

Career and Technical Education Program Study Findings: FY2020 Releases

Prepared by the Research - Evaluation Unit

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VIRGINIA DEPARTMENT OF CORRECTIONS

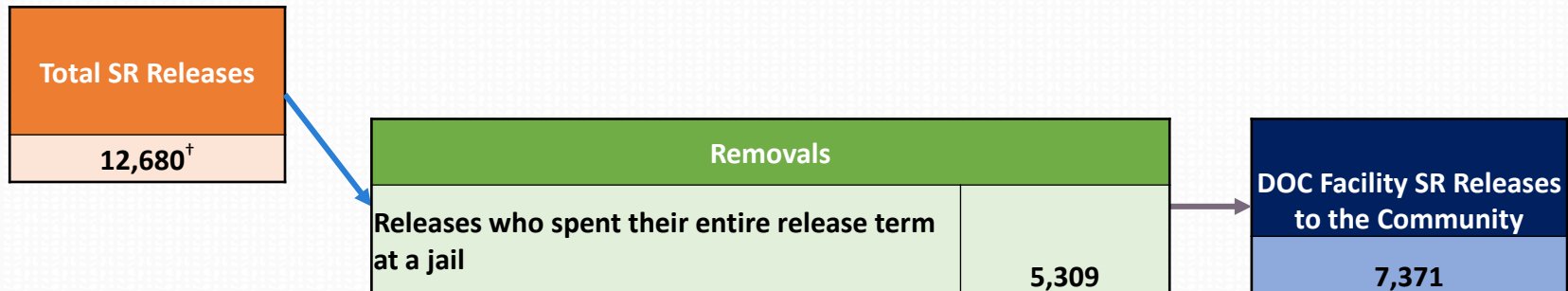
Presentation Outline

- Overview of the Career and Technical Education (CTE) program
- Characteristics of CTE completers and non-completers
- CTE completions by course type and career cluster
- Recidivism rates for the program
 - Overall rates
 - Program participants versus comparison groups
- Employment statistics and outcomes
- Comparison to FY2018 SR Releases Study
- Summary

Career and Technical Education Program (CTE)

- Purpose: Provide students with programming that prepares students for employment, trade and technical skills, industry-based certifications, and state licensure
- Outcomes: improve employability with sustainable employment and workplace readiness skills
- CTE Course Program
 - Courses are diverse (45 types, with ~689 courses offered): Automotive Repair, Welding, CAD, Masonry, HVAC, Electricity , Fiber Optics, CDL, Surveying, Barbering, and many others
 - Courses are offered statewide and wait lists are common
 - Prerequisites vary depending on the CTE Course
 - Minimum TABE scores (Math and Reading); GED®/HSE; HSD
 - Sufficient time left in sentence to complete course (or a partial completion and job code)
 - Challenges
 - Students transferred prior to class completion; limitations of space and resources; lack of qualified instructors; competing programming needs

FY2020 State Responsible (SR) Releases from DOC Facilities



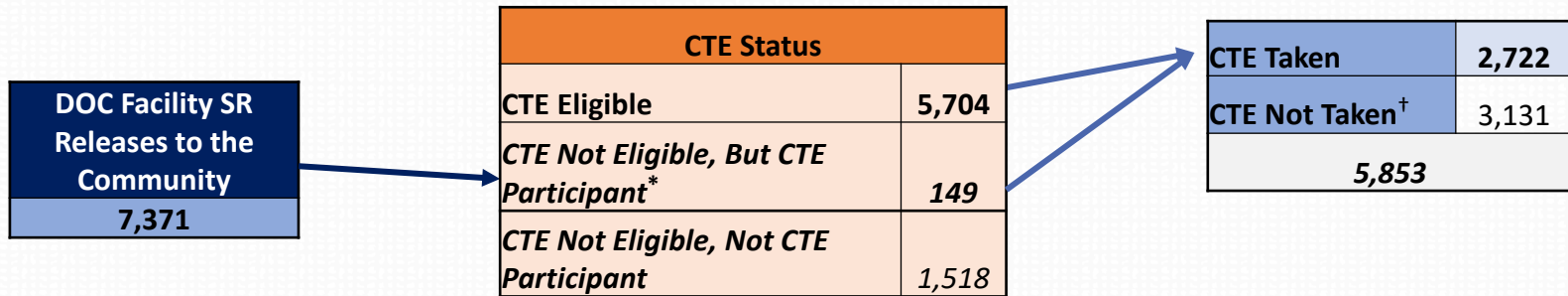
- FY2020 SR Releases included **12,680** inmates
- After reviewing the overall release group, we removed **5,309** inmates due to them spending their entire release term at a jail
- The resulting group used for analysis has **7,371** inmates
 - 342 (5%) were released early due to COVID early release*

Notes:

[†]Deaths in Custody (n=104) were already removed from the original release file. One inmate who escaped from a local/regional jail prior to transfer to a DOC facility was excluded from the analysis.

* [Pandemic-Related Early Release of State Inmates Coming to an End as Authority Expires](#).

FY2020 State Responsible (SR) Releases from DOC Facilities: CTE Status



- Eligibility Criteria: Sentence length of 24 months or longer and has GED®/HSD
- We identified **1,518** inmates who were not CTE Eligible and did not participate in a CTE course
- The resulting group used for analysis has **5,853** inmates
 - 47% (2,722) met requirements and participated in at least one CTE course

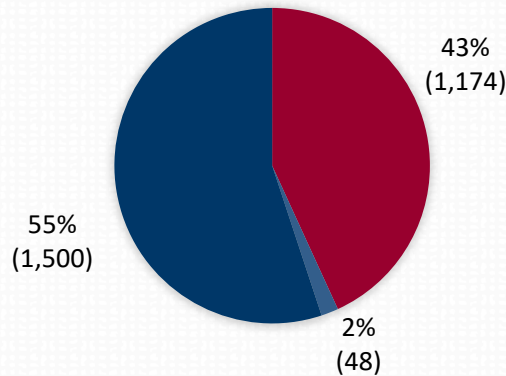
Notes:

* Since the current study looked at TABE Battery Average scores, Math and Reading TABE score minimum level requirements could not be examined and may explain these individuals not being identified as CTE Eligible.

† The Correctional Education group does not have the capacity to enroll all interested inmates, so wait lists occur for every CTE program. In addition, those who have shorter sentences have priority based on current policy ([Operating Procedure 601.6](#)).

CTE Program Completion for Current Term

CTE Completions



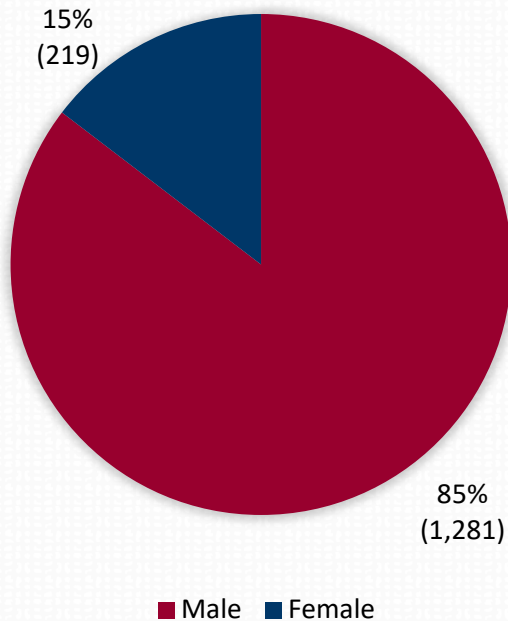
■ Removed from CTE ■ CTE Partially Completed ■ CTE Completed

	Removed	Partial	Complete	Total
Male	1,001 (43%)	46 (2%)	1,281 (55%)	2,328
Female	173 (44%)	2 (<1%)	219 (56%)	394
Total	1,174 (43%)	48 (2%)	1,500 (55%)	2,722

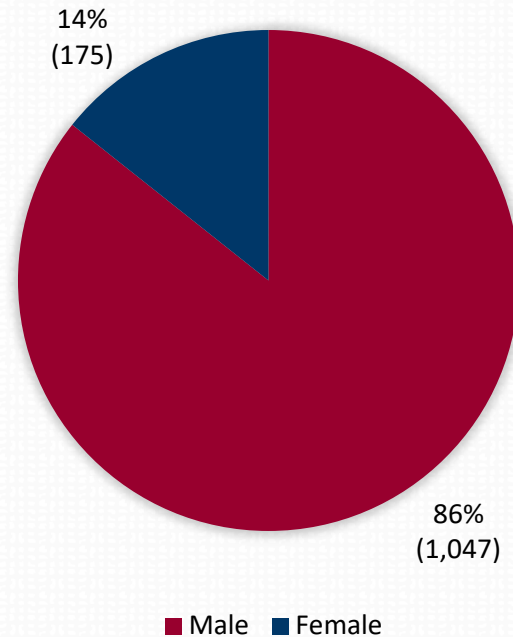
- Of the CTE Program participants, 86% (2,328) were male and 14% (394) were female
- Of the SR releases who enrolled in CTE courses, 43% (1,174) were removed for various reasons and were unable to complete these courses prior to release
- Overall, 55% (1,500) of the inmates who participated in CTE courses in their current term completed at least one course

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): Gender

CTE Completers: Gender



CTE Non-Completers: Gender



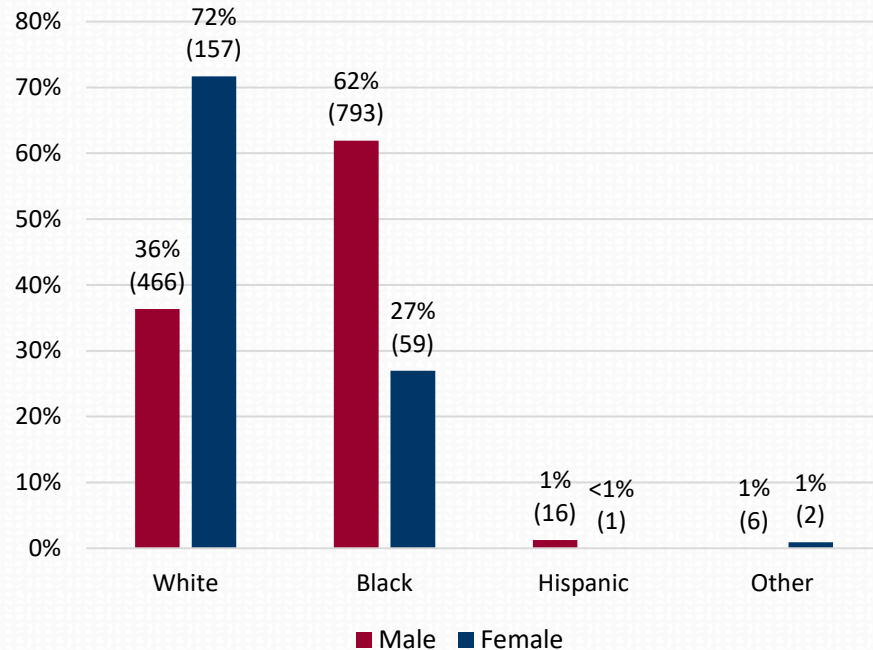
- CTE completers and non-completers had similar percentages of males (85% and 86%, respectively) and females (15% and 14%, respectively)

Note:

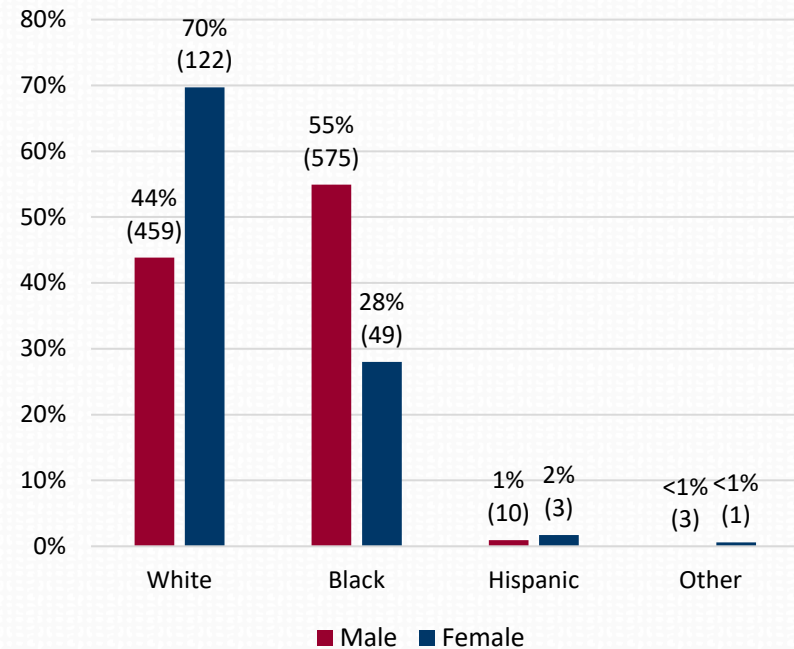
[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): Race/Ethnicity

CTE Completers: Race and Ethnicity



CTE Non-Completers: Race and Ethnicity



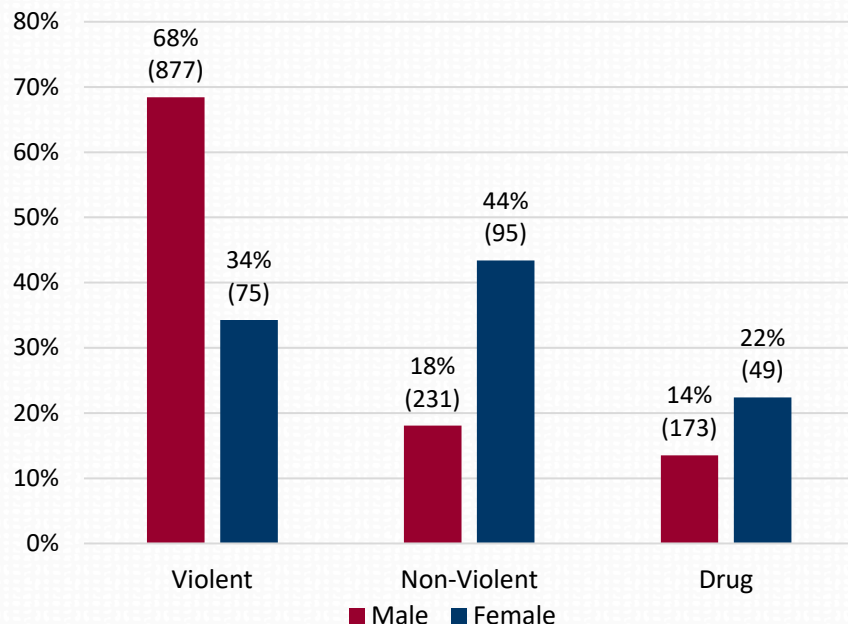
- Of the FY2020 DOC facility releases, 54% of males were Black and 72% of females were White
- The largest percentage of males for both CTE completers and non-completers were Black (62% and 55%, respectively)
- Over two-thirds of female completers and non-completers were White (72% and 70%, respectively)

Note:

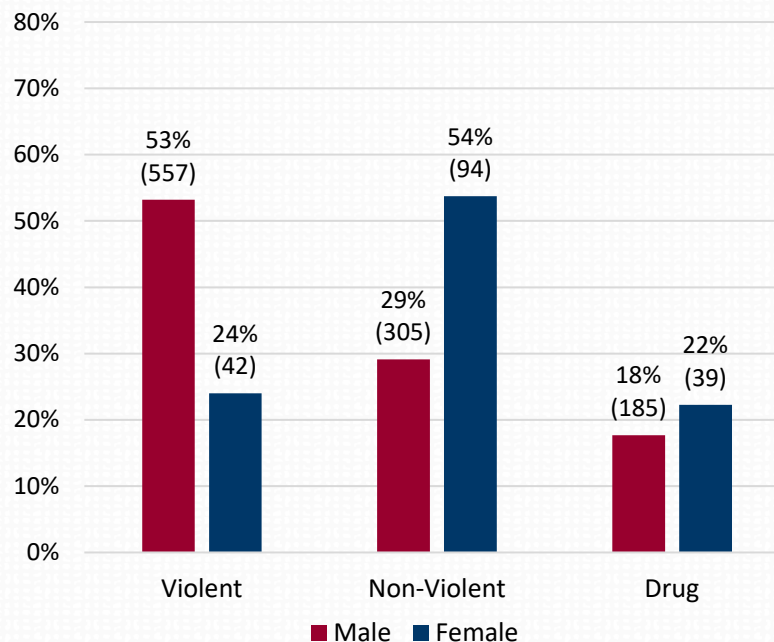
[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): Crime Type

CTE Completers: Crime Type



CTE Non-Completers: Crime Type



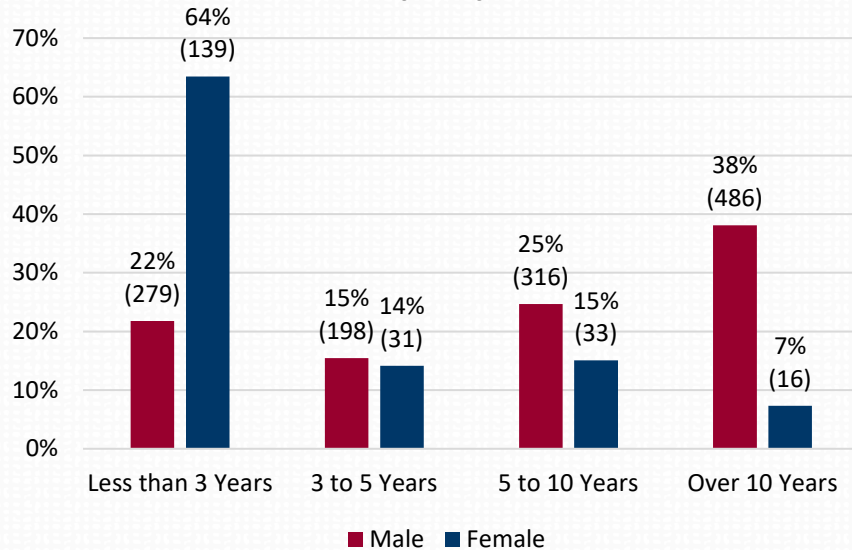
- Of the FY2020 DOC facility releases, 47% of males committed a violent offense and 50% of females committed a non-violent offense
- The largest percentage of male CTE completers and non-completers committed a violent offense (68% and 53%, respectively)
- The largest percentage of female CTE completers and non-completers committed a non-violent offense (44% and 54%, respectively)

Note:

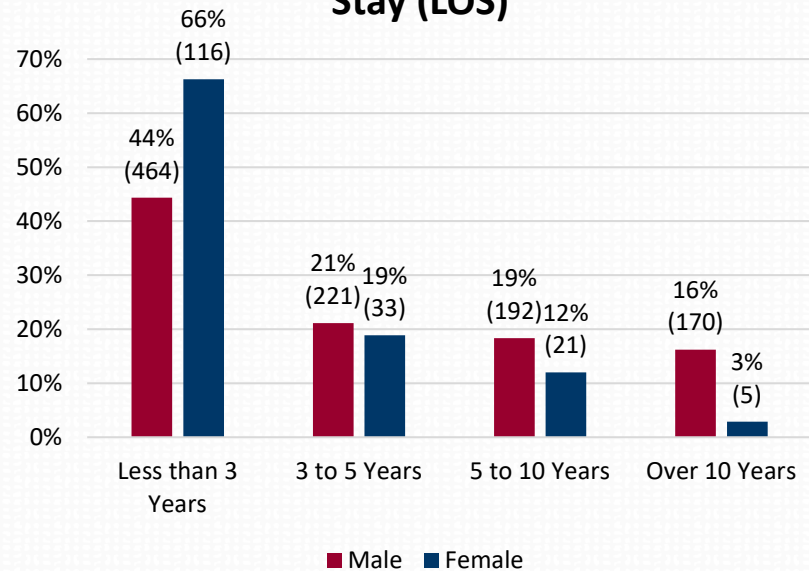
[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): DOC Length of Stay

CTE Completers: DOC Length of Stay (LOS)



CTE Non-Completers: DOC Length of Stay (LOS)



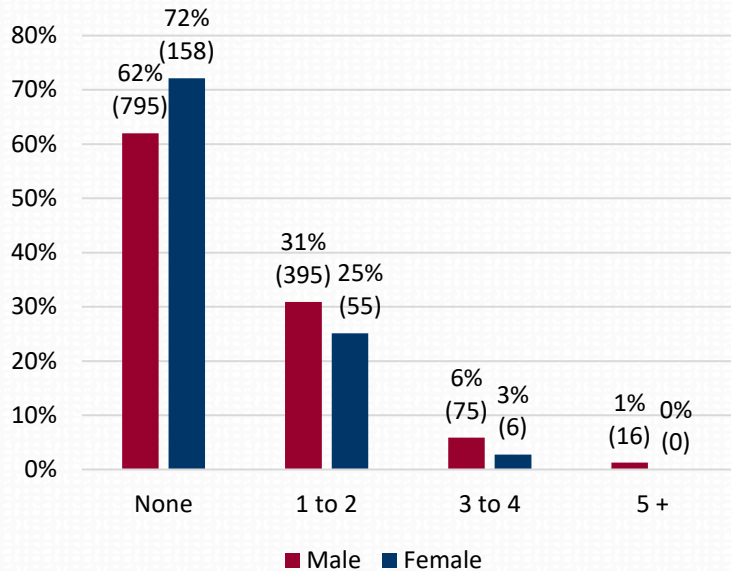
- DOC Length of Stay (LOS) is the total amount of time spent in DOC facilities
 - The largest percentage of male CTE completers had a length of stay of over 10 years (38%), while the largest percentage of female CTE completers had a length of stay of less than three years (64%)
 - The largest percentage of male and female CTE non-completers had a length of stay of less than three years (44% and 66%, respectively)

Note:

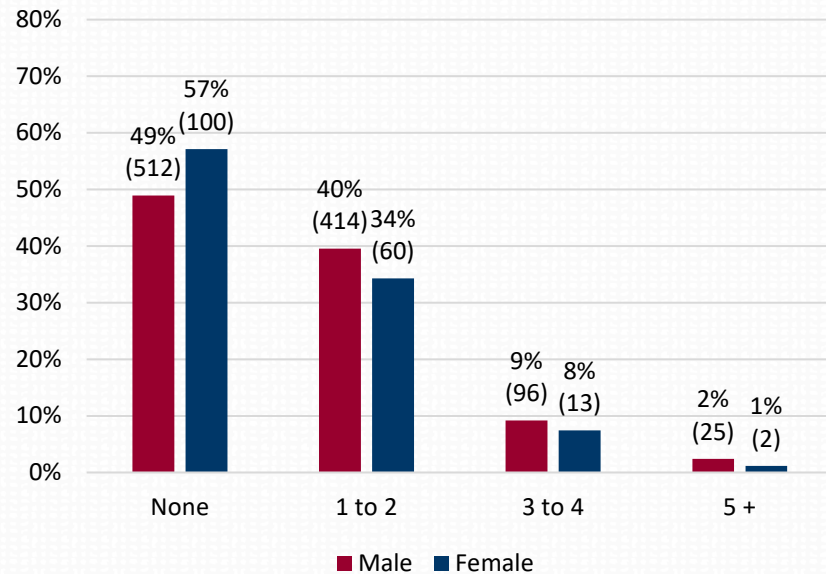
[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): Prior State Responsible Terms

CTE Completers: Prior State Responsible (SR) Terms



CTE Non-Completers: Prior State Responsible (SR) Terms

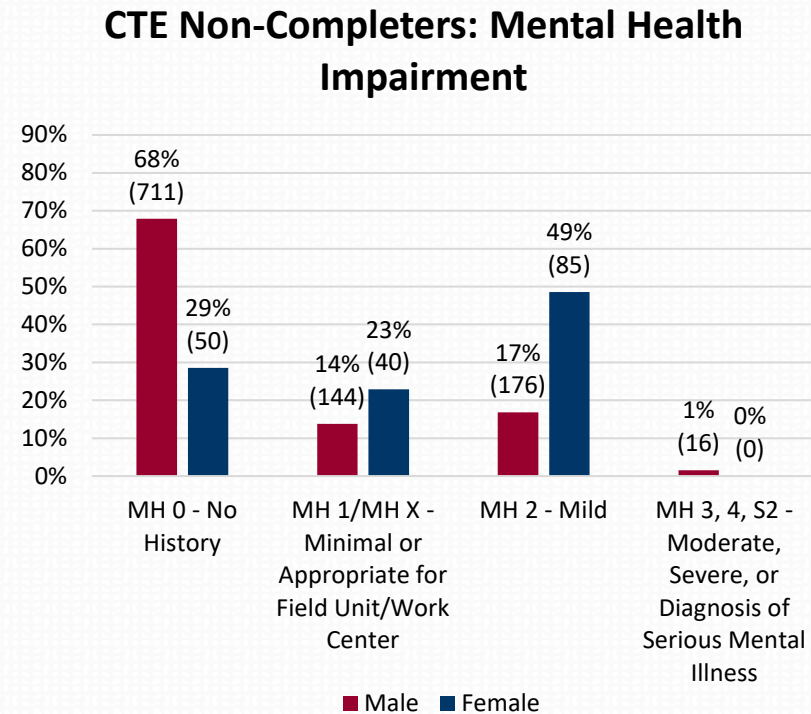
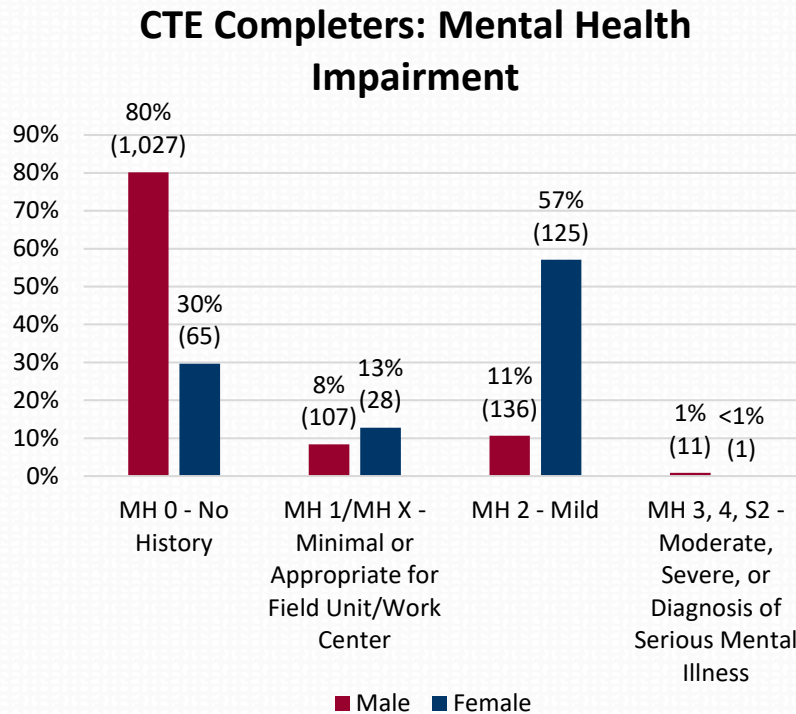


- A majority of male and female CTE completers had no prior SR terms (62% and 72%, respectively)
- The largest percentage of male and female CTE non-completers had no prior SR terms (49% and 57%, respectively)

Note:

[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers[†] (N = 1,222): Mental Health Impairment



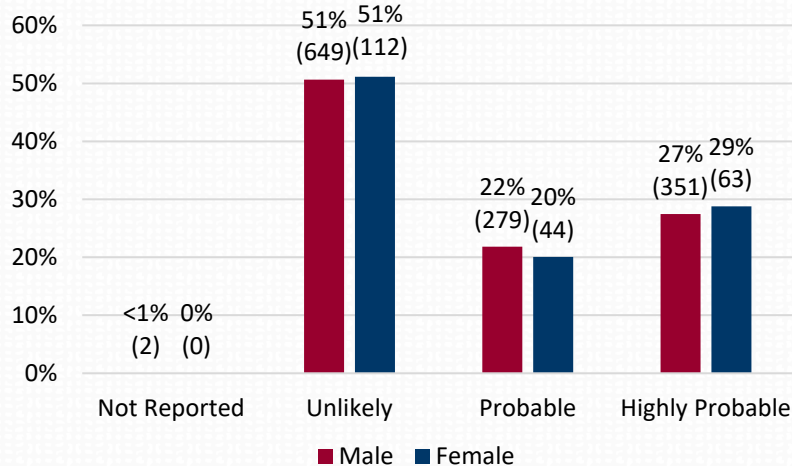
- Of the FY2020 DOC facility releases, 73% of males had no mental health impairment history (MH 0) and 52% of females had mild levels of mental health impairment (MH 2)
- Over three-quarters (80%) of male CTE completers and over two-thirds of male non-completers (68%) had no mental health impairment history (MH 0)
- Over one-half of female CTE completers (57%) and almost one-half of female non-completers (49%) had mild levels of mental health impairment (MH 2)

Note:

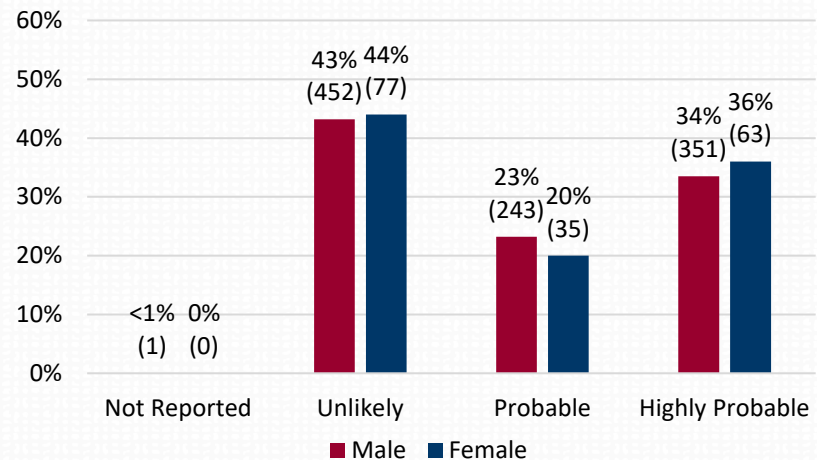
[†] Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

Characteristics of CTE Program Completers (N = 1,500) vs. Non-Completers† (N = 1,222): COMPAS Vocational and Education Needs Scale

CTE Completers: COMPAS Vocational and Education Needs Scale



CTE Non-Completers: COMPAS Vocational and Education Needs Scale



- Of the FY2020 DOC facility releases, 46% of males and females scored 'Unlikely' on the COMPAS Vocational and Education Needs Scale
- Almost one-half (49%) of both male and female CTE completers scored 'Probable' or 'Highly Probable' on the COMPAS Vocational and Education Needs Scale
- Over one-half of male (57%) and female (56%) CTE non-completers scored 'Probable' or 'Highly Probable' on the COMPAS Vocational and Education Needs Scale

Notes:

† Non-completers are releases who participated in a CTE program and were removed or those who partially completed the program.

* The initial COMPAS Vocational and Education Needs Scale scores during the current release term of incarceration were used. The scale measures educational attainment, vocational skills, job opportunities, and record of stable employment.

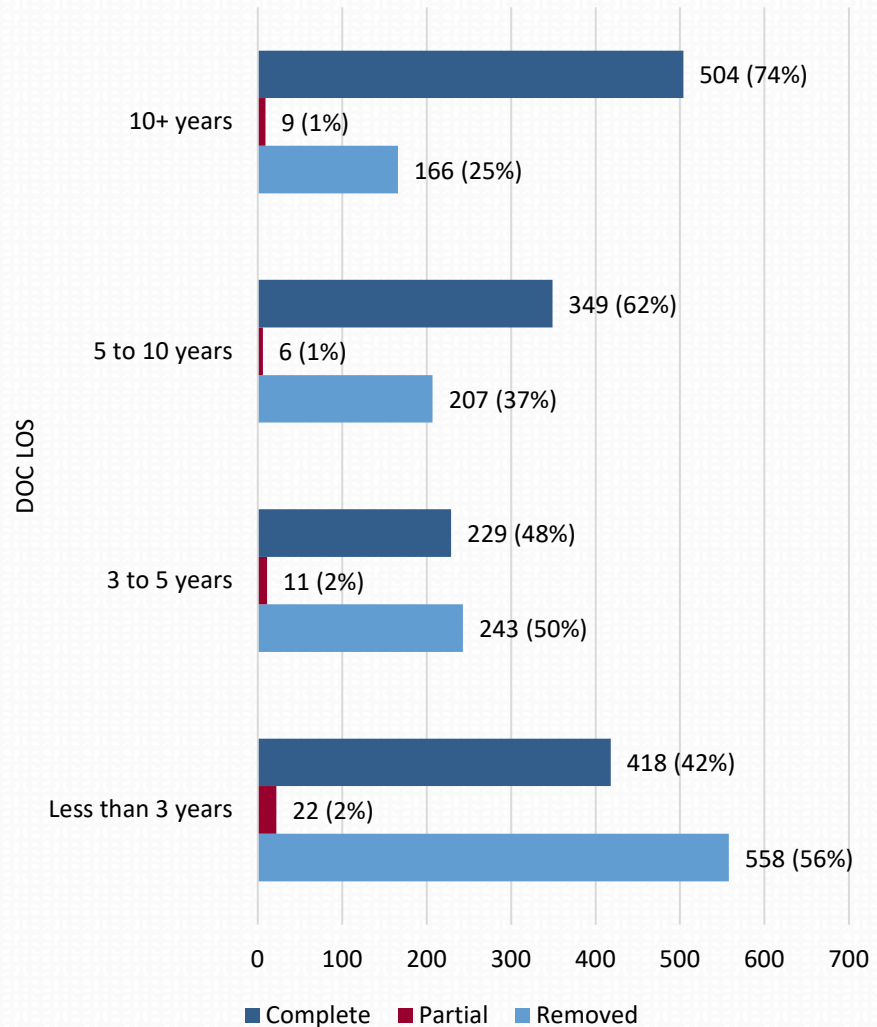
CTE Course Completion and LOS for Current Term

- In the current study group of CTE students, 63% had a DOC LOS of three years or greater, regardless of their CTE course outcomes

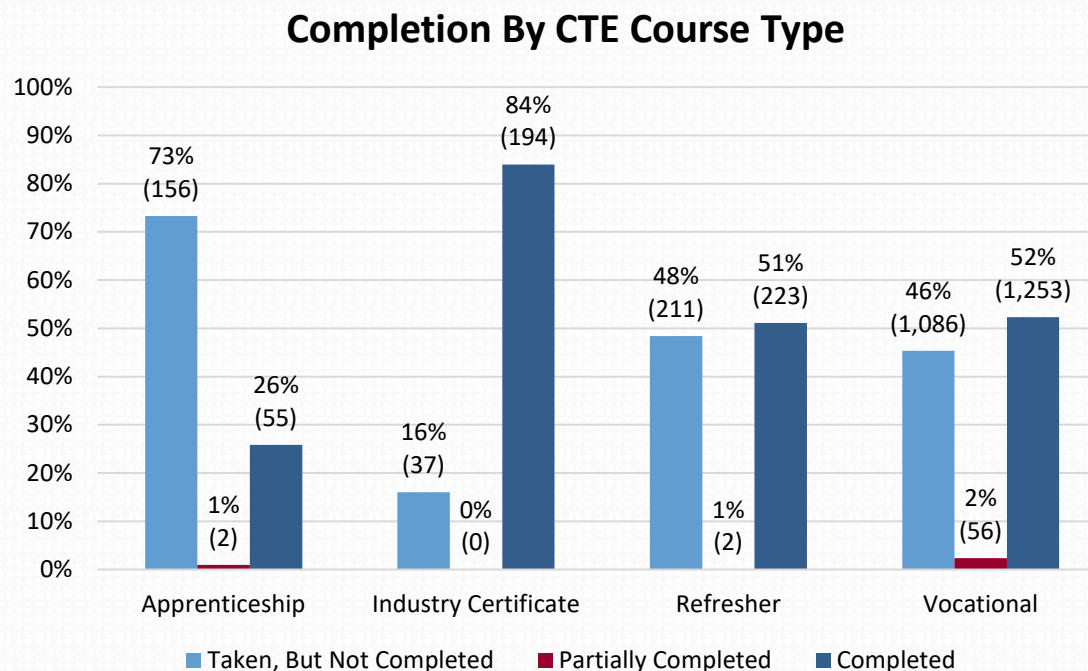
DOC LOS	CTE Students
Less than 3 years	998 (37%)
3 to 5 years	483 (18%)
5 to 10 years	562 (20%)
10+ years	679 (25%)

- CTE completion rates improved as DOC LOS increased:
 - Less than 3 years: 42%
 - 3 to 5 years: 48%
 - 5 to 10 years: 62%
 - 10+ years: 74%

CTE Course Outcomes By DOC Length of Stay (LOS)



Types of CTE Courses Taken



- Of the four CTE course types, Vocational programs had the highest number of completions (1,253), but had a 52% course completion rate
- Industry Certificate courses had the highest completion rate (84%)
 - Completion of an industry certificate course does not result in earning an industry certificate. Inmates are eligible to take industry certificate exams to earn the specific industry credentials
- Apprenticeship courses had the lowest completion rate (26%). The lower rate may be related to having fewer participants and lengthier program durations compared to other courses

Note:

† Students can participate in more than one course type but will only be counted once per course type where the highest completion status was kept.

Recidivism* By CTE Course Type Completion

CTE Course Type	Number of Completers†	Recidivism Rate
Apprenticeship	55‡	7.3%
Industry Certificate	194	5.7%
Refresher	223	6.7%
Vocational	1,253	10.1%

- SR releases who completed an Industry Certificate course had the lowest recidivism rate (5.7%) of the four CTE course types
- Vocational CTE course completers had the highest recidivism rate (10.1%) of the four course types

Notes:

* Recidivism for this study is defined as a new state responsible term of re-incarceration occurring within three years of an individual's release.

† Students can participate in more than one course type but will only be counted once per course type where the highest completion status was kept.

‡ Due to the small number, results should be interpreted with caution.

CTE Career Clusters*

- CTE career clusters are CTE courses that are grouped together based on the type of career those courses fall under
- The eight career clusters examined, and their composition are:
 - Agriculture, Food, Natural Resources, and Hospitality
 - Courses in Horticulture, Commercial Foods, and Dog Training
 - Architecture and Construction
 - Courses in Building Maintenance, Carpentry, Electricity, HVAC, Masonry, Plumbing, Fiber Optics, etc.
 - Arts, Audio/Video Technology, and Communications
 - Courses in Communication, Arts, Design, and Print Production
 - Human Services
 - Courses in Barbering, Cosmetology, and Teacher's Assistant
 - Information Technology and Finance
 - Courses in Business Software Applications, Computer Literacy, Economics, Personal Finance, Office Machine Repair, and Entrepreneurship
 - Manufacturing
 - Courses in Sheet Metal, Upholstery, and Welding
 - Science, Technology, Engineering, and Mathematics
 - Courses in Small Engine Repair, Computer-Aided Design, Optical Lens Technology, and Water Treatment
 - Transportation, Distribution, and Logistics
 - Courses in Automotive Technology, Auto Body, Motorcycle Repair, and Commercial Drivers Licensure

Note:

* Career cluster categories were provided by VADOC Correctional Education.

Recidivism* By CTE Career Cluster

Career Cluster**	Number of Completers†	Recidivism Rate
Agriculture, Food, Natural Resources, and Hospitality	232	5.6%
Architecture and Construction	890	10.6%
Arts, Audio/Video Technology and Communications	56‡	8.9%
Human Services	59‡	5.1%
Information Technology and Finance	382	6.5%
Manufacturing	55‡	10.9%
Science, Technology, Engineering, and Mathematics	98	15.3%
Transportation, Distribution, and Logistics	32‡	12.5%

- Of the eight CTE career clusters examined, the Humans Services cluster had the lowest recidivism rate (5.1%)‡
- FY2020 SR releases who completed a CTE course in the Science, Technology, Engineering, and Mathematics cluster had the highest recidivism rate of 15.3%
- The Architecture and Construction career cluster had the most completions (890)

Notes:

* Recidivism for this study is defined as a new state responsible term of re-incarceration occurring within three years of an individual's release.

** Career cluster categories were provided by VADOC Correctional Education.

‡ Due to the small number, results should be interpreted with caution.

† Students can participate in more than one career cluster type but will only be counted once per career cluster.

Overall Recidivism[†] Rates Three Years After Release

Correctional Education Status for Current Term	N	Recidivism Rate
CTE Completers:		
Male	1,281	10.2%
Female	219	5.5%
Overall	1,500	9.5%

- The overall three-year recidivism rate for CTE Completers (9.5%)
- The lowest rate was seen for female CTE Completers (5.5%)

Note:

[†] Recidivism for this study is defined as a new state responsible term of re-incarceration occurring within three years of an individual's release.

Case-Control Matching Process

- Since all eligible individuals have the opportunity to participate in workforce programming, case-control matching is used
 - The comparison group contained SR releases who did not complete at least one CTE course during their release term of incarceration
- The existing study group is matched with a case-control created comparison group with user-defined tolerances for each matching variable
- The variables the study and comparison group were matched on include:
 - Gender
 - Age at release (± 2 years)
 - Crime type
 - Number of prior SR terms (± 1 SR term)
 - Mental health status
 - Confirmed gang status at release
 - History of testing positive for opioids and/or cocaine
- The matches between the study and comparison groups are random and are as close to a randomized control trial as possible
- Individuals in the study group that are unable to be matched with the comparison group are removed from the study
 - 69 inmates that completed a CTE course were removed
- Outcomes of the comparison are analyzed for significant group differences

Recidivism Rates Three Years After Release: Matched* Cases and Comparison Groups – CTE

Correctional Education Status for Current Term	N	Study	Comparison
CTE Completers:[†]			
Male	1,230	9.8%[‡]	13.8%
Female	201	5.0%	9.5%
Overall	1,431	9.2%^{‡‡}	13.2%

- Significant differences in recidivism rates between study and comparison groups were observed for male CTE Completers and overall CTE Completers
- Although female CTE completers in the study group had a lower recidivism rate than the comparison group, the difference was not significant

Notes:

*Case and Comparison individuals were matched on the following: gender, age at release (± 2 yrs.), crime type, prior SR terms (± 1 SR term), mental health status, confirmed gang status at release, and history of testing positive for opioids and/or cocaine.

[†] 69 CTE Complete cases have been removed due to difficulty in identifying an appropriate match.

[‡] Chi-Square Test was significant ($p = 0.002$).

^{‡‡} Chi-Square Test was significant ($p < 0.001$).

Recidivism Rates Three Years After Release: Matched* Cases and Comparison Groups – CTE Career Clusters

Career Cluster	N	Study	Comparison
Agriculture, Food, Natural Resources, and Hospitality [†]	224	5.4%	10.3%
Architecture and Construction [†]	848	10.4%[‡]	15.6%
Arts, Audio/Video Technology and Communications [†]	53**	9.4%	15.1%
Human Services [†]	56**	5.4%	7.1%
Information Technology and Finance [†]	364	6.6%	8.5%
Manufacturing [†]	52**	7.7%	11.5%
Science, Technology, Engineering, and Mathematics [†]	93**	12.9%	12.9%
Transportation, Distribution, and Logistics	32**	12.5%	3.1%

- Significant differences in recidivism rates between study and comparison groups were observed for the Architecture and Construction career cluster
- Having a smaller number of completers in many of the career clusters is likely the reason why some differences were not significant

Notes:

* Case and Comparison individuals were matched on the following: gender, age at release (± 2 yrs.), crime type, prior SR terms (± 1 SR term), mental health status, confirmed gang status at release, and history of testing positive for opioids and/or cocaine.

[†] 8 Agriculture, Food, Natural Resource, and Hospitality cases; 42 Architecture and Construction cases; 3 Arts/Communications cases; 3 Human Services cases; 18 Information Technology and Finance cases; 3 Manufacturing cases; and 5 Science, Technology, Engineering, and Math cases have been removed due to difficulty in identifying an appropriate match.

** Due to the small number, results should be interpreted with caution.

[‡] Chi-Square Test was significant ($p = 0.001$).

Overview of Employment Statistics and Outcomes

- All employing units that are subject to the taxing provisions of the unemployment compensation laws are required to report wages to the Virginia Employment Commission (VEC)
 - Typically required if a company has: one or more employees who work a portion of a day in twenty different weeks of a calendar year OR have a total gross payroll for any calendar quarter of \$1,500 or more
- Wages are reported quarterly
 - Wages are defined as: wages, salary, commissions, tips, annual bonuses, severance pay, and back pay
- Important to note that only Virginia employers who reported wages are included in the data set
 - Under the table pay/freelance work was not included
 - Employment records from outside of Virginia are not included

Note:

<https://www.vec.virginia.gov/employers/>

Three-Year Employment Rates for SR Releases from DOC Facilities

FY2020 SR Releases From DOC Facilities: Employment Rates				
		All FY2020 SR Releases	Overall CTE Completers	Non-Completers/Non-Earners [†]
Males	N	6,221	1,281	4,792
	Employment Rate	63%	70%	62%
Females	N	1,150	219	924
	Employment Rate	68%*	79%*	65%**
Overall	N	7,371	1,500	5,716
	Employment Rate	64%	71%	62%

- Employment was defined as having any wages reported during the three-year follow-up period¹
- Females had significantly higher employment rates than males
- FY2020 SR releases who completed a CTE course had higher employment rates than all FY2020 SR Releases and releases who did not complete any correctional education

Notes:

* Chi-Square Test was significant ($p < 0.01$).

** Chi-Square Test was significant ($p < 0.05$).

[†] Releases in the Non-Completers/Non-Earners group are releases who did not complete a CTE course or earn a GED.

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Employment Rate by CTE Career Cluster

FY2020 SR Releases From DOC Facilities: CTE Completers		
Career Cluster*	Number of Completers**	Employment Rate ⁺
Agriculture, Food, Natural Resources, and Hospitality	232	78%
Architecture and Construction	890	72%
Arts, Audio/Video Technology and Communications	56 [‡]	79%
Human Services	59 [‡]	68%
Information Technology and Finance	382	70%
Manufacturing	55 [‡]	80%
Science, Technology, Engineering, and Mathematics	98 [‡]	65%
Transportation, Distribution, and Logistics	32 [‡]	56%
Overall CTE Completers	1,500	71%

- Releases who completed a CTE course in Manufacturing had the highest employment rate (80%) of any career cluster[‡]
- All career clusters except for Transportation, Distribution, and Logistics had a higher employment rate than releases who did not participate or complete a correctional education program (62%)
- Five of the eight career clusters had employment rates of at least 70%

Notes:

*Career cluster categories were provided by VADOC Correctional Education.

**Students can participate in more than one career cluster type and will be counted once per career cluster.

⁺ Employment was defined as having any wages reported during the three-year follow-up period.

[‡] Due to the small number, results should be interpreted with caution.

Recidivism Rates[†] By Employment Status Three Years After Release

FY2020 SR Releases From DOC Facilities: Recidivism Rates				
		All FY2020 SR Releases	Overall CTE Completers	Non-Completers/ Non-Earners [‡]
Employed	N	4,724	1,071	3,551
	Recidivism Rate	13.0%*	9.3%	14.1%*
Unemployed	N	2,647	429	2,165
	Recidivism Rate	18.7%	10.0%	20.3%
Overall	N	7,371	1,500	5,716
	Recidivism Rate	15.0%	9.5%	16.5%

- Overall FY2020 SR releases and those who didn't complete a CTE course or earn a GED and who were employed during the follow-up period¹ had significantly lower recidivism rates than those who were unemployed
- Employed and unemployed CTE completers had lower recidivism rates than all FY2020 SR releases and those who didn't complete a CTE course or earn a GED
- Unemployed CTE completers had a lower recidivism rate than employed FY2020 SR releases and employed releases who did not earn a GED or complete a CTE course

Notes:

* Chi-Square Test was significant (p < 0.001).

[†] Recidivism for this study is defined as a new state responsible term of re-incarceration occurring within three years of an individual's release.

[‡] Releases in the Non-Completers/Non-Earners group are releases who did not complete a CTE course or earn a GED.

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Employment Statistics¹

FY2020 Employment Statistics		
	CTE Completers (N=1,071)	Non-Completers/ Non-Earners (N=3,551)*
Quarterly Wages		
Mean	\$5,932.31	\$5,230.41
Median	\$5,418.47	\$4,226.42
Time to Employment		
Mean	1.4 Quarters	1.9 Quarters
Median	1.0 Quarter	1.0 Quarter
Percent of Eligible Quarters Employed		
Mean	59%	50%
Median	62%	46%
Number of Employers		
Mean	3.5	3.2
Median	3.0	2.0

- Quarterly, CTE completers earned approximately \$700 more, on average, than releases who did not complete a CTE course or earn a GED
- On average, CTE completers had higher quarterly wages, shorter time to employment, and a higher percent of eligible quarters employed than releases who did not complete a CTE course or earn a GED

Notes:

*Releases in the Non-Completers/Non-Earners group are releases who did not complete a CTE course or earn a GED.

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Employment Rates Three Years After Release: Matched[‡] Cases and Comparison Group

FY2020 SR Releases: Employment Rate By Gender			
Correctional Education Status for Current Term	N	Study	Comparison
CTE			
Male	1,230	70%*	61%
Female	201	81%**	67%
Overall	1,431	71%*	62%

- The study group had significantly higher employment rates during the follow-up period¹ than the comparison group

Notes:

* Chi-Square Test was significant ($p < 0.001$).

** Chi-Square Test was significant ($p < 0.01$).

[‡] CTE was matched on the following: gender, age at release (± 2 yrs.), crime type, prior SR terms (± 1 SR term), mental health status, confirmed gang status at release, and history of testing positive for opioids and/or cocaine.

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

CTE Employment Statistics¹

FY2020 Employment Statistics: CTE		
	Study (N=1,020)	Comparison (N=886)
Quarterly Wages		
Mean	\$5,950.86*	\$5,778.34
Median	\$5,426.20	\$4,931.48
Time to Employment		
Mean	1.4 Quarters*	1.8 Quarters
Median	1.0 Quarter	1.0 Quarter
Percent of Eligible Quarters Employed		
Mean	59%**	54%
Median	62%	54%
Number of Employers		
Mean	3.5*	3.2
Median	3.0	2.0

- On average, CTE completers earned approximately \$170 more per quarter than the comparison group
- CTE completers gained employment significantly faster after release than the comparison group (1.4 quarters and 1.8 quarters, respectively)
- CTE completers were employed for a significantly greater percentage of quarters than the comparison group while at liberty (59% and 54%, respectively)
- CTE completers averaged significantly more different employers than the comparison group (3.5 and 3.2, respectively)

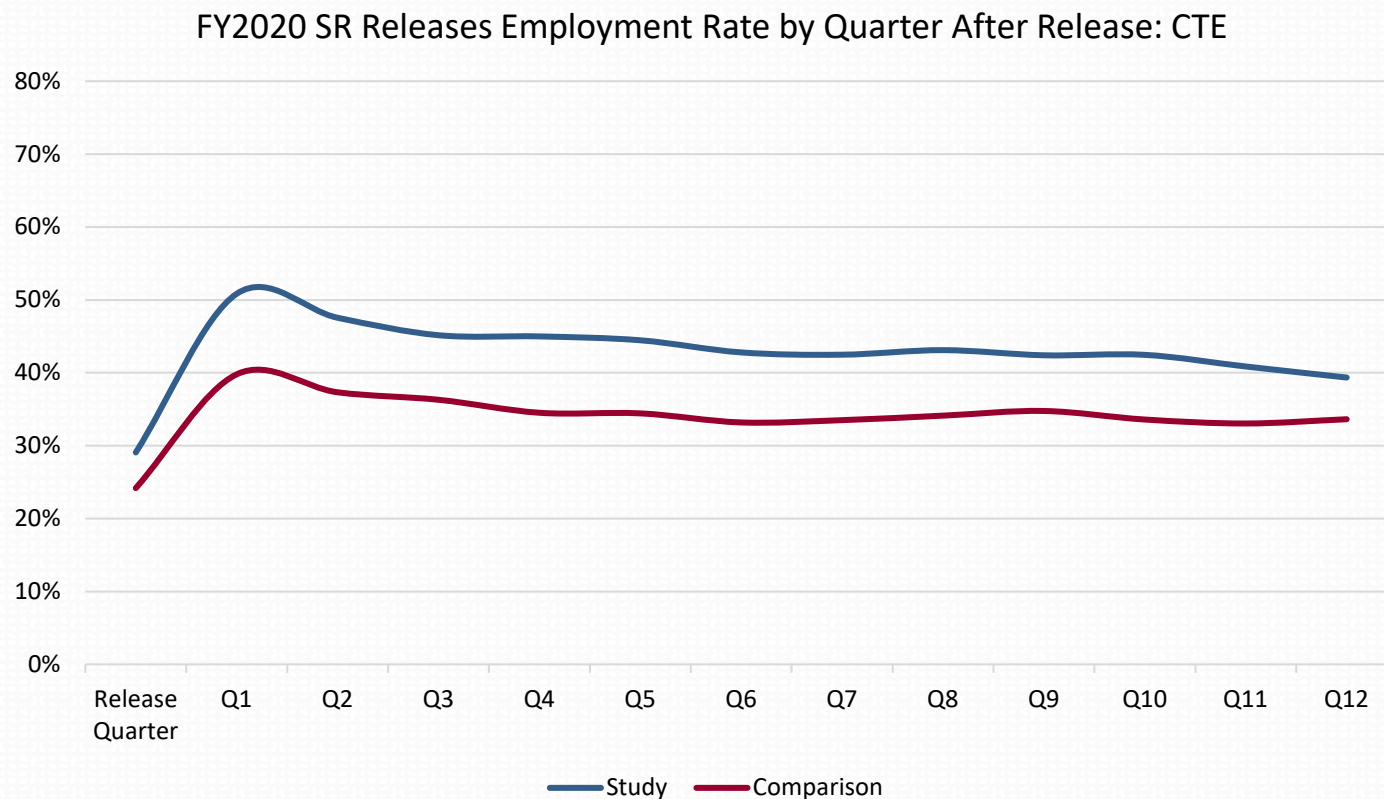
Notes:

* T-test was significant ($p < 0.05$).

** T-test was significant ($p < 0.001$).

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Quarterly Employment Rate¹: CTE



- Overall employment rate was higher in every quarter after release, including the release quarter, for the CTE completion group

Note:

¹ Number of releases with wages reported during a quarter out of the total number of releases that were at liberty to work.

Annual Employment Rate: CTE

FY2020 SR Releases: Annual Employment Rates of CTE Study and Comparison Groups				
	Year One	Year Two	Year Three	All
Study	30.3%	30.6%	31.1%	17.5%
Comparison	22.1%	24.1%	24.2%	12.1%
Difference	8.2%	6.5%	6.9%	5.4%

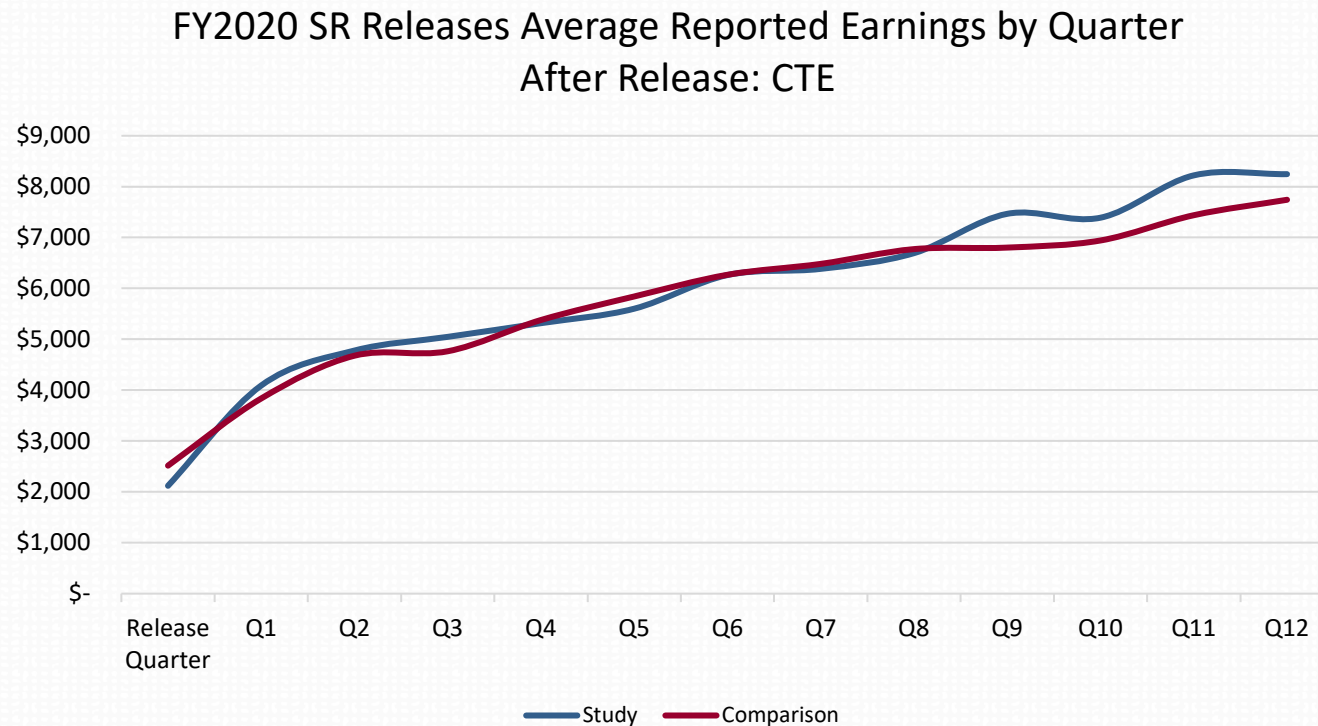
- Annual employment rate¹ is the rate at which an individual was employed all four quarters of the year
- The largest difference in employment rate occurred during year one (8%)
- 18% of the CTE study group sustained employment for the entire follow-up period² compared to 12% of the comparison group

Notes:

¹ Number of releases with wages reported in all four quarters of a year out of the total number of releases that were at liberty to work all four quarters of that year. Year One represents the first four quarters post-release, Year Two represents quarters five through eight post-release, and Year Three represents quarters nine through twelve post release.

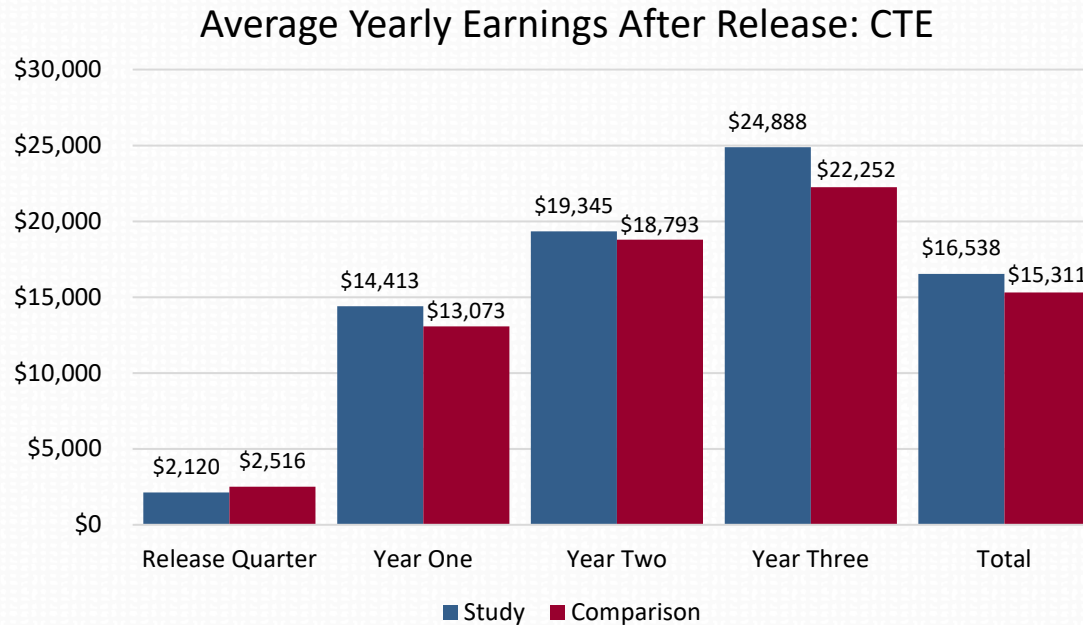
² Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Average Reported Quarterly Earnings: CTE



- The CTE study group had higher average quarterly earnings in the majority of quarters (54%) than for the comparison group

Average Reported Yearly Earnings: CTE



- The CTE study group's yearly average wages were higher than the comparison group every year after the release quarter
 - This difference was statistically significant for year one after release, year three after release, and overall after release¹

Note:

¹ Release quarter, $p < 0.05$; Year 1, $p < 0.05$; Year 3, $p < 0.05$; Total, $p < 0.05$.

CTE Career Cluster Employment Statistics: Quarterly Wages

FY2020 Career Clusters: Quarterly Wages			
Career Cluster	N	Mean	Median
Agriculture, Food, Natural Resources, and Hospitality			
Study	174	\$5,561.18*	\$4,873.27
Comparison	131	\$5,046.53	\$4,213.00
Architecture and Construction			
Study	608	\$6,144.80	\$5,591.89
Comparison	528	\$5,968.04	\$5,164.89
Arts, Audio/Video Technology and Communications			
Study	41	\$7,229.78	\$6,293.27
Comparison	36	\$6,634.21	\$6,112.32
Human Services			
Study	37	\$6,024.51	\$5,776.23
Comparison	31	\$5,649.48	\$4,752.51
Information Technology and Finance			
Study	258	\$5,972.07**	\$5,310.00
Comparison	220	\$5,297.28	\$4,652.38
Manufacturing			
Study	42	\$7,296.56	\$7,082.13
Comparison	34	\$7,439.45	\$5,940.00
Science, Technology, Engineering, and Mathematics			
Study	59	\$6,678.40	\$6,211.05
Comparison	54	\$6,548.90	\$6,014.90
Transportation, Distribution, and Logistics			
Study	18	\$6,964.77	\$7,478.94
Comparison	21	\$7,305.15	\$7,145.49

- Inmates who completed a CTE course in the Agriculture, Food, Natural Resources, and Hospitality or Information Technology and Finance career clusters earned significantly more than the comparison group during the follow-up period¹
- Although the differences weren't significant, CTE course completers in each career cluster except for Manufacturing and Transportation had higher average quarterly wages than the comparison groups

Notes:

* T-test was significant ($p < 0.01$).

** T-test was significant ($p < 0.001$).

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

CTE Career Cluster Employment Statistics:

Time to Employment

FY2020 Career Clusters: Time to Employment			
Career Cluster	N	Mean	Median
Agriculture, Food, Natural Resources, and Hospitality			
Study	174	1.5 Quarters	1.0 Quarter
Comparison	131	2.0 Quarters	1.0 Quarter
Architecture and Construction			
Study	608	1.4 Quarters*	1.0 Quarter
Comparison	528	1.7 Quarters	1.0 Quarter
Arts, Audio/Video Technology and Communications			
Study	41	1.3 Quarters	1.0 Quarter
Comparison	36	1.2 Quarters	0.5 Quarter
Human Services			
Study	37	1.5 Quarters	1.0 Quarter
Comparison	31	2.4 Quarters	1.0 Quarter
Information Technology and Finance			
Study	258	1.5 Quarters*	1.0 Quarter
Comparison	220	2.0 Quarters	1.0 Quarter
Manufacturing			
Study	42	1.3 Quarters	0.0 Quarters
Comparison	34	1.0 Quarters	0.5 Quarter
Science, Technology, Engineering, and Mathematics			
Study	59	1.7 Quarters	1.0 Quarter
Comparison	54	1.2 Quarters	0.0 Quarters
Transportation, Distribution, and Logistics			
Study	18	1.1 Quarters	0.0 Quarters
Comparison	21	2.1 Quarters	1.0 Quarter

Notes:

* T-test was significant ($p < 0.05$).

¹ Results should be interpreted with caution due to the small numbers.

² Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

- On average, inmates who completed a CTE course in the Architecture and Construction career cluster or the Information Technology and Finance career cluster had a significantly shorter time to employment¹ than the comparison group during the follow-up period²

CTE Career Cluster Employment Statistics:

Percent of Quarters Employed

FY2020 Career Clusters: Percent of Quarters Employed			
Career Cluster	N	Mean	Median
Agriculture, Food, Natural Resources, and Hospitality			
Study	174	60%*	69%
Comparison	131	52%	46%
Architecture and Construction			
Study	608	60%*	62%
Comparison	528	55%	54%
Arts, Audio/Video Technology and Communications			
Study	41	60%	62%
Comparison	36	66%	77%
Human Services			
Study	37	61%	67%
Comparison	31	55%	62%
Information Technology and Finance			
Study	258	57%	62%
Comparison	220	52%	52%
Manufacturing			
Study	42	59%	62%
Comparison	34	60%	69%
Science, Technology, Engineering, and Mathematics			
Study	59	60%	62%
Comparison	54	56%	64%
Transportation, Distribution, and Logistics			
Study	18	75%	85%
Comparison	21	54%	38%

Notes:

* T-test was significant ($p < 0.05$).

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

- The Agriculture, Food, Natural Resources, and Hospitality and Architecture and Construction study groups were employed for a significantly greater percentage of quarters during the follow-up period, while at liberty¹

CTE Career Cluster Employment Statistics:

Employer Count

FY2020 Career Clusters: Number of Employers			
Career Cluster	N	Mean	Median
Agriculture, Food, Natural Resources, and Hospitality			
Study	174	3.5	3.0
Comparison	131	3.3	3.0
Architecture and Construction			
Study	608	3.6*	3.0
Comparison	528	3.2	3.0
Arts, Audio/Video Technology and Communications			
Study	41	3.0	3.0
Comparison	36	3.3	3.0
Human Services			
Study	37	4.3	4.0
Comparison	31	3.1	2.0
Information Technology and Finance			
Study	258	3.4	3.0
Comparison	220	3.0	2.0
Manufacturing			
Study	42	3.1	2.0
Comparison	34	2.6	2.0
Science, Technology, Engineering, and Mathematics			
Study	59	3.0	2.0
Comparison	54	3.2	2.0
Transportation, Distribution, and Logistics			
Study	18	4.4*	3.5
Comparison	21	2.3	2.0

- On average, the Architecture and Construction and the Transportation, Distribution, and Logistics study groups had significantly more employers than the comparison group during the follow-up period¹

Notes:

* T-test was significant ($p < 0.05$).

¹ Follow-up period was from the quarter/year the inmate was released through 12 additional quarters or through the quarter/year that the inmate recidivated.

Recidivism and Employment Rate Comparison of FY2020 and FY2018 Releases

Current Study
(FY2020 Releases)

	Full Release Group (n = 7,371)	CTE Completers (n = 1,500)
Recidivism	15.0%	9.5%
Employment	64%	71%

Previous Study
(FY2018 Releases)

	Full Release Group (n = 7,018)	CTE Completers (n = 1,545)
Recidivism	18.2%	12.4%
Employment	64%	71%

- The overall recidivism rate for FY2020 was 3.2 percentage points lower than FY2018 VADOC facility releases
- Inmates released from a VADOC facility in FY2020 who completed a CTE course had a lower recidivism rate (9.5%) than their FY2018 counterparts (12.4%)
- CTE completers for both years had a higher employment rate (71%) than FY2018 and FY2020 VADOC facility releases (64%)

Summary of CTE Program Information

- Of the FY2020 DOC Facility Releases (7,371), 37% (2,722) participated in at least one CTE Program and 20% (1,500) completed at least one CTE program
- CTE programs had higher completion rates for individuals with a DOC LOS of greater than three years
 - CTE Complete: <3 years = 42% versus 3+ years = 63%
- CTE Course completion appears to be a strong factor in reducing recidivism
 - Male CTE Completers = 10.2% (n = 1,281)
 - Female CTE Completers = 5.5% (n = 219)
 - Overall CTE Completers = 9.5% (n = 1,500)
- Significant differences in recidivism rates between study and comparison groups were observed for male CTE Completers and overall CTE Completers
 - Completing a CTE course resulted in significantly lower recidivism rates than the comparison group (9.2% and 13.2%, respectively)
- The Architecture and Construction career cluster had a significantly lower recidivism rate than the comparison group

Summary Employment Statistics and Outcomes

- All inmates who completed a CTE course had higher employment rates than the overall FY2020 release cohort
- FY2020 SR releases who completed a CTE course had higher quarterly wages and were employed for a greater percent of eligible quarters than releases who did not complete a CTE course or earn a GED
- All employed FY2020 SR releases had lower recidivism rates than those who did not find employment after release
- The CTE study group earned significantly more, on average, than the comparison group
- All career clusters except for Manufacturing and Transportation had higher average quarterly wages than the comparison groups
- Six of the eight career clusters had a higher percentage of eligible quarters employed than the comparison groups
- Higher employment rates and wages may contribute to the lower recidivism rates of CTE completers

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