An Evaluation of the Iowa Department of Corrections Apprenticeship Programs

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Executive Summary

This study examined 1,414 individuals who enrolled in the Iowa Department of Corrections (IDOC) apprenticeship programs from their inception. There were 673 individuals who had been released, 735 were still incarcerated and 6 had died.

Analysis on the released cohort showed that those who completed had a 3-year recidivism rate of 19.7%, compared to 39.0% for non-completers and 38.7% for the FY2021 general population.[1] Quarter 1 employment rate was 71.4% for those who completed, 68.1% for non-completers, and 50.3% for the FY2018 general population. These differences were consistent over time. Quarter 4 and 8 employment rates were 70.8% and 64.0% for completers, 54.8% and 47.0% for non-completers, and 37.4% and 32.1% for the FY2018 general population. The adjusted wage per quarter for quarter 1 was $7,709 for completers, $6,107 for non-completers, and $4,631 for the FY2018 general population. All 3 groups saw a steady increase over time with the completers earning an adjusted wage of $9,686 in quarter 8 post-release, $7,501 for non-completers and $5,766 for the FY2018 released population.

Potential reasons for non-completion identified by this study included length of stay (LOS) and transfer of institution. Those that completed an apprenticeship had an average LOS of 126.0 months compared to 46.9 months for non-completers. Apprentices who were transferred had a completion rate of 6.6% compared to 16.6% for those who were not transferred.

This study also conducted surveys on apprenticeship sponsors and other individuals who work closely with apprentices (counselors, IPI supervisors, treatment directors, and unit managers). In addition to capturing their workload involved in the apprenticeship program, they also identified strategies for potential expansion.

Recommendations

1. Identify strategies to increase apprenticeship completion rate.
2. Evaluate methods to increase capacity of apprenticeship enrollment from the staff perspective.
3. Expand capacity of apprenticeship opportunities at institutions to increase the number of incarcerated individuals to enroll and participate.
4. Explore an apprenticeship path for incarcerated individuals entering the system.
5. Identification of incarcerated individuals who are qualified and prepared for enrollment.

[1] Iowa Department of Corrections Reports Small Drop in Recidivism Rate

Introduction

Background and Statement of the Problem

This project studied the Iowa Department of Corrections (IDOC) Apprenticeship programs to provide a program and outcomes evaluation. The IDOC has a policy to provide offenders with Registered Apprenticeship Program opportunities to assist them in re-entry to their communities and reduce recidivism. IDOC became registered with the United States Department of Labor (USDOL) in 2015 and now offers 29 different apprenticeships across nine facilities with approximately 300 active apprentices at any given time. Beyond completion rate, additional metrics to measure other successes of these programs have not yet been identified. Understanding which programs or components are successful will allow IDOC to expand successful programs and eliminate or strengthen less successful programs. This analysis utilized all facets of the programs to identify metrics of success, and utilized criminal history records to determine if there was a reduction in the rate recidivism for those who enrolled and/or completed an apprenticeship.

The goal of this report is to answer the following questions:

1. Does enrollment and/or completion in an apprenticeship program impact recidivism?
2. Were there differences in demographics for those that completed an apprenticeship vs. those who did not?
3. Has the number of apprentices changed over time? Was there an impact from Covid-19?
4. Does enrollment and/or completion of an apprenticeship program impact job placement and earning post-release?
5. Does the apprenticeship sponsor job classification and time spent differ across institutions?

Program Description

Selection and Eligibility in the Apprenticeship Program

Each institution has work opportunities available for II's. To be eligible to apply for an apprenticeship position, the incarcerated individual (II) be working in an occupation in which an apprenticeship opportunity exists. If this criterion is met, they would meet with the facility's apprenticeship sponsor in which they would start the enrollment discussion. Per Department of Labor's requirements each apprentice must be a US citizen and have a high school diploma or equivalency. Once it is determined the apprentice is eligible, there is usually a 30-day probation period before officially being enrolled in the program. This allows the individual to work in the job for a while and decide whether they want to commit to that job/apprenticeship. If after the 30-day waiting period they are still wanting to enroll in the program, they will meet with the apprenticeship sponsor and complete the enrollment process.

Apprenticeship Programs Offered at Iowa's Institutions

There are 29 apprenticeships programs in Iowa's nine correctional institutions. The apprenticeships offered at each institution differs based on logistics (e.g. necessary equipment) and personnel needed (e.g. mentors, trainers, etc.). Iowa's correctional institutions vary by security level. Table 1a shows the security levels as well as the staffing levels and II's housed in each institution. Please note the staffing levels and II's housed are approximate.

Table 1a. Iowa's Correctional Institutions security level and number of staff and II's

Institution Name	Security Level	Number of Staff	Number of II's
The Anamosa State Penitentiary	medium-maximum	325	950
The Clarinda Correctional Facility	medium	220	1,000
The Fort Dodge Correctional facility	medium	265	1,400
The Iowa Correctional Institute for Women	medium	240	950
The Iowa Medical and Classification Center	medium	500	940
The Iowa State Penitentiary	maximum-medium	260	850
The Newton Correctional facility	medium	265	1,050
The North Central Correctional Facility	minimum	100	500

Table 1b, on the next page, shows the number of apprentices per location by apprenticeship type. The top 3 apprenticeship enrollments include housekeeper (18.0%), cook (11.5%) and welding (8.2%).

Table 1b. Apprenticeship Type by Institution from Inception to October 2021

Apprenticeship Type	Anamosa	Clarinda	Fort Dodge	Fort Madison	Mitchellville	Mount Pleasant	Newton	Oakdale	Rockwell City	Total
Audio Video Repairer			2							**2**
Baker (Bake Produce)	7			7		5	2	2	7	**30**
Barber	3	2			3	1	5	3	10	**27**
Cabinet Maker	24	2	2	24		2	2		10	**66**
Carpenter	1		17			18		2	2	**40**
Computer Operator	42	1	13	7			2		2	**67**
Cook (Any Industry)	18		21	16	39	3	17	5	44	**163**
Drafter, Mechanical	1			3		1				**5**
Electrician	5		9	2	5	5	15	5	9	**55**
Electrostatic Powder Coat Tech	9			1					10	**20**
Fabricator-Assembler Metal Prod	33	31	1		1	5	2		9	**82**
Home Performance Laborer							15			**15**
Housekeeper, Com, Res, Ind	71		5	66	34	12	19	22	25	**254**
Industrial Sewing Machine Operator			28			1		3		**32**
Information Technology Specialist			3		3					**6**
Injection Molding Machine Operator						18	19			**37**
Job Printer	1							1	1	**3**
Landscape Management Technician		35	11	7	17	15	12	1	13	**111**
Maintenance Repairer, Build	11	1		2		8	2	1	15	**40**
Material Coordinator		4				1	43	4	1	**53**
Office Manager/Administrative Services			8		14		1		12	**35**
Painter (Const)	2		3	3		12	3	1	4	**28**
Peer Specialist	2				3		4	4		**13**
Plumber	11	1	2	1		8	3	4	6	**36**
Refrigeration, Air Condition Mech (HY)	10					2	1	3		**16**
Screen Printer	16								3	**19**
Sewing Machine Repairer			3					1		**4**
Upholsterer				1	29	3		2	4	**39**
Welding, Combination	16	27	6			15	3	3	46	**116**
Total	**283**	**104**	**134**	**140**	**148**	**135**	**170**	**67**	**233**	**1,414**

Literature Review

Introduction

Apprenticeships have received increased attention as a high-quality training model that combines paid work with structured-on-the-job training and classroom-based technical instruction. The number of people starting an apprenticeship in the 33 states where the federal government collects data has steadily increased from 2,864 new apprentices in 2000 to 9,223 apprentices in 2016.[2] Apprenticeship programs are recognized as a valuable and meaningful training experience that can equip individuals returning from prison with knowledge, skills, and tools to help them secure a job upon release. To date, studies evaluating the impact of corrections-based work on employment and recidivism has focused on work programs.[3] This is one of the first studies to evaluate the impact of registered apprenticeships on employment and recidivism.

Recidivism

Research shows that inmates' educational level, work experience, and skills are below national averages for the general population.[4] Furthermore, the stigma associated with incarceration exacerbates poor labor outcomes for ex-inmates. Poor labor market outcomes subsequently contribute to reoffending that keep individuals in a vicious cycle of crime.

Providing educational and training opportunities through different prison programs has been associated with fewer prison returns after incarceration. For example, one study reviewed 95 intervention studies with offenders conducted between 1973 and 1978 and found that 86% were successful, with recidivism rate reductions ranging from 30-60%.[5] A meta-analysis evaluated recidivism outcomes of 33 independent evaluations of corrections-based education, vocation, and work programs and found that participants recidivate at a much lower rate relative to nonparticipants.[6] A study of 92,000 male inmates who participated in Ohio prison education programs showed that participation without completion of any type of educational program provided no relative benefits in comparison to not participating in prison educational programs at all; completion of vocational training/apprenticeships was associated with lower odds of returning to prison for either a new crime or a parole violation.[7]

An evaluation of the Federal Bureau of Prison's Post-Release Employment Project (PREP) which provided vocational training, showed that program participants were 15% less likely to receive an incident report than a comparison group and were 33% less likely to recidivate throughout the 12-months follow up period. Similarly, a study conducted in the Virginia Department of Correctional Education found that

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[2] Ian Hecker and Daniel Kuehn. (February, 2019) "Apprenticeship and the Justice System." [Accessed online: April, 2022]

[3] Grant Duwe & Susan McNeeley. "The Effects of Prison Labor on Institutional Misconduct, Postprison Employment, and Recidivism." *Corrections*, 5:2 (2017), 89-108

[4] Bruce Western. "The penal system and the labor market" *Barriers to re-entry* (2007): 335-359.

[5] Paul Gendreau and Bob Ross. "Effective correctional treatment: Bibliotherapy for cynics." *Crime & Delinquency* 25.4 (1979): 463-489.

[6] David Wilson, Catherine A. Gallagher, and Doris L. MacKenzie. "A meta-analysis of corrections-based education, vocation, and work programs for adult offenders." *Journal of research in crime and delinquency* 37.4 (2000): 347-368.

[7] Amanda Pompoco, John Wooldredge, Melissa Lugo, Carrie Sullivan, and Edward J. Latessa. "Reducing inmate misconduct and prison returns with facility education programs." *Criminology & Public Policy* 16.2 (2017): 515-547.

inmates who enrolled and completed educational programming while incarcerated returned to prison at a significantly lower rate (21.3%) relative to those who did not enroll at all (49.1%) and those who enrolled, but did not finish (37.3%).[8] An evaluation of the Affordable Homes Program (AHP), a construction trade training for Minnesota offenders, indicated that participants had significantly higher odds of obtaining employment in a construction-related field, but it did not significantly reduce recidivism.[9]

Employment upon Release and Job Quality

Existing empirical research has suggested that prison employment has positive effects on obtaining a job after release, hours worked, and wages.[10] Results from a random sample of 3,000 male and female inmates released during the period 1979 – 1994 from the Virginia Department of Corrections suggested that the employability rate of inmates who complete educational programming while incarcerated is much higher than those who enroll, but do not complete it.[11] Approximately 55% of those inmates who had no educational programming while incarcerated were employed for a period exceeding ninety days. About 78% of inmates who completed educational programming were employed within ninety days, relative to 60% of those who were enrolled in educational programming but did not complete the program.[12]

A study of 6,144 II's released between 2007 and 2011 evaluated the recidivism outcomes between Minnesota Correctional Industries (MINNCOR) participants and a matched comparison group of non-participants found that MINNCOR participants had 24% greater likelihood of finding a job in the first year after being released.[13] Although MINNCOR participation significantly increased the number of hours worked and total wages earned, it did not have a significant effect on hourly wage. Furthermore, the percentage of prison time spent in MINNCOR had significant effects on finding employment, number of hours worked and total wages earned.[14] Longitudinal data from 2016 on a cohort of 10,861 individuals who were released from the North Carolina State Prison into community supervision identified those who found employment soon after leaving prison were 20% less likely than their non-employed counterparts to return to prison within the next two years.[15] Individuals from the study cohort who found employment soon after leaving prison were 20% less likely than their non-employed counterparts to return to prison within the next two years.

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[8] Kim Hull, Stewart Forrester, James Brown, David Jobe, and Charles McCullen. "Analysis of recidivism rates for participants of the academic/vocational/transition education programs offered by the Virginia Department of Correctional Education." *Journal of Correctional Education* (2000): 256-261.

[9] Miriam Northcutt Bohmert and Grant Duwe. "Minnesota's affordable homes program: Evaluating the effects of a prison work program on recidivism, employment and cost avoidance." *Criminal Justice Policy Review* 23.3 (2012): 327-351.

[10] Grant Duwe. "An outcome evaluation of a prison work release program: Estimating its effects on recidivism, employment, and cost avoidance." *Criminal Justice Policy Review* 26.6 (2015): 531-554.

[11] Kim Hull, Stewart Forrester, James Brown, David Jobe, and Charles McCullen. "Analysis of recidivism rates for participants of the academic/vocational/transition education programs offered by the Virginia Department of Correctional Education." *Journal of Correctional Education* (2000): 256-261.

[12] Ibid.

[13] Duwe and McNeeley. "The Effects of Prison Labor on Institutional Misconduct, Post-Prison." St. Paul: Minnesota Department of Corrections.

[14] Ibid.

[15] Andrew Berger-Gross. "The Impact of post-release employment on recidivism in North Carolina." (2022).

Some recent research has suggested that job quality is more important than simply obtaining employment. A longitudinal study conducted on 740 male exiting prisoners in Illinois, Ohio, and Texas prisons found that prison work experience was positively related to employment after release.[16] Their findings show that higher wages of returning workers were associated with lower rates of recidivism. Longitudinal data on the employment outcomes of 10,794 Michigan prisoners paroled showed that those who find employment in the highest-quality industries (manufacturing, transportation, warehousing, and construction) have about a 13% lower likelihood of returning to prison in the eight quarters after being released from prison relative to those who do not find employment at all.[17] A study of former prisoners released from Pennsylvania prisons, showed that simply finding employment did not differentiate between parole success and parole failure, but offenders who had higher wages, greater job security, and greater job satisfaction were successful on parole relative to parole violators.[18] A recent study in North Carolina also showed that a high-quality employment can significantly reduce individuals' likelihood of returning to prison within the next two years.[19]

[16] Visher, Debus-Sherrill, and Yahner. "Employment after prison: A longitudinal study of former prisoners."
[17] LaBriola. "Post-prison employment quality and future criminal justice contact." *RSF: The Russell Sage Foundation Journal of the Social Sciences*, *6*(1) (2020), 154.
[18] Kristofer Bret Bucklen and Gary Zajac. "But some of them don't come back (to prison!) Resource deprivation and thinking errors as determinants of parole success and failure." *The Prison Journal* 89.3 (2009): 239-264.
[19] Berger-Gross. "The Impact of post-release employment on recidivism in North Carolina." (2022).

Methods

As previously stated, the research questions informing this report include:

1. Does enrollment and/or completion in an apprenticeship program impact recidivism?
2. Were there differences in demographics for those that completed an apprenticeship vs. those who did not?
3. Has the number of apprentices changed over time? Was there an impact from Covid-19?
4. Does enrollment and/or completion of an apprenticeship program impact job placement and earning post-release?
5. Does the apprenticeship sponsor job classification and time spent differ across institutions?

CJJP received a list of 1,694 apprenticeships started by 1,434 II's at Iowa's correctional institutions, indicating some individuals enrolled in more than one apprenticeship since they started to be offered. For purposes of analysis, only the most recent apprenticeship for each individual was utilized. There were 20 individuals who were excluded due to prison supervision status (e.g. prison compact) leaving a final cohort of 1,414. Offender code, first name, and last name was used to match the cohort in the Iowa Correctional Offender Network (ICON) to pull variables for analysis. These variables included supervision start date, supervision end date (as of 10/7/2021), date of birth, convicting crime class, as well as race and ethnicity. The apprenticeship start date was utilized to filter down to the prison stay where the apprenticeship was started. There were 679 individuals who had a supervision end date, 6 of these had a supervision status change reason as death, leaving a cohort of 673 individuals who comprise the released cohort for this study. There were 735 individuals who did not have a supervision end date, indicating they were in prison at the time of the data extraction. The outcome of recidivism and employment status post release could only be evaluated in the released cohort, however there is value in examining the characteristics of the total cohort. For this reason, where possible, the results will be presented by the total cohort as well as by released cohort. It should be noted that those still incarcerated may be in the process of completing their apprenticeship. To compare the apprenticeship cohorts to the entire prison population, the active at end population at 12:00am on 7/1/2021 was utilized. These data were used to answer research questions 1-3. To assess if there were statistically significant differences for variables within the released population, Pearson's correlation and Chi-square for categorical variables, and independent T-test for continuous variables. To assess if there was a difference in time to recidivism for the released cohort, a Kaplan-Meier test was performed. An individual was considered to have an event (i.e. recidivated) if they returned to prison after being released from the stay where they started the apprenticeship. An individual was considered censored if they had not returned to prison before 10/7/2021. A p-value of <0.05 was considered significant for all statistical tests.

In partnership with the Iowa Workforce Development (IWD), the release cohort was analyzed for rates of employment and wages. Due to the sensitive nature of the data, only aggregate data was returned and reported. These data were used to answer research question 4.

CJJP conducted site visits to several of Iowa's institutions (Anamosa State Penitentiary, Fort Dodge Correctional Facility, Iowa Medical Classification Center, and the Newton Correctional Facility) and conducted a virtual meeting with the Iowa Correctional Institution for Women to discuss the apprenticeship programs with sponsors. These interviews were utilized to create a survey to deliver to

all apprenticeship sponsors (Appendix A) and another survey to deliver to correctional counselors and Iowa Prison Industry workers (Appendix B). These surveys were utilized to answer research question 5.

Results

Cohort Demographics

Age

Age for apprentices was calculated using date of birth and date that the apprenticeship was started. To compare the age distribution of those who started an apprenticeship to the entire prison population the active at end population on 7/1/2021 was used. Using the apprenticeship start date to calculate age may result in a younger age than the method used to calculate age for the entire prison population. Although this does not provide for a direct comparison, it does give a general indication that the age distributions are similar. Please note that "unknown" and "under 18" (n=524) were not included in the age distribution for the current prison population table.

Table 2. Age Distribution of Apprentices and FY2021 Prison Population

2a. Apprentices Age Distribution

	n	Total %
18-24	131	**9.3%**
25-34	506	**35.8%**
35-44	450	**31.8%**
45-54	243	**17.2%**
55-64	67	**4.7%**
65+	17	**1.2%**
Total	**1,414**	**100.0%**

2b. FY2021 Prison Population Age Distribuion

	n	Total %
18-24	975	**13.5%**
25-34	2,286	**31.7%**
35-44	1,889	**26.2%**
45-54	1,081	**15.0%**
55-64	684	**9.5%**
65+	300	**4.2%**
Total	**7,215***	**100.0%**

*524 missing or unknown

Gender

The percentage of females who ever started an apprenticeship is slightly higher than the overall percentage of women that make up the prison population (10.4% vs. 7.7%, respectively).

Table 3. Gender Distribution of Apprentices and FY2021 Prison Population

3a. Apprentices Gender

	n	Total %
Male	1,267	**89.6%**
Female	147	**10.4%**
Total	**1,414**	**100%**

3b. FY2021 Prison Population Gender

	n	Total %
Male	7,146	**92.3%**
Female	593	**7.7%**
Total	**7,739**	**100%**

Race

The overall racial distribution is similar for the apprenticeship cohort and the entire prison population.

Table 4. Race Distribution of Apprentices and FY2021 Prison Population

4a. Race Distribution of Apprentices

	n	Total %
White	982	**69.5%**
Black	340	**24.0%**
Other	92	**6.5%**
Total	**1,414**	**100%**

4b. Race Distribution of FY2021 Prison Population

	n	Total %
White	4,962	**64.1%**
Black	1,968	**25.4%**
Other	809	**10.5%**
Total	**7,739**	**100%**

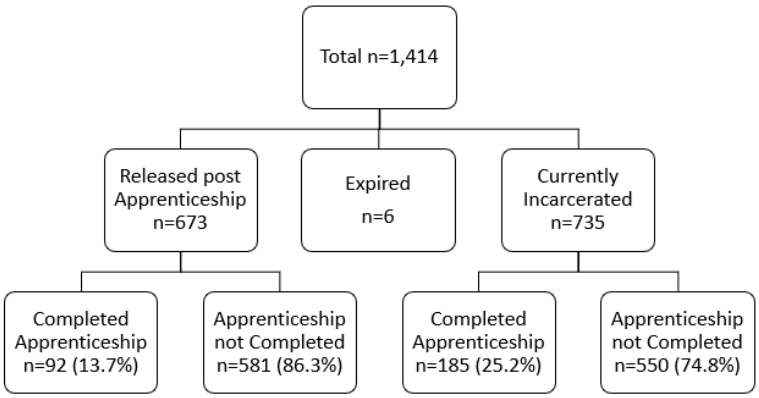
Apprenticeship Cohort

Prison Supervision Status

As described above, the cohort analyzed was comprised of 1,414 individuals utilizing the most recent apprenticeship, if the individual started more than one. There were 673 individuals who were released from an Iowa correctional institution after an apprenticeship was started. There were 735 individuals still incarcerated at the time of data extraction (10/7/2021) and 6 who had expired (died).

Of the 673 released apprentices, 13.7% completed an apprenticeship and 86.3% did not complete. In the currently incarcerated apprentices, 25.2% completed and 74.8% had not at the time of data extraction.

Figure 1. Status and Completion of Apprenticeship Cohort as of 10/7/2021



Number of Apprenticeships Started Over Time

Examining apprenticeship enrollment over time demonstrates a steady progression in enrollment until CY 2020, the year the pandemic began. It is not surprising to see a decline in enrollment for CY 2020 due to IDOC procedures to prevent the spread of Covid-19 and keep II's and staff safe. Although not to pre-pandemic levels, there was an increase in enrollment in CY 2021.

As mentioned previously, there were a total of 1,694 apprenticeships started by 1,414 individuals. For the final cohort, the most recent apprenticeship for each individual was used as shown in Table 5a. Utilizing the most recent apprenticeship started could lead to a skewed distribution when examining the number started over time. Therefore, the total number of apprenticeships started (n=1,694) is shown in Table 5b.

Table 5. Number of Apprentices Started over Time

Table 5a. Most Recent Apprenticeship Started for Cohort (n=1,414)

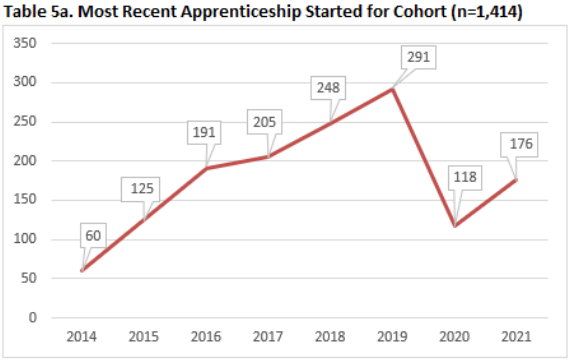
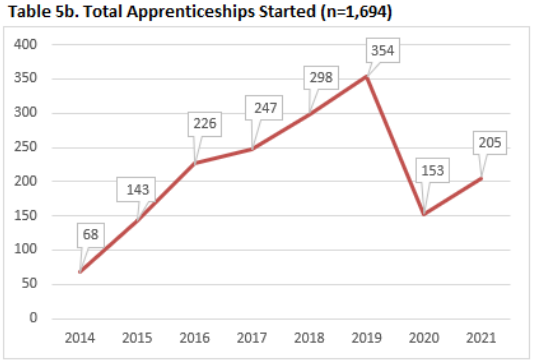


Table 5b. Total Apprenticeships Started (n=1,694)



Factors which may influence completion

Length of Stay (LOS)

Each apprenticeship has a curriculum component and an on-the-job training requirement. Although the time required may vary between the different programs, they all require a time commitment of approximately 2-4 years to complete. The related training instruction (RTI) can range from 144-576 hours and on-the-job (OTJ) training can range from 2,000-8,000 hours. To determine if the length of stay was a factor in completion, the released cohort was utilized. There was a statistically significant difference in the length of stay for those who completed an apprenticeship compared to those who did not complete (126.0 vs. 46.9 months respectively, $p<0.01$). Further analysis on variable specific to LOS accompany the results for that specific variable (e.g. gender, crime class, etc.).

Table 6. Completion by Average Length of Stay in Months for the Released Cohort

	Completers	Non-Completers
	Average LOS (n)	
Average LOS	126.0 (92)	46.9 (581)

Age

For the total cohort, those that completed were significantly older with a mean age of 41.5 years compared to 36.6 years for the non-completers ($p<0.01$). Results were similar for the released cohort where the mean age was 40.2 years for the completers and 34.9 years for the non-completers ($p<0.01$). To compare the distributions, age was categorized and is presented in table 7a for the total cohort and table 7b for the released cohort. Although a majority of apprentices fall in the 25-44 age range, those over the age of 45 have a higher rate of completion, more notable in the released cohort. It should be noted that the older population may be more likely to have a longer prison stay, which this study indicates is associated with a higher rate of completion (as shown in Table 6).

Table 7. Completion by Age Distribution

Table 7a. Total Cohort

	Completers	Non-Completers	Total	% Completed
18-24	7	124	**131**	**5.3%**
25-34	75	431	**506**	**14.8%**
35-44	94	356	**450**	**20.9%**
45-54	73	170	**243**	**30.0%**
55-64	24	43	**67**	**35.8%**
65+	6	11	**17**	**35.3%**
Total	**279**	**1,135**	**1,414**	**19.7%**

Table 7b. Released Cohort

	Completers	Non-Completers	Total	% Completed
18-24	2	68	**70**	**2.9%**
25-34	27	252	**279**	**9.7%**
35-44	36	179	**215**	**16.7%**
45-54	19	73	**92**	**20.7%**
55-64	7	8	**15**	**46.7%**
65+	1	1	**2**	**50.0%**
Total	**92**	**581**	**673**	**13.7%**

Gender

The completion rate was higher in the male population for the total cohort and the released cohort (Table 8a and 8b). For the released cohort, this could, in part, be due to a statistically significant shorter length of stay for females compared to males (33.0 vs. 62.4 months, respectively; p<0.01). As shown in table 9, this is prominent in those that did not complete (28.5 vs. 50.8 months, respectively).

Table 8. Completion by Gender

Table 8a. Total Cohort

	Completers	Non-Completers	**Total**	**% Completed**
Male	267	1000	**1267**	**21.1%**
Female	12	135	**147**	**8.2%**
Total	**279**	**1,135**	**1,414**	**19.7%**

Table 8b. Released Cohort

	Completers	Non-Completers	**Total**	**% Completed**
Male	87	478	**565**	**15.4%**
Female	5	103	**108**	**4.6%**
Total	**92**	**581**	**673**	**13.7%**

Table 9. Average Length of Stay by Gender for Apprenticeship Completers and Non-Completers

	Completers	Non-Completers
	Average LOS (n)	
Male	126.0 (87)	50.8 (478)
Female	125.7 (5)	28.5 (103)

Race

Completion of an apprenticeship program is similar for Whites and Blacks (20.1% and 19.7%, respectively) and slightly lower for other races (16.3%). This is more notable in the released cohort, although it should be noted that the overall number for "other" race is small.

Table 10. Completion by Race

Table 10a. Total Cohort

	Completers	Non-Completers	**Total**	**% Completed**
White	197	785	**982**	**20.1%**
Black	67	273	**340**	**19.7%**
Other	15	77	**92**	**16.3%**
Total	**279**	**1,135**	**1,414**	**19.7%**

Table 10b. Released Cohort

	Completers	Non-Completers	**Total**	**% Completed**
White	73	430	**503**	**14.5%**
Black	17	116	**133**	**12.8%**
Other	2	35	**37**	**5.4%**
Total	**92**	**581**	**673**	**13.7%**

Crime Class

An individual can be convicted and subsequently sentenced to prison on more than one charge. For the purpose of this analysis, only the most serious charge was used. Results indicate that those convicted of a more serious charge were more likely to complete an apprenticeship program. It is important to note that there are likely underlying factors (e.g. length of stay, Table 12) that contribute to this finding.

Table 11. Completion for Most Serious Convicting Crime Class

Table 11a. Total Cohort

	Completers	Non-Completers	Total	% Completed
A Felony	77	133	**210**	**36.7%**
B Felony	119	339	**458**	**26.0%**
Felony - Enhancement to Original Penalty	16	108	**124**	**12.9%**
Other Felony	3	4	**7**	**42.9%**
C Felony	61	340	**401**	**15.2%**
D Felony	3	183	**186**	**1.6%**
Aggravated Misdemeanor	0	28	**28**	**0.0%**
Total	**279**	**1,135**	**1,414**	**19.7%**

Table 11b. Released Cohort

	Completers	Non-Completers	Total	% Completed
A Felony	6	9	**15**	**40.0%**
B Felony	34	100	**134**	**25.4%**
Felony - Enhancement to Original Penalty	10	67	**77**	**13.0%**
Other Felony	--	--	--	
C Felony	39	214	**253**	**15.4%**
D Felony	3	164	**167**	**1.8%**
Aggravated Misdemeanor	0	27	**27**	**0.0%**
Total	**92**	**581**	**673**	**13.7%**

Table 12. Average Length of Stay for Most Serious Convicting Crime Class

	Completers	Non-Completers
	Average LOS (n)	
A Felony	297.2 (6)	273.7 (9)
B Felony	165.0 (34)	115.9 (100)
Felony - Enhancement	53.3 (10)	36.0 (67)
C Felony	91.5 (39)	52.6 (214)
D Felony	31.9 (3)	16.6 (164)
Aggravated Misdemeanor	0 (0)	11.9 (27)
Total	**126.0 (92)**	**46.9 (581)**

Transfer of Institution

A factor which may result in an II not completing an apprenticeship is a transfer of institution while the apprenticeship is underway. Transfer was coded either yes or no (yes indicating that the apprentice had a transfer that occurred during the stay where the apprenticeship was started). All transfers that occurred prior to the start date of the apprenticeship were excluded. For those that completed, all transfers that took place after the completion date were excluded as well. As shown in Table 13, apprentices who had a transfer had a significantly lower rate of completion (6.6% vs. 16.6%, respectively, $p<0.01$). These results indicate that a transfer of institution may play a role in non-completion of an apprenticeship.

Table 13. Transfer by Completion for the Released Cohort

	Completers	Non-Completers	Total	% Completed
Yes	13	183	**196**	**6.6%**
No	79	398	**477**	**16.6%**
Total	**92**	**581**	**673**	**13.7%**

Instances of Discipline

The incidences of discipline were compiled for each apprentice in the released cohort. Data were coded either yes or no (with yes indicating the individual had at least 1 incidence of discipline during their stay and after the apprenticeship was started). The total number of disciplines was also examined by completion. It should be noted that for this analysis, each incidence of discipline was treated equally (i.e. the severity of discipline was not accounted for in this analysis).

There were 346 individuals who had 4,597 incidences of discipline in the released cohort. Interestingly, of those that completed an apprenticeship, 66.3% received a discipline compared to 48.0% of the non-completers (Table 14). Of the 4,597 incidences of disciplined, there were 828 incidences of discipline in the completion group and 3,769 incidences of discipline in those that did not complete. As shown in Table 15, the average per apprentice was similar for both. Results indicate that receiving a discipline and the number of disciplines received did not impact completion.

Table 14. Ever Received an Incidence of Discipline by Completion for the Released Cohort

	Yes	No	**Total**	**Total %**
Completers	61	31	**92**	**66.3%**
Non-Completers	279	302	**581**	**48.0%**
Total	**340**	**327**	**673**	**50.5%**

Table 15. Count of Disciplines by Completion for the Released Cohort

	Completers	Non-Completers	**Total**
Sum of Disciplines	828	3769	**4597**
Average per Apprentice	**13.6**	**13.5**	**13.5**

Outcomes

Recidivism

For this study, recidivism was defined as a return admission to prison after being released from a prison where an apprenticeship program was started. This portion of the analysis was limited to the released cohort. IDOC reported a 3-year recidivism rate of 38.7%[20] for FY2021. As shown in Table 16a., the percentage of those who recidivated that completed the apprenticeship was 19.7%, which is a 49.1% reduction in recidivism while there was no difference for non-completers. Due to the small sample size, the entire cohort recidivism was also calculated. Table 16b shows that those who completed had half the recidivism rate as those who did not complete (16.3% vs. 32.7%, respectively). The overall recidivism rate for those who ever started an apprenticeship was 30.5%. Within the released cohort, there was a statistically significant difference in the likelihood to recidivate (p=0.001).

Table 16. Recidivism for Completers and Non-Completers

Table 16a. 3-year Recidivism Rates

	Yes	No	Total	% Recidivated
Completers	15	61	**76**	**19.7%**
Non-completers	185	289	**474**	**39.0%**
Total	**200**	**350**	**550**	**36.4%**

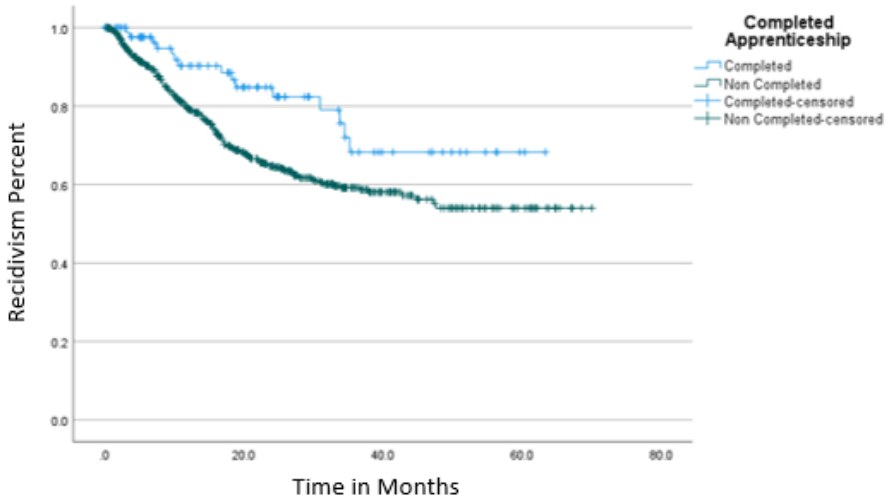
Table 16b. Total Cohort Recidivism Rates

	Yes	No	Total	% Recidivated
Completers	15	77	**92**	**16.3%**
Non-Completers	190	391	**581**	**32.7%**
Total	**205**	**468**	**673**	**30.5%**

Time to Event (Recidivism) Analysis

Kaplan-Meier survival analyses were conducted to examine time to recidivism among II's who completed and those who did not complete an apprenticeship program. As shown in Figure 1, the Kaplan-Meier analysis demonstrates it took longer that for those who completed an apprenticeship to recidivate (p=0.008). The average time to recidivism for completers was 69.3 months compared to 31.2 months for non-completers.

Figure 1. Time to Recidivism for the Completers versus the Non-Completers



Note: 1.0= 100%; .8= 80%, etc.

[20] Iowa Department of Corrections Reports Small Drop in Recidivism Rate

Employment Industry, Rate and Wage

There were 521 apprenticeship participants in the released cohort that had the data necessary to be analyzed by IWD for employment rate and adjusted wage. IWD uses unemployment insurance (UI) wage records which are derived from unemployment insurance quarterly contribution reports. The state UI program does not cover all industries, including federal employees, members of the armed forces, the self-employed, proprietors, unpaid family workers, church employees and railroad workers covered by the railroad unemployment insurance system, as well as students employed in a college or university as part of a financial aid package. The UI program does provide partial information on agricultural industries and employees in private households. Multiple job-holders will have a separate wage record for each employer. Because wage records include full and part-time workers, therefore, one may not assume a 40-hour work-week to get an average weekly wage. Occupations are not included in the wage records.

Wages represent total wages paid during the calendar quarter, regardless of when services were performed. Included in wages are pay for vacation and other paid leave, bonuses, stock options, tips, the cash value of meals and lodging and in some cases deferred compensation may be included.

Each individual in this analysis was analyzed for up to 2 years (8 quarters) post release. If an individual was released within the 2 years prior, their time in the analysis was shorter.

Employment Industry

As shown in Figure 2 and Table 17, the most common industry of employment in the quarter after release and Q1 is with administrative and waste services (34.1% and 29.1%, respectively). In Q2-Q8 manufacturing is the most common industry of employment.

Figure 2. Employment Percentage by the Top 5 Industries

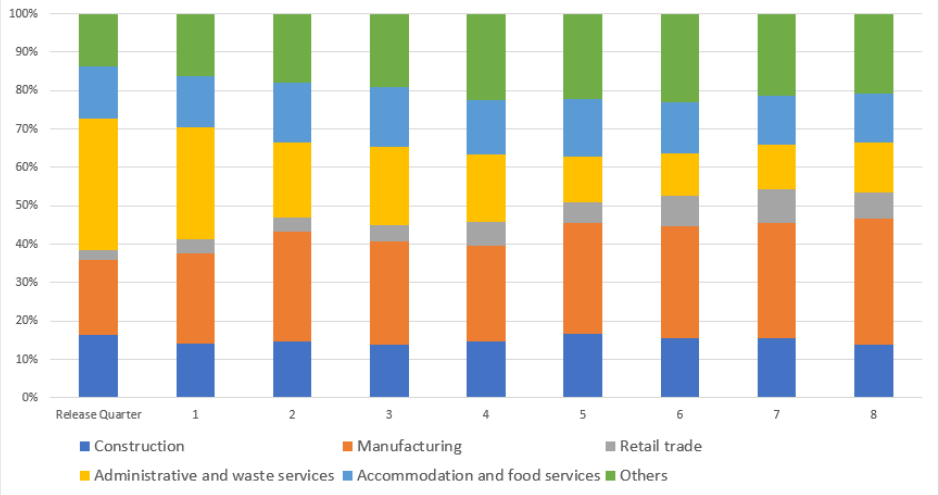


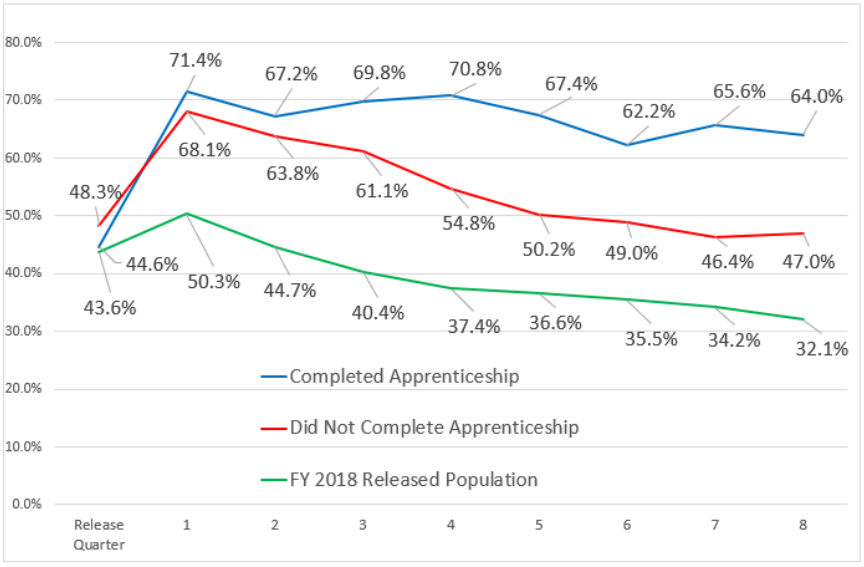
Table 17. Employment Percentage by the Top 5 Industries

Top 5 Industry Sectors	Number of Quarter(s) after Release								
	Release Quarter	1	2	3	4	5	6	7	8
Construction	16.5%	14.1%	14.6%	13.7%	14.6%	16.8%	15.4%	15.4%	13.9%
Manufacturing	19.3%	23.4%	28.6%	26.9%	24.9%	28.7%	29.4%	30.1%	32.7%
Retail trade	2.8%	3.8%	3.9%	4.4%	6.3%	5.4%	7.7%	8.9%	6.9%
Administrative and waste services	34.1%	29.1%	19.3%	20.5%	17.6%	12.0%	11.2%	11.4%	12.9%
Accommodation and food services	13.7%	13.4%	15.7%	15.3%	14.1%	15.0%	13.3%	13.0%	12.9%
Others	13.6%	16.2%	17.9%	19.2%	22.5%	22.1%	23.0%	21.2%	20.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Employment Rate by Apprenticeship Completion and FY 2018 Comparison Cohort

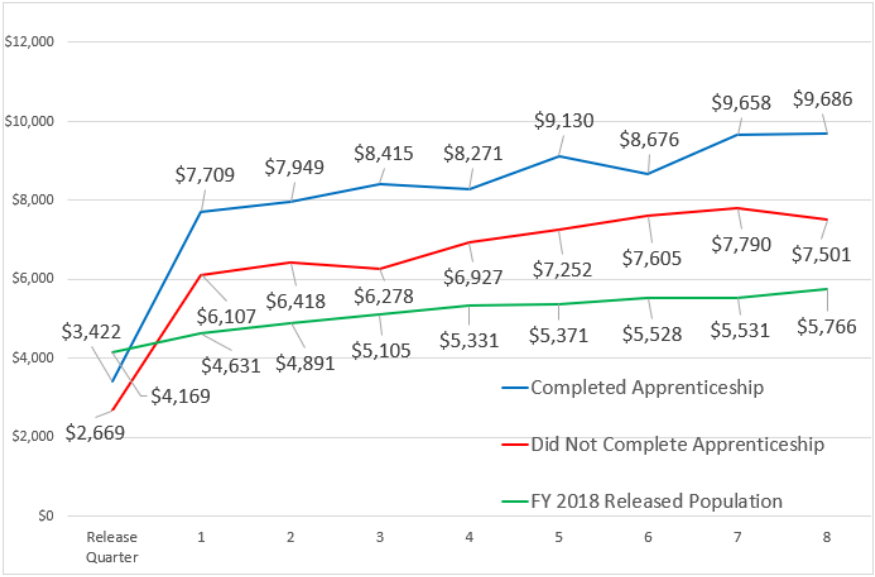
The released cohort was further divided by completion to determine if there was a difference in employment rate and wage. As shown in Figure 3, the employment rate for those that completed remained consistent from quarters 2-8, ranging from 71.4% in Q1 to 64.0% in Q4. Employment rates for those who did not complete started at a comparable percent in Q1 (68.1%), but declined to 47.0% in Q8.

Figure 3. Employment Rate by Apprenticeship Completion



As shown in Figure 4, in Q1 individuals who completed an apprenticeship had a higher adjusted wage per quarter ($7,709 vs. $6,107, respectively). Both groups had an increasing wage through Q8, and the higher wage per quarter remained for the completion group in Q8 ($9,686 vs. $7,501, respectively).

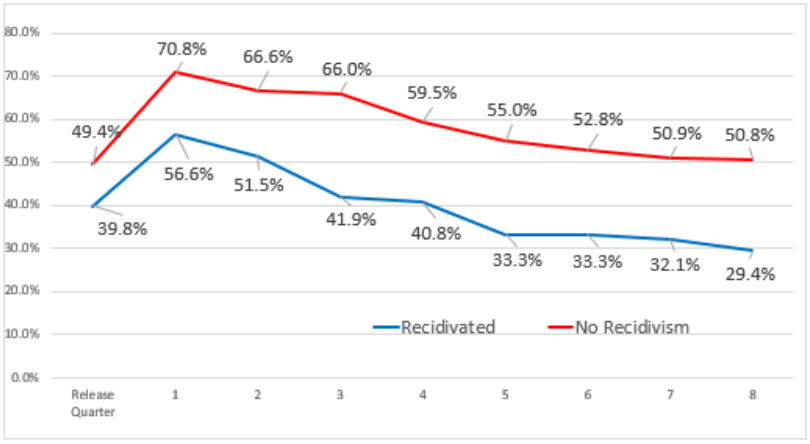
Figure 4. Adjusted Wage per Quarter by Apprenticeship Completion



Employment Rate and Wage by Recidivism

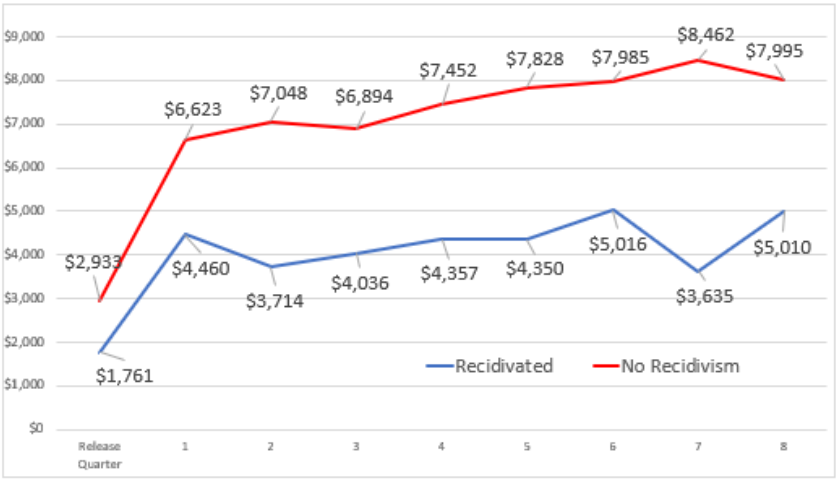
The released cohort was also divided by recidivism to determine if there was a difference in employment rate and wage. As shown in Figure 5, the employment rate for both groups had similar trajectories, but those that did not recidivate had a higher overall employment rate of approximately 15-20% over Q2-Q8.

Figure 5. Employment Rate by Recidivism



As shown in Figure 6, in Q1, individuals who did not subsequently recidivate had a higher adjusted wage per quarter ($6,623 vs. $4,460, respectively). These same individuals had an increasing wage until Q8, where it declined slightly from $8,462 to $7,995. Those who recidivated had a decrease in adjusted wage in Q2 and Q7, and remained approximatley $2,000 below the cohort who did not recidivate.

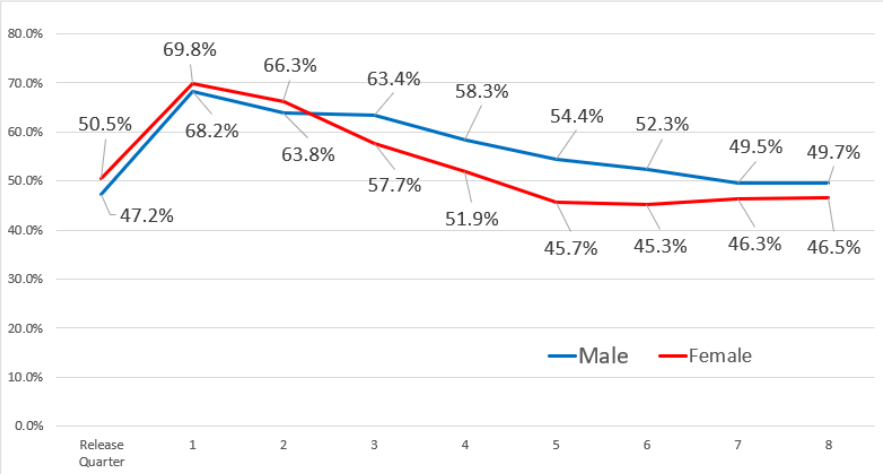
Figure 6. Adjusted Wage per Quarter by Recidivism



Employment Rate and Wage by Gender

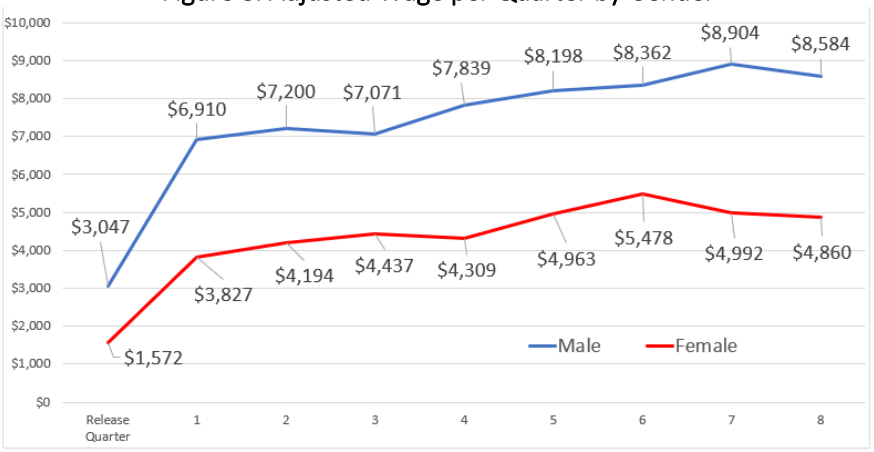
As shown in Figure 7, the employment rate started at a similar rate for men and women. Starting in Q3, the employment rate for women dropped to 57.7%, 5.7% below that of men. It remained below for the remainder of the study period. In Q8, the unemployment rate for women was 3.2% below that of men.

Figure 7. Employment Rate by Gender



As shown in Figure 8, in Q1, men had a higher adjusted wage per quarter ($6,910 vs. $3,827, respectively). This gap remained consistent through the remaining study period.

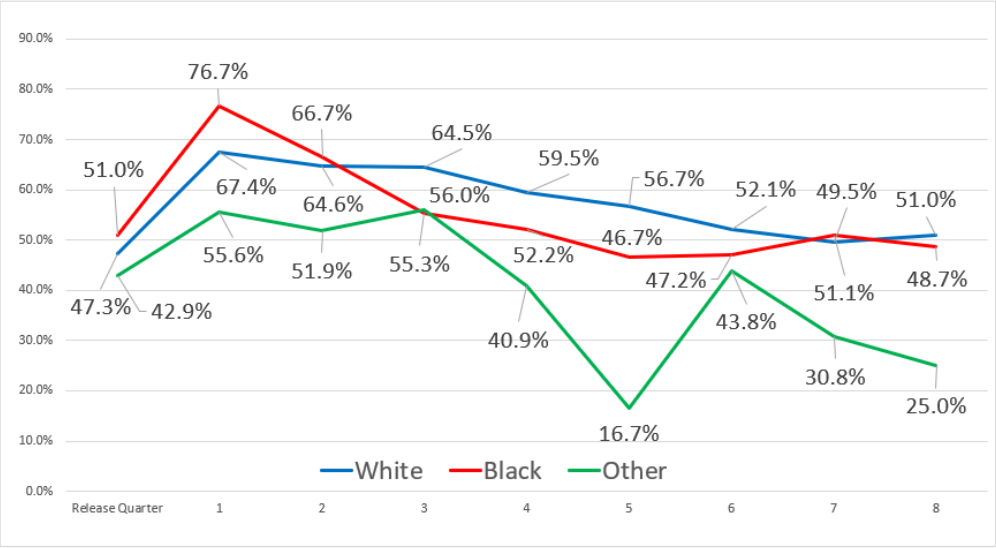
Figure 8. Adjusted Wage per Quarter by Gender



Employment Rate and Wage by Race

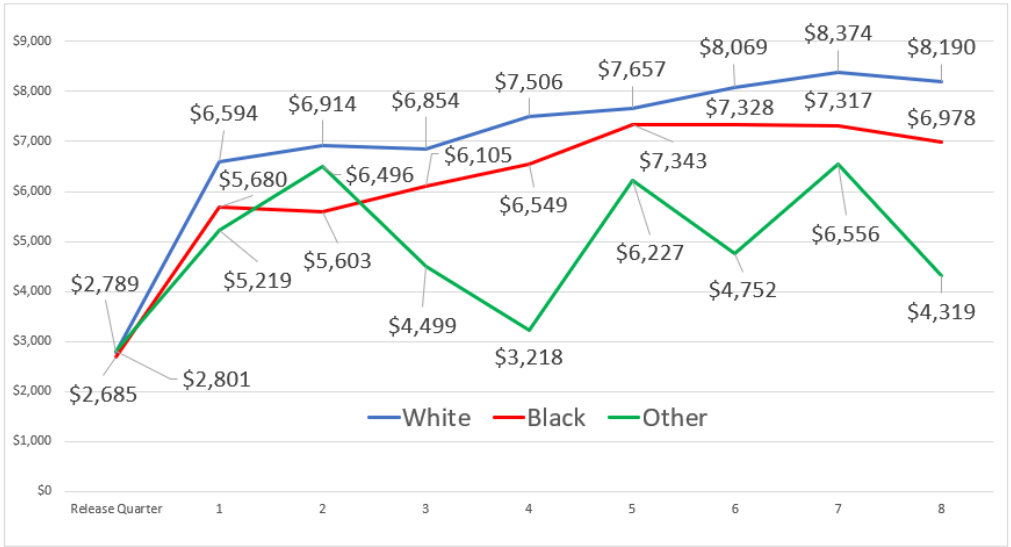
As shown in Figure 9, the employment rate for Black individuals was higher than for White individuals for the release quarter through Q2, but then fell below that of White individuals for Q3-6. The employment rate was lowest for Other (non-White and non-black) individuals, but it should be noted that the number in this category was small (n=28).

Figure 9. Employment Rate by Race



As shown in Figure 10, in Q1, Whites had the highest adjusted wage per quarter compared to Blacks and other races ($6,594 vs.$5,680 and $5,219, respectively). This gap remained consistent through the remaining study period.

Figure 10. Adjusted Wage per Quarter by Race



Staff survey results

Years of Experience

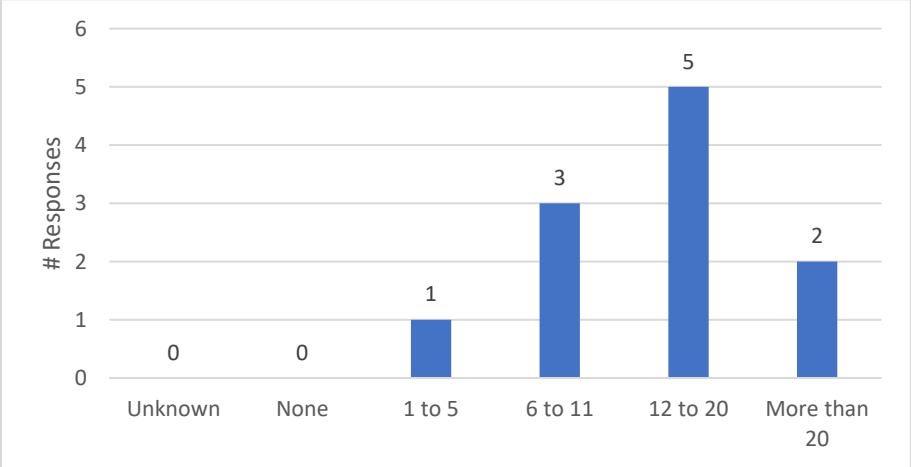
Each institution has an apprenticeship sponsor, the person designated by the warden of each institution to facilitate and provide the oversight of the apprenticeship programs. There was a total of 11 apprenticeship sponsors from the institutions who participated in the survey. Figure 11 shows 45.5% of sponsors reported they have been working more than 10 years in the current facility and 36.4% reported working between 6 and 10 years in the current facility. The majority of respondents reported they have been a program sponsor between 3 and 5 years followed by those who have been a program sponsor between 6 and 10 years (36.4% and 27.3% respectively).

Figure 11. Year of Experience for Apprenticeship Sponsors

Number of Apprenticeship Programs

Examining the number of apprenticeship programs offered from the sponsors perspective, survey results demonstrated in Figure 12 that five institutions offer between 12 to 20 programs, and three institutions offer between 6 and 11 different apprenticeship programs. Two institutions offer more than 20 different apprenticeship programs, and one institution offers 1 to 5 different programs.

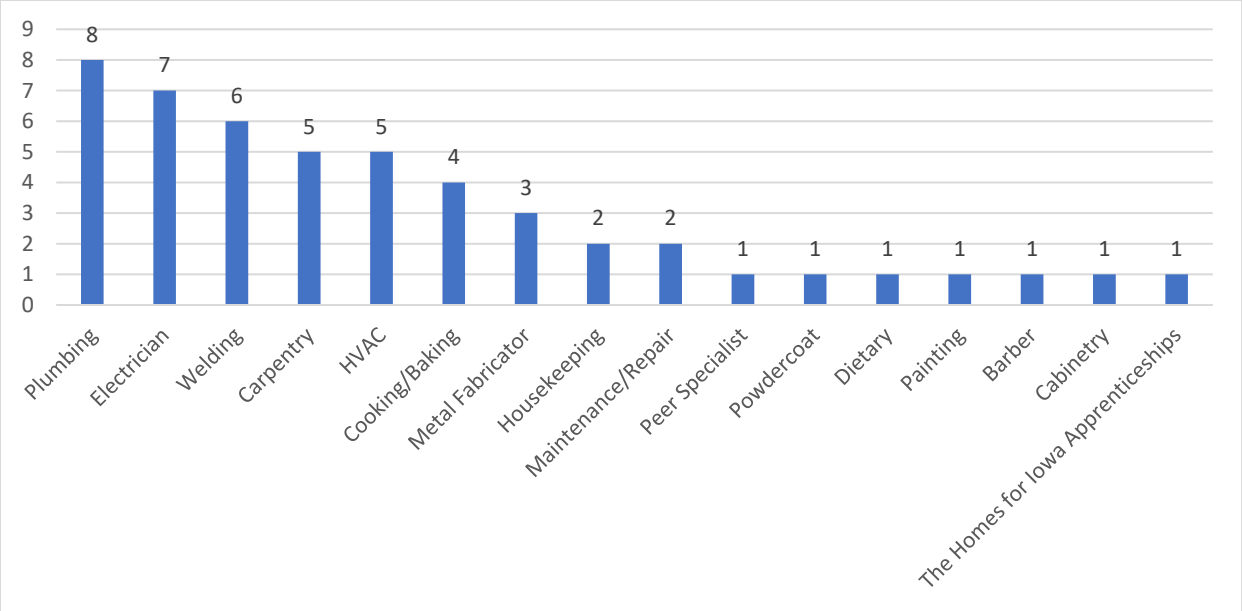
Figure 12. Reported Number of Apprenticeship Programs by Sponsors



Perception of Apprenticeship Programs Value

As shown in Figure 13, sponsors perceive some types of apprenticeships as better for participants. For example, sponsors reported that plumbing, electrician, welding, carpentry, HVAC, cooking/baking, and metal fabricator were better for participants. On the other hand, housekeeping, maintenance, peer specialist, powder coat, dietary, painting, barber, cabinetry, and the homes for Iowans were less common responses.

Figure 13. Sponsors Rank of Best Apprenticeship Programs



Sponsors elaborated on why these trades are perceived as better for apprentices indicating that they have developed relationships with employers and unions over the years, which helps them be more successful with connecting apprentices to employers and unions upon release. Also, there is generally more job demand for these trades and employers and unions are accepting of the training that apprentices went through, and these jobs offer livable wages.

Furthermore, these programs are generally more popular among the II's enrolled in apprentices, have more job opportunities than sewing or housekeeping. Additionally, community colleges offer opportunities to obtain an associate degree.

Resources and Supports Needed

In their responses, sponsors highlighted they need more buy-in from the IDOC staff as well as more support and staff for apprenticeship programs. Other suggestions included the need for a full-time sponsor position, a re-entry coordinator position, and more assistance to free up sponsors' time. Additionally, sponsors recognized the need for better technology and databases.

Some of the biggest challenges with the apprenticeship programs sponsors identified was the lack of time to devote to these programs, lack of support from other staff or management, as well as the limited number of job positions to place apprentices. Other challenges identified were difficulty to keep apprentices motivated to complete the program, the need for a better curriculum as well as high-quality programs that will provide more incentives for II's to complete the apprenticeship program.

Rewarding Aspects of Being Involved

Sponsors indicated that seeing growth in participants and providing them with a second chance to work on themselves and build their skills was the most rewarding experience. Furthermore, seeing participants enroll, participate in the program, complete it, and eventually find a job and stay out of prison were the most rewarding experiences.

Areas of Opportunity for Institutions and IDOC - Sponsor Support

Examining sponsors suggestions on how IDOC could help them succeed in their role, sponsors emphasized a need for more staff and better technology. Additionally, sponsors emphasized the need for better coordination between departments and across different institutions that allow individuals enrolled in an apprenticeship to remain until they complete the program or obtain a transfer to an institution that offers a comparable apprenticeship.

Sponsors responded that they could be more successful in their role if they had more education on apprenticeship programs and the value they bring and if there were openings for the programs and jobs so that more individuals can participate.

Areas of Opportunity for Institutions and IDOC - Apprenticeship Program Support

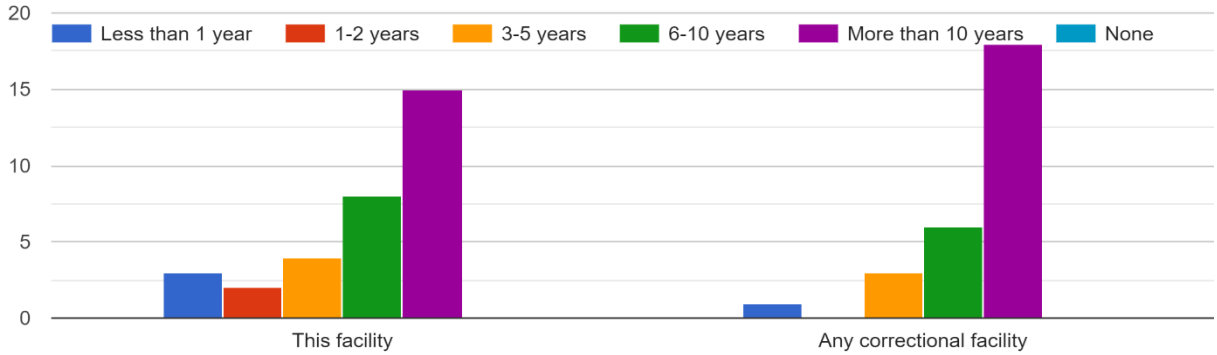
Sponsors reported that IDOC should invest efforts in educating employers and unions on apprenticeship programs, and the structure and value they bring to the II's in terms of the work training and experience that could easily be transferable to the workplace outside the prison. Sponsors emphasized that it would be helpful to have a journeyman and IWD staff involvement at each prison.

Other staff results

Years of Experience

A total of 31 other staff members participated in the survey. The sample was comprised of counselors (48.4%), IPI supervisors (22.6%), treatment directors (19.4%), and unit managers (9.6%). They will be referred to in this section as "other staff". As shown in Figure 18, the majority of other staff were involved in the current facility for more than 10 years.

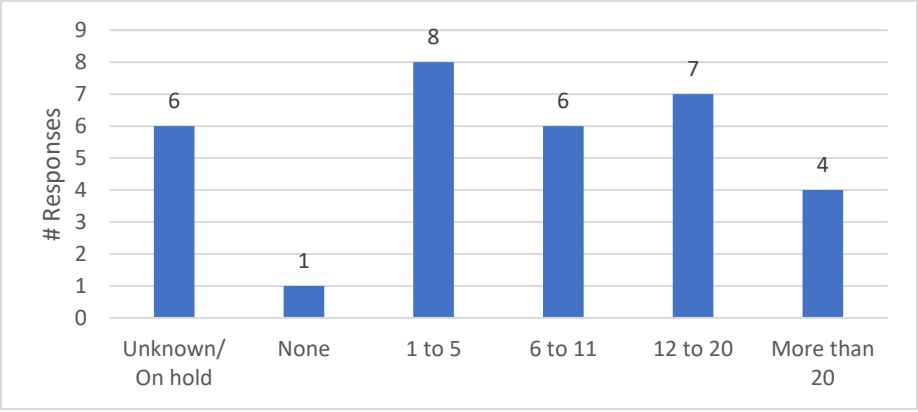
Figure 18. Year of Experience for Other Staff



Number of Apprenticeship Programs

When examining the number of different apprenticeship programs, Figure 19 shows that 25.0% reported that their institution offers 1 to 5 apprenticeship programs, 18.8% reported 6 to 11, 21.9% reported 12 to 20 apprenticeship programs, and 12.5% reported more than 20 programs. About 18.8% of staff reported the information about the apprenticeship programs is unknown or apprenticeships are on hold. One staff member (3.0%) reported that their institution does not offer any apprenticeship programs.

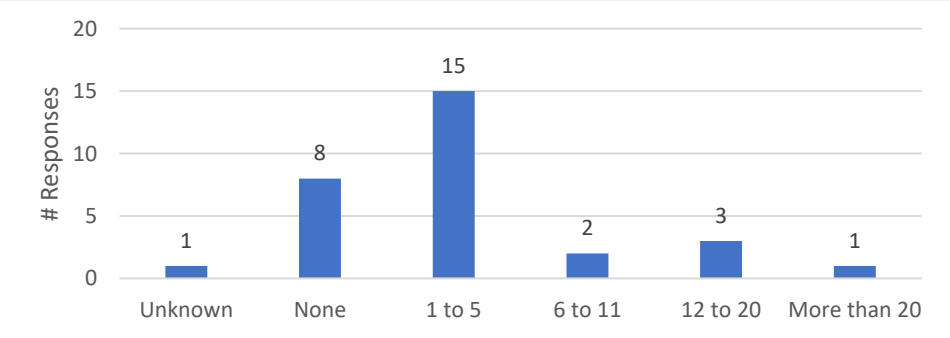
Figure 19. Reported Number of Apprenticeships by Other Staff



Other Staff – II Contact

As shown in Figure 20, 50% reported they discuss apprenticeship programs with 1 to 5 II's each week and 20% with 6 to more than 20 II's. Slightly more than a quarter of other staff (26.7%) reported they do not discuss apprenticeship programs with any II's. One staff member (3.3%) reported that the number of II's they discuss the apprenticeship programs with is unknown.

Figure 20. Number of IIs Other Staff Talks with per Week



Increasing Awareness

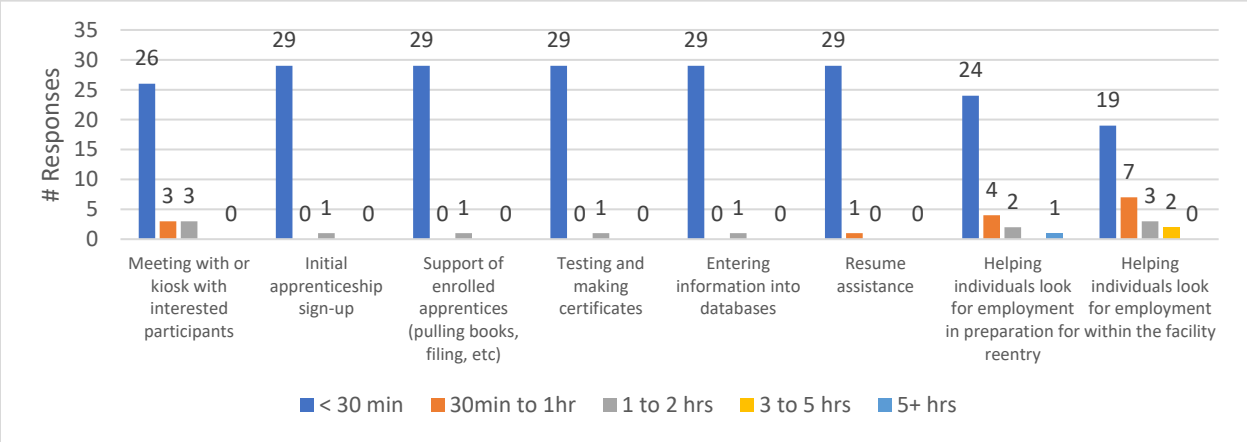
The staff reported several different ways in which the awareness of the apprenticeship programs at their institutions could be increased. For example, a list of these programs could be provided at orientation and initial meetings with II's, it is also provided in their case plan and gets discussed at their case plan reviews. Apprenticeship programs get discussed with II's when they express interest in finding a job, and a person is referred to the sponsor or IWD clerk.

Some other ways that the institutions increase the awareness of the apprenticeship programs are electronically in the newsletter, "Off Net", and Info TV channel, postings, and flyers. Information about the apprenticeships is communicated through other programs.

Other Staff Time Allocation

When examining how much time the other staff allocates to apprenticeship program activities, the majority spend less than 30 minutes on each of the different apprenticeship program activities (meeting with or kiosk with interested participants, initial apprenticeship sign-ups, support of enrolled apprentices, testing and making certificates, entering information into databases, assistance with resumes, helping individuals look for employment in preparation for reentry, and helping individuals look for employment within the facility).

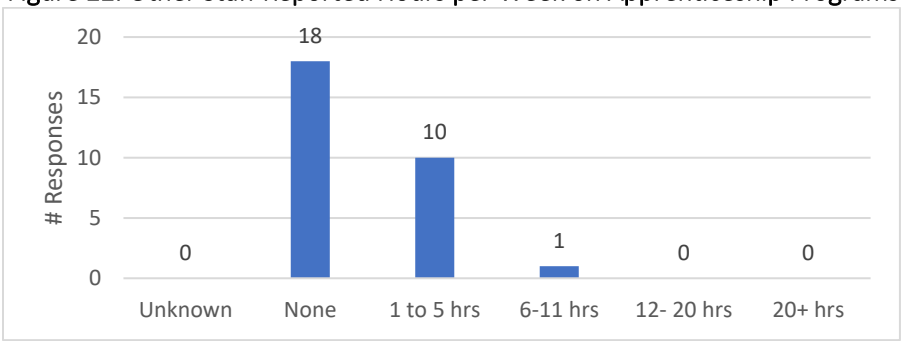
Figure 21. Other Staff Reported Time Spent on Apprenticeship Duties per Week



Regarding the total time spent on the apprenticeship program activities, Figure 22 demonstrates that 34.5% reported spending between 1 to 5 hours on the apprenticeship programs per week, and 3.4% reported they spend between 6-11 hours on these programs.

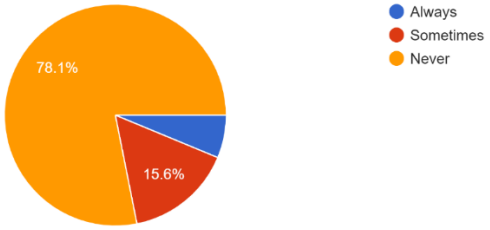
As shown in Figure 22, 62.1% of staff do not spend time on the apprenticeship programs. Note that this might be reflective of the fact that almost 50% of the sample consists of counselors who are only minimally involved and are they trained on these programs. Given their contact with the incarcerated population they could be a good source to provide flyers or pamphlets.

Figure 22. Other Staff Reported Hours per Week on Apprenticeship Programs



The majority (78.1%) of staff reported they do not feel rushed in completing their apprenticeship duties because of other responsibilities. As shown in Figure 23, 15.6% reported they sometimes feel rushed, whereas 6.3% reported they always feel rushed in completing apprenticeship duties.

Figure 23. Other Staff Response on Feeling Rushed in Apprenticeship Duties



Advantages of Enrollment

Staff identified the most beneficial component for those enrolled in apprenticeship programs as reduced job barriers upon release, increasing their chances of employment, and reducing the likelihood of recidivism. Staff also believed that participation in the apprenticeship program is perceived as useful since it provides a sense of pride, self-esteem, and accomplishment helping II's to stay out of trouble while institutionalized.

Resources and Supports Needed

Some of the resources staff identified to make it easier to effectively support apprentices were more information on programs offered in the institution, a training schedule, and better communication with IWD. Additionally, they expressed a need for more staff, especially a full-time program coordinator, as well as more qualified and trained staff who would handle the program and get involved in outreach to increase apprenticeship participation among II's of color. The staff has also reported a need for better technology, a database of companies that are hiring, technology for resume building, and video interviews to help support apprentices.

More than half (56.3%) of staff reported they feel the number of apprentices at their institution can be expanded, whereas 12.5% reported that the number of apprentices cannot be expanded. About a third of staff have reported they are not sure if the number of apprentices can be expanded.

Staff elaborated on some of the barriers that prevent the institutions from expanding apprenticeships, which included lack of staff, lack of good training and resources, as well as buy-in from management to expand apprentices. Other barriers mentioned were a limited number of institutional employment opportunities and jobs, programs being of interest to II's, short stays in the facility, and security concerns.

Some of the biggest challenges identified by staff were the general lack of information on available programs and the time different programs are offered, along with lack of resources, funding, and staff to devote time to supervising, mentoring and training apprentices. Other challenges are the lack of jobs offered within the institution, as well as difficulty in meeting program requirements to be eligible to take part in some programs. Furthermore, staff reported that some programs are outdated, so there is a mismatch between the programs offered and the skills they teach that are not easily transferable to the workforce upon release.

Areas of Opportunity for Institutions and IDOC

When asked what their Institution and IDOC could do to make staff more likely to success, staff indicated that more information and better communication with those who are in charge of the apprenticeship programs would be helpful. Other areas of need include hiring more qualified staff, trainers, and full-time apprenticeship coordinators, making more types of apprenticeships available, mandating participation, better promotion of the programs for those who qualify, and relocation of individuals who are eligible to participate. Staff also reported that their institution could help them succeed in their role with apprenticeship programs by reinventing the wheel completely and making different pay scales for those in the program.

When asked what IDOC could do to make the programs more successful, the staff reported linking programs to the colleges and partnering with companies and community stakeholders to increase the continuity of the program with the community. Additionally, examining why some apprenticeship spots are never filled while others have waiting lists. This could help expand the program and help attract more participants, especially in lower security institutions.

Regarding what the institution could do to make the apprenticeship programs more successful, staff thought that the institution should put efforts into learning about the specific interests of each individual, reduce restrictions due to security so that useful skills can be taught, provide computers for apprentices' training, and form a committee to provide oversight of enrollment.

Discussion

This study has several limitations that should be noted:

- Due to the observational methodology, only associations can be inferred on the apprenticeship programs' impact on recidivism and employment outcomes.
- II's who enroll and complete and apprenticeship may be more likely to stay employed and remain in the community upon release, due to self-selection bias and/or intrinsic motivation.
- Could not evaluate differences in outcomes for the different types of apprenticeships. It has been demonstrated that individuals who earn higher wages post-release were more likely to avoid a return to prison. There may be differences in employment rate and wages for the different types of apprenticeship program.
- This study could evaluate if receiving a discipline impacted apprenticeship completion, however it cannot evaluate if being enrolled in apprenticeship is associated with less discipline overall, which may impact the safety of an institution.

Despite these limitations, this study identified several findings:

- II's who completed an apprenticeship had a 49.1% reduction in 3-year recidivism as well as increased employment rates and wages per quarter. Those who enrolled, but did not complete, experienced an improvement in employment wage and rate, but not in 3-year recidivism. Those who completed had a 3-year recidivism rate of 19.7%, compared to 39.0% for non-completers and a 38.7% for the FY2021 general population.
- Employment post-release per quarter

    - Quarter 1 employment rate was 71.4% for those who completed, 68.1% for non-completers, and 50.3% for the FY2018 released general population. These differences were consistent over time.
    - Quarter 4 and 8 employment rates were 70.8% and 64.0% for completers, 54.8% and 47.0% for non-completers, and 37.4% and 32.1% for the FY2018 released general population.
- Adjusted wage post-release per quarter
    - Quarter 1 adjusted wage was $7,709 for completers, $6,107 for non-completers, and $4,631.
    - All 3 groups saw a steady increase over time with the completers earning an adjusted wage of $9,686 in quarter 8 post-release, $7,501 for non-completers and $5,766 for the FY2018 released population.
- Those that recidivated had a lower employment rate per quarter.
    - Quarter 1, Quarter 4 and Quarter 8 employment rates for those that recidivated versus those that did not was:
        - Recidivated: 56.6%, 40.8%, and 29.4%
        - Not recidivated: 70.8%, 59.5%, and 50.8%
- Those that recidivated had a lower adjusted wage per quarter
    - The Quarter 1, Quarter 4, and Quarter 8 adjusted wage per quarter for those that recidivated versus those that did not was:
        - Recidivated: $4,460, $4,357, and $5,010
        - Not recidivated: $6,623, $7,452, and $7,995

The released cohort only had a completion rate of 13.7%. Access to administrative data allowed for associations to be examined between apprenticeship completion and several variables including individual demographics (e.g. age, race, etc.) as well as extrinsic factors (e.g. LOS, convicting crime class, discipline, transfer, etc.). One of the major differences was completers had an average length of stay of 126.0 months compared to 46.9 months for non-completers. The goal of prison is to rehabilitate and return individuals back to the community as soon as possible. While the LOS should not be extended to accommodate completion, future studies to determine which components of the apprenticeship (e.g. RTI, OJT, etc.) have the biggest impact on outcomes will allow IDOC to plan the trajectory of each individual's stay and utilize apprenticeship components to maximize benefit. As the study showed, institution transfer was associated with a reduction in completion percentage. This suggests that enrollment in an apprenticeship should be considered in the overall decision to transfer, especially if it is due to non-release related factors (e.g. bed space).

Qualitative analysis allowed for study of apprenticeship sponsors and those closely associated to apprenticeships to provide data on workload and suggestions for improvement of the apprenticeship programs. Often recommendations are made without the voices of those who are closest to the issues. The qualitative analysis was conducted on 2 groups, the apprenticeship sponsors and those who work closely with the apprenticeship programs (counselors, IPI supervisors, treatment directors, and unit managers).

Apprenticeship sponsors have direct contact with the apprentices from enrollment to prepping individuals for work post-release. Sponsors identified several different duties necessary that they carry out on a daily basis. These include meeting with interested individuals, sign-up, helping to pull books,

testing, database entry, and helping the individuals prepare for entry with resume building and job searches. Over 80% of sponsors indicated they felt rushed completing these duties due to other work responsibilities. One of the biggest barriers identified by sponsors was lack of time to devote to these programs. An opportunity to increasing the number of individuals enrolled would be to increase staffing, having dedicated apprenticeship sponsors, and a re-entry coordinator position. Another challenge identified by sponsors was keeping apprentices motivated to complete. Education on the outcomes of those who complete as well as incentives may help to increase completion.

The sponsors reported:

- Over 80% of sponsors have been working in their current institution for over 6 years, and 60% have been an apprenticeship sponsor for over 3 years.
- Plumbing, electrician, and welding are the top 3 apprenticeships for II's. One major reason identified was that sponsors have developed relationships with employers in the community and are successful to connect apprentices with them upon release. Additionally, they noted that these programs offer rigorous, hand-on training which equips them with marketable and transferrable skills.
- Sponsors talk with 12-20 II's per week about the apprenticeship programs. Suggestions to increase awareness included postings on internal TV, the "offnet" offender web services, and flyers around the institution. During the site visits, several sponsors discussed the potential to create an apprenticeship path for individuals upon re-entry to the system. This included working with the individual to identify what career(s) interest them and his or her anticipated LOS. This information could be used to determine a good apprenticeship program fit and identify steps necessary for the quickest enrollment with the goal of completion before release. Sponsors indicated that lack of knowledge was one of the barriers to increasing enrollment. A systematic approach ensuring that all II's are aware of the apprenticeship opportunities and benefits upon entry may help increase enrollment and completion if programs are started earlier. Being aware of the opportunity will allow II's to enroll when they are ready.

The second group included in the qualitative component were counselors, IPI supervisors, treatment directors, and unit managers. When asked the amount of time spent on apprenticeship programs, 34.5% indicated they spent 1-5 hours per week, 3.4% 6-11 hours and 62.1% said they do not spend any time. Given the contact with the incarcerated population that this group has, they may have the opportunity to increase enrollment. Although these individuals already have a full workload, having informational packets and handouts may be useful. Additionally, having them know where to direct interested individuals would limit the time required while still potentially increasing enrollment. This group also recognized the advantages of re-entry preparation and helping to find employment post-release. They also noted it provided apprentices a sense of pride, self-worth, and accomplishment.

This study conducted a quantitative analysis on apprenticeship completion, but did not have the ability to assess differences in motivation and indicators of individuals who self-select to enroll into an apprenticeship program. It is not likely that the apprenticeship programs will benefit all II's equally. However, there is an opportunity for individuals who are at a point in their rehabilitation process who could benefit from, but are currently unaware of the apprenticeship program. Given the reduction in overall recidivism as well as increased employment rate and wage per quarter, identification of these II's and completion of an apprenticeship program may allow them to experience the same benefits.

Future research will include a closer evaluation of the different apprenticeship programs to determine if the outcomes of recidivism, employment rate, and employment wage per quarter vary between them. An analysis to determine if apprenticeships result in lower discipline, and potentially institutional safety will be done. Interviews and surveys will be created to assess how apprentices view the programs and the motivational factors which lead them to enroll.