Evaluating the Impact of Goodwill Education Initiatives Recidivism Intervention
Pre-Analysis Plan

Patrick S. Turner, University of Notre Dame, Wilson Sheehan Lab for Economic Opportunities (LEO)
Willam N. Evans, University of Notre Dame, Wilson Sheehan Lab for Economic Opportunities (LEO)

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Introduction

This plan outlines the hypotheses and empirical approach used to measure the impact of a new educational intervention at the Goodwill Excel Center in Indianapolis, IN aimed at improving outcomes for Excel Center students with prior involvement with the criminal justice system. This pre-analysis plan has been created prior to the collection of any outcome data.

Overview of the Study

Every year, over 600,000 incarcerated individuals are released from prison, while another 9 million cycle through local jails.[1] Of those released from prison, more than two-thirds are rearrested within 3 years of release and half are reincarcerated.[2] Individuals with low educational attainment comprise a large share of this population. A quarter of formerly incarcerated people hold no high school diploma and at least a third hold a GED, an alternative high school credential which many inmates earn while in prison.[3] We still know too little, however, about effective workforce or educational interventions that might help reduce recidivism. For example, research has shown that job placement programs alone have not been effective in reducing recidivism (Moses, 2012), though there has been success with "enhanced" transitional jobs programs that pair subsidized employment with supportive services (Barden, et al., 2018).

The Excel Center (TEC) is a high school for adults that previously dropped out of school. The Excel Center model supports adult learners to a traditional high school diploma with a number of key program features: TEC places students into an accelerated curriculum tailored to the individual; has flexible class schedules with 8-week terms; and provides non-academic support services like free on-site child care, life coaches, and transportation assistance. Life coaches serve as academic advisors to students and provide other counseling services to help students overcome non-academic barriers. The capstone of the curriculum is a senior seminar course near the end of their studies that focuses on life planning, job searching, and interview practice, among other topics.

TEC aims to increase persistence and graduation, and improve labor market outcomes for their students with prior involvement with the criminal justice system. To that end, they have created an intervention that provides coaching and a specialized senior seminar to target the additional barriers faced by students with a history of criminal justice system involvement. In addition to having a life coach, students will have access to individualized coaching delivered by coaches who themselves have their own history of criminal justice system involvement and have specialized knowledge of barrier removal and might better motivate the students. Once a student completes normal TEC coursework and receives this coaching, he/she will become academically eligible for a specialized senior seminar that mirrors the standard senior seminar course, but has a specific focus on barrier removal. If the student is eligible for expungement, they will also have access to funding to pay for expungement. Collectively, these services will be referred to as Justice Involved (JI) services.

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[1] https://aspe.hhs.gov/incarceration-reentry#:~:text=Each%20year%2C%20more%20than%20600%2C000,release%20and%20half%20are%20reincarcerated.

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[3] https://www.prisonpolicy.org/reports/education.html

Evaluation Design

Research Question

1. What is the effect of career and reintegration coaching for justice-involved students on persistence, graduation, post-secondary enrollment, recidivism, employment, and earnings?

Eligibility

All students at the participating TEC locations who have 50% or higher attendance in the present term (excluding those who are e-learn only or have already or are currently enrolled in the regular senior seminar) will be screened for having prior criminal justice system involvement. To screen for justice involvement, the research team will match TEC student rosters to administrative data from the Marion County Sheriff's Office on bookings and from the Indiana Office of Court Services on court cases.

Randomization

Students enroll and begin coursework at TEC during one of five 8-week terms, and students may begin during the middle of a term for shortened 4-week courses. Twice during each term, TEC staff will send LEO a list of all active TEC students who are academically eligible for JI services (see above). The set of newly eligible students (i.e., those not yet randomized) who are found to have a prior booking or conviction will be randomly assigned at a 1:1 ratio to either the treatment group who will be eligible to receive JI services or to the control group who will receive business-as-usual services already available at TEC (e.g., life coach, transportation assistance, etc.). Randomization will be stratified by campus.

The Intervention

The students who are assigned to the JI services treatment group will receive individualized mentoring from a coach with previous JI involvement. This coaching will focus on removing barriers to the student and encouraging persistence. They will also take a specialized one-term JI senior seminar that covers topics like support systems and services, health and wellness, employability skills and life skills that will prepare them to continue their education or gain meaningful employment and avoid recidivating. Students in the control group will continue to work with their life coach and coursework as normal at TEC, but not receive these extra recidivism-focused interventions. All mentoring/courses will be provided by TEC coaches, who are employed by Goodwill of Central and Southern Indiana and managed by the Excel Center staff.

Timeline

This study is set to launch in August 2022. The intervention for an individual student begins in the term in which they are screened for prior justice involvement and continues for the remainder of their time at TEC. Since students will become eligible to receive JI services at different times, they might not necessarily take the seminar with the same cohort with whom they entered the treatment. This intervention period will run for at least three years. We will track outcomes for each student 12, 24 and 36 months (roughly 5, 10, and 15 academic terms) following random assignment.

Data Sources

The following section summarizes the planned primary data sources for this project. Outcomes measures will be drawn from student records provided by Goodwill and from postsecondary education and labor market data compiled by Indiana's Management Performance Hub (MPH).

Goodwill Student Records

Class rosters of enrolled TEC students including their baseline information such as student demographics and entry and withdrawal dates for enrollment spells at TEC, will be collected from Goodwill Education Initiatives (GEI). They will also provide student data regarding course completion, interactions with life coaches and JI coaches, and graduation. A data sharing agreement (DSA) has already been fully executed between the researchers and GEI.

Indiana Office of Court Services & the Marion County Sheriff's Office

An existing partnership with both of these entities has yielded to us two datasets with all bookings and charge records for the state of Indiana since 2010. This data will be linked with student records from Goodwill to determine which students have a prior conviction and thus are eligible for randomization. A fully executed DSA exists between the researchers and

Marion County Sheriff's Office (MCSO) and a fully executed data use agreement (DUA) exists between the researchers and the Indiana Office of Court Services (IOCS). Each year of the study, we will receive updated datasets with new bookings and charge records to track those students in treatment and control to determine recidivism outcomes.

National Student Clearinghouse
We will link study participants to data from the National Student Clearinghouse (NSC) in order to track enrollment and graduation from postsecondary institutions.

Indiana Management Performance Hub
We will partner with the Indiana Management Performance Hub (MPH) to link students to state-level administrative data on public postsecondary enrollment and completion, and unemployment insurance wage records. MPH partners with state agencies, including the Indiana Commission for Higher Education (CHE) and the Indiana Department of Workforce Development (DWD), to create a linked, longitudinal dataset education and workforce dataset. Study participants will be linked to this dataset by MPH using information such as names, addresses, gender, student ID numbers, and dates of birth.

Experian Credit Records
We plan to measure the impact of JI services on subsequent financial well-being, as measured by credit scores and usage of debt. LEO has an existing relationship with Experian that we will use to link records in this study with Experian's credit data.

Primary Outcomes

We plan to study four broad domains: educational success, recidivism, employment and earnings, and financial well-being. Within each domain, we indicate a primary measure or measures, which will be the focus of our analysis, as well as how the measures will be constructed.

- Educational Success:
  - Primary measure: Excel Center graduation
    - Goodwill will maintain records tracking graduation for all students in the study and share this information with LEO. Measured each term relative to the term in which an individual was randomized in the study.
    - Hypothesis: The intervention is designed to increase graduation rates. We will test the null hypothesis that there is no effect of the intervention on graduation rates.
  - Alternative Measure: Excel Center Persistence
    - Goodwill will maintain records tracking enrollment spells for all students in the study and share this information with LEO. Persistence will be defined as either being currently enrolled in the Excel Center or having already graduated from the Excel Center. Measured each term relative to the term in which an individual was randomized in the study.
    - Hypothesis: The intervention is designed to increase persistence. We will test the null hypothesis that there is no effect of the intervention on persistence.
  - Alternative Measure: Post-secondary enrollment
    - Data will be collected from NSC and CHE to determine whether students enrolled in post-secondary institutions. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: It is unclear if the intervention will increase or decrease post-secondary enrollment. We will test the null hypothesis that there is no effect of the intervention on post-secondary enrollment.
  - Alternative Measure: Post-secondary graduation
    - Data will be collected from NSC and CHE to determine whether students graduated from post-secondary institutions. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: It is unclear if the intervention will increase or decrease post-secondary graduation. We will test the null hypothesis that there is no effect of the intervention on post-secondary graduation.
  - Alternative Measure: Certifications and college credits
    - CHE data from MPH tracks certification completion and completed credits by program of study. Assessed 12 months, 24 months, and 36 months after randomization. We will consider whether any certifications/credits were earned and look separately by programs of study.

- Hypothesis: It is unclear if the intervention will increase or decrease certification completion. We will test the null hypothesis that there is no effect of the intervention on certification completion.
- Recidivism:
  - Primary Measure: Criminal Charges
    - Researchers will use IOCS charge records to determine if the student recidivates. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: The intervention is designed to reduce criminal charges. We will test the null hypothesis that there is no effect of the intervention on criminal charges.
  - Alternative Measure: Criminal Bookings
    - Researchers will use MCSO bookings records to determine if the student recidivates. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: The intervention is designed to reduce criminal bookings. We will test the null hypothesis that there is no effect of the intervention on criminal bookings.
- Labor Market Success
  - Primary Measure: Average Quarterly Earnings
    - Researchers will use earnings information from unemployment insurance wage records accessed through MPH. Assessed 12 months, 24 months, and 36 months after randomization. Average quarterly earnings over a 4 quarter period (i.e.g, 0–3 quarters since random assignment, 4–7 quarters since random assignment, 8–11 quarters since random assignment). Because earnings data tend to be noisy, we will also construct an indicator for whether an individual earned $3,750 per quarter on average over the time period.
    - Hypothesis: The intervention is designed to increase earnings. We will test the null hypothesis that there is no effect of the intervention on earnings. Employment
  - Alternative Measure: Employment
    - Researchers will use earnings data from MPH. Employment is an indicator for whether an individual earned more than $0 in a quarter in Indiana. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: The intervention is designed to increase employment. We will test the null hypothesis that there is no effect of the intervention on employment.
- Financial well-being:
  - Primary Measure: Credit Score
    - Researchers will use credit information from Experian on an individual's Vantage 4.0 credit score (or similar score). Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: The intervention is designed to improve outcomes that are associated with higher credit scores. We will test the null hypothesis that there is no effect of the intervention on credit scores.
  - Alternative Measure: Total balance in collections
    - Researchers will use credit information from Experian. Assessed 12 months, 24 months, and 36 months after randomization.
    - Hypothesis: The intervention is designed to increase credit scores. We will test the null hypothesis that there is no effect of the intervention on credit scores.

Balance Checks

We will conduct balance checks using baseline data collected from GEI student records.

Subgroup Analysis

The research team is interested in determining whether the intervention is more effective for certain populations relative to others. The following are areas of interest for exploratory analysis of subgroups:

1. Race (e.g., Black students, white students)
2. Gender (e.g., male students, female students)
3. Race X Gender (e.g., Black male students, Black female students, white male students, white female students)
4. Expected time to graduation at baseline

Data Analysis

We will estimate intent-to-treat (ITT) treatment effects by OLS using the following regression

$$Y_i = \alpha + T_i\beta + X_i\gamma + \epsilon_i$$

Y_i is the outcome. T_i is an intent-to-treat dummy indicating the random assignment of person i. In the case of non-compliance, T_i takes on the value of the original random assignment. The vector X_i includes a set of person-level characteristics collected at baseline, campus fixed effects, term of randomization fixed effects, and pre-randomization measures of the outcome variable (when available). The coefficient on the treatment dummy β will give us the conditional difference in means between the treatment and control groups, the average treatment effect of being offered JI services. The full estimation sample will include about 360 individuals in the treatment group and 360 individuals in the control group.

Because some individuals assigned to the treatment group (those offered JI services) may not enroll, the research team will also estimate the effect of the intervention for those who participate, or the treatment-on-the-treated (TOT) effect. Treatment-on-the-treated (TOT) effects will be estimated via an instrumental variable (IV) model using random assignment as the instrument for participating in JI services.

Standard Errors—We will report heteroskedasticity-robust standard errors.

Multiple Hypothesis Testing—The research team has limited their primary outcomes to the four domains described above. Given the limited number of primary outcomes, we will report unadjusted *p*-values.

Power Calculations

We assume a post-randomization 80 percent power and a type-1 error rate of 5 percent. The intended sample size is 720 students divided evenly between treatment and control. Given this sample size, we would be able to detect a 0.209 standard deviation increase in an outcome. A primary outcome for the study is graduation. Roughly 30 percent of students at the Excel Center graduate. We are powered to detect a 9.9 pp increase in graduation (about 25 percent increase). Another primary outcome is recidivism. We anticipate roughly 35 percent of the control group will recidivate within 3 years of random assignment. Under these assumptions, we would be able to detect a 10.2 pp decrease in recidivism (about 23 percent).

References

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Moses, M. C. (2012). Ex-offender job placement programs do not reduce recidivism. Corrections Today, 74(4), 106-108.