A National Evaluation of the Effects of the Prison Industries Enhancement Certification Program (PIECP): Results of a Feasibility Study

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[1] Confidentiality was promised to many of these government and private personnel. Therefore, we have chosen to omit all names to protect those who participated in the interview processes.

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A National Evaluation of the Effects of the Prison Industries Enhancement Certification Program (PIECP): Results of a Feasibility Study

Background

For the past several years, the National Correctional Industries Association (NCIA) has been the recipient of a grant from the Bureau of Justice Assistance and responsible for monitoring the Prison Industry Enhancement Certification Program (PIECP). During the previous grant period, NCIA added a Research Division and developed a rigorous long term research plan to test the effects of the PIECP according to its legislative intent and related research questions.[2] This project is one small part of the overall plan.

The NCIA assembled a Research Advisory Board (RAB) to direct the research initiative. This board is comprised of ten individuals from diverse stakeholder groups, such as correctional administrators, political leaders, nonprofit offender job placement services, academics, BJA grant monitor, and PIECP administrators. The RAB provides guidance and support for the overall research plan.

PIECP has been operational since 1979, yet no evaluation has been conducted. One reason the program has continued to be funded is because it is hypothesized that

[2] This project addresses a small part of the 1st subsection of the guidelines. Dr. Petersik has submitted a proposal to examine the economic impact identified in subsection 2. Future NCIA research projects will address the additional subsections. Legislative intent taken from current guidelines: **(1) To provide a cost-efficient means to address inmate idleness and to provide inmates with work experience and training in marketable job skills.** (2) Through inmate wage deductions, to increase advantages to the public by providing the department of corrections with a means for collecting taxes and partially recovering inmate room and board cost, by providing crime victims with a greater opportunity to obtain compensation, as well as promoting inmate family support. (3) Through PIECP participation, to prevent unfair competition between prisoner-made goods and private sector goods. (4) To prevent the exploitation of prisoner labor.

joint venture industries between inmates/Department of Corrections and the private sector is a promising type of re-entry preparedness in the work experience area. However, there is little empirical data to support or refute this belief. This project will address this void in the literature.

The short term NCIA research plan included three phases. During the first phase of funding, an NCIA staff member assembled an annotated bibliography of relevant literature (Brodus, S. (2001) Research on Programs in Correctional Institutions. *The Justice Professional Vol. 14(2)*). The annotated bibliography collects the published works on what is known about programs in correctional institutions. In other words, it is a comprehensive literature collection used to guide the research agenda.

During the second phase, this feasibility study was conducted. The final phase will answer three research questions:

1. Does PIECP participation increase post release employment as compared to traditional industries (TI) work or non-work (NON)? Under what conditions and for which inmates is it more effective?

   The legislative intent states “to provide inmates with work experience and training in marketable job skills.” The NCIA defines marketable job skills as both hard and soft skills. Therefore, the outcome measure of whether an inmate has learned a marketable skill is post-release employment. In other words, did working in PIECP increase post-release employment over the two control groups?

2. Does PIECP participation reduce inmate disciplinary reports while incarcerated as compared to traditional industries work or non-work? Under what conditions and for which inmates is it more effective?

   The legislative intent states the program is designed "to address inmate idleness." One desired outcome of reduced inmate idleness is improving inmate behavior. One measure of improved behavior is a reduction in disciplinary reports (DRs).

3. Does PIECP participation reduce recidivism as compared to traditional industries work or non-work? Under what conditions and for which inmates is it more effective?

   The legislative intent does not address recidivism. However, unemployment is directly linked and a predictor of criminal activity (Saylor & Gaes, 1997). And, the U.S. Congress conceded as early as 1930 that the hope for rehabilitation of inmates is found in learning the soft and hard skills of work (*Congressional Record,* Report No. 529. 71st Congress., 2d session., April 21, 1930. as cited in Saylor & Gaes, 1997). Additionally, this research question was chosen because the RAB wanted to better understand the rehabilitative effects of PIECP. An ultimate desire of those involved in criminal justice is that the offending stop. If PIECP offers that effect on all or a segment of its participants, we want to know.

Purpose of the Feasibility Study

The purpose of a feasibility study is to determine if the desired study can be accomplished. Discussions among the RAB raised concerns about the feasibility of

conducting a useful national quantitative study. Therefore, this feasibility study was conducted to determine whether a standard assessment of the PIECP in up to six states could be completed, under what conditions, and with what results. Specifically, the feasibility study clarified the following four issues, (1) sufficiency of the data, (2) adequacy of control groups, (3) steps to obtain all required data, and (4) comparability across states.

The result of a feasibility study identifies limitations, solidifies the research design, and discusses the experiences that lead to the final research design. The products derived from a feasibility study should include, at a minimum, an outline of the documents or forms to be used in the full study (i.e., interview protocol, survey instruments, data collection forms). The forms or outlines to be used in the full study are appended to this report. The following report outlines the research design of the full study, clarifies the four issues mentioned previously, discusses unanticipated issues discovered during the feasibility, and identifies the limitations.

Full Study Design

The research design is a quasi-experimental design using matched samples[3] with a test group of PIECP participants and two control groups of traditional industries participants (TI) and non- or reluctant participants (NON), while controlling for other characteristics that prior research has indicated may impact the outcomes (i.e., individual effects, family effects). The research proposes to answer three research questions with the following hypotheses:

[3] This design is found extensively in the literature over a period of years. (See, for example, Petersilia & Turner 1986, Turner & Smith, 1994.)

1. Does PIECP participation increase post release employment as compared to traditional industries work or non-work? Under what conditions and for which inmates is it more effective?

   Hypothesis 1: PIECP participation increases post release employment significantly more than TI and NON. (The difference between the PIECP and TI experiences, which includes the amount of pay, may be quite small and found only with sufficient sample sizes (Saylor & Gaes, 1997). However, the difference between PIECP and NON includes pay, soft, and hard skills and is more easily detectable.

   Hypothesis 2: Inmates who have positive individual (i.e., prior work experience, educational skills) and family (i.e., family visits) level variables (based on a scale to be developed) will have a greater increase in post release employment than those with overall negative impact in the domains.

2. Does PIECP participation decrease disciplinary reports while incarcerated as compared to traditional industries work or non-work? Under what conditions and for which inmates is it more effective?

   Hypothesis 1: PIECP participation reduces major disciplinary reports significantly more than TI and NON. (The number (or lack thereof) of disciplinary reports is a criteria for consideration in the higher paid positions, which includes by definition, PIECP and the more desirable TI positions. There will be a small difference in the number of reports because of the requirement that inmates be disciplinary free for six months prior to employment in PIECP. Those on the waiting list are disciplinary free to remain eligible.)

Hypothesis 2: Inmates who have positive individual (i.e., prior work experience, educational skills) and family (i.e., family visits) level variables (based on a scale to be developed) will have fewer disciplinary reports than those with overall negative impacts of the domains.

3. Does PIECP participation reduce recidivism as compared to traditional industries work or non-work? Under what conditions and for which inmates is it more effective?

   Hypothesis 1: PIECP participation reduces recidivism significantly more than TI and NON.

   Hypothesis 2: : Inmates who have positive individual (i.e., prior work experience, educational skills) and family (i.e., family visits) level variables (based on a scale to be developed) will have greater reduction than those with overall negative impacts of the domains.

Data collection

The research design and research questions require a matched data set (n=2400) of PIECP (N=800), TI (n=800), and NON (n=800) inmates. Prior research suggests a host of issues may impact "success" in the community upon release. (See, for example, Brodus 2001 annotated bibliography). Therefore, based on the literature, the researchers identified a list of variables believed to impact success and will collect them in the full study. (See Appendix A: Variables List). Statistical procedures will be used to control for the effects of these variables. The dataset includes variables from two domains.

- Individual level variables: demographic, education, employment, criminal history, and mental health variables (See Appendix A: Variable List)
- Family level variables (See Appendix A: Variable List)

These data will be collected from site visits, and the automated and hard copy data files in each of the five states for each of the test and control groups.

A random sample of matched sets (n=85) will be selected from each state (n=255/ state). Manual data collection will be conducted from the hard copy files (n=1275). (If time permits, additional files will be reviewed). The purpose of the manual data collection is to complete missing data and to gather those variables that are not available in the automated systems on a subset of the total sample. Additionally, qualitative data will be taken from at least two matched sets (one each, PIECP, TI & NON) that describe how the set compares and contrasts.

Sampling[4]

A purposive cluster sampling strategy[5] was used for site selection. This strategy ensures a sufficiently large sample by selecting states having large numbers of PIECP workers. The selection process included all major U.S. geographic regions and represented rural vs. urban populations. Additionally, each state had PIECP certification prior to 1996. This strategy resulted in a selection of five states; Iowa, Texas, Washington, South Carolina, and Florida.

[4] The sampling outlined is the best available method given the time and budget constraints. See control groups defined for a full discussion of the best sampling design.

[5] A purposive sample is one selected to meet a specific purpose. It is not random. The purpose for this project was to select sites in various geographic regions that included both rural and urban areas. A cluster sample is one where a region is selected (i.e., state) and all subjects within that region are included in the study. This ensures sufficient numbers without the extra travel costs between sites.

The sample selection will include all inmates who worked in PIECP for at least six months and were released between January 1996 and June 2001,[6] which permits at least one-year follow-up. Approximately 800 inmates meet these criteria in the five states chosen for the study. However, each state's PIECP workers will be matched with NON and TI workers within that state. The 800 inmates will be matched to 800 TI and 800 NON workers using six matching criteria (exact matches on *race*: Minority and White; *gender*: male and female; *crime type*: person and all other; and category matches on *age*: 5 criteria categories; *time served:* 7 criteria categories; and *number of disciplinary reports:* 10 criteria categories).[7]

The term, criteria category, means that the categories are created and defined by the criteria for that grouping. For example, inmates age 26 will be matched with inmates 3 years older or 3 years younger than the PIECP subject, while inmates 34 will be matched with inmates 5 years older or younger. A 26-year-old subject will be matched to someone between the ages of 23 and 29, while a 34-year-old inmate will be matched with inmates between the ages of 29 and 39. A simpler technique of grouping the individuals into three or four categories and matching by category is frequently used. However, this may result in a person 35 being matched to a person 27 when there is a person 36 that is a closer match.

[6] Sample selection was modified during the feasibility study. Originally, as discussed in the RAB, the researchers requested a listing of all PIECP workers who had been released in 2000 and the first half of 2001. The sample sizes were too small. It was determined that we would require a considerably longer period of time. Therefore, we requested all PIECP workers who had been released between January 1996 and June 2001.

[7] Female category criteria are different than male criteria because of the limited number of females in the system in the NON and TI categories compared to the high percentage of females in PIECP. This disproportionate number of females working in PIECP to total females incarcerated compared males working in PIECP to the total males incarcerated is similar in all the states.

Following a variation of the propensity score process (Rosenbaum and Rubin, 1985 as cited in Saylor & Gaes 1997), a multinomial regression indicated that some categories of age, time served, and DRs predicted the category membership (PIECP, TI, NON). These results were used to guide matching criteria categories.

The matching process began by dividing the three groups of PIECP, TI, and NON by the strata into a grid of cells (8 stationary strata and an undetermined number of criteria strata because each age, time served and discipline ranges by a plus or minus score). Next, for each cell containing a PIECP participant, one TI and one NON participant was randomly selected from the inmates in that cell. (Any cell void of a PIECP participant will not be represented in the study). A test of these procedures in SC (n=409 PIECP) has indicated that 394 of the PIECP participants can be matched (See Table 1: Summary of Matching Variables for Females). This process will be used in each of the states.

Table 1 identifies how the female[8] PIECP participants compare to the NON and TI control groups. Additionally, there is a group of inmates who were not selected from the possible pool of controls. There are statistical differences between the matched groups on time served. This was expected for the females because of the limited selection pool. These differences will be controlled statistically in the final analysis.

Definitions of test and control groups

PIECP – The test group includes those inmates who participated in PIECP. The PIECP includes a private sector company that hires inmates to work for them at the

[8] Females were selected for this sample table because their limited numbers make them the most difficult to match. Only 11 out of 131 females could not be matched. Preliminary results of the males indicated only 4 out of 278 could not be matched.

Table 1: Summary of Matching Variables for Females

Matching Variable	PIECP		TI Matches		NON Matches		NON Not chosen as matches	
Age	**Average (n)**		**Average (n)**		**Average (n)**		**Average (n)**	
	32.6	131	31.7	120	30.5*	124	30.2	535
Race	**Number**		**Number**		**Number**		**Number (%)**	
Minority	93	71%	89	74.2%	93	75%	314	58.7%
White	38	29%	31	25.8%	31	25%	221	41.3%
Time Served	**Average (n)**		**Average (n)**		**Average (n)**		**Average (n)**	
	1369.2	131	1254.0	120	626.2*	124	271.7	535
Crime Type	**Number**		**Number**		**Number**		**Number**	
Person	34	26.0%	32	26.7%	30	24.2%	67	12.5%
All others	97	74.0%	88	73.3%	94	75.8%	468	87.5%
Disciplinary Reports	**Average (n)**		**Average (n)**		**Average (n)**		**Average (n)**	
	3.0	131	2.6	120	2.7	124	.9	535

*statistically significant (t<.05) between PIECP & NON workers

prevailing wage (e.g., minimum wage or above). The work ranges from labor intensive routine tasks (i.e., assembly line) to highly skilled craftsmanship (i.e., sheet metal welding). The causal characteristic of PIECP is (at a minimum[9]) three-fold. First, the inmate who works in PIECP for at least six months will have experienced the soft skills (i.e., going to work regularly, getting to work on time, positive attitude at work) and hard skills (i.e., learning a trade or skill, such as welding). Additionally, it includes the benefits of reduced idleness and prevailing wage (minimum wage or higher).

[9] This is a simplistic characterization of PIECP. Future studies should include data collection and analysis of the more complex characteristics. For example, PIECP may include an array of soft skills, such as greater urgency in work, less wasting time, and increased customer responsiveness. Additionally, PIECP may include less tolerance of error, higher quality craftsmanship, and better raw material controls. Finally, free world employers may perceive PIECP employment to be prior employment.

TI – Traditional Industries (TI) is divided into two categories. The first is similar to PIECP in terms of work, except the inmate is not paid a prevailing wage. For example, he or she may be paid $.25/hour or nothing. Traditional Industries include various types of work (i.e., sewing prison uniforms, making mattresses) that assists in the self-sufficiency of the operation of the prison or is sold within the state to government entities. The second type of work is classified as institutional maintenance (i.e., semi-skilled maintenance, office support staff).

This control group isolates part of the PIECP effect. TI includes learning the soft skills and hard skills (although *some* skills are substantially less helpful for employment upon release), as well as some of the benefits. In fact, the main difference between PIECP and TI is the substantial amount of money and all the benefits that follow (i.e., the ability to pay child support and restitution prior to release). An inmate on the waiting list for a PIECP job may be working in a TI, learning similar employment soft and hard skills. When comparing the outcomes of those in PIECP to those in TI, there may not be a detectable difference if the rehabilitating factor is the soft and hard skills.

NON – NON is divided into two categories; 1) those who choose not to work while in prison, and 2) those who are in mandatory work states that choose the jobs with the least requirement of effort and time (i.e., 2 hours of mopping in the dorm area). This means the inmate must be working or attending school. Inmates who are unable to work, due to physical, mental, or behavioral limitations are not included in the NON group (i.e., gang segregation inmates are not eligible for participation in programming).

This control group isolates most of the PIECP effects. The hard and soft skills learned in this situation are limited. Some of the inmates do earn a minimal wage (i.e., $.25 /hour).

Each of these groups (PIECP, TI, NON) has some commonalties along with their differences, which is expected to blur or weaken the actual statistical differences. First, there are confounding issues when comparing the differences between them. The criteria for selection into the PIECP sample group include those who were in PIECP for six months or longer. Inmates working in PIECP for less than six months may have acquired some of the soft and hard skills, thereby masking the differences between the groups of PIECP, TI, and NON. Additionally, some inmates participate in vocational education programs learning the hard skills and some soft skills. This will mask the differences between the groups also. Second, we did not identify or measure the differentiating variables, which may result in PIECP, TI, and NON being somewhat equivalent. Therefore, we must expect small differences in this early effort of PIECP evaluation.

Projected Analysis Techniques

Post release employment (PRE) will be measured using three outcomes; 1) number of weeks employed in each quarter during the follow-up period (from release to June 2002), 2) amount of money earned in each quarter during the follow-up period, and 3) job category. The research question requires a comparison of PIECP to TI and PIECP to NON to determine if participation in PIECP results in increased PRE. Certainly, many other variables might impact the success of an ex-offender in PRE. Therefore, the variables in the two domains (individual and family) will be included in the

analysis (see hypothesis 1). Additionally, models will be developed to determine the predictors of the levels of success (see hypothesis 2). Multiple and logistic regression will be used, depending on the level of measurement of the dependent variable.

Disciplinary reports may be measured in several ways, including number/rate of DRs during the incarceration, behavior exhibited, discipline assigned (i.e., loss of good time), and date patterns. Analysis may include analysis at the individual level and at the aggregate level. Specifically, a single subject design, also known as n of 1 statistics, may be used. This will compare the pattern of DRs before the six months grace period one must be DR free prior to PIECP employment to post PIECP employment (i.e., DR DR DR $X_{6 \text{ mos. prior to PIECP employment}}$ DR DR) as compared to TI and NON individual performance. Second, the average number of DRs for each group will be compared using t tests or ANOVA.

Recidivism will be measured using three outcomes during the follow-up period (from release to June 2002); 1) arrests, 2) convictions, and 3) re-incarceration. The research question requires a comparison of PIECP to TI and PIECP to NON to determine if participation in PIECP results in decreased recidivism. Certainly, similar to PRE, many other variables might impact the success of an ex-offender in recidivism. Therefore, the variables in the two domains (individual and family) will be included in this analysis also (see hypothesis 1). Additionally, models will be developed to determine the predictors of the levels of success (see hypothesis 2). Multiple and logistic regression will be used, depending on the level of measurement of the dependent variable. Finally, hazard models may be appropriate to estimate the time to failure upon release.

The complexities of the concepts being examined in this project necessitate a variety of perspectives in analysis. Therefore, this project will examine each research question from multiple perspectives, as appropriate.

Summary

Up to this point, this report has provided a background and purpose of the feasibility study, and outlined the full study design, which is a result of the feasibility study. The remainder of this report will address the findings of the feasibility study. In other words, how did we arrive at the full study design? This section will first describe the methods used in the feasibility study, then discuss the four issues identified prior to the start of the feasibility study. The next section will discuss unanticipated issues discovered during the feasibility study. The limitations to the full study are discussed as they are identified throughout the text.

Methods of the Feasibility Study

The feasibility study was exploratory by design. The research team spent considerable time talking with various personnel in each state to determine the processes used and the state of the data. Many of the original interviews were open-ended and unstructured in the initial sites and became much more structured as the process progressed.

The data collection techniques used in the feasibility study included interviews with various individuals in each state, site visits, and analysis of automated data systems and manual files (See Table 2: Data Collection Techniques).

Table 2: Data Collection Techniques

Interviews

Interviews were conducted with the various state and contractual employees. This included the following:

- The research division was consulted on automated data availability and manual file data.
- The director of prison industries was consulted concerning location and general information about PIECP, TI, and NON programming and criteria.
- The Warden or his or her assignee was interviewed during site visit tours. (See Appendix B: Interview Form – Site Visit) Additionally, various individuals throughout the institutions gave their perspectives. For example, the head nurse in the medical unit might provide the number of inmates on psychotropic medications in that facility.
- The researchers or heads of probation, parole, or community services were interviewed to determine the availability and adequacy of outcome data.

Site visits

Site visits were conducted to determine the comparability of the institutions and to obtain multidisciplinary input for the interview protocol developed (i.e., medical, education, industry). The site visits included the following:

- Tour of the full facility (each facility from which subjects will be selected)
- Observational data collection (See Appendix B: Interview form – Site Visit)
- Interviews (see above) with the warden and/or tour guide and additional input from other personnel in the context of the tour

Data systems and manual files

The automated and manual file data in the state's systems were analyzed to determine the completeness of the data. The following steps were taken to determine if the data identified by the Corrections personnel were complete:

- A list of desirable variables was created.
- Corrections research personnel identified the variables available in the automated data systems. In some states, the research team physically examined the computer dataset (SC, TX). In other states, partial datasets were provided (WA, IA). Finally, in other states, a list of inmates with matching criteria was submitted (SC, TX, FL)
- Researchers reviewed 149 total hard-copy files. During this review, the researchers recorded whether the variable was found in the file and noted the title of the form(s) on which it was located. This will enable data collection to proceed more quickly in the full study.

Results of the Feasibility Study

Is the project feasible?

Yes, although there are issues that pose challenges and limitations, some of which are still in the process of being resolved, the project is feasible. Data and procedures appear to be available permitting rigorous examination of some of the effects of PIECP with all the limitations included in this report.

There are sufficient data available from five states, providing a sample of approximately 800 individuals out of approximately 20,000 that have participated nationally since PIECP's inception. Each sample subject participated in PIECP for at least six months during their incarceration[10] and was released from prison between January 1996 and June 2001. The project includes males and females. The states selected include diverse geographic (i.e., west, east, south, north) and population regions (e.g., urban and rural states).

Sufficiency of the data

What data do we want?

A list of variables was developed from the predominantly anecdotal literature[11] and in consultation with the RAB (See Appendix A: Variable List). The list of variables was compared to the states' automated data system and to the hard-copy files. Variables that were not available consistently across the five states were deleted from

[10] The PIECP experience usually occurs near the end of the sentence. However, that is not always the case. One state sends all individuals to a pre-release center for a period of time prior to release.
[11] A search of the literature was conducted. A list of variables was created from those discussed in the literature. For example, age was discussed/used by the following authors: DeBor & Lebolt 1983, DeBor 1984, Flanagan, Thornberry, Maguire, McGarrell 1988, DeRosia 1998, Baro 1999, Gainey, Payne, & O'Toole 2000, Soderstrom, Minor, Castellano & Adams 2001, Johnson & Grant 2001.

the list or changed to a more generic variable. For example, most DOCs do not maintain or release juvenile data. However, most files have some indication of whether the inmate has a juvenile history. Therefore, several juvenile variables were removed from the list and a simple yes or no variable was created to determine if the youth had prior juvenile contact with the criminal justice system (See Appendix A: Variable List).

Do the desired data exist?

The data reviewed on-site and the sample datasets received to date indicate that the desired data do exist. However, automated data are maintained in two formats. First, the online data are almost immediately accessible. Second, archived data require substantial data processing time by the states. Understandably, the states were not willing to invest the money during these tight budget times unless assured the study would be conducted and each would be included. Therefore, some states have submitted the online portion of the dataset while others have submitted the data necessary to do the sample selections in each state. For example, Iowa and Washington have provided a partial sample dataset, which include important variables from the desired variable list.

Missing data is always a concern in criminal justice research. The automated data provided to date have an average of less than 20 missing out of more than 60 data elements per person. Based on our review of the automated data systems, prior DOC research, and conversations with researchers in the other states, a similar missing data percentage is anticipated. These automated datasets will be supplemented with hard copy file reviews to decrease the problem of missing values.

In what format are the data?

The list of variables indicates those that are routinely available in the automated data systems and those that will require manual collection. Most of the automated variables also were found in manual format in the sample of case files reviewed. Each subject's missing automated data will be printed on a data collection form and collected from the hard copy file if available. This will minimize missing data.

Can we have access to it?

Yes, permission can be obtained, and in most cases verbal or written agreements are in place. We would be remiss not to mention the "politics" of permission. Many things could occur that would change the permission status. For example, September 11 occurred during the feasibility study. An already downward economy plummeted. Budget cuts were increased in all states. This study relies on the data personnel to extract the data and the file personnel to assist in file location. Reduced budgets mean the research team is an increased burden on each department. There is a point where it could become impossible to continue. Additionally, states will have elections this fall. Changes in the administrations may change priorities within the state.

Each state requires different procedures to access their data, varying from basic privacy assurance to complete research proposal formats. Additionally, Institutional Review Board (IRB) approval will be sought based on the Privacy Certificate (Appendix C: Privacy Certificate) and Informed Consent (Appendix D: Informed Consent) attached.

The importance of working with the states is not underestimated. The research personnel in each state know their data. Therefore, we will convene a one-day work group at the beginning of the full study grant period and assess the need for an additional meeting at the end to provide the context for the data results. Table 3 outlines the status of research agreements.

Table 3: Research / Data Agreements

State	DOC	Probation & Parole	Law Enforcement Departments (Recidivism)	Employment Security Commission (post-employment)
IA	N/A	N/A (Included in DOC)	Access through DOC	Contact made through DOC
FL	*Yes, signed; must up-date (full)	N/A (Included in DOC)	*Have agreement prepared	*Have agreement prepared
SC	*Yes, signed; must up-date (full)	Meeting held; need formal agreement letter	Have verbal agreement	In Probation, Parole & Pardon files
TX	N/A	Included in DOC meeting	Included in DOC meeting (Public Safety)	Have verbal discussions through DOC
WA	1 signed (feas) 1 in progress (full)	Included in DOC	Pending	Contact, but personnel change

*Have written agreement forms.

What is the state of parole data and agreements to cooperate?

The Law Enforcement Departments (LED) will provide criminal history information; arrest, conviction, incarceration in prison. Most do not include jail time. The DOC's can produce the conditions under which one is released (i.e., max-out, probation, parole).

Parole departments were eager to participate in the study. Originally, we were hopeful to get multiple measures of "success" or "failure" (i.e., violations of parole, technical violations, or other indicators of problems), in addition to the traditional arrest,

conviction, and incarceration, and follow-up family variables. However, some states have reduced parole and the mandatory sentencing laws have significantly reduced the number of inmates released on parole in most states. Therefore, the number of inmates released without any follow-up is substantial. It is probably not feasible to collect these measures of success on such a few parolees and certainly is not feasible within our budget to locate the sample of inmates to collect data from them. Therefore, the data requested of parole divisions will be minimal if at all.

Adequacy of control groups

Control groups defined

Random assignment of equivalent participants to each of the test and control groups is the only way to ensure the differences between groups are a result of the "treatment." That is not possible under the current design of PIECP. Private sector business partners exercise the right to interview and hire their employees. To randomly assign prisoners to PIECP work, traditional industries work, or non-work would deny the private sector partners that right.

Another equally generalizable method of sample selection would be to randomly select PIECP participants from a nationwide list of all PIECP program participants. A stratified random sample of IT and NON workers would then be selected. The strata used to ensure that TI and NON were similar to the PIECP, would include variables that relate to being selected to PIECP, such as, prior work experience. Unfortunately, the budget, time, and available data preclude this option.

The next best option for control groups is to identify all prisoners that are eligible for PIECP and use the individuals (or a random sample of these individuals) on the

waiting list as a control group. Practically speaking, the vast majority of facilities do not maintain waiting lists. Additionally, the eligibility criteria are not strictly followed. For example, in one state the criteria lists that no “lifers” are to be employed in a PIECP position. However, there were “lifers” employed at the time of the site visit.

Another criterion is that an individual must be placed in a facility housing a PIECP program. This excludes the generalizablility of the results to individuals that would have qualified if bed space at the PIECP facility had been available. Furthermore, some facilities have all three groups, PIECP, TI and NON, while other facilities have only one or two of the groups. For example, Texas has only one PIECP facility at the time of this writing. That facility does not have TI workers. If we are limited to select members of the control groups only from inmates who are placed at a PIECP facility, we would not have a TI control group. However, placement in facilities is based on many factors, but practically speaking, it is based on an open and available bed. This system limitation does not imply that an inmate is not eligible for PIECP. Thus, matching offenders from various facilities and controlling for facility differences is necessary.

The best available method was to “match” the PIECP participants on each of six criteria to other inmates by dividing the groups into strata and then randomly selecting two control group individuals from each cell holding a PIECP participant. This will result in the ability to generalize the findings of the research to those inmates most like the inmates chosen by the PIECP industry partners. In other words, this study will indicate the potential impact of PIECP on inmates that would be most likely hired by PIECP industries based on a summary of industries’ prior choices.

PIECP, TI and NON subjects should be selected from the same facility to avoid bias. That was not possible. Based on site visits, security level did not sufficiently divide the sites across and between states. The first state site visit clearly identified the need to develop measurable environmental variables to be used to control for the differences in facilities. The first minimum security facility was similar to a college campus where inmates had considerable autonomy (i.e., alarm clocks and were expected to be self-sufficient). Free time might be spent sitting on a park bench over-looking the surrounding fields with minimal obstruction of view (one small fence in a distance). The second minimum security facility was fully fenced, had structured line movements, and had the feel of considerable control.

Site visits were made in four of the five states. Following the feasibility model, a data collection instrument outline was developed containing the necessary variables to capture the differences in institutions (See Appendix E: Environmental Factors Outline). All sites from which the samples are taken will be toured and the surveys completed.

There exists some concern that the samples range from 1996 to 2001, yet the site data collection occurs in 2002. During the feasibility study, we asked our tour guide and others in the facility how things changed over the time frame. This would continue to be necessary. While most of the changes were modest, a few were major (i.e., triple rows of razor wire and double fencing added to a single fenced yard).

Focus groups with inmates would be a positive triangulation for these data. Unfortunately, this would cost an additional day per facility, thereby reducing the sample size by over 100 (estimating approximately 20 facilities). This would not be a good use of our limited funds.

Generalizability is limited by this research design. The first two options of sample selection allow generalizability of the results to all PIECP workers and the respective control groups. However, using a purposive cluster sample of states and a matched sample for the test and control groups results in less than perfect confidence in the generalizability to the national PIECP program. In the strictest definition of research methods, we are able to generalize only to the five states involved and then only to the participants in the sample. However, realistically, the generalizability falls somewhere between these two opposites. This study does inform the stakeholders of the impacts of PIECP on a much larger scale than is currently known.

Eligibility criteria

Ideally, stratification on the PIECP eligibility criteria and the industry's final selection criteria would be used to develop the matches. However, the eligibility criteria vary by state, institution, and industry. While there are general criteria that seem to fit MOST of the sites and industries, it is not consistent. Appendix F (Prison and Industry Factors) depicts the general criteria with the understanding that there are exceptions to almost all of the elements. The following is a general summary of the DOC criteria:

- Disciplinary report free for 6 months
- Minimum and medium security levels
- Enrolled in a high school or GED program or completion
- Sentence of at least 6 months remaining
- No major medical problems prohibiting work

When interviewing in the first state we qualitatively asked the question of how do you hire your workers and we took qualitative notes. As we progressed through the

various states we were able to better describe the general criteria used and could ask more specific questions. As the image of the criteria began to appear, it was apparent that we needed to develop a set of measurable criteria for each site and control for these differences in the analysis. The following is a general summary of the industry criteria:

- Submit an application and be interviewed
- Prefer prior work experience
- "Fit" with the current work force

The criteria vary across sites. For example, screening tests are conducted to determine if the inmate possesses or can develop necessary skills. Others rely on vocational education teacher recommendations. Some employers take into account other inmate recommendations, while others take a VERY cautious view of these recommendations. Some employers seek correctional staff and education personnel recommendations, while others prefer not to have this input. One employer maintains a file of applications in date order and takes the next applicant when a vacancy occurs. Therefore, a survey of industries and DOC facilities will be developed and administered to measure differences in eligibility criteria (See Appendix G: Employment Factors Outline).

Stratification

As mentioned previously, few studies are beyond the descriptive level. For example, California asked similar research questions but did not compare the participants from one program to another (Mitchell, Berecochea, Mehring, Catlin, & Colen, 2001). Saylor and Gaes (1997) did go beyond the descriptive level, using a

propensity score matched sample design. This process required an exact match based on sex and race because these variables are found to be predictors of recidivism (Gendreau, Little, & Goggin, 1996). Age and time served were found to be important in dividing the test subjects from the control groups (Saylor & Gaes, 1997). The number of disciplinary reports during current term was used in the matching criteria because DRs are one of the consistent criteria for inmates. Most states require the inmate to be DR free for six months prior to employment. This encourages positive in prison behavior for not only PIECP workers, but all inmates waiting for a job.

While security level appears to be a meaningful matching variable, the field is updated each time a change occurs. Therefore, it was not a useful variable for matching purposes. However, it will indicate the security level of an inmate at the time of release. There is a difference between a person released into society from maximum security compared to those released from a medium or minimum security level facility.

Steps to obtain all required data

How were the states chosen?

The RAB agreed to send a survey to all PIECP certificate holders asking about the availability of data in their respective states. A survey was constructed by Dr. Patrick Henry and faxed to the certificate holders. The findings of this survey indicated a willingness of most states to participate and belief that sufficient data exist.

The next step was to identify other relevant factors and rank the states accordingly. The first factor discussed was the number of workers, followed by the certification date. This was important to ensure sufficient numbers of inmates that have worked in PIECP and been released. Table 4 depicts the rankings of the states based

on the number of PIECP workers reported during the first quarter of 2000.[12] The next factor for selection purposes was to ensure the sample was taken from various parts of the country (i.e., South, East, West, and Central) and represented both rural and urban states.

Table 4: State Ranking for Selection

State	# of PIECP workers*	Cert. Before 96	Region	Rural vs. Urban
South Carolina	523	1987	East	Rural
California	395	1985	West	Urban
Utah	291	1985	West	Rural
Washington	291	1987	NW	Rural
Iowa	279	1989	Central	Rural
Kansas	265	1986	Central	Rural
Minnesota	267	1985	Central	Rural
Texas	224	1984	South	Urban
Tennessee	541	1991	Central	Rural
Wisconsin	23 (currently)	1993	Central	Rural
Florida	216	1995	South	Urban

*First quarter 2000

Six states were selected. The final five states are highlighted in Table 4. The sixth state, California was dropped from the feasibility study as a result of budget cuts and lack of available research staff in that state. The five states, South Carolina, Washington, Iowa, Texas, and Florida, represent a wide variety of states based on our selection factors.

Comparability across states

Many of the data elements are easily defined to be sufficiently similar across sites (i.e., age at entrance is either calculated in whole years or the date of birth and the date of entry are supplied and can be calculated easily to get the age at entrance). However, some variables are proxies for our list and will require a data definition more

[12] These numbers count people, not numbers of positions. Therefore, if there is significant turnover in

global. For example, the variable of interest is number of children. One state collects the number of dependents, while others collect the number of children. These types of situations will require scrutiny as we combine the various state data. It is possible that additional variables will be excluded from the final analysis if sufficiently general descriptions are not reasonable or good measures.

While the research team reviewed each variable with each state during the site visits, it is inevitable that we did not capture the full contextual meaning of all of them in such a short time frame. For this reason, we will re-examine each variable and the potential values during the data collection process to ensure across jurisdiction definitions. In the feasibility study, variables that were identified as either unavailable or irreparably different across states were dropped from the analysis. For example, some states could collect jail time while others did not. Therefore, jail time had to be removed from the list of potential recidivism variables.

Test group differences between the states

There are differences between the states in the offenders sought by PIECP. For example, some prisons reserve PIECP jobs for individuals serving the final 6 months of their sentence to prepare the soon-to-be-released inmate for re-entry. Other states accommodate industries that search for long-term employees. These industries are frequently training-intensive jobs and are located in facilities where inmates have a minimum of two year sentences, which gives the industry time to train the inmate and then keep the inmate for a substantial period of time to reap the reward of the training dollars spent.

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jobs, these numbers may appear inflated.

What's next?

The following steps outline the full study activities. They are incorporated into the Task Management Plan, which provides a projected timeline and associated duties (See Appendix H: Task Management Plan).

1. Begin Institutional Review Board approval process
2. Finish pulling samples, contact ESCs, LEDs with samples lists
3. Get full data files from DOC, ESC, LED
4. Create data collection forms (automated vs hard copy)
5. State site visits – collect site variables & collect data from hard copy files
6. Analyze data
7. Write report