons for each of the four program categories. The total number of students enrolled in this table does not equal the number of offenders enrolled in FY 2012 because some offenders were counted more than once if they were enrolled in multiple programs. Additionally, 10⁵ discharges could not be coded (5 for CTE and 5 for Academic), as the reason for discharge was unclear. These offenders were counted in the enrollments but were not counted in any of the subsequent number breakdowns.

⁵ This number differs from the 7 mentioned previously because this table shows individual category outcomes. Since some offenders enrolled in more than one category, there was one offender who had an unknown discharge in one category and a known discharge in another.

Table 12. FY 2012 Students by Category

	CTE	CCi	Academic	SBS
Students Enrolled	4,790	590	4,868	1,983
Program Completions ^b	2,570	185	1,039 ^a	784
Still Enrolled	967	242	1,940	553
Completing Classes	557	65	219 ^c	290
Program Incompletes ^b	413	51	777	204
Transfers ^b	145	21	240	94
Prison				
Parole/Community	120	24	531	50
Discharged Sentence	13	2	117	8

Note. The total number of students enrolled in this table does not equal the number of offenders enrolled in FY 2012 because some offenders were counted more than once if they were enrolled in multiple programs. ^a 92 offenders earned a GED but had not been enrolled in an academic program, so they are not counted here. ^b As of June 30, 2012. ^c 39 offenders verified they had a GED or high school diploma while in class so they are counted here. ^d Includes discharges for institutional behavior, program behavior, medical and court issues, and administrative discharges.

G. PAROLEES

DOE provides the opportunity for offenders to learn the educational and vocational skills they need to successfully reintegrate into the community. One crucial outcome is obtaining regular employment. DOE seeks to provide relevant vocational training to offenders, so many of the certificates and vocational programs correspond to the top 10 industry jobs as categorized by the Colorado Department of Labor and Employment. Table 13 ranks the distribution of occupations in Colorado for the 2010 to 2020 time frame.

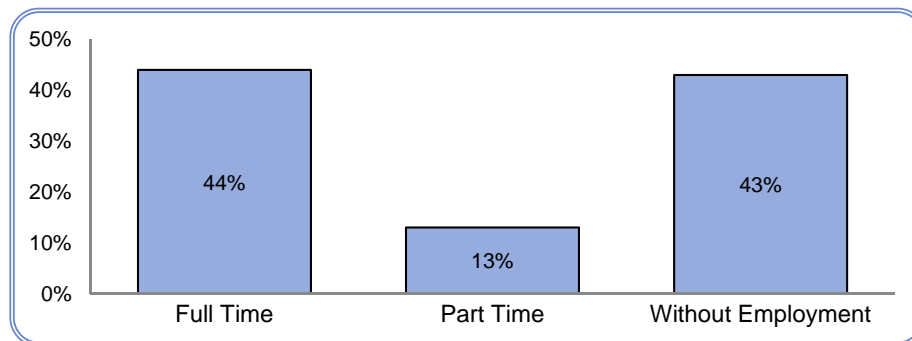
Table 13. Occupational Employment Projections for 2010 to 2020

Rank	Occupation Group
1	Office and Administrative Support
2	Sales and Related
3	Food Preparation and Serving Related
4	Business and Financial Operations
5	Education, Training, and Library
6	Healthcare Practitioners and Technical
7	Construction and Extraction
8	Transportation and Material Moving
9	Management
10	Installation, Maintenance, and Repair

Note: Modified from the Occupational Employment Distribution table on the Colorado Department of Labor website located on October 29, 2012

As of June 30, 2012, there were 8,445 offenders⁶ on parole in Colorado. Figure 1 displays employment for all parolees as of June 30, 2012. Within this population, approximately 57% were employed either full- or part-time. The data system only tracks offenders who are employed, so the remaining 43% are absent from the employment system. Their reasons for not being employed are unknown (i.e., receiving veterans' benefits, disabled, or attending school).

Figure 1. Percent of Parolees Employed (N = 8,100)⁷



Note: Employment status was not available for 142 offenders.

⁶ Includes all parolees serving their sentence in Colorado except absconders, as reported in CDOC's Monthly Population Report < [HTTP://WWW.DOC.STATE.CO.US/SITES/DEFAULT/FILES/OPA/MONTHLY%20REPORT%20JUNE%202012\(REVISED\).PDF](http://www.doc.state.co.us/sites/default/files/opa/monthly%20report%20june%202012(revised).pdf)>, JUNE 30, 2012.

⁷ CWISE Dashboard Monthly Report as of June 30, 2012.

H. RESEARCH

The Department has not conducted program evaluations or cost-benefit analyses on academic or vocational programs other than this annual report. Currently, the CDOC is focused on ensuring that program data are collected and recorded accurately. By improving the quality of program data, the Department will be able to track an offender's progress through available programs more efficiently and expand the capability for program evaluation.

In May of 2011, DOE implemented an MPS data system that met the data requirements of C.R.S. 17-32-105. There were four primary areas of focus for this project:

- 1 Department-Wide Referrals:** Under the MPS system, offenders are referred to programs across the Department. For example, when an offender takes the TABE at DRDC, an automatic academic referral is generated based upon the offender's assessed education level. Additionally, program referrals do not need to be re-created every time an offender changes facilities because they follow offenders from facility to facility.
- 2 Referral List Prioritization:** Offenders will be prioritized for academic enrollment according to criteria set by DOE, such as expected release date, eligibility for special education services. Until January 2014, the number of GED tests already completed will also be used to prioritize offenders on the referral list because at that time a new GED test will be implemented that will erase previous tests completed.
- 3 Historical Waitlist Record:** Under the new system, a historical record will exist so that the CDOC can determine how long offenders are on waitlists before enrolling in a program.
- 4 GED Tables:** DOE has added two tables in the CDOC information system to track GED data within the larger information system. In the previous tracking method, GED test scores could not be accessed.

Items one through three were completed in April 2012 and item four was completed in June 2012. The implementation of the improved MPS data system has several anticipated benefits. The new GED tables will allow the DOC to conduct education-based research in the future. For example, the Office of Planning and Analysis was able to add the number of GEDs to the reported dashboard measures posted on the web in January 2013. In anticipation of conducting future studies, researchers at DOC's Office of Planning and Analysis (Livengood, Welch, & DeLaCerde) conducted a brief review of the literature by examining peer-reviewed studies on corrections-based education and vocational programs, which is presented below.

Considering most offenders will eventually be released, one of the primary goals of the criminal justice system is to reduce recidivism rates (Petersilia, 2005). Corrections-based education and vocational programs have shown promise in improving several criminal justice outcomes (Drake, Aos, & Miller, 2009). The aim of this brief was to review research examining whether these programs are associated with changes in recidivism rates, employment and wages, and whether they are cost effective.

NATIONAL LITERATURE REVIEW OF EDUCATION PROGRAMS

Education and Literacy Rates among Offenders

Most individuals involved in corrections have high educational needs in relation to the general public. The National Center for Education Statistics published two studies measuring the literacy rates of inmates, defined as “using printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential” (Greenberg, Dunleavy, & Kutner, 2007). On average, offenders have lower literacy levels and are undereducated compared to the general population, making it difficult for them to complete everyday tasks and develop other skills (see Table 1). Approximately 63% of state prisoners and 73% of federal prisoners have attained at least a high school education (including those with a high school diploma, GED, or any postsecondary education) compared to 82% of individuals in the general public (Crayton & Neusteter, 2008; Greenberg et al., 2007). As shown in Table 14, the greatest disparity in educational achievement between individuals in the criminal justice system and the public is in postsecondary education, with the general population achieving roughly twice as much postsecondary education as prisoners (i.e., federal and state). In Colorado, 14% of inmates are considered functionally illiterate (DeLaCerde & O’Keefe, 2011).

Table 14. Percentage of Individuals Attaining Formal Education by Population

Population	Less than high school	High school diploma	GED	Any postsecondary
General population	19%	26%	5%	51%
Federal prisoners	26%	17%	29%	27%
State prisoners	37%	17%	32%	14%
Jail inmates	44%	26%	17%	13%
State parolees	51%	42%	-	7%
State/local probationers	42%	40%	-	18%

Note. Table adapted from Brazzell, Crayton, Mukamal, Solomon, & Lindahl (2009).

Education Programs in Correctional Facilities

Corrections-based education programs are typically organized by whether the academic content is above or below high school level and often include adult basic education (ABE), general equivalency diploma (GED), high school diploma, postsecondary education, and life skills programs. ABE and GED have courses at or below high school level. ABE classes are designed to increase basic skills in mathematics, reading, and writing. Postsecondary refers to education beyond high school, including academic, undergraduate, graduate, and certificate or degree programs (Chappell, 2004). Life skills programs are designed to enhance skills necessary to function successfully in everyday life (e.g., job searching, budgeting, and goal setting; MacKenzie, 2006). The Colorado Department of Corrections (CDOC) offers these different programs and requires inmates to work toward a GED if they do not have a GED or a high school diploma (DeLaCerde & O’Keefe, 2011).

Despite the potential benefits of corrections-based education programs (Lochner & Moretti, 2001; Steurer, Smith & Tracy, 2001; Wilson, Gallagher, & MacKenzie, 2000), not all correctional facilities offer them. As of 2006, 76% of prisons offered adult basic education, 80% offered adult secondary education, and only 29% offered college coursework (Coley & Barton, 2006). In addition, many

interested offenders are unable to participate in correctional education programs when offered at their facility, due to space limitations. Brazzell and colleagues (2009) reviewed research that reported percentages of inmates who participated in different educational programs, shown below in Table 15. The Institute for Higher Education Policy found lower participation rates than Brazzell et al. (2009), with less than 5% of U.S. prisoners enrolled in postsecondary education classes in 2005 (Erisman & Contardo, 2005) and approximately 6% in 2011 (Gorgol & Sponsler, 2011). Furthermore, correctional facilities differ in the access that offenders have to these programs and in the likelihood offenders will obtain a certain degree (O'Neill, MacKenzie, & Bierie, 2007).

Table 15. Participation in Correctional Education Programs by Type

	Percentage of inmates who participated since admission		
	Federal prisons	State prisons	Local jails
Adult basic education	2%	2%	1%
Adult secondary education	21%	19%	9%
Postsecondary education	10%	7%	1%
Life skills	29%	24%	-
Vocational training	31%	27%	5%

Note: Table adapted from Brazzell et al. (2009).

Outcomes of Education Programs

Recidivism

ABE, GED, and High School Education Programs. Recidivism is the chief outcome used to evaluate corrections-based education programs. Adult basic education classes are offered to inmates because many lack basic abilities in reading, writing, and mathematics, and if these skills improve, they may have a better chance of avoiding criminal behavior after release (Phipps, Korinek, Aos, & Lieb, 1999). Piehl's (1995) experimental study showed that prisoners who completed ABE, GED, or vocational training demonstrated a 9% decrease in recidivism (i.e., returning to prison within 4 years) compared to no significant decrease in recidivism for the noncompleters, which is consistent with studies that found offenders who earned a GED in prison have lower recidivism rates than those without such a degree (e.g., Cronin, 2011; Nuttall, Hollmen, & Staley, 2003; Zgoba, Haugebrook, & Jenkins, 2008). In contrast, other studies have shown ABE programs have no effect on recidivism rates (e.g., Cho & Tyler, 2008, 2010; Tyler & Kling, 2007).

Review studies have also examined the effect of ABE classes or a high school education on recidivism, in order to make sense of the disparate findings. The Washington State Institute for Public Policy reviewed the most rigorous studies on prison-based ABE classes, which on average showed an 11% reduction in crime compared to no treatment or regular treatment programs (Aos, Phipps, Barnoski, & Lieb, 2001). Wilson et al.'s (2000) meta-analysis demonstrated that participants of ABE and GED correctional programs were 1.44 times less likely to recidivate (i.e., 18% reduction in recidivism) compared to nonparticipants. Cecil, Drapkin, MacKenzie, and Hickman (2000) also reviewed ABE program evaluations, yet concluded there was insufficient evidence to determine whether these programs consistently reduce recidivism. Nevertheless, after summarizing the results of methodologically strong experiments and review studies, Jensen and Reed (2007) categorized ABE, GED, and high school education programs as "what works programming" in reducing recidivism (p. 88).

Postsecondary and College Education Programs. Out of all the education programs available to offenders, a college education seems to be the most effective at reducing recidivism. Ironically, a college degree is one of the largest educational deficits among offenders compared to the general population, and college programs are the least-offered correctional education programs (Guerrero, 2010). Multiple studies have shown that college classes for offenders significantly reduce recidivism (e.g., Batiuk & Moke, 1996; Burke & Vivian, 2001; Stevens & Ward, 1997; Winterfield, Coggeshall, Burke-Storer, Correa, & Tidd, 2009), especially when an offender obtains employment (e.g., Batiuk, Moke, & Rountree, 1997). Batiuk, Lahm, McKeever, Wilcox, and Wilcox (2005) indicated that only participation in college programs significantly reduced recidivism (by 62%) compared to offenders without a college education.

Several review studies also concluded that postsecondary education reduces recidivism, including a meta-analysis by Chappell (2004). In the 15 studies meeting the selection criteria, postsecondary education was associated with a 46% decrease in recidivism, and postsecondary education was associated with a 40% reduction in recidivism rates when analyses were based on the three studies with control groups. In addition, Wilson et al. (2000) conducted a meta-analysis revealing that postsecondary education program participants had an average 26% reduction in recidivism compared to nonparticipants, which was also consistent with Jensen and Reed's (2007) categorization of postsecondary education and college education as "what works programming" (p. 92).

Life Skills Programs. Life skills programs appear to be the least effective corrections-based education programs in reducing recidivism; however, findings are mixed. The majority of rigorous studies (Melton & Pennell, 1998) and review studies (Drake et al., 2009; Mackenzie, 2006) have found that life skills programs do not have an effect on recidivism rates of adult offenders compared to comparison groups, yet may slightly reduce recidivism rates for juvenile offenders (Drake et al., 2009). However, other research has found that life skills programs are sometimes more effective than other approaches. For example, Ross, Fabiano, and Ewles (1988) compared recidivism rates of probationers who participated in cognitive skills training, life skills training, or probation only. Although the cognitive skills group demonstrated the lowest recidivism rates, the life skills group did show lower recidivism rates than the probation only group. Given the differing results, two recent review studies agree life skills programs are best classified as "what is unknown," rather than "what works" or "what does not work" (Cecil et al., 2000; Jensen & Reed, 2007).

Education Programs in General. Research that groups different types of corrections-based education programs together generally shows that they are effective at reducing recidivism. A "three-state study" compared participants in different education programs (e.g., ABE, GED, life skills, and vocational training) to nonparticipants (Steurer & Smith, 2003; Steurer et al., 2001) and showed that education program participants had significantly lower rearrest, reconviction, and reincarceration rates in Ohio and Minnesota but not in Maryland. Mitchell (2002) reexamined the "three-state study" data by controlling for factors that could influence the results (e.g., age, education when entering prison, longest job held) and also found lower recidivism among education program participants, with the exception of offenders in Maryland.

Harer's (1995) quasi-experimental analysis demonstrated that offenders participating in at least one half of an education course (i.e., ABE, GED, college, vocational training, and life skills) were 16% less likely to be rearrested or have their parole revoked compared to nonparticipants. However, Foster (2010) reported correctional education and vocational programs did not impact the ability of male or female offenders to stay out of prison compared to nonparticipants, which was attributed to the correctional training program's failure to provide skills relevant to the current job market. Wells (2000) conducted a meta-analysis of 124 correctional education studies with juveniles and adults and showed that education programs (e.g., GED, ABE, vocational training, and postsecondary education) were associated with a 38% average reduction in recidivism (Wells, 2000), whereas, Drake's (2009) meta-analysis revealed that corrections-based adult education programs (i.e., ABE and postsecondary education) reduced recidivism by 8% for adults and 19% for juveniles. Finally, two other review studies concluded correctional education programs generally reduce recidivism (Hrabowski & Robbi, 2002; Vacca, 2004).

Employment and Wages

In addition to recidivism, researchers are interested in determining whether correctional education programs bolster employment and wages after release. Prison administrators often justify prison education programs on the basis that such programs enhance the employment prospects of former offenders, thus reducing recidivism rates (e.g., Cronin, 2011; Harer, 1995). Studies have generally found participation in correctional education programs does increase employment rates, especially for minority participants (i.e., ABE; Cho & Tyler, 2008, 2010). Other studies show these programs have no effect on postrelease employment rates (i.e., education and vocational programs, Foster, 2010; GED, Sabol 2007a; education programs, Steurer & Smith, 2003). However, it is important to note that the state of the economy may also have an unintended impact on the employment and wage prospects of ex-offenders.

The meta-analysis by Wilson and colleagues (2000) sought to determine whether education programs (i.e., ABE, GED, postsecondary education) increase employment rates and found participants were 1.70 times more likely to be employed than nonparticipants. Summary studies have concluded precollege classes (Gerber & Fritsch, 1995), college classes (Gerber & Fritsch, 1995; Taylor, 1992) and education programs in general increase employment (Gerber & Frisch, 1995; Jancic, 1998), which is one of the strongest determinants of recidivism (Benda, Harm, & Toombs; 2005; Brown, 2011) with some exceptions (Tripodi, Kim, & Bender, 2009).

Not only is it important for ex-offenders to find jobs, but they must also earn a living wage. After studying a sample of high school dropouts admitted to prison, Tyler and Kling (2007) found GED program participants earned significantly higher wages than nonparticipants: \$181 higher for the first year, \$180 higher the second year, and \$109 higher the third year. The "three-state study" found education program participants earned significantly higher average wages compared to nonparticipants for the first year after release, but not the second or third year (Steurer & Smith, 2003; Steurer et al., 2001). More recent research showed that prison-based ABE programs were not associated with higher earnings among participants (Cho & Tyler, 2008); however, a later study by the same authors demonstrated that ABE programs were associated with higher postrelease earnings, especially for minorities and those with uninterrupted instruction (Cho & Tyler, 2010).

Therefore, correctional education program participants generally have better employment prospects and earn higher wages than their nonparticipant counterparts.

Cost Effectiveness

Correctional education programs seem to be cost efficient, although the methods by which studies estimate monetary benefit vary. Bazos and Hausman (2004) found investments into correctional education are more cost effective than investments into prison expansion and reincarceration. Using data from the “three-state study” by Steurer and colleagues (2001), Bazos and Hausman (2004) estimated a cost reduction of \$1,000 per crime pre-vented if the state invested in correctional education instead of prison expansion and reincarceration, assuming an annual cost of incarceration per person of \$25,000. Harer (1995) found education program participants were 16% less likely to recidivate compared to nonparticipants, translating into 360 fewer offenders who recidivated based on an annual release cohort of 5,000 offenders. Given these findings, Harer (1995) estimated a cost savings of \$8 million for education programs, with a conservative estimate of \$22,000 as the annual cost for one offender. Drake and colleagues’ (2009) systematic review of studies with high scientific rigor demonstrated the annual benefit for prison-based education programs (i.e., ABE and postsecondary education) for one adult offender would be \$17,636, including the costs of the program. For one juvenile offender, potential victims would save \$75,722 and taxpayers would save \$28,713 annually, not including the costs of the program.

VOCATIONAL PROGRAMS

Employment Rates among Offenders

An ex-offender’s employment prospects are hindered by several factors. Offenders are often less competitive in the job market due to low levels of education and the stigma of a felony record. Some occupations are completely closed to offenders by law; among those that are not, employers are disinclined to hire previously incarcerated individuals. One study found over 60% of employers would “probably not” or “definitely not” hire applicants with a criminal record (Holzer, Raphael, & Stoll, 2004), and another study found the presence of a criminal record reduced chances of being called back for an interview by half (Pager, 2003). These factors contribute to postrelease employment prospects that are worse than those for the general public. For example, Visser, Debus, and Yahner (2008) found 35% of offenders were unemployed at some point during the 8 months after release, with 55% unemployed at 8 months after release, which was higher than the national unemployment rate.

Vocational Programs in Correctional Facilities

Corrections-based vocational programs can improve the job outlook for offenders, teaching skills necessary for specific industries and facilitating opportunities to earn a legitimate income (Crayton & Neusteter, 2008; Smith & Silverman, 1994). Although the breadth and type of vocational programs vary from state to state, over half (54%) of U.S. prisons offer some form of vocational training, and approximately 30% of offenders have participated in these programs (Coley & Barton, 2006). Common corrections-based vocational programs include carpentry or construction, horticulture, culinary arts, auto mechanics, plumbing and heating, and electrical programs. Colorado has several vocational programs, and some allow inmates to earn apprenticeship certificates from the Colorado Department of Labor and Employment (DeLaCerde & O’Keefe, 2011).

Outcomes of Vocational Programs

Recidivism

Similar to correctional education programs, the primary outcome measure for evaluating correctional vocational programs is whether they reduce recidivism, and the bulk of evidence suggests they do. Lattimore, Witte, and Baker (1990) found that vocational training program participants had significantly lower arrest rates (36%) compared to the control group (46%), and program completers showed significantly lower arrest rates (30%) compared to noncompleters (45%). In addition, Saylor and Gaes (1997; 2001) found that compared to nonparticipants, participants were 35% less likely to be arrested 12 months after release and 33% less likely to recidivate 8 to 12 years after release (Saylor & Gaes, 1997). Subsequent analyses showed minority participants were more likely to be arrested 8 to 12 years after release (Saylor & Gaes, 2001); however, vocational training was more of a benefit to minority groups at high risk to recidivate compared to lower risk individuals who did not belong to a minority group. Callan and Gardner (2007) also found a reduction in recidivism for vocational training participants (28%) compared to nonparticipants, which is consistent with other studies using comparison groups (e.g., Gordon & Weldon, 2003; Lichtenberger, 2007; Steurer & Smith, 2003). Conversely, a small number of studies have found corrections-based vocational programs had no effect (e.g., Bohmert & Duwe, 2011; Downes, Monaco, & Schreiber, 1989; Foster, 2010) or even had a detrimental effect on recidivism (Brewster & Sharp, 2002; Van Stelle, Lidbury, & Moberg, 1995).

The majority of review studies have also concluded vocational training reduces recidivism rates. These studies estimate that vocational training in general reduces recidivism by 22% (Wilson et al., 2000) or 10% (Drake et al., 2009) and that correctional industries reduced recidivism by more than 6%, community-based employment and job training by nearly 5%, and work release programs by a little over 1% (Drake et al., 2009). Moreover, most review studies conclude the preponderance of evidence suggests correctional vocational programs “work” to significantly reduce recidivism (Gerber & Fritsch, 1995; Jensen & Reed, 2007). In contrast, Bouffard, MacKenzie, and Hickman (2000) reviewed 13 vocational programs, with 10 studies showing reductions in recidivism and 3 without such reductions, which led them to categorize vocational programs as “what is promising” in reducing recidivism.

Employment and Wages

In addition to reducing recidivism, another main goal of vocational programs is to increase opportunities for offenders to acquire and maintain legitimate employment with higher wages. The majority of studies have concluded that correctional vocational programs increase the likelihood of postrelease employment (e.g., Bohmert & Duwe, 2011; Lichtenberger, 2007; when employed prior to incarceration, Sabol, 2007b; Visher & Kachnowski, 2007) and higher wages (Lichtenberger, 2007); however, the results are mixed. For example, Saylor and Gaes (1997) found offenders who participated in prison industries or vocational programs were 14% more likely to be employed a year after release but did not earn higher wages (i.e., near poverty level) than nonparticipants. In addition, vocational training failed to increase a participant’s likelihood of finding or maintaining employment in a couple of studies, which was attributed to either a lack of jobs for which offenders had been trained (Sabol, 2007a) or to the depressed state of the economy hindering employment

prospects of offenders who were already among the least desirable applicants (Foster, 2010). Review studies have generally concluded vocational training improves postrelease employment prospects (Gerber & Fritsch, 1995), with some showing reductions as high as 34% compared to nonparticipants (Wilson et al., 2000).

Research also has looked at whether wages can reduce recidivism. According to Visser et al. (2008), maintaining employment in the 6 months prior to incarceration and earning higher wages within 2 months after release cuts an offender's chances of recidivism nearly in half. In addition, individuals who made more than \$10 an hour were half as likely to return to prison as those making less than \$7 an hour (Visser et al., 2008). Lichtenberger (2007) found that offenders who completed correctional vocational training earned 31% higher wages than noncompleters.

Cost Effectiveness

Research indicates corrections-based vocational programs are a cost-effective investment. According to the Washington State Institute for Public Policy, prison vocational education is the most cost-effective program out of other types of programs evaluated (e.g., cognitive-behavioral therapy, drug treatment, education), with a total annual benefit of \$20,714 per participant (in 2007 dollars) after accounting for the costs of the program (Drake et al., 2009). Additionally, correctional industries programs were estimated to provide an annual benefit of \$13,961 per participant, employment and job training in the community a benefit of \$6,351, and work release programs a benefit of \$2,288. Bohmert and Duwe (2011) calculated a simple cost-benefit analysis of a prison industry program estimated to provide approximately \$13 million in benefit during the first 10 years of operation due to the reduced housing costs of participants, reduced cost of construction labor, generated tax revenue from employment earnings, and the lowered costs of recidivism.

CONCLUSION

Overall, education and vocational programs appear to reduce recidivism, increase employment and wages, and be cost efficient. Indeed, correctional education and vocational programs are among the most effective programs in reducing recidivism and produce the largest monetary benefits out of a variety of programs designed to reduce recidivism (e.g., cognitive-behavioral therapy and drug treatment; Drake et al., 2009). However, it is unclear whether life skills programs produce these positive outcomes. Among different education programs, college programs show the greatest reductions in recidivism and institutional misconduct (Batiuk et al., 2005; Lahm, 2009). Research suggests these programs increase the odds of an offender obtaining employment and higher wages, which reduces recidivism and in turn saves money by avoiding costs that would have been spent on criminal justice resources or potential victims (Cronin, 2011). Unfortunately, many of the program evaluations have serious methodological flaws (e.g., nonrandomized group assignment), thus weakening any conclusions based on the results. However, the findings of methodologically strong studies show promising results, though much still remains unknown about what curricula are effective for which populations, at what time, in which circumstances, and due to what factors.

I. FUNDING

The Long Bill appropriates general funds for educational and vocational programming under the Inmate Programs group; this constitutes the majority of funding for DOE. Educational and vocational programs also receive a small portion of federal education grants from the U.S. Department of Education. Additionally, some educational and vocational expenses are offset by cash funds provided from the canteen, a program within CDOC that allows offenders to purchase personal items. Pursuant to C.R.S. 17-24-126 (3), profits from the canteen must be used for programs that benefit the offenders. A percentage of these funds are allocated to recreational expenditures and funding for volunteer coordination, but a larger portion offsets the cost of education.

Table 16 presents funding appropriated to DOE by the Long Bill for FY 2012. Table 17 shows all academic and vocational expenditures in state facilities for FY 2012. By contract, private prisons are required to provide some level of services as part of their per diem. The majority of academic and vocational expenditures in state facilities came from the general fund. Expenditures are higher than appropriations because personal services costs for insurance (health, life, dental), Public Employee Retirement Association contributions (Amortization Equalization Disbursement and Supplemental Equalization Disbursement), and short-term disability are counted in expenses but not in original appropriations.

Table 16. Education Summary FY 2012 Supplemental Long Bill Appropriations by Fund

Description	General	Cash	Re-appropriated/Federal	Total
Personal Services^a	\$11,059,314	\$914,261		\$11,973,575
Operating Expenses		\$1,859,352	\$611,015	\$2,470,367
Contract Services	\$73,276			\$73,276
Education Grants		\$10,000	\$1,276,297	\$1,286,297
Indirect Costs			\$5,476	\$5,476
Total	\$11,132,590	\$2,783,613	\$1,892,788	\$15,808,991

^aPersonal services appropriated by the Long Bill do not include all associated payroll expenses such as shift, health, life, and short-term disability.

Table 17. Education Summary FY 2012 Expenditures by Fund

Description	General	Cash	Reappropriated/Federal ^d	Total
Academic				
Personal Services ^a	\$10,018,296	\$691,889	\$0	\$10,710,185
Operating Expenses ^b	\$0	\$703,742	\$0	\$703,742
Contract Services	\$73,165	\$0	\$0	\$73,165
Education Grants ^c	\$0	\$0	\$394,861	\$394,861
Subtotal	\$10,091,461	\$1,395,631	\$394,861	\$11,881,953
Vocational				
Personal Services ^a	\$3,219,856	\$222,371	\$0	\$3,442,227
Operating Expenses ^b	\$0	\$820,523	\$0	\$820,523
Education Grants	\$0	\$0	\$544,241	\$544,241
Subtotal	\$3,219,856	\$1,042,894	\$544,241	\$4,806,991
Academic & Vocational				
Personal Services ^a	\$13,238,152	\$914,260	\$0	\$14,152,412
Operating Expenses ^b	\$0	\$1,524,265	\$0	\$1,524,265
Contract Services ^c	\$73,165	\$0	\$0	\$73,165
Education Grants	\$0	\$0	\$939,102	\$939,102
Total	\$13,311,317	\$2,438,525	\$939,102	\$16,688,944

^a Fund splits between general funds and cash funds were based upon ratios of the total expenses of academic and vocational personal services. Personal services include all associated payroll expenses such as shift, health, dental, life, and short-term disability.

^b Fund splits between general funds, cash funds, and reappropriated funds were based upon ratios of the total expenses of academic and vocational operating expenses. Additional funds were paid out of general funds by other subprograms for educational expenses.

^c Included additional cash fund expenses paid from CCI subprogram for education expenses.

^d Represents funding that has been reappropriated from another line item in the Long Bill or was federally funded.

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APPENDIX

Acronym	Facility
ACC	Arrowhead Correctional Center
AVCF	Arkansas Valley Correctional Facility
BCCF*	Bent County Correctional Facility
BVCF	Buena Vista Correctional Facility
BVMC	Buena Vista Minimum Center
CCC	Colorado Correctional Center (Camp George West)
CCCF*	Crowley County Correctional Facility
CCF	Centennial Correctional Facility
CMRC*	Cheyenne Mountain Re-entry Center
CMC	Canon Minimum Centers include FMCC, SCC & ACC
CSP	Colorado State Penitentiary
CTCF	Colorado Territorial Correctional Facility
DCC	Delta Correctional Center
DRDC	Denver Reception and Diagnostic Center
DWCF	Denver Women's Correctional Facility
FCF	Fremont Correctional Facility
FMCC	Four Mile Correctional Center
KCCC*	Kit Carson Correctional Center
LCF	Limon Correctional Facility
LVCF	La Vista Correctional Facility
RCC	Rifle Correctional Center
SCC	Skyline Correctional Center
SCCF	San Carlos Correctional Facility
SCF	Sterling Correctional Facility
TCF	Trinidad Correctional Facility

*Private facility

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