

Basic Correctional Education and Recidivism: Findings from PIAAC and NRS

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Abstract

Potential relationships of incarcerated adult participation in basic correctional education with recidivism seldom receive analysis in largescale datasets. Though 95% of incarcerated adults reenter communities when released, recidivism is higher for adults with low skills. This paper presents new Programme for the International Assessment of Adult Competencies findings on characteristics and skills of U.S. incarcerated adults participating in basic correctional education. The paper also examines adults' learning outcomes and available state recidivism rates from the National Reporting System. Recidivism is lower for adults participating in basic correctional education than for incarcerated adults overall, a finding worth further investigation. Implications for practice and policy are discussed.

Keywords: recidivism, basic correctional education, adult learning outcomes, PIAAC, National Reporting System, disabilities

Approximately 1.4 million adults are incarcerated in U.S. state and federal prisons, an incarceration rate of 555 per 100,000 adults 18 years and older (Carson, 2020). Nearly half of incarcerated adults (46.9%) are 25 to 39 years old, a time when many young adults in the community enter peak years for applying skills to boost earnings and support their families. Virtually all (93%) are men. Additionally, 81,000 adults are incarcerated in local jails (Carson, 2020).

Nearly all (95%) incarcerated adults are eventually released, reenter communities, and seek employment and to rebuild their lives (Delaney & Smith, 2018; Muhlhausen & Hurwitz, 2019). However, they do so with essentially the same skills as when they were first incarcerated (Klein & Tolbert, 2007). Basic correctional education

programs, defined as programs offering basic skills or high school equivalence instruction to incarcerated adults, provide opportunities for incarcerated adults to gain skills. Although most prisons offer basic correctional education opportunities, participation is low. Limited research on incarcerated adult participation shows support for basic correctional education's role in preparing reentering adults for employment and reducing recidivism (Cai et al., 2019). Adding to the knowledge base on connections between basic correctional education and recidivism is important because about half of reentering adults return to prison within 5 years (Delaney & Smith, 2018; Durose et al., 2014), and recidivism is higher for adults with less than high school education (Lockwood et al., 2012).

Identifying a relationship between adults learning basic skills while incarcerated and recidivism matters to long-term success for reentering adults. Furthermore, how recidivism relates to education outcomes is unclear and debated. Reed (2015) called for examining incarcerated adults' education outcomes, such as gains in learning and completion of high school equivalency (HSE) credentials. She also noted a need to more fully understand conditions in which incarcerated adults make academic progress. The purpose of this paper is to add to the knowledge base on incarcerated adult participation in basic correctional education and correlations of that participation with learning outcomes and recidivism. To achieve this purpose, three data sources are employed, including two largescale datasets. First, Programme for the International Assessment of Adult Competencies (PIAAC) findings are presented on background characteristics and assessed skills of U.S. incarcerated adults participating in basic skills or HSE instruction. The paper reports statewide National Reporting System (NRS) learning outcomes of incarcerated adults participating in basic correctional education. Next, available state recidivism rates for adults in basic correctional education are compared with learning outcomes.

Literature Review

Need vs. Participation

Previous research points to a contrast between need for basic correctional education and incarcerated adults' actual participation. Under the First Step Act, U.S. Bureau of Justice Statistics reports annually on need in federal prisons – in 2019, three in ten incarcerated adults in federal prisons, or 51,416, lacked a high school diploma or HSE (Carson, 2021). To meet the need, basic correctional education offers incarcerated adults

an opportunity to gain skills (Cai et al., 2019), and evidence points to it being more cost effective than reincarceration (Davis et al., 2014; Duwe, 2018).

Extent of participation in U.S. basic correctional education is only partially known and the literature is sparse (Cai et al., 2019; Reed, 2015). The Workforce Innovation Opportunity Act (WIOA), Title II, requires U.S. states to provide basic correctional education (U.S. Department of Education, 2015). In 2018-19, approximately 130,000 incarcerated adults participated in Title II funded basic correctional education (Office of Career, Technical, and Adult Education [OCTAE], 2021). Although the U.S. Bureau of Justice Statistics surveys samples of adults in state prisons periodically, such as the Survey of Prison Inmates (U.S. Bureau of Justice Statistics, 2016), state departments of corrections operating with state funds are not required to report on need or participation to national agencies.

Even though U.S. basic correctional education programs are widely available, many incarcerated adults do not participate for diverse reasons (Tighe et al., 2019; Travis et al., 2014), such as preferring to work, not having permission to participate, or needing to participate in counseling or treatment programs. In federal prisons, of more than 51,000 eligible adults, 3,791 earned an HSE (Carson, 2021). One HSE program, GED® Testing Service (2018), reported that 57,776 incarcerated adults, in all correctional facility types, took GED® tests in 2017, with a pass rate of 78%. Two other HSE programs, HiSET® and TASC®, did not publish figures on corrections testing.

Characteristics of Incarcerated Participants

Another critical gap in the knowledge base occurs in that little is known about characteristics of participants and nonparticipants in basic

correctional education (Travis et al., 2014). To begin to fill that gap, the U.S. PIAAC Prison Survey (National Center for Education Statistics [NCES], 2014; Rampey et al., 2016) provides data that allow comparisons of their characteristics and assessment results. Cai and colleagues (2019) analyzed educational attainment and proficiency but did not look at other demographic or background characteristics, such as age or employment status. They found that incarcerated adults in HSE programs perform significantly higher in PIAAC literacy and numeracy assessments than nonparticipants without high school credentials.

Other important characteristics needed in the knowledge base associate with health and disabilities. Incarcerated adults experience noticeable rates of illnesses such as infectious diseases and mental illness (Travis et al., 2014). Travis and colleagues observed that disability-related needs of incarcerated adults may be overlooked, which creates strong impediments to well-being (2014). In some cases, negative behaviors associated with disability may result in incarceration. Incarcerated adults with learning disabilities are not often provided with accommodations or with access to special education (Koster, 2019). They may also lack access to advocates who can help them get accommodations and support services (Edelson, 2017).

Health can also be a barrier to learning. Incarcerated adults' rates of fair or poor health in 2014 were substantially higher than 15% found 10 years earlier (Greenberg et al., 2007). Nearly doubled rates of vision or hearing difficulties and quadrupled rates of learning disability (37.1%) among incarcerated adults with less than high school attainment, compared with the general population (Patterson & Paulson, 2016; Rampey

et al., 2016), point to adults with critical health concerns and challenges from disabilities. More investigation of connections of health factors with learning in correctional settings is needed.

Preparing for Successful Reentry, Not Recidivism

Following incarceration, nearly all incarcerated adults are released to reenter the community (Travis et al., 2014). One measure of successful reentry is reduced recidivism – that is, reentering adults do not return to prison. Reentering adults with low skills – in literacy, numeracy, and/or technology – tend to struggle to adjust and find work, putting them at elevated risk for recidivism (Cai et al., 2019; Klein et al., 2004; Tyler & Kling, 2006). If they gain basic skills while incarcerated, hypothetically this risk decreases. Recent studies link correctional education programs overall with recidivism as indicators of program effectiveness (Bozick et al., 2018; Davis et al., 2013; Davis et al., 2014; Delaney & Smith, 2018; Duwe, 2018; Lockwood et al., 2015; Newton et al., 2018; Pompoco et al., 2017; Tighe et al., 2019; Travis et al., 2014). Building basic skills of incarcerated adults is associated with increases in skill use (Reder, 2019) and with interest in pursuing further education, which could further support reentering adults to remain in the community (Delaney & Smith, 2018). These studies indicate that having gained basic skills while incarcerated can benefit reentering adults in gaining employment, which in turn, among other supports, can reduce risk of recidivism.

PIAAC and the National Reporting System

Measuring skills and learning outcomes of incarcerated adults and their connection with recidivism of reentering adults from existing largescale data is not a straightforward task. These data are not collected in a single dataset.

Largescale data are available separately to examine potential connections at aggregated levels: the U.S. PIAAC Prison Survey (NCES, 2014) and NRS (OCTAE, 2021).

PIAAC is a large-scale study developed in collaboration with the Organization for Economic Cooperation and Development (OECD). PIAAC initially surveyed adults in 24 participating countries in 2012, nine more countries in 2014, and five additional countries in 2017. PIAAC assessed and compared basic skills and competencies of adults; PIAAC assessments focused on cognitive and workplace skills needed for successful participation in 21st-century society (NCES, n.d.). In 2014, the U.S. PIAAC Prison Study was conducted with a sample of 1,319 incarcerated adults (ages 18–74) in federal and state prisons. Incarcerated adults took the same literacy, numeracy, and digital literacy assessments as did U.S. PIAAC household participants, but the prison background questionnaire was adapted to address experiences and needs of incarcerated adults.

An advantage of the PIAAC Prison Survey is that it measures skills in three domains – literacy, numeracy, and digital literacy – and whether an adult has computer experience (Rampey et al., 2016), which represent important needed community skills. Measuring skills directly allows incarcerated adults to demonstrate how they use skills in practice (Cai et al., 2019). PIAAC also asks about participation in education during incarceration, reasons for doing so, and background characteristics of incarcerated adults.

In a second largescale dataset, NRS data are reported from the overall adult education’s accountability system under WIOA. States submit an annual performance report, including information on levels of performance achieved and qualitative summary data, to the NRS

website (OCTAE, 2021). NRS data measure basic correctional education participation and learning outcomes – including completed learning gains, HSE credentials, and postsecondary participation. A qualitative summary reports on state leadership efforts and includes responses to a single question on state calculation of recidivism rates for basic correctional education programs. In qualitative summaries, a variety of measures of recidivism are reported, but states report 3-year recidivism rates most frequently.

Research Questions

Understanding how gains in basic skills, incarcerated adult characteristics and skill levels, and recidivism may relate to each other requires having data available to examine these relationships for a common population. The research questions that follow investigate these connections through new descriptive analyses. It is important to note that hypothesized relationships are not causal. Research questions (RQ) focus on characteristics and assessed skill levels of U.S. incarcerated adults who participate in basic skills or HSE, aggregate NRS outcomes of incarcerated adult participation at basic or secondary levels, and 3-year recidivism rates.

1. What are background characteristics and assessed skill levels of incarcerated adults in basic skills or HSE instruction from PIAAC Prison Survey of 2014?
2. What are NRS learning outcomes of incarcerated adults who participated in basic correctional education, by state, from 2015-16?
3. How do reported state 3-year recidivism rates, from 2018-19, of incarcerated adults who participated in basic correctional education compare with overall recidivism rates?
4. At the state level, how do learning outcomes relate to 3-year recidivism?

Methods

Sample

Data for this paper came from three sources: (for RQ1) 2014 PIAAC Prison Survey dataset released by NCES in 2017; (for RQ2 and 4) NRS incarcerated adult learning gain outcomes, as reported in the 2015-16 annual report by state; and (for RQ3 and 4) NRS annual qualitative summaries from state adult education directors in 2018-19. New analyses of data from all three sources were conducted for this paper.

PIAAC's 2014 prison dataset contains information on 1,319 adults incarcerated in federal and state prisons. Of these 1,319 incarcerated adults, 461 participated in basic skills programs or in GED or other HSE preparation. Analyses in this paper employed PIAAC data on the 461 incarcerated adults participating in at least one of these three types.

States report performance and qualitative data to NRS annually (AEFLA Adult Education and Literacy, n.d.). Statistical data, including number of adults in basic correctional education programs (Table 6) and outcomes (Table 10), along with qualitative narrative summaries are made available publicly. The year 2015-16 was selected to investigate statistical data and learning outcomes of participating incarcerated adults in basic correctional education. If participating incarcerated adults were released that year, their outcomes would presumably factor into 3-year recidivism rates that state directors reported in 2018-19 qualitative summaries.

PIAAC Variables

Fifteen PIAAC variables, along with sets of sample and replicate weights and plausible values for assessed literacy and numeracy scores, were employed in descriptive analyses, as presented in Table 1. Three variables on participation (i.e., basic skills, GED or HSE preparation) permitted limiting data to those in basic correctional education ($n = 461$). Education attainment during incarceration indicated learning occurring in prison. Descriptive demographic variables included overall educational attainment, gender, age group, health status, and learning disability status. An experience with computer variable differentiated which adults operated computers previously in everyday life. Four variables on work experience indicated: whether the adult was working, job type, whether the job was challenging, and reason for leaving last job before prison. Final sample and replicate weights were applied in PIAAC analyses to ensure accurate representation of the sample in population (Hogan et al., 2016).

Assessment scores were estimated using 10 plausible values per content domain; plausible values were estimated for literacy and numeracy scores (Hogan et al., 2016). Score ranges for these domains were from 0 to 500 and scores were classified into one of five levels. According to NCES (n.d.), literacy and numeracy levels were below Level 1 (0-175), Level 1 (176-225), Level 2 (226-275), Level 3 (276-325), and Levels 4 / 5 (326-500). PSTRE scores were not examined for this paper because only 61% of adults could even attempt this computer-based assessment (Rampey et al., 2016).

TABLE 1: PIAAC Variables

Variable		Label	Levels
a.	Participation in basic skills	B_Q27AUSP	1=yes, 2=no
b.	Participation in GED or HSE preparation	B_Q27BUSP	1=yes, 2=no
c.	Participation in other HSE preparation	B_Q27CUSP	1=yes, 2=no
d.	Reason for participating in basic correctional education	P_Q40	1=I was required to participate, 2=To increase my knowledge or skills, 3= To obtain a certificate, 5=To increase my possibilities of getting a job when released, 6=To increase possibilities of getting a job assignment, 8=Family-related reasons, 9=Other
e.	Education attainment	EDLEVEL3	1=less than high school, 2=high school, 3 = postsecondary
f.	Educational attainment during current incarceration	P_Q120_ISCED11	1=ISCED1, 2=ISCED2, 3=ISCED3, 4=ISCED4, 5=ISCED5, 6=no further education completed
g.	Gender	GENDER_R	1=male, 2=female
h.	Age group	AGEG10LFSEXT	1=18-24 years, 2=25-34 years, 3=35-44 years, 4=45-54 years, 5=55-65 years, 6=66 years and older
i.	Health status	I_Q08	1=excellent, 2=very good, 3=good, 4=fair, 5=poor
j.	Learning disability status	I_Q08BUSX3	1=yes, 2=no
k.	Experience with computer in everyday life	H_Q04BUSP	1=yes, 2=no
l.	Work status before prison	C_Q07USP	1=Full-time employed (self-employed), 2=Part-time employed (self-employed), 3=Unemployed, 4=Student, 5=Apprenticeship/internship, 6=Retirement, 7=Permanently disabled, 8=Military, 9=Domestic tasks or looking after family, 10=Other
m.	Last job type before prison	E_Q04USP	1=employee, 2=self-employed
n.	Not challenged enough in last job before prison	F_Q07AUSP	1=yes, 2=no
o.	Reason for end of last job before prison	E_Q10USP	1=Dismissed, 2=Job eliminated, 3=Temporary job ended, 4=Resigned, 5=Gave up for health reasons, 6 Early retirement, 7=Retired, 8=Gave up for family responsibilities, 9=Gave up to study, 10=Other, 11=Arrested, 12=Incarcerated
p.	Assessed literacy skills (plausible values)	PVLIT1 to PVLIT10	Continuous, sample range 0-400
q.	Assessed numeracy skills (plausible values)	PVNUM1 to PVNUM10	Continuous, sample range 0-400
r.	Sample weight	SPFWT0	
s.	Replicate weights	SPFWT1 to SPFWT80	

NRS Variables

Statistical variables on adults in basic correctional education programs, and their learning outcomes, came from NRS tables 6 and 10, respectively, for all 50 states and the District of Columbia. The number in correctional facilities consisted of the count of incarcerated adults participating in basic

correctional education programs with WIOA, Title II, funding. Although reentering adults (number in community correctional programs) are included in counts for educational functioning level (EFL) completion and both groups are designated as “participating adults”, they are distinct from the

incarcerated count. Education-related outcomes that adults in basic correctional programs made as of 2015-16 include: moving from one EFL to a higher EFL; gaining a secondary credential or equivalent, such as a high school diploma or HSE credential; and entering postsecondary programs, whether entering in 2015-16 or reported in 2015-16 from 2014-15. Table 2 presents variables from these tables that were employed in analyses.

TABLE 2: NRS Variables

Variable	Source (NRS Table)
Number in correctional facilities	6
Number in community correctional programs	6
Completed an educational functioning level	10
Obtained a secondary school credential or its equivalent	10
Entered postsecondary educational training (current year)	10
Entered postsecondary educational training (prior year)	10

Additionally, qualitative narrative summaries that state adult education directors wrote are available publicly (AEFLA Adult Education and Literacy, n.d.). The narrative question was: What was the relative rate of recidivism for criminal offenders served? Please describe the methods and factors used in calculating the rate for this reporting period. The 2018-19 summary provided the state recidivism rate, if known, for incarcerated adults participating in basic correctional education programs. In state qualitative summaries, 3-year recidivism rates are most frequently reported; states reporting this rate were selected for consistency. Only 12 states included 3-year recidivism rates in their narrative – Alabama, Arkansas, Florida, Georgia, Indiana, Kansas, Louisiana, Missouri, Mississippi, North Dakota,

New Mexico, and South Carolina. Therefore, only data from these 12 states were included in recidivism analyses (RQ3 and 4), to correspond as closely as possible to outcomes data from 2015-16 (see Appendix).

Analyses

Assessment scores were estimated using 10 plausible values per content domain; plausible values were estimated for literacy and numeracy scores (Hogan et al., 2016). Analyses for RQ1 and RQ2 were descriptive, with percentages reported for categorical data and group differences evaluated with chi square statistics. Means and standard errors were reported for PIAAC assessed skill levels, and mean scores were compared with Cohen's *d* as an effect size for magnitude of difference. For NRS outcomes data, median outcomes and ranges of percentages were reported because of skew in state data. Wilcoxon Signed Rank Test assesses median differences in recidivism rates for RQ3 and was selected because samples were related, and number of available states was small. Effect size for *Z* was $r = Z / \text{SQRT}(n)$ (Patil, 2021). Spearman correlation coefficients (r_s) were calculated to determine associations among recidivism and outcome variables. Reported relationships were descriptive and not causal.

Findings

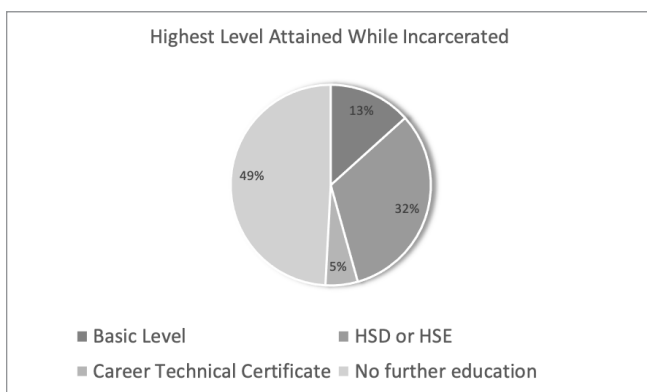
Background Characteristics and Assessed Skills

PIAAC data were examined to address RQ1 on background characteristics of participants in basic skills or HSE instruction. Incarcerated adults were asked about education attainment and learning that occurred in prison. Weighting the sample of 461 adults indicated nearly 433,000 U.S. incarcerated adults in basic correctional education. Participating adults were evenly

divided between less than high school (52.9%) and high school (47.1%) educational attainment levels. They most often entered basic skills or HSE instruction to increase chances of getting a post-release job (29.8%), to increase skills (29.0%), for credentialing (14.0%), or because they were required to participate (16.1%). Additional reasons included getting a prison job (4.9%), for their family’s sake (2.4%), and other reasons (3.3%).

While incarcerated, adults participating in basic skills or HSE instruction were evenly divided in whether their education level increased, with approximately half indicating no educational level change, as shown in Figure 1. Of incarcerated adults in basic skills or HSE instruction, nearly a third reported completing a high school diploma or HSE and a small proportion finishing basic level instruction (see Figure 1).

FIGURE 1: Education Attainment of Incarcerated Adults Participating in Basic Skills or HSE Instruction



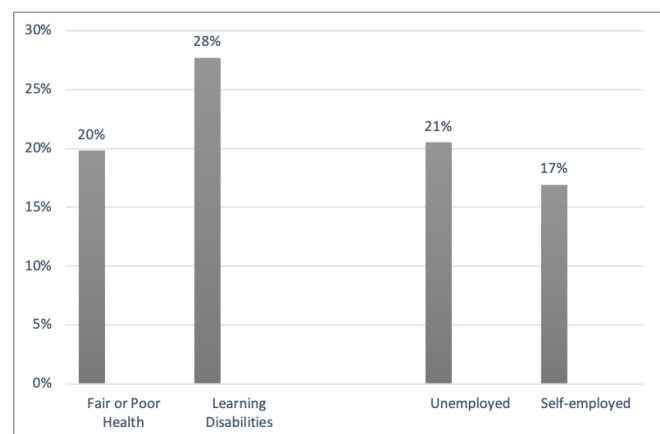
Note: Data source was PIAAC Prison Survey, NCES, 2014.

Incarcerated adults making no further change in basic correctional education level differed significantly from those attaining HSD or HSE in prison by previous education attainment – 70.9% of those making no further change had less-than-high-school education before prison, and 12.9% of those attaining HSD or HSE in prison had

less-than-high-school education before prison ($p < .001$). Also, those making no further change in basic correctional education level (“no-further-change” group) were significantly more likely ($p < .01$) to be female (8.2%) than those attaining HSD or HSE in prison (3.8%). The no-further-change and HSD-HSE groups did not differ significantly by age, reason for participating, health, learning disability diagnosis, computer experience, or previous employment status.

Other key characteristics were demographic. Most incarcerated adults in basic skills or HSE instruction were young; the three largest age groups were ages 24 years or less (16.8%), 25 to 34 years (36.8%), and 35 to 44 years (26.1%). Another 12.7% were 45 to 54 years, and 7.6% were 55 years or more. Unsurprisingly given the sample, 93.5% were male. Although most incarcerated adults (78.5%) indicated having good, very good, or excellent health, one-fifth reported fair or poor health, as shown in Figure 2. A high proportion of adults in basic skills or HSE instruction (27.7%) reported learning disabilities. Most incarcerated adults in basic skills or HSE instruction (69.7%) had no everyday-life experience with computers.

FIGURE 2: Background Characteristics of Incarcerated Adults in Basic Correctional Education



Note: Data source was PIAAC Prison Survey, NCES, 2014.

Adults also reported on pre-incarceration work experience. Results indicate high unemployment and underemployment, low entrepreneurship, and adults not challenged at work. Nearly two-thirds (62.9%) were employed before incarceration, either full time (45.6%) or part time (17.3%). However, unemployment was high (see Figure 2). Of those reporting a last job before incarceration, one in six were self-employed. Most who were employed left work because they were arrested (37.2%), incarcerated (21%), dismissed (7%), or laid off from temporary work (6.9%). Of those indicating skill use in last job before prison, 88.1% reported not being challenged enough at work.

Incarcerated adults were also assessed for literacy and numeracy skills. Mean scores and levels are presented in Table 3. Mean scores of adults in basic skills or HSE instruction were significantly lower than those of incarcerated adults overall.

For reference, at level 2, literacy tasks required respondents to make matches between text and information and may require paraphrasing or making low-level inferences, with some competing pieces of information present. At this level, adults can integrate two or more pieces of information based on criteria and can compare or reason about information and make low-level inferences. They can navigate within digital texts to access and identify information (OECD, 2013). Level 1 numeracy tasks required simple one-step or two-step processes involving, for example, performing basic arithmetic operations, understanding simple percentages, or identifying and using elements of simple graphs. An example item at level 1 displayed a photo of a box containing candles in rows and layers. Instructions informed test-takers about 105 candles in a box and asked them to calculate how many layers of candles were in the box. (OECD, 2013).

TABLE 3: Assessed Skills of Incarcerated Adults

Skill Domain	Incarcerated Adults in Basic Correctional Education		All Incarcerated Adults	
	Mean Score (Standard Error)	Skill Level	Mean Score	Skill Level ^a
Literacy	237.7 (2.1)	2	249	2
Numeracy	206.3 (3.0)	1	220	1

Note: Data source for incarcerated adults in basic skills or HSE instruction was PIAAC Prison Survey, NCES, 2014. Mean scores relied on sample weights and 10 plausible values per domain. Assessment unweighted $n = 461$. ^aMean score (without standard errors) and skill levels for comparison group of all incarcerated adults were reported in Rampey et al. (2016).

Literacy and numeracy scores of adults in basic skills or HSE instruction were further examined at three levels of educational change that had sufficient sample for analysis – no further change, basic level, and HSD or HSE, as displayed in Table 4. In literacy, incarcerated adults completing HSD or HSE had significantly higher mean scores than those making no further change or at basic levels, with medium

effect sizes ($d = .60$ for no further change and $d = .57$ for basic level). Literacy scores did not differ significantly for those making no further change and those at basic level (see Table 4). In numeracy, a small difference occurred in mean scores for no-further-change and basic-level groups ($d = .21$), a small difference for basic-level and HSD-HSE groups ($d = .44$), and a medium difference for no-further-change and HSD-HSE

groups ($d = .60$). While all three groups were at level 2 for literacy and at level 1 for numeracy, the

no-further-change group had lowest scores in both domains.

TABLE 4: Assessed Skills of Incarcerated Adults by Change in Basic Correctional Education

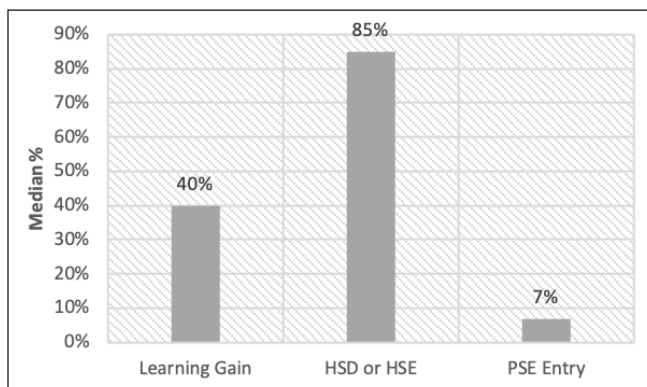
Skill Domain	No Further Change in Education Level		Basic Level		HSD or HSE	
	Mean Score (Standard Error)	Skill Level	Mean Score (Standard Error)	Skill Level	Mean Score (Standard Error)	Skill Level
Literacy	227.6 (3.1)	2	230.5 (5.5)	2	251.5 (3.2)	2
Numeracy	193.3 (3.8)	1	202.8 (6.4)	1	222.4 (4.1)	1

Note: Data source for incarcerated adults in basic skills or HSE instruction was PIAAC Prison Survey, NCES, 2014. Mean scores relied on sample weights and 10 plausible values per domain. Unweighted n for no-further-change group was 233, for basic level $n = 57$, and for HSD-HSE $n = 141$.

Learning Outcomes

In 2015-16, WIOA Title II programs served a total of 154,904 incarcerated adults in 50 states and DC (NRS, Table 6, 2016). Participating adult outcomes comprised learning outcomes from 169,598 adults, including outcomes from an additional 14,694 reentering adults; thus 87% of participating adults were incarcerated. A median two-fifths (state range from 0 to 86%) of participating adults made a learning gain of at least one EFL (NRS, Table 10, 2016), as displayed in Figure 3. Most participating adults with the goal to do so earned a secondary diploma or HSE (state range from 0 to 100%); 14,238

FIGURE 3: Outcomes of Incarcerated Adults in Basic Correctional Education



Note: Data source was NRS Table 10, 2015-16.

secondary credentials were awarded (see Figure 3). Postsecondary participation was minimal; a median 7% entered PSE in 2015-16 (see Figure 3) compared with 8% in the prior year (NRS, Table 10, 2016).

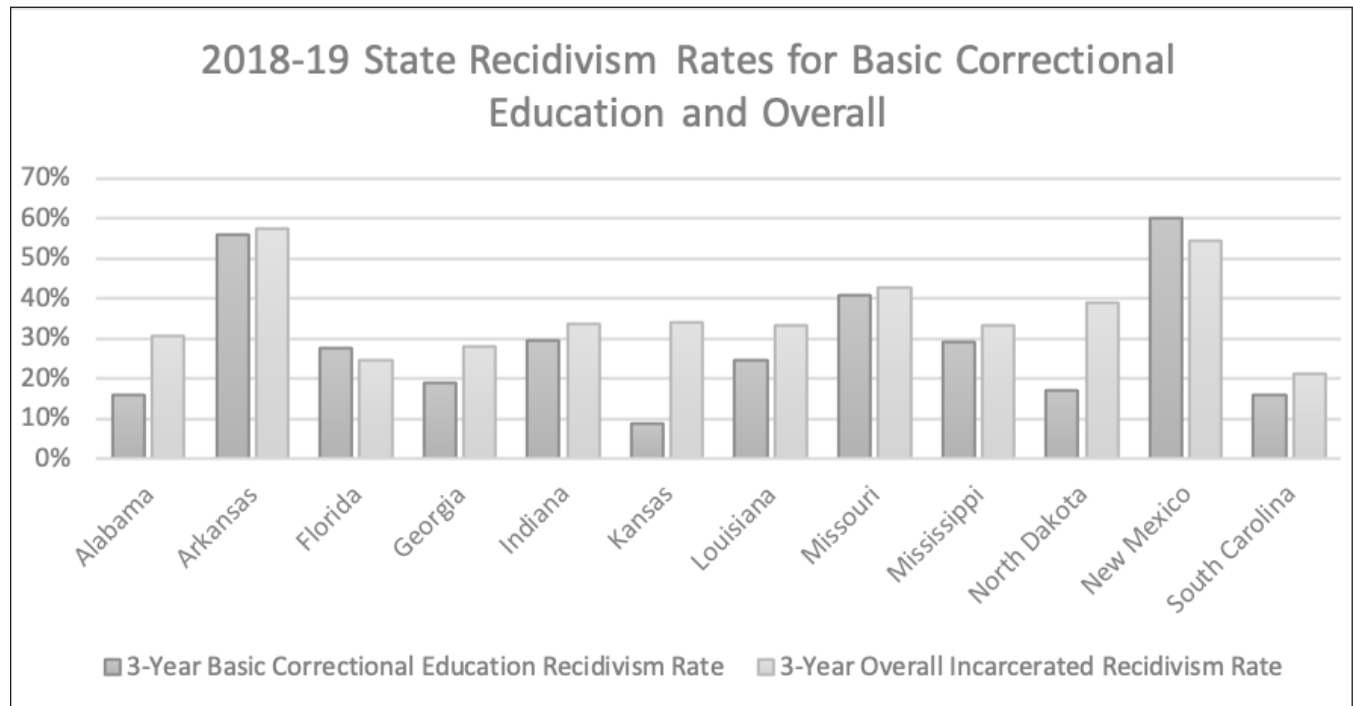
Recidivism Rates Following Basic Correctional Education

In 12 states reporting 3-year recidivism rates in 2018-19, recidivism for adults in basic correctional programs ranged from 9% to 60%, with a median of 26%. The median 3-year recidivism rate for incarcerated adults overall (i.e., without respect to involvement in basic correctional education) was higher, with a median of 34% (range from 21% to 57%). Median recidivism was significantly lower for adults in basic correctional programs ($Z = 2.3$, $p = 0.02$) than for incarcerated adults overall, and the effect was large ($r = 0.66$). Recidivism rates by state are displayed in Figure 4, overall and in basic correctional education (also see Appendix). In 10 of 12 states, reported recidivism rates were lower for adults in basic correctional education. Reported differences were most dramatic in Alabama, Kansas, and North Dakota – their recidivism rates for adults in basic correctional education were at least half the overall rates.

Recidivism rates were not significantly correlated ($p > .10$) with types of learning outcomes at the state level, i.e., learning gain, high school credential, or postsecondary entry. Correlations of types of learning outcomes with recidivism were small and negative (r_s

-0.26 for learning gain, r_s -0.22 for high school credential, and r_s -0.38 for postsecondary entry). As percentages of learning gains, high school credentials, or postsecondary entry increased, the recidivism rate for adults in basic correctional programs decreased.

FIGURE 4: Recidivism of Adults in Basic Correctional Education



Note: Data source was NRS 2018-19, State Qualitative Summaries. Overall recidivism rates for Kansas, Louisiana, and Missouri provided by Virginia Department of Corrections state recidivism comparison as of 2019.

Discussion

The paper's purpose was adding to the knowledge base on incarcerated adult participation in basic correctional education and connections of participation with recidivism. U.S. incarcerated adults most often entered basic correctional education to increase chances of getting post-release jobs or strengthen skills. Enhancing skills is important in prison, where 30% of adults have less-than-high-school education, compared with 14% in the general population (Rampey et al., 2016). Nearly a third of adults in prisons who participated in

basic correctional education reported completing a high school diploma or HSE and a small proportion reported finishing basic-level instruction. Adults were predominantly young, male, and had little experience with computers. They reported high unemployment and underemployment, low entrepreneurship, and not being challenged in pre-incarceration work. Adding characteristics of participants in basic correctional education (Travis et al., 2014) to the knowledge base is important.

On average, literacy and numeracy scores of incarcerated adults in basic correctional

education were significantly lower than for incarcerated adults overall, and adults not making educational level change scored lowest in both domains. Literacy scores averaging at level 2 and numeracy scores at level 1 indicated struggles with basic reading and very basic math tasks; their scores compared unfavorably with national general population averages at the upper end of level 2 (Rampey et al., 2016). A major concern, representing a missed opportunity for many, was half of participating adults made no gains in education while incarcerated. Most adults not making further educational level change appeared to have entered incarceration with previously low education attainment, and a higher percentage were women than in the HSD-HSE group. Without higher literacy and numeracy skill levels and with little computer experience on release, chances increase of reentering adults again facing high unemployment prospects or unchallenging work (if they can find it).

A high proportion (28%) of adults in basic correctional education reported having learning disabilities, at a higher rate than in the general population (Patterson & Paulson, 2016). Twenty percent reported fair or poor health. Adults with potentially burdensome health concerns and challenges from disabilities may struggle with learning as well as reentry after release (Travis et al., 2014).

Despite barriers facing incarcerated adults, NRS learning outcomes from basic correctional education in WIOA-funded programs indicated solid rates of learning gains and high rates of secondary credentials, with minimal PSE participation. Three years later, in 10 of 12 states reporting them, recidivism rates were significantly lower for adults participating in basic correctional education than for incarcerated adults overall. This finding adds to research results on lowered

recidivism of GED completers, from Pompoco and colleagues (2017), and Cai and colleagues (2019). It is also important given generally higher rates of recidivism for adults with less than high school education (Lockwood et al., 2012). As percentage of learning outcomes increased, the recidivism rate for adults in basic correctional programs decreased, although correlations with separate types of learning outcomes were small.

Implications for Basic Correctional Education Programs

Compared with national averages at upper end of Level 2 (Rampey et al., 2016), low skill levels point to substantial difficulties in reading and using information and in solving mathematical problems beyond very basic levels, which may limit further skill use (Reder, 2019). Educators have an opportunity to encourage incarcerated adults to use literacy and numeracy skills – and to continually expand them. As Cai and colleagues (2019) observe, learning and using skills should go beyond basic correctional education participation, to learning that continues in reentry.

Regrettably, though, half of adults participating in basic correctional education made no change in education level while incarcerated, reflecting Klein & Tolbert's (2007) finding about reentering communities with essentially no change in skills. Most adults not making educational level change appeared to have entered incarceration with low education attainment, which is an important condition for basic correctional educators to note (Reed, 2015) when planning instruction, particularly in programs serving women. How instruction is implemented in basic correctional education is key to enhancing gains in education. From awareness that incarcerated adults likely experienced little success in previous education and struggled with literacy and particularly numeracy skills, correctional educators can

prepare to meet incarcerated learners where they are and gather as much diagnostic information as possible to target instruction to needs. Data also indicate a need to offer additional basic skills instruction for incarcerated learners who are not ready for HSE preparation (Pompoco et al., 2017). As Patterson (2018) noted, incarcerated adults cited future jobs and gaining skills as reasons to participate in basic correctional education. Gaining general knowledge and specific skills in basic correctional education can also ease finding employment in reentry (Cai et al., 2019).

Learning disability rates were much higher than the household rate. Overlooking disability-related needs of incarcerated adults may reinforce impediments to well-being (Travis et al., 2014). Basic correctional education serving incarcerated or reentering adults must fully assess entering learners to determine current skill levels and screen for unmet needs that could interfere with learning. Acknowledging challenges, offering peer supports, and providing appropriate accommodations for learning can support adults in basic correctional education and facilitate learning.

Implications for Policymakers

Prison and reentry officials who make policy have an opportunity to review adult participation and assessment in basic correctional education and to identify ways more incarcerated and reentering adults can demonstrate educational level change. The 35% rate of participation noted in this paper could be even higher if policies supported enhancing adult participation, particularly those with low education attainment and learning disabilities. As Cai and colleagues (2019) stated, increasing amounts and intensity of basic correctional education programming is a must.

Though basic correctional education programs are widely available, many incarcerated adults did not

participate in them (Tighe et al., 2019; Travis et al., 2014), for reasons such as preferring to work in prison or not having permission to participate. In PIAAC analyses, a much more prevalent reason than preferring to work (3%) was not qualifying to enroll, which 26% of incarcerated adults with less-than-high-school educational attainment cited. Reasons for not qualifying may include policies related to safety or length of sentence; still, policymakers should review and adjust facility policies to maximize participation in and benefits from basic correctional education.

Additionally, policymakers need to review instructional and support services available to incarcerated or reentering adults with learning disabilities, to ensure those services facilitate learning and accommodate disabilities. According to an Open Door Collective brief (2020), incarcerated adult learners with learning disabilities have statutory rights to access services under the Americans with Disabilities Act. With special education services, incarcerated adults have stronger chances of successful reentry and are less likely to recidivate (Koster, 2019).

Recent studies made a connection of correctional educational programs overall with recidivism in discussing program effectiveness (Bozick et al., 2018; Davis et al., 2013; Davis et al., 2014; Delaney & Smith, 2018; Duwe, 2018; Lockwood et al., 2015; Newton et al., 2018; Pompoco et al., 2017; Tighe et al., 2019; Travis et al., 2014). Although not causal, findings from this paper indicated that basic correctional education participation was related to lower recidivism in most of 12 states reporting. A critical question to ask is, how can policymakers in states *not* reporting on recidivism of incarcerated adult learners begin to report? Gathering this information requires not only common time definitions (i.e., recidivism within 3 years of release) but common definitions

of what constitutes recidivism. It also requires developing and instituting statewide policies – involving correctional, education, and labor agencies – to collect and release data for research purposes. Further evidence of reduced recidivism, where available in connection with program effectiveness, could then support advocacy for funding of basic correctional education and education-related reentry services. Increasing access to services can play a positive role in reentry efforts and contribute to the economy (Open Door Collective, 2020).

Limitations and Future Research

Several limitations need acknowledgement. Learning outcomes in NRS data included only adults participating in WIOA Title II programs; additional incarcerated adults participate in basic correctional programs funded directly by state or federal correctional departments, and it was beyond the paper's scope to identify and include them. Future researchers need to identify where and how these data might be collected from departments of correction for studies.

Another limitation was the cross-sectional nature of NRS data; 2015-16 was unique both as the final year in which data were collected on learning outcomes as defined in prior legislation and as mapping to 2018-19 qualitative narratives. Future studies could consider multiple years of NRS data under new outcome measures definitions, to cross-validate findings, providing definitions of outcomes are consistent across years.

With respect to recidivism, availability of recidivism data on basic correctional education from only 12 states is a major limitation to conducting national analyses. A lack of recidivism data from the other 45 states and territories means that conclusions about relationships of recidivism with participation in basic correctional education

nationally cannot be made. The recidivism data that do exist represent 2018-19 state rates for WIOA, Title II, that met a three-year recidivism definition, typically described as through reincarceration. However, the state directors' qualitative summary guidance does not require states to follow a common recidivism definition, rather simply to report how they calculated it for adults participating in basic correctional education. Where state recidivism rates are unknown, determining why data are not collected might lead to a solution. In qualitative narratives, multiple state staff indicated they were working with correctional and other state agencies to gain access to recidivism rates. As more recidivism data come available, future analyses could investigate their relationship with learning outcomes.

Additionally, recidivism can be defined in multiple ways – according to Davis and colleagues (2013), it can be measured through rearrest, reconviction, reincarceration, or through parole measures. One-year or three-year time periods are most common. Data on arrests and convictions could supplement return-to-prison data in describing relationships with outcomes more comprehensively (Pompoco et al., 2017).

Despite these limitations, this paper contributed new knowledge from largescale data on assessed skills of participating adults and their learning outcomes, as well as meaningful relationships with available recidivism information. This finding on basic correctional education, while limited, is worth further investigation, both across states and within facilities. Where basic correctional education correlates with lower recidivism, circumstances and reasons need to be evaluated locally and success celebrated. More needs to be known about how basic correctional education programs are implemented and their effectiveness. In 10 states with lower recidivism

rates for participating incarcerated learners, how are services offered? What differences in programming occur, for example, in Alabama, Kansas, or North Dakota, in contrast with Florida and New Mexico?

Though not measured in this paper, other potential explanations for lower recidivism include availability of supports to reentering adults, differences in local employment opportunities, and alternative programming in mental health or substance use. Correctional and adult education researchers need to design tighter studies with clear definitions of recidivism and program implementation, including intensity and dosage,

to make a strong and clear case for the relationship of basic correctional education participation with recidivism and learner outcomes.

Future research should also look at economic outcomes of participating adults after reentry, such as current employment and earnings outcomes; under WIOA legislation these outcomes were deemed unreliable in 2015-16 so were not included here. Also excluded from outcomes were unknown counts of reentering adults who participated in WIOA, Title II, community adult education programs. Future study of reentering adult learning outcomes would also be informative to practice and policy.

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Appendix

NRS Table 10 Outcomes by State

State	Year(s)*	3-Year AE Recidivism Rate* (%)	3-Year Recidivism Overall Incarcerated Comparison Rate* (%)	2015-16 EFL Completion Rate (%)	2015-16 HS Credential Completion Rate (%)	2015-16 Entering PSE Current Year Rate (%)
Alabama	FY2017 to FY2019	16	31	41	85	12
Arkansas	2015	56	57	41	56	1
Florida	2016, 2017, 2018	28	25	36	51	3
Georgia	FY2015-16	19	28	49	86	17
Indiana	2016, 2017, 2018	30	34	73	83	26
Kansas	PY2016	9	34 †	64	90	10
Louisiana	PY2015	25	33 †	58	90	18
Missouri	2015-16	41	43 †	58	86	2
Mississippi	FY 2015	29	33	Not reported	98	Not reported
North Dakota	3 years	17	39	41	99	69
New Mexico	2015-16	60	54	35	87	8
South Carolina	2016	16	21	43	86	6

Note: *Reported in 2018-19 state qualitative narrative; † Designates missing 2019 data supplied from Virginia recidivism comparison (2/2020).