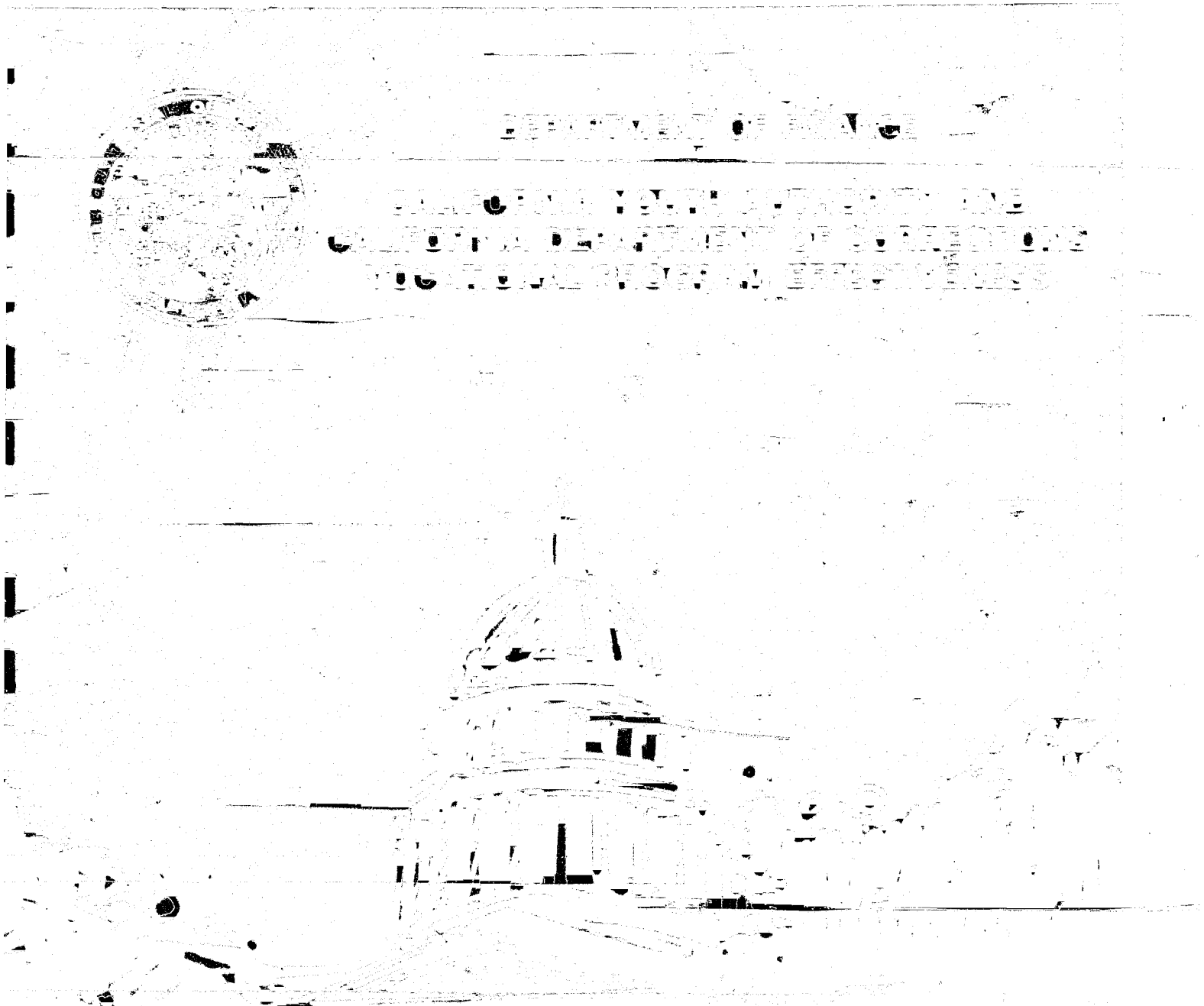

CALIFORNIA YOUTH AUTHORITY
AND
CALIFORNIA DEPARTMENT OF CORRECTIONS

VOCATIONAL PROGRAM EFFECTIVENESS

PREPARED BY

STATE OF CALIFORNIA
DEPARTMENT OF FINANCE
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PREFACE

This study was initiated by the Department of Finance at the request of the Health and Welfare Agency, and was carried out between February and July of 1977. Its primary purpose is to establish standards by which courses in vocational education can be evaluated; and to identify programs which fail to meet those standards.

During the course of the study the Department of Corrections and the California Youth Authority extended to the authors the finest kind of cooperation. We are grateful for the help of A. Dal Favero, William A. Kempf, and Trumbull W. Kelly, who were our primary contacts with the departments. Many supervisors of education and vocational education expended several days each, taking us to classes in the seven prisons and two Youth Authority facilities which were the main focus of the study. Teachers were most gracious in responding to detailed questions during interviews which despite our best efforts tended to exceed an hour; and students were not only cooperative in thoughtfully responding to our questionnaires, but also volunteering their views and experiences on an informal basis. The Inmate Education Committee at the California Men's Colony conducted a special survey for us, and we appreciate that effort.

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SUMMARY

Vocational training programs in California's correctional institutions are not highly effective. Immediately after release, 31 percent of California Department of Corrections (CDC) trainees are working in their trade of training; and by six months the figures are 22 percent for CDC and 12 percent for the California Youth Authority (CYA). Considering these placement rates, wages in the grade, and expected earnings if students had no training, many CDC classes are not cost beneficial. CYA classes are more cost beneficial because the classes are very short: this results in a greater annual throughput of students and relatively more placements, despite the lower rate of placement. In addition, CYA wards who do not get training have a lower expected earnings than their CDC counterparts; so each CYA placement represents a larger benefit.

The underlying reason for the low effectiveness of these vocational training systems appears to be the multiple handicaps of the students themselves. Inmates have problems--economic, academic, social, attitudinal, and penal--which the best systems of vocational training would have difficulty overcoming.

The training systems do have shortcomings. There is, however, no single point where reform could work a dramatic change. We do believe that some individual courses have an inherently low potential for being effective. Wages in those trades are quite low compared to what inmates

could earn without training. Perhaps for this reason, students avoid jobs in those fields. For all courses:

* One-fifth to one-third of students are not serious about getting jobs in the trade even while they are in training.

* About 40 percent of CDC students drop out of courses before they get saleable skills. The main reasons for dropping out--such as parole and reclassification--are not amenable to reform.

* Of those who persist in a course and who complete, large but undetermined numbers never apply for a job in the trade.

* For those who get a job in their trade of training, recidivism and drift into other occupations cut the benefits of the placement.

These problems (discussed in Chapter I) constitute a "slow leak" of students away from the theoretically desirable path which begins with training and ends with long term job stability. For most of these problems there is no simple solution.

To identify the individual courses which are not successful we conducted a benefit-cost study. Based on the considerations in the analysis, including the primary factors of wage rate, placement rate, quotas and length of training, we recommend:

. *eliminating CDC courses in building maintenance, housekeeping, baking, dry cleaning, shoe repair, cosmetology, drafting, upholstery, and data processing.*
ESTIMATED SAVINGS: $602,300.

. *eliminating upholstery, printing, and small engine repair courses in CYA.*
ESTIMATED SAVINGS: $94,353.

. *an administrative review of other courses with low benefit-cost ratios, for the purpose of eliminating those which cannot be improved in a substantial way.*

We also <u>recommend</u> that in the future all classes meet at least three of the following standards:

- *Average enrollment should exceed 15 and should never be less than 13 (page 30).*

- *Class quotas and enrollments should be highest in those courses which take the longest time to complete (page 30).*

- *Graduates should be able to earn over $4.20 per hour in their first year of work, and never less than $3.65 per hour. (The standard is expressed in 1977 dollars, and should be relaxed for CDC women and CYA wards (page 30).*

- *Placement rates in trades should exceed 20 percent in CDC courses (page 30).*

The application of these standards would improve the effectiveness of all courses.

Several operational issues are examined in Chapters III, IV and V. Work crews, inmate pay and job placement are foremost in need of reform. The training benefits in some classes doing institutional work may be indistinguishable from the benefits of work crews performing the same function. The cost of a work crew is much lower than a class. We therefore recommend:

- *the elimination of culinary arts and one landscaping class in CDC.*
  ESTIMATED SAVINGS: $263,000.

- *the elimination of culinary arts and janitorial classes in CYA.*
  ESTIMATED SAVINGS: $80,000.

- *a review of other classes, including mill and cabinet at CIM.*

Some classes recommended for elimination on cost-benefit grounds should also be dropped for these reasons.

Conversely, where work crews exist there is an apparent opportunity to improve inmates' vocational knowledge and socialization by offering short vocational courses to workers. We recommend:

- *a pilot program for the instruction of CDC work crew members.*
  ESTIMATED COST: Less than $5,000

This program could recruit well motivated workers into vocational classes.

Systems of inmate pay are not well directed to the achievement of vocational program objectives. The problem is more serious in CDC where we recommend:

- *a substantial bonus for completing a class. All or most of this bonus should be reserved for a trainee's use after he is released (page 59).*
  ESTIMATED COST: $167,000

- *that students receive periodic bonuses based upon achievement in class, with the greatest sums coming toward the completion date. Students should not be paid prior to 500 hours (page 59).*
  ESTIMATED COST: $70,000

- *that students receive incentive pay for productivity (page 59).*
  ESTIMATED COST: $60,000.

- *that funds available for pay should be allocated in a lump sum to each institution, where instructors and program administrators would be responsible for final allocation based upon systemwide principles (page 59).*

Completion pay acts as an incentive to finish a class and will help students during the critical period when they are seeking a job in a trade. Achievement pay is also an incentive to complete, will help students with living expenses, and may increase the efficiency of classes by getting students through them more quickly. Productivity pay is an efficiency and learning measure. These recommendations anticipate some re-programming of existing pay numbers.

For program monitoring purposes, the follow-up of CYA students is not satisfactory, and for CDC it is now non-existent. Good pre- and post-data are imperative for program administration.

CDC does relatively little to place students. However, CYA placement programs are not highly effective, and the cost-effectiveness of placement efforts is discouraging. We recommend a low-cost program which makes use of existing teaching and parole personnel resources:

- *CYA and CDC should adopt placement programs similar to that being tried at the California Rehabilitation Center. Teachers should have primary responsibility for:*
  - *Following up on all students at 1, 6, and 12 months after release.*
  - *Placing students whom the teacher certifies to have skills in the trade.*

ESTIMATED COSTS: CDC, $70,000. CYA, $12,000.

The correctional systems should also review the possibility of combining some of their existing placement resources so as to make a placement officer available to vocational students in each of several major metropolitan areas.

In direct placement programs, institutions train students in the techniques, procedures and standards used by a particular firm; and in return the firm assists with the operation of the class and will attempt to employ qualified graduates. In terms of cost effectiveness the ARCO program at CYA's Youth Training School (YTS) is a relative success compared to other auto mechanics courses. In absolute terms it is marginally cost beneficial. We recommend the expansion of direct placement programs.

This study makes several other operational recommendations:

- *Vocational program management should conduct annual surveys of wages and job openings for each trade; and should post the results where they can be seen by students.*

- *Where work is being done for institutional staff, instructors should specify the amount of work their class needs to do for training purposes, and on a trial-and-error basis let prices charged to staff increase until no more than that amount of work is coming in.*

- *Institutions should initiate a short, formal trial period for new students in a class, in an attempt to identify students who are unlikely to complete before they take up extensive training time (page 50).*

Some institutions have such trial periods now.

Our review of teaching and equipment leads to the conclusion that neither element is a major cause of low placement and course effectiveness. The mix of good and poor teachers, good and poor equipment, is what we would expect to find in any vocational school in the state.

We believe that many of the foregoing recommendations can be implemented in the 1978-79 budget year. We also recognize, however, that CYA and CDC program administrators will need time to consider implementation strategies. This is particularly true where additional study is recommended. We therefore recommend that:

- *CDC and CYA should submit implementation schedules to the Department of Finance by October 17, 1977.*

Preliminary schedules should be discussed at the time of budget hearings.

Summary

The cost effectiveness of correctional vocational training can be improved substantially by eliminating courses which are working poorly or for which there are less costly training substitutes. There is no evidence, however, that any combination of reforms will produce systems which dramatically upgrade student earning power or which will deliver on the promise of rehabilitation. We have recommended net reductions of

$493,000 in CDC expenditures, and $163,000 in CYA. The effectiveness improvements embodied in these changes would provide a base for successful future programming.

CHAPTER I

INTRODUCTION

Prison Effectiveness

This inquiry into vocational education is one part of a broad study of prison effectiveness. Prisons are said to have four goals: retribution, deterrence, incapacitation, and rehabilitation.[1] Vocational training contributes to the fourth goal.

Recent correctional literature reflects considerable pessimism about rehabilitation programs. One author concludes a review of several hundred high quality studies by saying that they:

> ...give us very little reason to hope that we have in fact found a sure way of reducing recidivism through rehabilitation. This is not to say that we found no instances of success or partial success; it is only to say that these instances have been isolated, producing no clear pattern to indicate the efficacy of any particular kind of treatment.[2]

Because of the thoroughness of his study of manpower programs and his evident sympathy for them, the conclusions of a second researcher, Robert Taggart, merit careful consideration:

> This brief review and assessment of efforts to increase the employability of offenders leaves little room for more than the most restrained optimism. There have been a wide range of projects to test the effectiveness of various strategies; and though the evidence which has been gathered is limited, very little of it is positive. There is no proof that any single manpower service or strategy has had more than a marginal impact on its recipients, and no proof that any combination of services can make a substantial contribution.

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[1] David T. Stanley, Prisoners Among Us (Washington, The Brookings Institution, 1976), p. 7 ff.

[2] Robert Martinson, "What Works? Questions and Answers About Prison Reform," Public Interest (Spring, 1974), p. 49.

> There have been some glimmerings of success...but overall the results have been disappointing. On the basis of the existing evidence, it does not seem likely that the employment problems of offenders can be significantly alleviated by manpower programs, or that these programs will have a noticeable impact on the rate of crime.
>
> This is contrary to what we want to believe...There is...a demonstrated relationship between employment problems and criminal behavior...We want to believe that something can be done to alleviate the crime problem and to rehabilitate the average offender.
>
> Yet there is meager evidence to sustain these beliefs. The dollars spent to date on manpower services for offenders have had little impact on institutions or individuals. Worse still, they have revealed how intractable the problems are, casting doubt as to whether, even with redirection and expansion, manpower services will have more than a very marginal impact...[3]

Taggart's gloom is not unrelieved--he holds out some hope for improvement--but he has no sure remedy to offer.

In this context it would be very surprising if California's prison vocational training programs turned out to be extraordinarily successful. In fact, they are not. Overall, the costs of CYA and CDC vocational programs outweigh their benefits. A happier finding, however, is that some individual courses of study do work; and that there are others which can be made cost-effective.

Basic Problems and Relationships

Before getting into the details of this study it is worth noting several underlying problems which limit the effectiveness of any vocational program. These are:

1. Process: The slow leak.
2. Behavior: Employment and recidivism.
3. Motivation: An explanation for success.

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[3] The Prison of Unemployment: Manpower Programs for Offenders (Baltimore: John Hopkins Press, 1972), pp. 96-98.

These will be discussed in turn.

PROCESS: THE SLOW LEAK

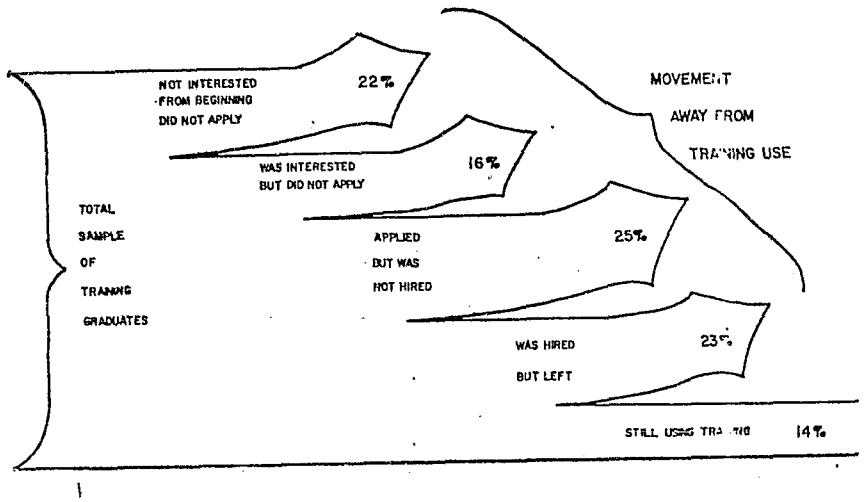
Only a fraction of the people who start a vocational program end up in a job. During both the training and post-release periods there is a slow leakage of "dropouts" from the theoretically desirable track to employment.

Forty-six percent of CDC inmates who start a course will complete it. They account for about 68 percent of training hours. The main reasons for dropouts are parole, transfer, and inmate request. While not all the time spent in class by dropouts is wasted, completions generally represent a threshold of employability beneath which it is unlikely that a person would get a skilled job.

What happens to vocational graduates? The most complete snapshot we have seen comes from a Michigan study (Figure 1). Something like this is happening in California. A 1971 study by the Department of Corrections found that 26 percent of graduates were employed in their trade of training (cf. 14 percent in Michigan); while 37 percent had no plans to do so (cf. 38 percent in Michigan who were not interested or were not sufficiently interested to apply for a job.) This attrition, taken together with normal recidivism, means that the expected job payoff of a class is low. As the Michigan study concluded, the fact that slow leakage is occurring at various points and for various reasons makes it difficult to find a single solution to the problem.

FIGURE 1

ATTRITION AMONG GRADUATES OF A MICHIGAN CORRECTIONAL VOCATIONAL TRAINING PROGRAM



SOURCE: "The Uses of Correctional Trade Training," State of Michigan, Department of Corrections, 1969, p. 19.

BEHAVIOR: EMPLOYMENT AND RECIDIVISM

One approach to correctional training is to treat it as a manpower program whose effects are the rate and quality (measured by wages) of employment. Prisoners unquestionably have had a worse employment and education profile than most citizens. One national survey in 1974 found that:[4/]

4/ Survey of Inmates of State Correctional Facilities, 1974 Advance Report (Washington: U.S. Department of Justice, Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service, March, 1976). See also Robert Taggart III, The Prison of Unemployment: Manpower Programs for Offenders (Baltimore: Johns Hopkins University Press, 1972), p. 16.

* 60 percent lacked a high school diploma.
* About 1/3 were unemployed in the month preceding arrest.
* Median income was $4,800, which was less than half the national median.
* Their last full time job had lasted 8 months.

The special argument for providing manpower help to prisoners is that they are not only a disadvantaged group, but that this assistance should cut crime. Crime--especially crime against property--has been linked to both low income and unemployment. However, the fact remains that not everyone who is unemployed or poor commits a crime; and not all people who commit crimes are unemployed or poor. The national study cited above implies, for example, that 2/3 of all prisoners had a job during the month prior to their arrest.[5/]

As for recidivism, a Massachusetts study found that only 12 percent of prisoners who were completely unemployed during the first three months after their release were successful on parole; while nearly 55 percent of those who were fully employed were successful, and 62 percent of those with a semi-skilled job or better "made it." On the other hand, a Minnesota study found no significant relationship between parole adjustment and employment.[6/]

Even disregarding the Minnesota finding, the problem here is that vocational education is only weakly linked to increased employment. According to a federal evaluation of MDTA prison training projects,

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[5/] Survey of Inmates of State Correctional Facilities, 1974 Advance Report (Washington: U.S. Department of Justice, Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service, March, 1976). See also Robert Taggart III, The Prison of Unemployment: Manpower Programs for Offenders (Baltimore: Johns Hopkins University Press, 1972), p. 16.

[6/] These studies are cited in David T. Stanley, Prisoners Among Us: The Problem of Parole (Washington: The Brookings Institution, 1976), pp. 150-151.

employment of vocationally trained inmates was 73 percent three months after release, compared to 67 percent for control groups; but by six months the figures had nearly reversed, and were 68 and 72 percent, respectively.[7] Hence, while the mere fact of being employed may (and, we suspect, probably does) affect recidivism rates, the fact that a person has had prison vocational training doesn't increase employment rates in a dramatic fashion. It may be that trainees get better jobs, but that is a different question.

In sum, vocational training has a limited effect on employment rates; and employment rates have a limited effect on recidivism. The correlational linkages appear to be so weak that programs have an uphill struggle to justify themselves.

MOTIVATION: AN EXPLANATION FOR SUCCESS

Beyond what can be demonstrated statistically, the most serious problem of all is the ambiguous variable of motivation. It makes some sense to believe that prisoners who have better than average motivation will be found in vocational programs; that the best motivated of these will be well represented among course completers; and that the best motivated among these will at least try to get a job in their trade of training. This being the case, we should expect to find much greater rates of parole success among vocational graduates than among some other groups of prisoners, such as those who were in no program.

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[7] Abt Associates, Inc., An Evaluation of MDTA Institutional Training in Correctional Institutions, Vol. 3 (Washington, D.C.: AAI, May, 1971), cited in Taggart, op. cit., p. 47.

Our research (which will be presented in detail at a later point) indicates that recidivism will drop by 0.9 percent for every 100 hours of training; and that the effect is more significant (2.8 percent) when we are talking about the range of 500 to 2,000 course hours. The question is, can this not be explained by a variable which existed even prior to an inmate's enrolling in a course--motivation?

There is no litmus test for motivation, and until a good one is devised the question is unanswerable in the strictest sense. What we do conclude is that vocational programs must be more than just slightly successful in raising the employment rate of trainees in the respective trades if the programs are to justify themselves.

Program Description

The CDC vocational training program for Fiscal Year 1977-78 is budgeted at $5.56 million, up 19 percent from 1975-76. The 17 vocational supervisors and staff of 201 instructors will conduct 120 vocational classes and 3 skill centers in 48 trade areas. With an average capacity of 2500 training slots, the program is serving 3500 students a year and providing 2100 certificates of completion.

CYA's total vocational budget for Fiscal Year 1977-78 amounts to $2,764,646 with the Preston and YTS vocational elements accounting for 62 percent of the program. The Preston and YTS instructors will hold 38 classes, training students in 26 trades. Students served in these classes will number 610, a 14 percent decline from the previous year, due to an expected decrease in the institutional population.

Procedures and Methodology

This study is an outgrowth of earlier Department of Finance research on vocational training.[8/] More than anything else, what prompted this effort was the finding that in CDC only 23 percent of trainees were working in their trade of training six months after release. The reasons why were not clear; and the earlier work did not attempt to clarify the issue of whether this was indeed an effective showing. Among the main objectives of this study, therefore, were the following:

1. Preparation of standards of effectiveness.
2. A listing of currently offered courses which do not meet these standards.
3. A proposal for placement and other reforms which would make courses more effective.

These objectives had some bearing on our approach.

The thrust of our effort has been to develop a comprehensive standard of effectiveness, a cost-benefit model. Doing this required extensive discussions with instructors. We concentrated on 14 of the 47 courses offered by CDC; and 13 courses offered by CYA, at the Youth Training School (YTS) and Preston School of Industry (Preston). In CDC we talked to 44 instructors who taught 38 different sections. This enabled us to compare the viewpoints of instructional personnel at different institutions who were teaching the same course. Our findings for CDC are generalizable to 25 courses, covering over 80 percent of CDC enrollment. For Preston and YTS we reviewed courses with 80 percent of the vocational enrollment. We did not examine CYA's prevocational courses (ones which are generally taught to people who are too young to be on the job market).

8/ "Vocational Education in the California Youth Authority," and "Vocational Education in the California Department of Corrections," Staff Reference Reports, State of California, Department of Finance, 1976.

In each class that we visited, questionnaires were distributed to inmates and wards. There were 520 responses at CDC and 182 in CYA. A separate questionnaire was administered to CDC inmates who were not necessarily vocational trainees, but who were within a month or two of release. This gave us a better idea of what prisoners were facing upon their release, and how they were planning to meet the situation (Appendices A and B).

In order to get a better idea about the relationship between vocational education and recidivism, 600 case files of 1973 CDC parolees and releasees were reviewed; and in the 175 where good follow-up data on employment existed, we attempted to determine the relationship between the length of training and recidivism (Appendix C).

Other than these projects, our efforts consisted of talks with a number of administrative personnel, representatives of private industry, placement officers, union officials, community and prisoner groups; and of a review of correctional and economic research studies.

Chapter II of this report contains our main findings on costs and benefits. These benefit-cost calculations are tedious, lengthy, and complicated. (Detailed methodology is presented in Appendix D.) Most of the background work is not published in this paper, but is on file for review by those who are interested. Chapter II thus deals with the principal findings and most serious methodological issues. Subsequent chapters address the major questions of pay numbers, placement programs, and class size; and a number of minor issues.

CHAPTER II

BENEFITS AND COSTS

A Standard of Effectiveness

Because it attempts to measure and weigh all costs and benefits of a program, benefit-cost analysis is the best single standard of overall program effectiveness.

The major drawback of this approach is its difficulty. Some relevant data are hard to get. In other cases the practitioner must make delicate judgments about the relationship of data and the appropriate method of their manipulation. The social sciences are not so far advanced that these judgments are beyond question.

Despite these problems we believe that the results portrayed in this chapter are a fair and accurate picture of vocational training in the state's correctional institutions. We would not insist that a class that has a benefit-cost ratio of, say, 0.90, is necessarily cost ineffective. Our measurements are not that scientific: the true ratio might be 0.80 or 1.00. We do believe, however, that:

1. The relative ranking of classes, from the most to the least effective, is quite accurate. A common methodology assures this.

2. In absolute terms the benefit-cost ratios presented are a reasonable guide to prudent decision-making. For example, when a class has a benefit-cost ratio of 0.50 or less, no change in assumptions however strained toward optimism would result in a reasonable conclusion that the class is cost beneficial.

While the technical quality of the results is high, their implementation nevertheless requires reasonable administrative judgment.

Because of its complexity, benefit-cost analysis cannot be performed on an annual basis without incurring substantial analytical costs. Its utility as an everyday tool is thus somewhat limited, especially as conditions change and the analysis becomes dated. For this reason the final section of this chapter distills some everyday administrative rules of thumb from the more complicated benefit-cost study. As standards of effectiveness they are an incomplete but useful substitute for benefit-cost analysis.

BASIC ASSUMPTIONS AND DATA

The primary objective of vocational training is to increase the rate of employment and the wages of trainees. In the case of correctional programs it is hoped that improving these intervening variables will also affect recidivism.

It should be noted that in the strictest sense benefit-cost studies are indifferent to who benefits from a program. In this case, a dollar of institutional benefits (which redounds ultimately to the taxpayer) is equal to a dollar of employment benefits to the trainee. This is a key point. In some CDC programs, training benefits are low and institutional benefits are high; but because performance of an activity (such as food preparation) in a classroom structure entails some very high costs, it can be argued that such activities should be run as work crews rather than classes. This point will be developed in the following chapter.

In this chapter we will discuss the main features of the analysis, key issues, and conclusions. A more detailed discussion of our procedures appears in Appendix D to this paper. Some data (such as short essays on the institutional benefits of each class) are not being published, but are available to interested persons.

The Model: Costs

On the cost side of the ledger the data are fairly straightforward. Teaching costs (including fringe benefits) are known precisely. They represent 70 percent of total CDC costs, and for this reason the total cost estimate is reasonably impervious to change. Supervisorial costs are similarly clear, but other administrative costs (for support personnel) are probably underestimated. This is not a serious problem, because such costs are presumed to be small.

We derived our material costs from estimates by the instructor and from institutional (usually accounting) personnel. They are 7 percent of CDC costs.

Equipment was a more difficult problem. We relied both on instructors' estimates and upon a more refined analysis which is now being done by CDC. Because of conflicting opinions as to the amortization period for equipment, we used a standard 20-year figure which will not be accurate for some classes. In general, equipment costs have probably been underestimated; but since they represent less than 3 percent of total costs we could be off by a very wide margin without seriously affecting overall results.

TABLE 1

COMPONENTS OF THE BENEFIT-COST CALCULATIONS

COSTS	BENEFITS
1. Personnel costs --Instructors --Supervisors --Administrative	1. Benefits to individual trainee: expected increase in earnings due to training.
2. Material cost	2. Institutional benefits.
3. Equipment cost	3. Benefits not calculated --Recidivism reduction --Change in welfare payments --Labor displacement --Prior experience, random placement
4. Facilities cost	

We have estimated the cost of facilities at 20¢ per square foot. This is within the range suggested by General Services (15¢ for warehouses, 49¢ for offices) and is also comparable to the experience of community colleges which have leased vocational training areas (9¢ to 35¢). Areas used for necessary prison production, such as baking shops, were not included in the calculation; but a supplementary classroom for a baking shop was.

While the resulting facility cost estimates should be reasonably accurate, there is one interpretative issue which pertains to facilities and supervisorial costs. If a single class were eliminated, neither of these costs would completely disappear. The constant supervisorial costs would be prorated over a diminished number of classes. The facility would not necessarily be used, but would still need upkeep and suffer from deterioration. By including these cost factors our analysis portrays

the full economic cost of classes, which is the most accurate approach. We also believe that if a class is closed some economic substitution will occur: a shop area would be taken over by another class or by correctional industries, and a supervisor would find new activities such as job placement to fill his time. Each would, of course, have to be evaluated on its own merits.

The Model: Benefits

Calculating the benefits to trainees requires the following knowledge:

1. What would a person have earned without training? What would his employment chances and hourly wage have been?
2. What is the rate of placement for trainees (a) in their trade, and (b) overall?
3. What are a trainees' expected earnings (a) in the trade, and (b) overall?
4. For what period of time do we attribute benefits to the class?

None of these issues is simple.

EARNINGS WITHOUT TRAINING

Fortunately, we were able to arrive at a solid estimate of earnings without training from two independent sources. The Bregman report sampled CDC trainees to determine their earnings prior to training.[1] Using a wage inflation factor to update the findings we concluded that 1976

[1] Ralph Bregman, Verna Frey, et. al., "Report of Study on Vocational Programs in Selected California Correctional Institutions for Male Felons," State of California, Department of Corrections, June 30, 1975.

earnings would be $160 per week without training. Responses to our own questionnaire (N=437 inmates) indicated a figure of $165 per week.

One implication of this, incidentally, is that unless a trade pays more than $160 per week (that is, $4.00 per hour) it is difficult to justify offering it. Inmates could make as much without the training. Training could boost the total employment rate, which means that more people would be getting $4.00 per hour than otherwise; but unless the employment rate is boosted sharply (which, as we note below, it is not) the costs of training will probably outweigh benefits. Where wages are substantially less than $4.00, negative benefit-cost ratios are possible and do, in fact, appear.

Based on questionnaires given to CYA wards (N=179 wards) we estimate that those who did work averaged $3.90 per hour. This is surprisingly close to the CDC total. The best explanation for this is that the wards and inmates appear to have held the same type of jobs which, especially if they were unionized, would pay at the same rate regardless of age. In addition, the wards in the vocational classes were old enough so that when they left CYA they would be in an age bracket which is comparable to at least the younger CDC trainees; and one would thus expect them to have similar hourly earnings.

PLACEMENT RATES

Tables 2 and 3 show the placement rates for each class studied.

Table 2 was published in an earlier Finance study and is based on 1971-1973 CDC follow-up data. Some questions about its reliability have been raised. Our review of the statistical sampling probabilities

TABLE 2

EMPLOYMENT STATUS OF CDC VOCATIONAL TRAINEES, AFTER ONE AND SIX MONTHS, BY COURSE, 1971-1973

Course	One Month		Six Months	
	Related Employment	Total Employment	Related Employment	Total Employment
Nursing	48%	60%	48%	70%
Business Education	46	62	42	54
Auto Mechanics	42	83	31	69
Welding	39	83	41	67
Culinary Arts	39	83	21	61
Painting	38	82	26	54
Mill and Cabinet	38	87	30	67
Printing (Offset)	37	74	20	64
Shoe Repair	37	82	20	48
Machinist	37	81	33	63
Auto Body and Fender	35	79	26	60
Refrigeration Mechanics	33	94	21	67
Sheet Metal	32	87	30	71
Masonry	28	75	22	58
Electrician	24	80	17	61
Dry Cleaning	23	83	13	50
Building Maintenance	23	55	18	36
Upholstery	22	80	10	58
Landscape Gardening	22	81	16	59
Data Processing	19	76	19	62
Drafting	18	76	12	53
Bakery	18	70	11	42
Laundry Operator	17	82	7	57
Meatcutting	14	80	12	63
Others	26	73	23	63

SOURCE: California Department of Corrections, Vocational Education and Correctional Industries Report of Trainees Released to Parole, 1971, 1972, 1973.

TABLE 3

EMPLOYMENT STATUS OF CYA VOCATIONAL TRAINEES[a/]

	Related Employment	Total Employment
Welding	28	51
General and Machine Shop	22	58
Mill/Cabinet	18	50
Masonry	17	52
Upholstery	17	33
Carpentry	14	52
Janitorial/Building Maintenance	12	47
Landscaping	8	49
Auto Mechanics	8	48
Culinary Arts	7	48
Plastering	6	47
Printing	0	59
Small Engine Repair	0	50

SOURCE: "Jobs Related to Training: Final Report," Educational Research Series Report No. 12, State of California, California Youth Authority, May, 1973; and current (1977) CYA parole reports on 1975 releasees. The two sources of data were averaged to make the estimates of trade related training more reliable.

[a/]Three to four months after release.

indicates that with 95 percent confidence the figures for each class are within 5 to 11 percent of the true figure, depending upon the class. We also believe that the follow-up data overstate placement rates, if any bias exists, because parole officers would have an easier time finding and reporting on people who had the most stable employment rate and who had not absconded. It is thus rather unlikely that the figures in Table 2 understate placement to an extent that would invalidate the analysis; though it is possible to give some benefit of doubt to a final benefit-cost figure which is slightly less than 1.0.

A second problem with the data is that they are dated. *We strongly recommend that CDC reinstitute a follow-up procedure to replace the process which was dropped in 1973.* However, the characteristics of CDC vocational instructors, course equipment, class content, as well as job markets for the various trades, do not seem to have changed too markedly to render the old data invalid. Where placement for a class was very low, there is every reason to believe that it would still be below average today, though the placement rates may have changed somewhat.

The quality of CYA's data is better. It is derived from two sources: a 1973 report entitled "Jobs Related to Training," and current (1977) follow-up data on 1975 releasees.

TRAINEES' EXPECTED EARNINGS

This was a very complicated step in the calculations.

Basic wage data for trades of training came from EDD reports on each trade, modified somewhat by instructors' comments. We also constructed an index of salary increases which a person who stayed in the

trade could expect. The basis for this was a study of North Carolina prisoners, but we believe that the progression would be fairly typical for California releasees or, for that matter, any cross section of vocational trainees entering the labor market. Again, the comments of instructors about the progression of salary increases their successful students could expect were useful. The data were modified for inflation factors and were then discounted at a conservative rate of 5 percent per annum.

From the Bregman report we knew that 48 percent of course completers had been unemployed prior to their prison term. This meant that, ceteris paribus, we could expect 52 percent of releasees to find employment at a wage rate of $165/week, their wage rate without training. This amount was then subtracted from the sum of:

--The rate of placement in a trade times the wage rate for the trade, and

--The difference between the placement rate in the trade and the total employment rate, multiplied by the wage rate for individuals without training.

The actual calculations were done on an adjusted basis to account for class dropouts and for recidivism. Where classes were offered for women, somewhat different figures were used to account more carefully for expected earnings without training. They increased the estimated benefit of these classes. Details are in the appendix.

A similar procedure was followed for CYA.

LENGTH OF THE BENEFIT PERIOD

One of the more difficult issues in the analysis was to determine the appropriate length of the benefit period--that is, for how long a

time can we attribute increased earnings to vocational training? We settled upon a period of three years. The reason for this is that:[2/]

* In a typical year, nine percent of all Americans change occupations.

* One-third of 18 and 19-year olds; one-fourth in the 20-24 year old bracket; and one-eighth of 25-34 year old men change occupations in a year.

* Prisoners are known to have somewhat greater mobility between jobs than others in their age bracket.

Furthermore, as a person spends a longer and longer time on the job, an increasing portion of his pay can be attributed to what he learned on the job, rather than in class. This is most true for persons who entered a job with marginal skills; and most CYA and CDC instructors told us that early dropouts from their classes and (depending upon the trade) some completers would be considered as marginal in their respective professions. For these people, institutional training will get them in the door; it will enhance their chances to get an entry level slot; but learning on the job will be required if they are to retain the position.

A case could be made for a 4- or at the outside a 5-year benefit period. The argument would be more persuasive for CDC than for CYA because trainees would be expected (due to the age factor) to change occupations less frequently. On the other hand, the discounted present value technique means that benefits are more strongly discounted in later years than immediately after training has taken place.

[2/] See James J. Byrne, "Occupational Mobility of Workers," Monthly Labor Review (February, 1975), pp. 53-59.

INSTITUTIONAL BENEFITS

Many CDC courses are oriented toward creating institutional benefits. For the classes visited we did calculate these benefits; and essays of varying length are available in each instance. Where we did not have the opportunity to visit a class and where there are potential institutional benefits, we show benefit-cost results as ">x" to indicate that the ratio is incomplete on the benefit side.

Some classes create benefits for institutional personnel. Examples are dry cleaning, shoe repair, and upholstering. We have not counted these as institutional benefits (insofar as work for personnel was concerned) because we believe that the fees paid for work are small and should be equal to the value of the work. This is not to say that fees should be set at outside commercial rates: personnel who have work done for them suffer some inconvenience and risks inherent in the relatively unskilled nature of the inmate labor. Prices should be commensurately lower. This is to say that we know of no reason why prison personnel should be special beneficiaries of the work of prison labor. Such benefits are not to our knowledge part of any formal compensation package. For this reason the benefits produced in work for staff should balance fees paid; which means that both can be ignored in benefit cost analysis, especially since the amounts are small. The possibility that fees are, in fact, too low will be discussed in a later chapter.

To calculate institutional benefits we relied in part upon the estimates of the instructor, which were usually backed by appropriate work orders and other documentation. Another technique was to calculate the number of free staff persons needed to do necessary work if there

were no class. In this case we assumed that free staff would often be supervising a prisoner work crew; and for many classes this is the practice at institutions where a course is not offered.

It is important to note that in some classes the practice of having work done by a class is very expensive. While benefits can be significant, the salaries of teachers exceed those of skilled tradesmen by $8,000 or more. A high institutional benefit figure should not, therefore, be equated with cost effectiveness.

In two classes we discounted institutional benefits rather sharply. One, the landscaping class at Duel Vocational Institution (DVI), had every appearance of being a work crew; and we were not convinced that necessary work was being done. Secondly, for shoemaking classes as a whole, we felt that the necessary work in CDC could probably be done even if several classes were eliminated; and if work in institutions left without classes were done by full-time shoemakers, prisoner apprentices, or on contract with local professionals.

RECIDIVISM, WELFARE, LABOR DISPLACEMENT, AND PRIOR EXPERIENCE

These final items on the benefit side were not calculated, but are shown because they are theoretically appropriate to a complete analysis.

Correctional literature that we have reviewed indicates that the recidivism benefits of training cannot be proven due to the complication of the motivational variable, among other things. (See our discussion in Chapter I.) Since recidivism can be very costly (the full cost of a single incident exceeds $13,000) and because there is some tendency for

those who take lengthy vocational training courses to recidivate less, we do suggest in a later chapter that pay incentives be structured so as to encourage course completion. However, the data are too weak and inconclusive to recommend both the inclusion of a standard recidivism benefit for each class and a pay incentive.

We also have been unable to calculate negative benefits due to displacement of workers. They are probably substantial. At a rate of 9.2 percent, unemployment in California today is high.[3/] The trades in which correctional institutions train people share in this unemployment. Moreover, many public institutions (community colleges, Regional Occupational Centers and Programs, skill centers, adult schools) and proprietary schools are training even more people for these trades. When an individual from any one of these schools is placed, the net addition to employment is less than 1.0. In a simple case, person X gets a job and person Y does not; and society is no better off. Labor markets are more complicated than this, however. Adding to the supply of any commodity--in this case labor--drops its resource scarcity and prices; and allows more of that commodity to be used. Thus, vocational training should result in some net increases in employment; but this is done at the cost of holding down or reducing wages. Cosmetology is a good example of this. We have been told by vocational teachers and others that it is easy to get a job in this field; but as long as demand is limited (at a given price) the number of customers will remain the same, and each worker has a proportionately diminished share of the available market.

Calculating displacement rates for each trade would require sophisticated knowledge about demand curves and labor market restrictions,

[3/] The unemployment rate of 9.2 percent is the average, seasonally adjusted, rate for 1976.

and this is beyond the scope of the present study.[4] To the extent that displacement occurs, the effect of correctional trade training programs is to shift benefits from one group (unemployed persons who are qualified to hold a job in a trade) to another (prisoners). This is not an unreasonable social choice, since both groups undoubtedly share similar disadvantaged characteristics. However, this does not mean that each placement represents a net benefit to society. Benefits should be discounted to some extent. For this reason we believe that correctional training programs should have benefit-cost ratios which are somewhat in excess of 1.0 before they are considered to be clearly justified.

The next question that we were not able to resolve is that of welfare benefits of training. There are too many unknown factors to enable us to arrive at a satisfactory estimate. The following is a summary of some of the problems:

1. In a simple sense, reducing the welfare rolls requires putting someone to work who would not otherwise have been employed.

   a. Some studies have concluded that prison training does not result in a net increase in jobs.[5]

   b. In CDC we found an increase in total employment of .386 for every person placed in a trade of training. This translates into a net increase of 307 jobs for prisoners in one year and 537 man-years of work over three years. (This latter figure is speculative. 307 + 1/2 (307) + 1/4 (307) = 537). A similar calculation for YTS and Preston indicates, because of a low rate of placement in trades, a possible net increase of 40 jobs in one year and 70 over three years.

   c. These net increases in jobs for ex-prisoners should be offset for society as a whole by a displacement factor which cannot be quantified.

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[4] The correctional vocational programs are too small a factor in labor supplies to imagine that they are a prime cause of overproduction.

[5] Taggart, op. cit., p. 47, citing a study by Abt Associates.

2. Net increases in jobs for prisoners do not automatically translate into equal reductions of people on welfare.

   a. One CYA source indicates that 20 percent of released wards receive welfare. CDC doesn't know the figure, but a study of Baltimore prisoners found a figure of about 10 percent.

   b. It is the people who do not get jobs who are likely to end up on welfare. There are no data for the percent of unemployed ex-prisoners who are on welfare.

   c. Even if an ex-prisoner is unemployed, his spouse or parents could be taking care of him; and they may or may not be welfare recipients.

3. The net increase in welfare payments per recipient is unclear.

   a. This will depend upon a person's family situation, assets, part-time earnings, health, etc.

   b. As an example, consider a hypothetical case where a prisoner returns to an AFDC spouse. Under AFDC-U the family budget unit's payments will increase by $127 per month. Assuming that there is earned income of $1,800 per year, the net increase in food stamp bonus values would be $37 per month. Health benefits are less clear, though the younger age of releasees would tend to hold down these costs.

This information forms the basis for only a speculative calculation, namely:

> If one-fourth of the net increase in jobs represents a reduction in welfare, and if each welfare case costs $175/month ($2,100/year), CDC savings are $281,000 and CYA welfare savings are $37,000 per year; or less than $2,000 per class in each instance.

The one-fourth figure assumes that half of the net increase in jobs would not have been welfare cases, and that one-fourth of the net increase will be offset by displacement of other workers who will be going on to the welfare rolls.

For a typical class this would add about 0.04 to a benefit-cost ratio (e.g., it would change a ratio of 0.96 to 1.00). We have not included such a figure in our calculations because it is highly speculative; but it may be worth remembering for administrative decision-making purposes.

The last of the four questions which we were unable to resolve was that of benefit reductions for prior experience in a trade or random post-release employment. According to our questionnaires, 9 percent of CDC students listed as their "main" job prior to their current prison term a position in the trade for which they were training.[6/] We met one person who had a very large upholstering business (a fact which was confirmed by the instructor); another who was a landscaping contractor; and a woman who had worked for many years as a secretary, but who was taking the multi-clerical course. There is nothing wrong with this. In fact, it may be very cost effective to give people a chance to refresh their skills before reentering the labor market. But if these people are placed the credit should not redound entirely to the vocational class.

Similarly, there are some professions where a significant number of people will land jobs after leaving prison, simply on a random basis. About 3 percent of men (and 12 percent of women) in the labor force are general food service workers. Our benefit-cost calculations do not adjust for such expected placements; but, rather, credit all placements to the vocational class. This over-crediting is most serious where a profession is (a) numerically large and (b) fairly easy to enter. In this latter respect we would not expect many people to find random entry into cosmetology (which requires licensure) or meatcutting (where a high level of skill is required for most jobs).

A problem which is related to random entry is the issue of placement of vocational trainees with little or no skills. A person

6/A study of 1968 CIW trainees found that 20 percent of students had trained in a field where they had previously been employed. Five percent of all students (and 30 percent of those employed in their training trade) had prior experience in the trade. See Carol Spencer and John E. Berecochea, "Vocational Training at the California Institution for Women: An Evaluation," State of California, Department of Corrections, Research Report No. 41.

with a mild interest in auto mechanics may take a few hours of a class and, later, get a job as a gas station attendant. Such a job is only tenuously related to his actual training; yet vocational classes get full credit for it.

We have not been able to find satisfactory methods of adjusting benefits for prior experience, random or low-skill placement.

Results of the Benefit-Cost Study

Tables 4 and 5 represent the results of the benefit-cost study. The reader will note that where a class is offered to both men and women, we have calculated separate figures. The expected earnings of untrained women are relatively lower than for men. Benefit-cost ratios for womens' classes tend to be higher because the net difference in earnings level for a trained woman is large compared to the wages she could expect to make without training.

The results are grouped into four categories. The highest benefit-cost ratios are undoubtedly effective classes; and the lowest are, we think, hopelessly ineffective. In neither case would any reasonable reconsideration of the figures or any program change have much chance of changing the conclusion that the program either is or is not effective. *We recommend that courses with less than a 0.5 benefit-cost ratio be eliminated, for a direct budgetary savings of $602,300 in CDC and $26,737 in CYA.* [7/]

We recommend that program administrators attempt to improve, or consider eliminating, programs with benefit-cost ratios of 0.50 to 1.20. These courses are marginal.

7/ These and subsequent budget figures are based on 1976-77 data.

TABLE 4

CDC BENEFIT-COST RATIOS

Class	Benefit-Cost Ratio	Individual Benefit-Cost Ratio
Refrigeration & Air Cond.	> 3.21	3.21
Masonry	> 1.87	1.87
Welding	> 1.81	1.81
Meatcutting	1.79	1.28
Auto Mechanics	1.66	1.64
Business Education/Clerical	1.56	1.31
Painting	> 1.35	1.35
Auto Body and Fender	1.16	1.16
Sheet Metal	> 1.10	1.10
Culinary Arts (women)	1.09	.57
Electricity	1.01	.92
Mill and Cabinet	> .94	.94
Culinary Arts (men)	.88	.35
Licensed Vocational Nurse (men)	.86	.71
Electronic Technology (women)	.83	.79
Offset Printing	> .73	.73
Landscaping	.72	.52
Machinist	> .55	.55
Electronic Technology (men)	.51	.48
Data Processing	> .39	.39
Upholstery	.35	.31
Drafting	.24	.21
Cosmetology (women)	.15	.13
Shoe Repair	.01	-.53
Dry Cleaning	> -.42	-.42
Housekeeping (women)	-.47	-0.82
Baking	-.58	-1.07
Building Maintenance (men)	-2.12	-2.46

NOTE: ">" indicates a course where institutional benefits have not been calculated.

TABLE 5

CYA BENEFIT-COST RATIOS

Class	Benefit-Cost Ratio	Individual Benefit-Cost Ratio
Carpentry	2.11	1.92
Printing/Graphic Arts	1.94	1.65
Masonry	1.89	1.74
Welding	1.73	1.65
Culinary Arts	1.51	0.75
Plastering	1.36	0.94
General Shop/Machine Shop	1.18	1.16
Janitorial/Building Maintenance	1.16	0.69
Landscaping	1.16	0.61
Auto Mechanics (ARCO)	1.12	1.12
Small Engine Repair	1.01	1.00
Mill and Cabinet	0.92	0.74
Auto Mechanics	0.70	0.70
Upholstery	-1.36	-1.36

In Tables 4 and 5, the individual benefit-cost ratio is calculated by excluding institutional benefits and focusing on benefit to clients. The selection of marginal courses for improvement should be considered in terms of the benefits to the client group. By straining the assumptions and data in this study toward optimism, by gathering improved placement data, or by implementing reforms, these programs could potentially be justified.

Additional Standards of Effectiveness

There are four main factors which undercut courses' benefit-cost ratios: class size, the length of a class, wages in the trade, and

placement rates. Based upon our study we recommend the following standards for future program administration:

1. *Average enrollment should exceed 15 and should never be less than 13.*
2. *Class quotas and enrollments should be highest in those courses which take the longest time to complete.*
3. *Graduates should be able to earn over $4.20 per hour in their first year of work, and never less than $3.65 (standards for CDC women and CYA wards may be lower).*[8]
4. *Placement rates in trades should exceed 20 percent in CDC courses.*

When classes fail to meet one of these standards an individual justification should be prepared and filed; and when they fail to meet two of these standards, the class should be eliminated.

ENROLLMENT AND COURSE LENGTH

CDC teachers meet periodically to determine the standard length of courses. The number of training hours selected is geared to a desired standard of job readiness. In almost all cases, teachers have told us that students can get a job in a trade without completing a course; but this comes at some sacrifice in initial earnings, rapidity of promotions, and probabilities of placement. There is, thus, no one "scientific" standard for course length. Instead, there is an infinite series of tradeoffs. At CRC and in CYA, where inmate terms are comparatively short, courses are necessarily brief. The skill center concept used at Susanville and for CRC and CIW culinary arts courses emphasizes short courses on the theory that it is better to give a person minimal skills in four or five areas than more extensive training in just one field.

[8] These earnings rates are for 1977 and should be increased for future years' wage levels.

The length of a course and the size of a class determine the number of people who, ceteris paribus, will leave during the year with skills. If only a few people are leaving a class each year, the placement and wage rates must be very high in order for the class to be cost beneficial. One reason why CYA courses are technically successful, despite their low placement rates, is that CYA's short courses have a substantial volume of student throughput. So many wards pass through a 600-hour course in a given year that an adequate number of placements can be achieved even if the placement rate is low.

By contrast, courses at DVI and the Correctional Training Facility (CTF) are both long. Class quotas at DVI are generally 10 or 12 persons, with a standard length of 1,200 hours. At CTF, classes run for 2,000 hours and have quotas of 12 (which usually means an enrollment of 11). How many people could matriculate from a CTF class in a year?

* Classes which run for 48 weeks at 35 hours per week, and with 90 percent enrollment and attendance, will give a student 1,512 training hours per year.

* If all students completed, about 9 students would graduate each year.

* In reality, some students drop out early; and some of these have saleable skills short of the completion standard. Students who drop out make places for others, increasing net throughput.

Such a class could reasonably produce 4-5 completers and 5-10 terminations with 500 hours of training (but short of completion) each year. Placement rates would have to be between 60 and 90 percent for the class to be successful, unless wages, institutional benefits, or other factors were unusually high.

The reason why DVI and CTF have such small classes is for the protection of the teacher. We are in no position to challenge this custodial judgment. Nor do we suggest that classes must be shortened, because adult offenders may need opportunities for a job placement which is more than just a low-paid, entry level job. We do contend that under the present circumstances classes such as these are not effective, and unless something can be done to increase throughput they should be dropped.

WAGES

Several classes have negative benefit-cost ratios, something which is unusual in this type of analysis. The reason is that the expected earnings of a trainee are lower than what an average ex-prisoner could make with no training. The argument on behalf of retaining such classes is, as one teacher put it, that the students in such a class are "the bottom of the barrel" in terms of job skills, and for them such training is a relative step forward.

What is important is that the trades with the lowest pay and skills do not have a high placement rate, and are thus of limited value to the people "at the bottom of the barrel" who are presumably taking them. CDC placement rates six months after release average about 23 percent. The ten lowest paying trades (and placement rates) are shown in Table 6. Four of the five lowest paying trades, and seven of the ten lowest paying trades, have less than average placement.

Two other things about the trades in Table 6 are worth noting. First, most of them (especially the ones with low placement) are strongly

TABLE 6

THE TEN LOWEST PAYING CDC TRADES,
ENTRY-LEVEL WAGES, AND RELATED EMPLOYMENT RATES

Trade	Entry-Level Wage	Related Employment
Data Processing	$ 3.02	19%
Upholstery	3.11	10
Building Maintenance	3.36	18
Dry Cleaning	3.37	13
Business Education*	3.50*	42*
Sheet Metal	3.59	30
Shoe Repair	3.60	20
Landscaping	3.75	16
Culinary Arts	3.83	21
Mill and Cabinet	3.85	30

*This course is offered to women, and the wages are relatively attractive for women.

oriented toward institutional maintenance. Functions could be, and in some institutions are, run by work crews rather than classes. Second, some of these trades offer employment to low-skilled persons who have no training, such as dishwashing or lawn maintenance jobs. Considering the fact that performing an institutional maintenance function through a class is relatively expensive (because of a teacher's high salary), it appears that for at least some low-wage trades inmates could be receiving comparable training and placement benefits in a work crew setting. This point will be discussed further in a later chapter.

PLACEMENT RATES

One of CDC's seven highest benefit-cost ratio courses and seven of the eight lowest courses had placement rates of below 20 percent.

(The other low benefit-cost course had a placement rate of exactly 20 percent.) Under these circumstances there is a very strong presumption that a course which can't place 20 percent of the students who terminate from it will be unsuccessful, and should be dropped.

We are unable to suggest a similar guideline for CYA, though a rate of 10 percent might be a useful rule of thumb. The range of CYA placement rates in a trade is so narrow (from zero to twenty-seven percent; or, eliminating the extreme figures, from seven to eighteen percent) that it is difficult to find a consistent correlate of course success.

TWO SPECIAL CASES

The benefit-cost calculations represent the relative ranking of the courses in terms of their dollar benefit and cost, all dollars being equal. From these ratios, we developed several standards as administrative guidelines to gauge course success. Special circumstances surround two CYA courses; Printing and Small Engine Repair classes exhibit related placement rates of zero.

On the basis of "equal" dollars, these courses compare favorably to others. Printing, in fact, ranks among the highest for CYA courses. The benefits for these two classes, however, have accrued primarily from the high overall employment rates with no benefits at all attributable to employment in the trade. Although the activities in these classes have value, their value as vocational classes providing entry level skills to the respective trades is minimal. The benefits from these classes can be gained other than from a classroom setting. For these reasons, *we recommend that printing be performed in a work crew setting and that Small Engine*

Repair classes be dropped. As we had observed at Preston, Small Engine Repair was recreational in nature and does not merit retention as a vocational course.

Summary

We have reviewed courses which represent 83 percent of CDC and 80 percent of YTS and Preston training slots. The overall benefit to cost ratio is 0.88 percent in CDC and 1.29 percent for the two CYA institutions.

Within these aggregates there is a wide range of successful and unsuccessful courses. While the effectiveness of most courses (even the successful ones) could be improved, we have recommended that some should be dropped because it is unreasonable to assume that they could achieve a positive benefit-cost ratio. Others should be subject to careful administrative review and possible termination. Guidelines relating to class size, length, wages and placement rates in the trades have been proposed for the purpose of assisting these administrative reviews.

CHAPTER III

OPERATIONAL ISSUES

This chapter addresses several major and minor issues which came up during the study.

Work Crews

For most classes, 60 percent or more of the full cost is the instructor's salary. Where institutional production is occurring, the same production could be achieved at a saving of $5-10 thousand per year per class if journeyman workers were supervising work crews. This is a significant issue because in our review it was not clear that students were learning anything more in a class setting than they would in a work crew, or that their placement chances were being improved.[1/]

The worst single case we encountered was the DVI landscaping class where:

* There was no required reading.
* There were no tests.
* Books were kept in the lavatory.
* Activities focused on manual labor, rather than development of technical skills such as plant propagation.

1/In their study of CETA trainees, Spencer and Berecochea, op. cit., are critical of classes whose main justification appeared to be institutional benefits, and which "taught" skills in the same trades where women had work experience.

At least one inmate told us he had enrolled to build up his body prior to release. Also:

* The class quota was 8.
* The crew did general labor jobs, such as laying concrete.
* The work being done seemed superfluous in view of an already adequate ground crew.

One thing the "class" does is to maintain 300 palm trees around the perimeter of the prison farm.

Another instance brought to our attention (but which we did not observe) was a Mill and Cabinet class located at the reception center at CIM. The "class" produces products used by prison industry. Since inmates spend only a short time at the reception center it is doubtful whether they can learn any trade there. Moreover, a generally recognized standard of correctional training is that skills should be taught toward the end of a prisoner's term if he is to retain and use them. While this "class" may be laudably productive, the same function could be performed by a work crew or through prison industries at considerably less expense.

Building maintenance and housekeeping are also matters of concern. The courses do teach some skills. However, at most prisons work crews do the same things that the students in these classes do. How do the work crews learn those skills? Is there something really different in the process and quality of education in a class?

These programs are of small concern compared to food preparation classes. Almost one in five CDC training slots is in food preparation--270 in culinary arts, 115 in baking, and 85 in meatcutting. There are 60 culinary arts slots in CYA.

BAKING

Baking is not a promising trade. Labor officials in Los Angeles and Sacramento report identical idle rates for their membership--6.7 percent. EDD manpower projections indicate a growth of 466 positions between 1975 and 1980 in California, which with turnover will mean that 484 positions per year will open; but the EDD Manpower Guide projects declining per capita consumption of baked goods and increasing mechanization, which will cut labor needs. Mechanization also means that an increasing proportion of the labor force will be working in machine rather than hand shops. As more tasks are performed by machines, less skill will be required of the workers. Baking (because of placement rates and wages) has one of the very lowest benefit-cost ratios in our study.

CULINARY ARTS

CDC's culinary arts program has run for several years at Susanville. In the skill center format used there, students are exposed to baking, meatcutting, and other food service skills. (These other skills take up the bulk of course time).

In our benefit-cost analysis, culinary arts was marginal: slightly beneficial for women, and slightly cost-ineffective for men. Susanville (which is to be commended for this) did a separate follow-up study for its students and found that 36 percent of those tracked were working in the trade. Unfortunately, the figure is next to useless.[2/]

[2/] Only 22 students were sampled, and these appeared to be course completers. One would expect about 180 terminations from the class each year. The sampling handbook we use doesn't even give values for a sample of 22, but the nearest thing to it is that at a 90 percent confidence level and with ± 7 percent error one needs a sample of about 75.

Despite the fact that the Culinary Arts concept (as well as the skill center concept) is unproven, CDC has opened up classes at CIW and CRC. Generally, the same people who last year were cooks are now teachers; and the maximum salary and fringe benefits for a teacher are $10,000 per year more than they are for a Supervising Cook I. There are now 13 culinary arts teachers at CRC; 5 at CIW; and 9 at Susanville.

Again, the question is: what are these people doing now that they weren't doing last year? The answer seems to be that they now give one hour of classroom instruction each day, and there are texts, tests, and so forth. In addition, Susanville has recently eliminated scullery on the grounds that it may be responsible for the large number of early dropouts from the course; and because it is not a high level skill. Instructors from each of the institutions said that they would like to do some special things in the course:

*Susanville now lets students do cake decorating in their spare time. (According to industry sources, this skill is in demand.)

*CIW would like to have a model kitchen to demonstrate the preparation of noninstitutional food.

*In small ways (such as salad preparation contests) teachers do, apparently, try to orient the ongoing process of institutional food production toward enriching experiences.

*There is more vocational and job placement encouragement.

These differences do not, on balance, seem very great. It appears to us that what was being taught at the work bench last year is now being taught both in the classroom and at the work bench.

The final point worth making about culinary arts is that our benefit-cost analysis did not deduct from benefits any figure to approximate the number of people who were trained and placed but who (a) had

prior experience in the field or (b) would have gone into the field on a random basis. Three percent of the male labor force and 12 percent of the female labor force work in this field, compared to a 21 percent estimated placement rate for culinary arts trainees. If we looked at a cross-section of workers who had the same socio-economic characteristics as CYA/CDC inmates, an even larger portion would be found working in culinary arts.

JOB SOCIALIZATION

Vocational classes teach three things: specific trade skills, general work habits, and an occupational orientation. In trades where low skill levels mean that access to a job is easy, the most important product of a class may be its socializing effect.

A recent study of the labor market information of young men indicates that for people in lower socio-economic classes, simple labor market information has a high payoff:

> A literal interpretation of the regression coefficients suggests that an increase in occupational knowledge equivalent to a five-point rise in the test score--less than one standard deviation--would yield a gain in annual income of about $140 for a steadily employed white youth and $290 for a black.3/

In addition to the effect of information, attitudinal change is important. Getting a person to <u>think</u> he is a cook, welder, etc., may be all that is needed to give him the mental fortitude to persist in seeking a job in a trade.

3/ Herbert S. Parnes and Andrew I. Kohen, "Occupational Information and Labor Market Status: The Case of Young Men," <u>Journal of Human Resources</u>, X (Winter, 1974), pp. 44-55.

RECOMMENDATIONS

Where work crews exist, correctional institutions may be missing an opportunity for job placement payoff by not emphasizing job socialization. What are the trade placement rates for work crews? What would they be if work crews were given (a) short, perhaps two-week, courses in their trade, (b) vocational orientation and socialization, and (c) placement encouragement and services?

These services could be quite inexpensive. For example, people who are currently teaching a trade could visit other prisons where the work is being done by a crew and put on short, annual courses. They could leave some reading materials; and they could work with crew supervisors on techniques to encourage crew members to continue in the trade. The cost of this would be about $300 per week-long course (that is, travel and per diem for the instructor plus some incidental expenses). Also, the teacher's regular classroom time would be foregone. In addition to better placement potential, a subtle benefit of this would be recruitment for the teacher's own class. Prisoners who are really interested in the trade are likely to be found in the appropriate work crew; so this would in effect be a way of recruiting the best prospects for placement, assuming that they can transfer to an institution where the trade is taught. *We recommend that CDC institute a small trial program to explore this opportunity.*

On the other hand, *we recommend that at least culinary arts, baking, housekeeping and building maintenance classes be reverted to a work crew status; and that the CIM Mill and Cabinet class be reviewed for this purpose.* On the basis of benefit-cost ratios alone we have

already recommended elimination of three of these classes. Additional savings would be: Culinary Arts (CDC), $233,000; Landscaping (DVI only), $30,000; Culinary Arts (CYA), $26,000; and Janitorial (CYA), $54,000. In the instance of the CDC Culinary Arts classes we note that the potential savings in future years are considerably higher, because CRC and CIW teachers have not yet reached the top steps of the teaching scale.

It is worth emphasizing that many classes have work crew characteristics, including ones (e.g., dry cleaning) which we did not visit. *Program administrators should review all such classes for possible reversion to work crew status.* In some cases where classes produce significant institutional benefits it may be possible to make arrangements short of complete abolition of a class. For example, although we have recommended (on a benefit-cost basis) eliminating shoe repair classes, it might be desirable to keep one within the CDC system. By screening potential trainees to get the most qualified people, placements could be improved; and graduates who have not been paroled could be sent to institutions where classes have been dropped. They would pick up some of the institutional work load which would otherwise have to be contracted or done by a full-time free staff person.

Teaching and Equipment

Reviews of vocational training frequently center on teaching and equipment problems. Our concern in this study has been to ascertain those factors which are so unusually deficient that they would explain the very low placement rates of students. Finding no evidence that teaching and equipment are unusually bad, we did not pursue these topics in depth.

Any school experiences a mix of good and bad teachers. Correctional institutions are no exception. Our questionnaires to students indicated that they held teachers in surprisingly high esteem. The only exception to this pattern was brought to the attention of the teacher's supervisor. Beyond this, our discussions with vocational supervisors and with the teachers themselves gave us no reason to believe that correctional institutions have any greater teaching problem than other schools.

Our review of equipment came to the same conclusion. We asked each teacher to tell us about his equipment deficiencies. Considering the fact that we came from the Department of Finance, this was a very open invitation for complaints. What we heard was that equipment was generally adequate. Most instructors wanted one or two additional items, but they were minor ones which would not--in our opinion, and often in theirs--have made a significant difference in placement rates. Many businesses, like the classes themselves, have a mix of old and new equipment; and often the old equipment is quite adequate for learning purposes. CDC is conducting a detailed equipment study whose results may be valuable.

Job Information: Wages

We did find one systematic and serious problem in virtually all classes. Students had unrealistic, and sometimes very unrealistic, ideas of what they would be earning when they were released.

* Of 14 cosmetology students, 10 expected to make over $7.50 per hour and 4 expected to make $5.00 to $7.50. In fact, the average full-time cosmetologist makes $4.10 per hour, and many make less than this.

* Landscaping students expected to make over $5.00, while the true average is closer to $3.75.

* Upholstery students thought they would be making $5.70 per hour, compared to a more likely figure of $3.11.

In some classes students' estimates were more realistic.

The reasons for the discrepancies in students' estimates of what they would be making if they were working in the trade right now are at least three in number. First, some people do make as much as the students' estimates. Second, students are likely to be optimistic. Third, teachers may stress an optimistic view of potential earnings as a motivating device. It is also possible that students know that at least for the first few months they won't be making the amounts they say they expect.

Despite these facts, excessive estimates of potential earnings can lead to lower job placement rates. An interesting labor market theory called "job search" holds that:

> People who first begin looking for jobs lack basic information about the labor market, and have higher expectations about pay than can be realized. As a result, workers may reject the jobs that they first encounter and continue searching. Gradually, this procedure enables them to make a more realistic evaluation of available jobs and to adjust their expectations accordingly. Eventually the search process results in employment, or in withdrawal from the labor market.4/

People who have highly unrealistic expectations of wages, who have a low tolerance for frustration, and who suspect that for one reason or another the "low" wages they are being offered may be a result of a "grudge" society holds against them, may be especially prone to dropping out. While "job search" is simply a theory, it appears to be supported

4/Peter B. Doeringer and Michael J. Piore, "Unemployment and the 'Dual Labor Market'," Public Interest (Winter, 1975), p. 70.

by the finding, cited above, that labor market information alone has a significant payoff for job seekers.

We recommend that CYA and CDC vocational program management arrange for annual wage surveys for each program, and post the results where they can be seen by inmates. Such surveys, which *should include data on openings as well,* will be useful for ongoing program evaluation. They might include an estimate of initial wages; wages after the first year of experience; and maximum wages. They might also distinguish between different types of employment in the trade (e.g., hand and machine shops in baking), and provide other useful information.

Skill Centers

The central idea of a skill center--used at Susanville, and for Culinary Arts at CIW and CRC--is that instead of being given intensive training in one trade; a student will be given introductory experience in several. He may later have an opportunity to specialize, but regardless of whether he chooses to do so he will have some chance of getting a job in one of several different trades. If the training is not adequate to get the kind of job he wants, he at least knows more about his vocational choice; and is in a better position to get more training after release.

We did encounter several criticisms of skill centers. A number of instructors felt that students who had a mere introduction to their trade would have very little chance of landing a job; and that any job they would get would be unskilled, the kind that someone could get by walking in off the street. Some of the students we talked to had

specific ideas about the one trade in the skill center they intended to pursue, and thought that the rest were a waste of time.

In theory the skill center idea will work best if trades are related to one another and if skills are interchangeable. CCC's Fabric Skill Center has a problem in this respect, since it offers upholstery, shoe repair, dry cleaning and alterations, office machine repair, masonry, and laundry. The transferability of baking and meatcutting skills to other elements of Culinary Arts is also questionable.

Despite these problems, the skill center concept makes sense. Among the reasons for the low rate of placement for those trained in only one trade is the fact that economic circumstances force them to get a job in the first week or so after release. Finding a common labor job is relatively easy; but finding an opening in a specific trade is not. By giving trainees skills and socialization into several trades, the chances that they will capitalize on their training are improved. For example, in a small town there may not be any openings in a given trade for several months at a time; so having minimal credentials (and confidence that comes from socialization) in some other trade can be very important. Moreover, even major metropolitan areas share the characteristics of a small town for a person who has a limited perception of his "neighborhood" for job-seeking purposes, or who has simple transportation problems which limit his access to jobs. (We have found that prisoners do have such problems after release.)

We are not aware of empirical research which defines the benefit tradeoff between higher rates of placement in lower-skilled jobs--presumably the main effect of skill centers--and lower rates of

placement at a higher initial salary, which occur as a result of more traditional programs. CCC's own follow-up study shows an overall placement rate for the three centers of 34 percent, compared to 23 percent placement for CDC as a whole six months after release.5/ Possibly, the program is relatively cost-effective provided that the wage tradeoff is not too bad. The placement rate must also be understood in the context that, on a random basis, many students would fall into a job in one of the several trades offered by each skill center. On the other hand many students do go on to specialize in a trade while they are in a skill center, so the wage tradeoff may be small. Wage information is lacking, however.

From a technical standpoint, one factor which favors skill centers is that in effect they have a significant throughput of students. In CYA, we have observed, it is this throughput in short courses which makes programs successful despite low placement rates.

Reimbursements for Services to Staff

Vocational classes provide many services to prison staff, including dry cleaning, upholstery, shoe repair, automotive repair, and even special construction jobs (e.g., a metal shop building a staircase for a staff home). This "live" work is a valuable part of training, and lower-than-commercial rates are justifiable because (a) providing work is sometimes inconvenient for staff, (b) trainees

5/The CCC sample size was too small for us to attribute a high degree of reliability to the result; and, as noted above, successful course completers appeared to have been significantly over-sampled.

are not professionals, and work slowly, and (c) trainees make mistakes for which the prison assumes no liability.

Despite this fact, many instructors told us that prices charged to staff were too low, by a factor of 20-30 percent. This is to say that prices could be raised without reducing the volume of work brought in by staff below a point where training would suffer.

It is easy to see why this is so. In one institution staff members pay $3.00 to have three pieces of furniture re-upholstered. They must also pay for materials, but the class is able to get these at half price. Some furniture arrives in terrible shape, but as a class exercise it is carefully and finely restored; and if students do make mistakes, many of them can be rectified by doing the work over again. (This extra-high quality work, which commercial shops could not afford, occurs also in automobile service. At CCC even the simplest job becomes a thorough check on a car's major functional systems.) The result is that staff members can get several hundred dollars worth of net benefits for a small investment.[6/]

We were told that in some prisons (CDC) prices were deliberately kept below what the market would bear. This practice may be unfair to inmates. *We recommend that instructors specify the amount of work needed for training purposes, and on a trial-and-error basis let prices float upward until no more than that amount of work is coming in.* Vocational program staff should monitor this process.

6/We checked several shops to see whether staff might be buying used furniture, running it through a vocational class, and reselling it commercially. This does not appear to be happening.

Instructors frequently told us that if they could keep the money they made, for equipment purchase or bonuses for inmates, their classes could be run more effectively. We hesitate to recommend this because it would create a number of very small special funds with dedicated uses, and this might be administratively inefficient as well as inappropriate in some classes. Such funds could provide productivity incentives, however, and should be considered.

Trial Periods

Introductory trial periods for classes have been instituted at Preston to minimize the time and costs of familiarizing wards with a trade. The concept allows for a structured time schedule, usually two weeks, to acquaint the student with the various skills to be learned and to allow the instructor and student to evaluate whether the student's talents and personal traits are suitable for the trade. The system discourages premature dropping and transferring among classes without a fair assessment by either the student or instructor. On the other hand, the system enables the student to gain enough knowledge of the trade in a short period so that he does not waste excessive instruction time to learn he is not suited to the trade.

Premature dropping sometimes occurs because students begin their training by tending to the most menial and boring tasks in the trade, such as scrubbing pots in culinary arts.7/ A more meaningful introductory period would foster a trainee's interest.

7/At CCC this problem was alleviated by assigning pot-scrubbing chores to a work crew.

A formalized introductory period encourages a student to reach a go or no-go decision point on a trade at an early time. At CMC about half of the students who dropped classes after less than 500 hours because they were not interested had stayed in the class beyond two weeks. Also, CDC 1974-75 termination statistics indicate that 23 percent of those inmates who terminated for lack of interest had stayed in the class beyond 500 hours.

The cost of premature dropouts due to lack of interest and related factors may exceed $100,000 in CDC, counting only dropouts prior to 500 hours. Some of this is unavoidable, and some institutions and teachers do make an effort to weed out potential dropouts before they have accumulated large amounts of training time. A more systematic effort would improve cost-effectiveness. We believe, therefore, that *institutions should initiate a short, formal trial period for new students in a class, in an attempt to identify students who are unlikely to complete before they take up extensive training time.*

Education Day Furlough

CYA's overall low and declining vocational student population forbids offering a wide choice of trade training courses and maintaining a cost-effective program. To satisfy the training needs for minimum security risk students and to minimize incurring large capital equipment costs for classes, DeWitt Nelson is sending some vocational students to local Regional Occupational Center (ROC) classes.

We were not able to evaluate the cost-effectiveness of this approach to training. Too many extenuating circumstances prevailed to

allow a fair assessment. The number of participants in the program currently is limited to those wards who reside in the local school district. We interviewed all three of them. All three students had indicated no desire to work in the trades of training, but they were delighted to have the opportunity the education program provided to leave the confines of the institution. Furlough programs generally tend to serve as a reward for good behavior.

Cost comparisons with Preston and YTS figures indicate that the direct student quota costs per hour are very close to those figures provided by the Woodruff ROC in Stockton. The courses we examined in CYA averaged $1.87 per student/hour, whereas for the ROC/adult student costs charged are $1.17 and for high school students, $2.59, computed on an hourly basis. The ROC administrator anticipates, however, that costs for adult students will be rising to $2.41. Also, these costs do not include the additional expense of transporting wards to the local schools. The off-site training costs will amount to at least 30 percent more than costs for training within the institution.

Due to the security risks local schools are unlikely to desire to serve more than a very select group from the correctional institutions. The psychological rewards and socialization opportunities afforded by the program may compensate for some of the higher costs. If this program continues on a broader basis, a more thorough evaluation considering job placement and wage rates will be necessary.

CHAPTER IV

INMATE PAY

In the 1977-78 fiscal year, half of all CDC inmates will be receiving pay. In recent months there have been 6,332 inmates paid by maintenance; 1,770 by correctional industries; 1,041 in forestry; and 143 in work furlough. The 1977-78 budget will add 1,000 maintenance slots. Wages for maintenance work run from 6 to 35 cents per hour, and most inmates are paid at the lowest rate.

In CYA, roughly half of the wards in vocational classes at YTS are paid. They tend to work in areas where institutional jobs are done, and nearly two-thirds of the pay slots are in culinary arts.

All vocational students at Susanville are paid, and none are paid at CMC. In the majority of CDC classes elsewhere there are one or two pay numbers for people who are working as a clerical or a "lead man" assistant to the teacher. Classes in both CDC and CYA which are strongly oriented toward productive work (culinary skills, maintenance, upholstery, and shoe repair) have more pay numbers or slots, but it is unusual for more than half the class to be on pay status. Usually, the most experienced students are paid.

We believe that a restructured pay system could improve the effectiveness of vocational classes by offering incentives which are more sharply focused on the attainment of course objectives. Among these objectives are:

* Enrolling and retaining the people who need training.
* Encouraging rapid achievement and skill acquisition.
* Encouraging productivity.
* Helping graduates get jobs in their trade.

From each of these perspectives a different pay system would be optimal, and we will recommend an approach which coordinates alternative strategies.

Enrolling and Retaining Inmates Who Need Training

California Department of Corrections inmates enrolled in vocational courses are generally the ones who can most benefit from training.[1] Despite this successful targeting some people who are interested in training do not enroll because they need a pay number. At CMC (where there are no pay numbers in vocational education) 28 inmates were on waiting lists in May who had turned down an opportunity to get into a class of their choice. Of these, 17 had pay numbers; 8 were in other school programs; and 3 were in detention, medically unassigned, or unassigned. One-third of CMC inmates who dropped out of training prior to 500 hours did so because they wanted a pay number.[2]

Pay may be particularly important in lengthy classes where inmates would have difficulty saving up enough money to provide for their occasional needs for 16 months (the normal time it takes to complete a 2,000 hour course).

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[1] Bregman, op. cit., pp. 110-114, compares enrollees with a cross section of inmates. The enrollees appear to have a higher level of education and a worse job history than other inmates, which indicates that the program is successfully targeted on the people who can most profit from it.

[2] This information was provided by the Inmate Education Committee at CMC, which conducted an excellent survey of dropouts for us. We appreciate this effort by inmates.

Helping students to complete such long courses is important because completion of a long course may have a small recidivism benefit.

Our study of the post-release records of inmates indicates that there is a 0.9 percent reduction in recidivism for every 100 hours of vocational training completed; and that in the 500 to 2,000 hour range the decline is 2.8 percent. (See Appendix C) This may be because people who are well-motivated at the time they enter the class are likely to stay longer.

We estimate that CDC's full cost per hour of training is $1.32. At this rate the costs of additional training exceed marginal recidivism benefits during the first 500 hours. Thereafter the net recidivism benefit of additional training could be as high as $2.36 per hour if we ignore the motivational variable.[3/] Since we do think that motivation explains prisoner success to some extent, we must regard the $2.36 per hour figure as a maximum estimate of the benefits of inducing a prisoner to stay in a course beyond 500 hours. A minimum estimate is, of course, zero.

Most instructors we interviewed felt that inmates should be paid, though some believe that they should be paid only for productive work.

3/ The $5.56 million CDC vocational education budget provides for 2,500 slots which, if filled for 35 hours per week, 48 weeks per year, yields an average hourly cost of $1.32 per student hour. For 1976 the full cost of an instance of recidivism is about $13,127, based upon figures provided by John Holahan, "Measuring Benefits from Prison Reform," in Robert H. Havemen et.al., eds., Benefit-Cost and Policy Analysis: 1973 (Chicago: Aldine Publishing Co., 1974), pp. 491-516. A 2.8 percent reduction in recidivism is worth $368 (.028 x $13,127); the cost of an extra 100 hours of training is $132; and the potential net benefit is $236.

Encouraging Rapid Achievement and Skill Acquisition

In Chapter II we noted the essential importance of throughput efficiency in courses. Inmates who find a course to be an enjoyable way of doing time have no incentive to finish quickly. There is now no such incentive for teachers other than administrative norms which discourage keeping a student in a class beyond the formal period for termination. In fact, students who have acquired a high level of skills (or who enter with some skills) are an asset in production and as teachers' aids. Financial bonuses based upon the achievement of skills are one incentive for getting inmates to learn and to complete as quickly as they can.

Encouraging Productivity

An upholstery instructor commented to us that he could place every one of his students. On a more thoughtful note, he added that they would all be fired in a few days because they worked too slowly.

Encouraging speed and quality in work is an important part of the vocational learning process. Where classes are production oriented this also benefits the institution. It also creates problems. One critic of prisons states:

> The most basic manpower problem in the prisons is that they do not effectively utilize their human resources. With limited markets for their goods, they can employ only a minority of their inmates in prison industries. The rest are applied to maintenance tasks with little concern for efficiency or output. When labor is a relatively free good, it is almost always misused.4/

4/Taggart, op. cit., p. 57. The extent to which this applies to California institutions is not clear.

He goes on to urge productivity incentives. The problem with greater productivity, however, is that unless prisons can find more useful things for inmates to do, efficiency improvements will lead to a situation where some people are very productive and others are very idle.

The flip side of this coin is that unless idleness becomes a problem the incentives for prison officials to find new, meaningful work will be minimal.

Most vocational teachers told us that their students were one-fourth to one-third as efficient as journeymen. Some claimed higher levels of efficiency, but in any event one would not expect learners to be as efficient as experienced workers. The fact remains that there appears to be considerable room for improvement in the productivity of vocational students and that this would benefit both their training and the institution. Pay, which is the most common and important productivity incentive used by outside industry, is not used effectively as an incentive in the vocational classes. Pay tends to go to the most senior students in a class, and though there are some classes which are suitable for piecework rate pay we are unaware of any instance where this technique is used.

Helping Graduates Get Jobs In Their Trade

Our study of inmates who were nearing release (see Appendix B) and other studies of parolees indicate that ex-prisoners face severe financial problems in the first week or two after leaving an institution.

Most must get a job in the first week or two or find some alternative means of support--family, friends, welfare, or hustling.5/

This pressure leads many prisoners to accept dead-end jobs. Such jobs are relatively easy to find, while a person who is looking for a job in a particular trade may have to wait before an appropriate opening appears. If a vocational trainee is in a position where he cannot wait, he must accept a job elsewhere. At best, the benefits of his training are postponed; and at worse, having made a bad start, he will not be able to recover.

California has been more sensitive than any other state to the immediate financial needs of releasees. Its $200 "gate money" allotment was unsurpassed, at least in 1975, and the 1976-77 budget gives CDC parole officers an average of $41 per releasee for cash subsistence grants. California Youth Authority wards receive financial support primarily from parole; in Fiscal Year 1975-76 direct expenditures amounted to an average of $200 per parolee.

Cash grant programs appear to have large positive effects. One Maryland program provided experimentals with $60 per week for 13 weeks. Results indicated that 22 percent of participants were arrested for property crimes in the first year after release, compared to 30 percent

5/"The typical parolee is broke very soon...and has real trouble making ends meet until his first payday. Even if he starts on a job right away he will not be paid for a week, maybe two. Meanwhile, he buys some clothes, pays a fee for a driver's license, makes an advance payment on rent, buys food supplies or restaurant meals, and spends something on a celebration of his release. So he is in difficulty and may borrow...." Stanley, op. cit., pp. 145-146. Despite California's comparatively generous grants of gate money, half of the prisoners we interviewed expected to have less than $200 upon release and 31 percent anticipated having between $200 and $500.

of the control group. In the second year (long after the payments had ended) there was a 6 percent gap in the arrest rates of the two groups. Employment for those receiving money was higher by six percentage points at the end of the year (47 versus 41 percent). Although the program had an unfavorable benefit-cost ratio in a narrowly budgetary sense, the ratio of total societal benefits (including the reduction in crimes) to costs was highly favorable.[6/]

A 1972-73 experiment in California was similarly favorable. It provided grants averaging $61 for 12 weeks. After six months, 80 percent of the grant recipients--but only 71 percent of nonrecipients--remained successfully on parole status. On a narrow cost-benefit basis (considering direct budgetary outlays) the project was not successful; but like the Maryland study, a broader cost-benefit analysis would undoubtedly have shown positive results. What is more to the point here is that the program appeared to be particularly beneficial to people who had vocational skills. Experimentals who had skills (which could have been acquired in prison or elsewhere) were successful in 86.5 percent of the cases, compared to 74.7 percent for those who had no skills. In the control group the figures were 73.3 and 69.6 percent, respectively. While the small size of the samples undercuts the reliability of the findings, they appear to lend credence to the belief that in order to make use of their skills vocational trainees need a longer financial "lifeline" than others.

6/ "Unlocking the Second Gate: The Role of Financial Assistance in Reducing Recidivism Among Ex-Prisoners," R&D Monograph 45, U.S. Department of Labor, Employment and Training Administration, 1977.

Financial assistance gave those with skills a 13.2 percent better success rate than those without, and if the Maryland data (which had a longer follow-up period than the California study) are to be believed this gap persists for several years.[7/]

Conclusions and Recommendations

We recommend four pay-related reforms at CDC.

1. *There should be a substantial bonus for completing a class. All or most of this bonus should be reserved for a trainee's use after he is released.*
2. *Students should receive periodic bonuses based upon achievement in class, with the greatest sums coming toward the completion date. Students should not be paid prior to 500 hours.*
3. *Students should receive incentive pay for productivity.*
4. *Funds available for pay should be allocated in a lump sum to each institution, where instructors and program administrators would be responsible for final allocation based upon systemwide principles.*

Reforms in CYA are less urgent.

At YTS and Preston there are already substantial pay numbers in some classes. Wards do not face similar monetary pressures as CDC inmates, and there are fewer pay numbers outside of the vocational classes to attract students away from training. Because CYA classes are short, there is less need for funds to sustain a student through the class-taking period; and it may be difficult to fashion realistic achievement tests in short courses. Finally, CYA casework funds for parolees

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7/ Craig Reinarman and Donald Miller, "Direct Financial Assistance to Parolees: A Promising Alternative in Correctional Training," State of California, Department of Corrections, Research Report No. 55, May, 1975.

appear to be more adequate to sustain trainees during their job search after leaving the institution. We suggest that CYA use current funds to reorient its system toward productivity and achievement pay, if possible; and if the reforms recommended for CDC appear to be successful, the issue of CYA implementation should be reconsidered.

There are two main arguments against implementing these proposals in CDC. One asks the question of why the State should pay for what it now gets at no cost. The answer to this is that the State is getting a vocational training system which in certain specific ways is not meeting its objectives as well as it might. A more serious objection is that the principles upon which our recommendations are based could also be applied to academic education, leading to significant costs in that program. Although there have been several experiments (including a current and hopefully successful one at DVI) in giving academic students pay, we believe that the issue of vocational pay should be addressed on its own merits.

The gross cost of these recommendations should be $297,000, broken down into:

* Course completion bonuses: $167,000.
* Achievement bonuses: $70,000.
* Productivity bonuses: $60,000.

It is implicit in our second recommendation that students in the first 500 hours of training should not be paid unless for productivity. This means that some money used to pay students at Susanville could be diverted to reduce the gross cost. It is also implicit that where current pay numbers are not geared to meeting class objectives the funds should be redirected.[8/]

[8/]We have not studied the extent to which redirection is possible.

The reason for the fourth proposal is that individual instructors will have to tailor pay systems to the conditions in their own classroom.

* In one class achievement tests may be appropriate at the 500th hour; but elsewhere a good testing point may occur somewhat later.

* Some teachers may be able to establish piecework productivity standards and others will not.

Because the purpose of these pay incentives is largely educational, we believe that it is best to leave them in the hands of instructors.

The resulting system should look something like this. In a class where productive work is being done students will begin receiving productivity pay of some sort at the 500th hour. It would probably be less than what they are now receiving. However, all students would also have increasingly larger achievement bonuses at about the 500th, 800th, 1200th, 1600th, and 2000th hours. (When a student actually reaches these points depends upon how rapidly he learns.) Finally, the completion bonuses we have suggested are calculated at a rate of 10 cents per hour and would become available to prisoners when they leave the institution. The whole system thus combines:

* A fairly regular paycheck for students in production classes after the 500th hour.

* Increasingly larger achievement bonuses which should have very little attraction to early dropouts, but should increase the staying power of the rest.

* A completion bonus which could double the gate money of someone finishing a 2,000 hour course.

Most inmates would receive slightly more pay, and policies which are now inconsistent among institutions (notably CMC and CCC) and individual courses would become more similar.

Because they are designed to achieve specific objectives, these proposals should improve program effectiveness. However, it may be desirable to test them before complete implementation. California Men's Colony is the most desirable location for a test because it now has no vocational pay numbers. The cost of an experiment would be roughly $40,000 per year plus analytical time. A good follow-up system would have to be assured, and although some aspects of the recommendations could be proven in a year's time, a complete test should run for two to three years.

An Alternative to Pay: Good Time

As an incentive for people to work toward class objectives "good time" is an alternative to pay. Youth Training School now gives nine days off for every month of participation in vocational education. AB 476/77 provides for a one-month reduction of sentence for every eight months spent in work, educational, vocational, therapeutic or other approved activities. Neither of these provisions is supported by any known correlation between participation and reduced recidivism. Furthermore, SB 42 expressly forbids denial of good-time credits for failure to succeed after demonstration of reasonable effort at an activity; so current provisions of law would be quite difficult to use as achievement and productivity incentives. Good time does not speak to prisoners' needs for some income while they are taking a course, nor does it help a person financially after release.

Changing the law and YTS practice could allow good-time provisions to become a more sharply focused took for achieving course objectives.

* Good time credit might become contingent upon course completion.

* When instructors set standards of achievement for certain points of time (e.g., a person must be able to perform a certain operation by the 500th or 1000th hour in a course) good time credits might stop running for students who fail tests.

For example, if a student in a 1,200 hour course finishes the course in 1,300 hours, he would get 1,200 hours credit, because good time would have stopped running between the 1200th and 1300th hours.

It is worth noting that a serious problem with the current system is that students who finish quickly can be penalized for so doing. If a person finishes a course in half the prescribed time, but then doesn't want or can't get into some other activity that gives good time, he loses an opportunity to cut the time of his sentence. Predictably, some inmates will want to stay in courses beyond the point where they have any reasonable education value simply to get good time credit in a manner they find enjoyable.

CHAPTER V

JOB PLACEMENT

CDC devotes few resources to placing prisoners. There are 2.5 positions serving this function. For parole agents and teachers (there are individual exceptions) placement is a peripheral task.

It can be argued that present placement resources are adequate. In the first place, there is a wide array of community groups and agencies interested in placing disadvantaged persons, and some of these specialize in ex-offenders. In addition to the Department of Employment Development, (EDD), there are the Seventh Step Foundation, M-2, the National Alliance of Businessmen, and various Federal programs. At least in Sacramento, group representatives have been candid in discussing duplication--especially when it comes to the problem of numerous groups trying to work with one employer. While there may be no shortage of resources, there may be a problem in organizing them effectively.

Secondly, studies of placement projects indicate that they are not so highly successful that all doubts about their cost effectiveness are resolved. Taggart describes one job development and placement project where:

> ...recidivism was apparently not reduced: 78 percent of those in developed jobs worked full time; compared with 73 percent of those with other jobs; 53 percent had worked three-fourths of the time since release, compared with only 40 percent of the others; 55 percent were in training-related jobs, compared with 45 percent of those whose jobs were not developed.1/

While the results of this project were indifferent--and from a cost-benefit standpoint, undoubtedly negative--Taggart concluded that there was reason to consider employment services effective for trained prisoners.

One reason why special job placement services have not been very successful may well be the multiplicity of services available to non-participants in the projects. Also, projects which relied upon general purpose placement agencies (such as EDD) have been criticized for not giving substantially greater services to prisoners than to others.

How do releasees find jobs? CDC's 1970 study of vocational students found that the job sources were:

* Parole agents	16.8%
* Union representatives	2.8
* Trade advisory committees	4.7
* The prisoner himself	46.7
* State employment agency	5.6
* Institutional personnel	5.6
* Family and friends	17.8

In only one out of eighteen cases where a parole agent was responsible for placement was a prisoner placed in his training trade; and the CDC

1/Op. cit., p. 74. In the Labor Department's "Unlocking the Second Gate" study, op. cit., two members of the Baltimore State Employment Service and occasional members of the project's staff gave job finding assistance to about 216 prisoners over a period of 13 weeks. Job services had "no effect" on employment. In the early 1970's CDC had four MDTA-funded placement officers, but when Federal funds ran out the project was discontinued, implying that policymakers were not convinced of its effectiveness.

authors conclude that parole agents were generally not very active in job placement and were particularly unresponsive to the needs of vocational trainees.[2/]

If the institutional personnel whom prisoners named as job sources were in fact teachers, only about 13 percent of all job sources (teachers, union representatives and trade advisory committee members) had strong links to a trade of training. For the rest--including the prisoner himself--trade skills may have been one resource for employment, but the main job search objective was probably to get the prisoner any kind of a job.

Prisoner Motivation

Another reason for doubting the effectiveness of placement services is that their potential is limited by prisoner interest. The Michigan study cited earlier in this paper found that 22 percent of vocational trainees were never interested in applying for a job in their trade, and 16 percent were interested but did not apply. Twenty-four percent of Dickover's CDC sample was also uninterested in working in their trade, even if given a chance to do so.

These figures contrast with what people say when they are still enrolled in a class. When asked whether they wanted to work in their trade, responses in our survey of 508 trainees were:

Yes	63.3%
Probably, yes	22.6
Probably, no	5.6
No	8.7

[2/] Robert M. Dickover, et. al., "A Study of Vocational Training in the California Department of Corrections," Report No. 40, State of California, Department of Corrections, pp. 63, 66-67.

Between 74 and 80 percent indicated that the primary reason why they were enrolled was to get a good job; but when we asked what was the best thing about working in the trade, only 30 percent said that it was a "good chance of getting a job right after being released." Sixty-one percent said there was a good or very good chance of getting employment right after being released, while 39 percent said it was fair, poor, none, or they didn't know. In another question, we asked students to estimate how many others in the class were serious about getting a job in the trade. They answered:

None	4.8%
A few	34.8
About half	23.4
Most	28.1
Everyone	9.1

The answers are similar to those found by Dickover.

What do these data mean? Some of the evidence is contradictory--80 percent are taking a course to get a good job, but only 61 percent think there is a better than fair chance of getting such a job immediately after release. This may imply that some who would like to get a good job know that they won't try, or couldn't if they did try; or that the prisoners are just being realistic. There is also a strong contradiction between the professed motivation of individuals to take a course and their opinion of how serious other people are about getting a job in the trade; this may be a byproduct of a cynical world view, or simply poor knowledge about what other people intend to do.

Despite these reservations, the data overall indicate that between 60 and 80 percent of vocational trainees are interested enough in the trade to be considered serious candidates for placement services.

This is a theoretically maximum placement rate, compared to which only 31 percent of trainees were involved in their trade one month after release, according to CDC data.

M.D.T.A. Experience

Under the Manpower Development and Training Act CDC had four positions (located within different institutions) for placement. The positions were not picked up with state funding, which indicates one level of judgment about its success. More to the point, the data surviving from the program are of doubtful quality: one agent claims to have placed 287 out of 287 people in a given year, while others show rates of roughly 25, 60, and 70 percent placed. The case loads and placement rates vary too much to be able to say with any certainty what could be expected from a similar program, though we suspect that an institutionally-based placement officer might work with about 190 prisoners per year. There are some good surviving data from DVI which show that for vocational students, the officer placed 29.6 percent in a trade; 4.6 percent in a related trade; 41.9 percent in an unrelated job; and the rest, 23.9 percent, got no jobs.

The indicated rate of placement in trades is similar to that for CDC vocational programs as a whole, one month after release. However, since some of the 23.9 percent of vocational trainees who did not get any kind of job through the placement officer might have done so after leaving prison, the program's record may be better than the formal data indicate. Based on the formal data, a cost of better than $400 per trade placement could be expected. Because many (we don't know how many)

of the people placed through the DVI job placement officer might have a trade placement by some other means, the program's net benefits are obscure.

CRC's Placement Program

The California Rehabilitation Center at Corona has the most ambitious placement program within our sample of institutions in the Department of Corrections. A full-time placement officer is located there. The heart of the program, however, is teacher responsibility for placing certificated students. Each month, teachers report on students who have left their classes with skill certificates and who are in the job market. They must identify the name and address of any employer. The placement officer is a resource for them, but the responsibility for placement is theirs.

The placement officer is also responsible for trade advisory committees and industry contact. Several firms work closely with particular vocational programs. The most notable of these is Suzuki, the motorcycle manufacturer. It has donated substantial equipment to CRC; participates in trade advisory council meetings; trains instructors; and employs selected graduates of the small engine repair class. Apparently, only the most reliable graduates--a minority--are sent to Suzuki, in order to minimize the chance that the corporation will be "burned."

Unfortunately, the results of the CRC program are not definitively encouraging. Placements in trades of training appear to be running at under 20 percent, but this is uncertain because the reporting forms are

ambiguous. They list employers' names and addresses; but company names don't always give a clue as to the nature of the business, and even where they do it is not clear whether a person's job is necessarily related to his training.[3/] CRC's forms also fail to state which individuals are considered to have left a class with skills.

CYA Placement Programs

We looked in some detail at two CYA programs.

The Oakland Job Center offers intensive placement assistance to CYA wards, regardless of their trade training or lack thereof. Staffed by four professionals, the center's 1976-77 budget was $192,000. An estimated 174 people were placed through the center in 1976, of whom 73 lasted for 60 days or more, yielding a cost of $1,104 per placement and $2,640 per longer-term placement. Most placements are in low-skilled jobs, according to the center's own evaluation document.[4/] By comparing the recidivism of those placed by the center to that of YA East Bay Area wards, this document claims recidivism benefits of $227,500. On the one hand, this seems excessive because of the motivational variable: the people who use the center are probably the ones who most want and are most likely to succeed. On the other hand, the document doesn't attempt to estimate increases in the quantity and quality of employment stemming from the center's services. Treating the two neglected items as a wash, the center appears marginally successful.

3/Ideally, follow-up data should include: employer and address, description of the trainee's job, wage rate, and the teacher's judgment as to whether the job is training-related. The job description and wage rate data can be a check on the teacher's judgment, and wage data are extremely valuable in benefit-cost analysis.

4/"Job Program Evaluation," State of California, California Youth Authority, 1977, mimeo.

About 20 percent of the people whom the center refers for additional training get jobs in their trade.

The YTS job development and placement staff consists of three persons. In the first three months of 1977, the 3-man staff placed 14 of the 20 people who were targeted for service. (Among these 20, three had been in the work furlough program.) Out of 15 people with trade training, eight were placed. We estimate a cost per placement in excess of $1,400. Considering the large number of vocational students at YTS, and the fact that only those recommended (presumably top-notch candidates) for these intensive services get them, the rate and number of placements is not indicative of a high level of program success.

Direct Placements

To enhance the effectiveness of vocational training, some institutional trade training programs have enlisted the assistance of favorably inclined employers. The nature of the assistance varies from donations of equipment or materials to job placements, teacher training, and other arrangements. A direct placement program contains elements of assistance from an employer, but the essence of the program features a mutually beneficial arrangement between the education system and an employer.

This formalized arrangement is shaped by two main, integrally related components. First, the vocational trade class curriculum is designed to meet the training needs for a particular employer. Second, there is a degree of assurance from that employer that trainees will be hired. Since the class graduates function as a source of specially

trained employees for that employer, the effectiveness of the hiring program and the training program is increased. Also important to the effectiveness of a direct placement program for those institutions whose wards or inmates will be paroled to all areas of the state is the selection of an employer with outlets in many communities.

CYA has initiated some programs with employers to assure direct placements. Among the several existing and proposed programs in CYA institutions are the ARCO service station management class at YTS, the Denny's Restaurant culinary training class at DeWitt Nelson and the fire-fighting training program for the Department of Forestry. Not all trades are suitable to the direct placement concept. Since the institutions generally must train students from many localities and not many trades have firms with a statewide network of shops, the selection of trades for a direct placement program is very limited. Those trades characterized by a plethora of small or non-affiliated businesses such as landscaping and shoe repair trades, must more appropriately rely on a network of trade advisory committee members to support job placements.

The ARCO program is the only direct referral program in current operation in CYA. The course curriculum, developed jointly with ARCO, generally is much more demanding in contrast to the auto repair class at Preston. The course requires 11 months to complete compared to the Preston 3-month course. The course requires students to have attained a 6.0 academic achievement level, slightly higher than the 4.8 in the regular auto mechanics trade classes. Also, the class quota is lower; 11 compared to 15. Out of the first class of 11 students, 9 completed the course. Follow-up information on these 9 students indicates that 6 were placed in related work. ARCO guarantees referrals for all graduates.

With these initial results, the ARCO training class ranks among those programs which exhibit relatively high benefit to cost ratios (1.123). Although the per student investment costs are higher for this class because of the small quota size, the high placement rate yields a correspondingly high expected earnings and benefits. Based on these data, the outlook and expectations for direct placement type programs are good. Each program, however, will have to be evaluated on its own merits, including considerations for wage levels, length of training program, student quota level, and placement rates.

Conclusions and Recommendations

When we began this study we expected to make some strong recommendations about the need for added placement services. For CDC, at least, placement stood out as the one element in the vocational sequence where manifestly little was being done. It thus seemed to be the most logical point at which low employment in trades of training could be explained. In some respects, it still is. However, in the course of this study we have come to appreciate the dynamic of the "slow leak" in the training process by which people drop out of courses early, never apply or apply persistently for jobs, and leave the jobs they get after a short time. Through our benefit-cost analysis we have seen how some courses are hobbled by low prevailing wages in the field, low enrollment and high course length--as well as by placement. Finally, we have not found evidence that placement programs made a considerable difference in the rate of placement in trade; or, to make the point more carefully, they don't promise to make enough of a

difference to justify both their own cost and the cost of training programs which are less than marginally cost beneficial.

We do *recommend that CYA and CDC adopt placement programs similar to that being tried at the California Rehabilitation Center. Teachers should have the primary responsibility for:*

a. Following up on all students at 1-, 6-, and 12-months after release.

b. Placing students whom the teacher certifies to have trade skills.[5/] Budgetary costs should not exceed $70,000 per year at CDC, and $12,000 for CYA (Preston and YTS). The main cost elements would be one week of travel for each teacher, for the purpose of lining up employment contacts, and telephone calls or post cards to parole agents for the purpose of follow-up. A non-budgetary cost is one week's absence from a class per year, which, ceteris paribus, would reduce benefit-cost ratios by about two percent. Based on our observation of vocational classes, teachers should be able to do follow-up work without cutting into instructional time in any significant way. A side-benefit of this approach is that in visiting employers, teachers will be coming into contact with new trade developments, and may find recruits for trade advisory committees.

Follow-up of vocational students is badly needed. Even CYA's system needs improvement, because it does not feed back highly specific data on a person's trade or wages. CDC has no system. We recommend a follow-up on all students because some will be placed after surprisingly few training hours, while in other cases teachers insist that the course should be credited with giving people who are not placed in a trade of training with generalized job skills. Follow-up data should include

5/Our recommendation does not include the hiring of full-time placement officers, which are a part of CRC's program.

at least:

a. A student's prior occupation or skills.

b. Dates of training, number of hours, and release or parole date.

c. Name and address of employer.

d. A description of the trainee's job.

e. Wages.

Data at 1-, 6-, and 12-months are most desirable.

With an additional week of placement-related travel each year, we would not expect teachers to go out with each trainee. However, in a two- or three-year cycle teachers should be able to maintain a few fresh contacts in each major employment center; and some trips could be geared to the foreknowledge that a particularly promising student would soon be released to a certain area of the state. For both placement and follow-up, teachers will have to depend upon the cooperation of parole officers; and the personal contact made possible by travel should facilitate positive relationships. Parole officers, allegedly, do not work hard to make trade-related placements; but the knowledge that he will be contacted at least three times a year for follow-up data and placement help may make a difference in an officer's response. It will also give the parole officer a chance to feed back observations about training to a place where it will count.6/

By making better use of existing teacher and parole officer resources, this approach to placement and follow-up is much less expensive than other alternatives.

6/It may be desirable at some point to gather a systematic overview of parole officers' perceptions about training. After the follow-up and placement system proposed here begins operating, a special study of parole officers participation and perceptions would be useful.

One alternative which we have considered is a joint vocational placement system to which CYA and CDC would contribute resources. Having at least one placement officer to serve vocational trainees in such places as Los Angeles, the Bay Area, and San Diego would be a useful backup to teacher and parole officer efforts. The 2.5 CDC placement officers are attached to institutions which are, at least in the case of Susanville and Tracy, far away from the metropolitan areas where people get jobs. The YTS placement effort does not appear to be very effective, and there is some doubt about the one in Oakland. By using these existing resources in whole or in part, the correctional institutions could form a cooperative placement effort which, if successful, could be expanded.

Finally, we *recommend the expansion of direct placement programs.* This concept may be inapplicable in some industries where employment is in small and unrelated businesses, but for many firms it could be advantageous.

APPENDIX A

VOCATIONAL CLASSES QUESTIONNAIRES

A survey of CDC and CYA vocational students was completed in May, 1977. The summaries of the responses to the vocational classes questionnaires are shown in Exhibits A and B for CDC and CYA, respectively. These responses were garnered from 528 CDC students at seven institutions:

Institutions	Responses
California Correctional Center	129
California Institution for Men	44
California Institution for Women	78
California Men's Colony	92
Deuel Vocational Institute	10
San Quentin State Prison	53
California Rehabilitation Center - Men	94
California Rehabilitation Center - Women	28
Total	528

and 182 CYA students from Preston (97 responses) and YTS (85 responses).

Some of the highlights from the summaries show many similarities and differences in the two groups of students. Although about a fourth of each group indicated that they did not work during the year before their terms, almost twice as many CDC students had worked the whole 12 months prior (23 percent compared to 12 percent). The working history of CDC trainees also compared favorably to CYA trainees in number of employers and hours per week worked.

When students were queried about their motivations, most CDC and CYA trainees (each 78 percent) asserted that the most important reason for taking their courses was to prepare for a better job. Similarly, the majority of both groups had optimistically stated "good" or "very good" as the chances for getting a job in their trade after release. It was notable, however, that each student had perceived his classmates to be generally less serious in their work intentions.

The students were asked to rate their teachers and the equipment in their classes. At each institution visited students most frequently chose the best category to rate their instructors; a few enthusiastically wrote in excellent in the margins. Only one CCC class (Baking) markedly deviated from this general trend. In general, students also were not critical of the equipment in their classes.

CONTINUED

1 OF 2

Institution_____
Class_____

EXHIBIT A
CDC QUESTIONNAIRE

VOCATIONAL CLASSES

The purpose of this questionnaire is to get a better understanding of how useful vocational classes are. We would appreciate accurate and thoughtful answers. Do not write your name on this form: answers will be kept confidential.

1. How old are you? (check one answer).

1	Under 18.	284	25-34.
178	18-24.	65	35 or over.

2. What is the highest grade you have completed in school?

6	5th or under.	32	8th.	115	11th.
4	6th.	41	9th.	173	12th.
3	7th.	68	10th.	83	13th or over.

3. During the year before you started this prison term, about how many months did you work?

134	None.	87	7-9 months.
61	Up to 3 months.	38	10-12 months.
87	3-6 months.	123	Worked full time (12 months).

4. During the year before you started this prison term, how many different employers did you work for?

136	None. (didn't work)	77	Three, four or five.
181	One.	14	Six or more.
113	Two.		

5. What was your job before going to prison? (If there was more than one type of job, list the one you spent the most time on first.)

Main job_____

Other job _____

Other job _____

6. When you were working, how many hours per week did you usually work?

79	Didn't work.	10	17-24.	333	40 or more.
30	1-8.	22	25-32.		
9	9-16.	39	33-39.		

7. When you were working, what was your average pay?

75	Didn't work.		
45	Less than $2.50 per hour.	86	$4.00 to $4.99 per hour.
86	$2.50 to $2.99 per hour.	67	$5.00 to $7.50 per hour.
120	$3.00 to $3.99 per hour.	36	Over $7.50 per hour.

8. What else were you doing in the year before starting this prison term?

77 In school.
11 Armed Forces.
72 Jail or prison.
124 Other.
213 Nothing else, just worked.

9. Have you been in jail or prison before, other than the current term?

352 Yes.
161 No.

10. Have you had any vocational or trade training before this course?

245 Yes.
270 No.

11. If you have had vocational or trade training other than this course, answer the questions below for each course. If not, go on to question #12. You may list trades learned in the Armed Forces, skill centers, community colleges, high schools, or other programs.

First Vocational Course

a. What trade did you learn?_____
b. Where did you take the course?_____
c. How long were you in the course?_____
d. Was the course taken during your present prison term?
___ Yes.
___ No.
e. Have you ever been employed in this trade?
___ Yes.
___ No.
f. How long were you employed in this trade?_____

Second Vocational Course

a. What trade did you learn?_____
b. Where did you take the course?_____
c. How long were you in the course?_____
d. Was the course taken during your present prison term?
___ Yes.
___ No.
e. Have you ever been employed in this trade?
___ Yes.
___ No.
f. How long were you employed in this trade?_____

12. How long have you been in the current training course?

199 Less than 3 months.
156 3-6 months.
90 7-12 months.
73 Over 12 months.

13. How long were you on a waiting list before enrolling in this course?

209 No wait.
166 1 month or less.
75 2-3 months.
37 4-6 months.
28 7-12 months.
8 More than a year.

14. Was this course your first choice for vocational training, or would you have preferred to learn some other trade?

386 First choice.
118 Preferred some other trade. Which trade?_____

15. Of the following reasons for taking this course, which is the most important?

67 The course is a good way to do time.
413 It prepares me for a better job when I get out.
28 It helps me get an earlier release date.

16. Which of the following reasons for taking this class are the most important to you? (Check three reasons)

103 I like the people in the class.
260 This type of work comes easy to me.
259 The instructor is good.
380 I can get a good job when I get out.
27 I can get a good pay number for taking the course.
59 I can get an earlier parole date.
141 It's better than doing nothing.
33 I get GI Bill money.

17. During your current prison term, have you ever been in any programs besides vocational training? Check all the programs you have been in.

58 Correctional Industries.
102 Prison maintenance and other jobs.
178 Academic education.
69 Athletic programs.
96 Other programs, such as counseling.

18. To the extent that you can tell, how many students in this class do you feel are really serious about working in the trade after release?

26 None.
186 A few.
113 About half.
149 Most.
46 Everyone.

19. How would you rate the teacher in this class?

303 Good.
180 Above average.
6 Below average.
18 Poor.

20. To the extent that you can tell, how do you rate the equipment used in this class?

214 Good.
123 Above average.
115 Below average.
52 Poor.

Answer the next question by writing in the number of hours which best answers the question.

21. Some prisoners say there should be pay numbers for every vocational education class. We would like to know how many hours each week you spend on prison maintenance work, and how many are spent on instructional activities.

First, tell us how many hours a week you spend in this class.

_____ NUMBER OF HOURS IN CLASS.

Second, tell us how many hours of class time each week are spent on prison maintenance and on production of things for prison use. (If you can't remember exactly, give us your best estimate.)

_____ NUMBER OF HOURS SPENT ON PRODUCTION.

Third, tell us how many hours of class time each week are spent on instruction. (Time spent on production and on instruction should add up to the total number of hours spent in class.)

_____ NUMBER OF HOURS SPENT ON INSTRUCTION.

22. Do you want to work at a job in the trade you are now training for?

325 Yes.
116 Probably, yes.
29 Probably, no.
43 No.

23. What do you think of the chances of your getting a job in this trade after you are released?

163 Very good.
145 Good.
112 Fair.
22 Poor.
15 None.
59 Don't know.

24. If you were working in this trade, how much would you expect to be making?

3 Less than $2.50 per hour.
28 $2.50 to $2.99 per hour.
86 $3.00 to $3.99 per hour.
125 $4.00 to $4.99 per hour.
179 $5.00 to $7.50 per hour.
90 More than $7.50 per hour.

25. What is the best thing about working in this trade? (Check only one answer.)

58 Good wages.
97 Steady work.
159 Good chance of getting a job right after being released.
130 Interesting work.
14 Chances for promotion.
33 Good working conditions.
37 Other (specify) _____

26. Since starting this class, how many total hours have you spent in this course (approximately)?

88 Under 100.
128 100 to 299.
76 300 to 499.
110 500 to 999.
55 1,000 to 1,499.
24 1,500 to 2,000.
23 Over 2,000.

27. How many more hours do you expect to spend in the class before your are through?

49 Under 100.
76 100 to 299.
89 300 to 499.
98 500 to 999.
57 1,000 to 1,499.
64 1,500 to 2,000.
75 Over 2,000.

28. When you leave this class, what do you think the most likely reason for leaving will be? (Check several answers if you need to.)

319 Release or parole.
9 Not interested in the trade.
230 Completion of the course.
4 Waste of time.
47 Forced out to make room for someone else.
10 Bored with the class.
69 Learned everything I want to learn.
71 Start some other program.
49 Get a pay number.

29. If you weren't enrolled in this class, what would you rather be doing?

284 Taking another vocational class.
125 Taking an academic class.
37 Working in prison industries.
61 Doing institutional maintenance work.
60 Doing nothing.

Class Schedule:

A.M._____

P.M._____

EXHIBIT B
CYA QUESTIONNAIRE

Institution_____
Class_____
Phase (circle): A, B, C, D.

VOCATIONAL CLASSES

The purpose of this questionnaire is to get a better understanding of how useful vocational classes are. We would appreciate accurate and thoughtful answers. Do not write your name on this form: answers will be kept confidential.

1. How old are you? mean = 19.6

2. What is the highest grade you have completed in school? (Check one answer.)

___5th or under.	8 8th.	50 11th.
___6th.	10 9th.	61 12th.
2 7th.	26 10th.	19 13th or over.

3. During the year before you started this stay in (Preston/YTS), about how many months did you work?

21 None--in school.	33 3-6 months.	22 Worked full time (12 months).
27 None--unemployed.	36 7-9 months.	
27 Up to 3 months.	12 10-12 months.	

4. During the year before you started this stay in (Preston/YTS), how many different employers did you work for?

20 None--in school.	51 Two.
24 None--unemployed.	32 Three, four or five.
46 One.	6 Six or more.

5. What was your main job before coming to (Preston/YTS)?

Main job _____

_____

_____

6. When you were working, how many hours per week did you usually work?

43 Didn't work.	5 17-24.	81 40 or more.
15 1-8.	12 25-32.	
7 9-16.	17 33-39.	

7. When you were working, what was your average pay?

41 Didn't work.	
18 Less than $2.50 per hour.	30 $4.00 to $4.99 per hour.
20 $2.50 to $2.99 per hour.	15 $5.00 to $7.50 per hour.
49 $3.00 to $3.99 per hour.	5 Over $7.50 per hour.

8. What else were you doing in the year before starting this stay in (Preston/YTS)?

41 In school.
5 Armed Forces.
49 Jail or CYA institution.
53 Just worked, nothing else.
19 Nothing.
16 Other (specify)_____

9. Have you been in jail or a CYA institution before, other than the current term?

128 Yes. 54 No.

10. Have you had any vocational or trade training before this course?

98 Yes. 83 No.

11. If you have had vocational or trade training other than this course, answer the questions below for each course. If not, go on to question #12. You may list trades learned in the Armed Forces, skill centers, community colleges, high schools, or other programs.

First Vocational Course

a. What trade did you learn?_____
b. Where did you take the course?_____
c. How long were you in the course?_____
d. Was the course taken during your present stay in (Preston/YTS)?
___Yes. ___No.
e. Have you ever been employed in this trade?
___Yes. ___No.
f. How long were you employed in this trade?_____

Second Vocational Course

a. What trade did you learn?_____
b. Where did you take the course?_____
c. How long were you in the course?_____
d. Was the course taken during your present stay in (Preston/YTS)?
___Yes. ___No.
e. Have you ever been employed in this trade?
___Yes. ___No.
f. How long were you employed in this trade?_____

12. How long have you been in the current training course?

60 Less than 3 months.
67 3-6 months.
29 7-12 months.
14 Over 12 months.

13. How long were you on a waiting list before enrolling in this course?

126 No wait
37 1 month or less.
7 2-3 months.
3 4-6 months.
1 7-12 months.
0 More than a year.

14. Was this course your first choice for vocational training, or would you have preferred to learn some other trade?

141 First choice.
37 Preferred some other trade. Which trade?_____

15. Of the following reasons for taking this course, which is the most important?

28 The course is a good way to do time.
142 It prepares me for a better job when I get out.
11 It helps me get an earlier release date.

16. Which of the following reasons for taking this class are the most important to you? (Check three reasons)

44 I like the people in the class.
80 This type of work comes easy to me.
87 The instructor is good.
134 I can get a good job when I get out.
28 I can get good pay in this class for taking the course.
27 I can get an earlier parole date.
50 It's better than doing nothing.
2 I get GI Bill money.

17. During your current prison term, have you ever been in any programs besides vocational training? Check all the programs you have been in.

42 Institutional maintenance and other jobs.
66 Academic education.
49 Athletic programs.
33 Other programs, such as counseling.

18. To the extent that you can tell, how many students in this class do you feel are really serious about working in the trade after release?

10 None.
52 A few.
36 About half.
50 Most.
23 Everyone.

19. How would you rate the teacher in this class?

106 Good.
63 Above average.
4 Below average.
5 Poor.

20. To the extent that you can tell, how do you rate the equipment used in this class?

108 Good.
49 Above average.
15 Below average.
8 Poor.

21. Do you want to work at a job in the trade you are now training for?

100 Yes.
47 Probably, yes.
13 Probably, no.
20 No.

22. What do you think of the chances of your getting a job in this trade after you are released?

48 Very good.
53 Good.
41 Fair.
10 Poor.
6 None.
25 Don't know.

23. If you were working in this trade, how much would you expect to be making?

0 Less than $2.50 per hour.
10 $2.50 to $2.99 per hour.
18 $3.00 to $3.99 per hour.
43 $4.00 to $4.99 per hour.
83 $5.00 to $7.50 per hour.
22 More than $7.50 per hour.

24. What is the best thing about working in this trade? (Check only one answer.)

12 Good wages.
16 Steady work.
52 Good chance of getting a job right after being released.
62 Interesting work.
4 Chances for promotion.
11 Good working conditions.
20 Other (specify)_____

25. Since starting this class, how many total hours have you spent in this course (approximately)?

39 Under 100.
45 100 to 299.
40 300 to 499.
34 500 to 999.
11 1,000 to 1,499.
5 1,500 to 2,000.
4 Over 2,000.

26. How many more hours do you expect to spend in the class before you are through?

18 Under 100.
24 100 to 299.
26 300 to 499.
51 500 to 999.
21 1,000 to 1,499.
10 1,500 to 2,000.
22 Over 2,000.

27. When you leave this class, what do you think the most likely reason for leaving will be? (Check several answers if you need to.)

151 Release or parole.
7 Not interested in the trade.
44 Completion of the course.
1 Waste of time.
4 Forced out to make room for someone else.
5 Bored with the class.
20 Learned everything I want to learn.
23 Start some other program.
24 Get paid work.

28. If you weren't enrolled in this class, what would you rather be doing?

79 Taking another vocational class (specify)_____.
25 Taking an academic class.
42 Doing institutional maintenance work.
19 Doing nothing.

APPENDIX B

PRE-RELEASE QUESTIONNAIRE

A survey of 93 CDC inmates who were within two months of their release dates was taken in April, 1977. Inmates were questioned about their work backgrounds, their perceptions of prison programs, and their plans and anticipated needs upon release.

One-fourth of the respondents stated that they did not work the year before their prison terms. Among those with work histories about 40 percent indicated average pay scales over $4.00 per hour.

Most inmates did not participate in the work furlough and temporary community release programs. Maintenance and institutional jobs, on the other hand, were among the most popularly chosen activities (63 percent). In rating maintenance work, however, participants thought their institutional jobs were not very useful in preparing for a successful parole (56 percent). Vocational education participants were among the most optimistic about program utility; "very useful" was indicated by half of the inmates who had participated.

Among those parole problems queried about, inmates seemed most satisfied with housing arrangements. Although most inmates had jobs lined up (65 percent), only a quarter of those jobs were intended to be enduring ones. Since 50 out of 93 respondents stated that their financial resources upon release would be less than $200, it was not

surprising that half of the inmates expected to borrow money soon after release. Clothes and other essential items were deemed not very adequate by those surveyed.

These data confirmed our impression that releasees are under significant pressure to get a job within a short time after release. Our analysis of individual questionnaires indicated that about one-fifth of the parolees will be released into extremely difficult circumstances where they will lack not only cash but also family support, decent job prospects, and basic items needed for everyday living. This is not to say that the remainder are released into an environment which is appealing or conducive to rehabilitation, but only that for twenty percent of releasees there do not appear to be any elements in their environment which would enable them to survive long without working. Those in this group who have had vocational training are under extreme pressure to take the first job they can get, regardless of whether it fits with their occupational training and goals.

See Exhibit C for further information detailing questionnaire responses.

Name_____
Number_____
Institution_____

EXHIBIT C

CDC PRE-RELEASE QUESTIONNAIRE

The purpose of this questionnaire is to find out whether you got into the kind of programs you needed when in prison. Also, we are trying to find out about the problems ex-prisoners face when they get out. Your answers will be strictly confidential, and will not be shown to prison authorities. An accurate answer will help us to understand prisoners' problems after release.

BACKGROUND QUESTIONS

1. What is your age? (Check one answer.)

0 Under 18.	45 25-34.
18 18-24.	30 35 or older.

2. What is the highest grade you have completed in school? (Check one answer.)

0 5th or under.	8 8th.	13 11th.
3 6th.	4 9th.	36 12th.
1 7th.	14 10th.	13 13th or over.
		1 no answer

3. During the last year before going to prison, about how many months did you work? (Check one answer.)

25 None (didn't work).	15 7-9 months.
13 Less than 3 months.	8 10-12 months.
18 3-6 months.	13 Worked full time--12 months.
	1 no answer

4. During the last year before going to prison, how many different employers did you work for? (Check one answer.)

25 None (didn't work).	11 Three, four or five.
34 One.	3 Six or more.
19 Two.	

5. When you were working, how many hours per week did you usually work?

15 Didn't work.	0 17-24.	59 40 or more.
5 1-8.	4 25-32.	2 no answer
4 9-16.	4 33-39.	

6. When you were working, what was your average pay?

15 Didn't work.	
12 Less than $2.50 per hour.	16 $4.00 to $4.99 per hour.
14 $2.50 to $2.99 per hour.	7 $5.00 to $7.50 per hour.
19 $3.00 to $3.99 per hour.	8 Over $7.50 per hour.
	2 no answer

7. What else were you doing in the year before starting this prison term?

12 In school.
2 Armed Forces.
22 Jail or prison.
20 Other.
35 Nothing else, just worked.
1 no answer

8. Have you been in jail or prison before, other than the current term?

80 Yes.
13 No.

9. Thinking about the pay you got and the chances for advancement, how would you rate the primary job you had in the year before starting this term?

19 Very good.
13 Good.
30 Average.
10 Bad.
4 Very bad.
16 Didn't work.
1 no answer

10. When you are released or paroled, do you think you will be able to get as good a job or a better one? (Check one answer.)

42 Can get a better job.
28 Will get about the same kind of job.
16 Won't get as good a job.
6 no answer

11. During your current term, how much did you participate in the following activities? (Check one answer for each activity.)

a. Vocational education.

31 No participation.
12 Some (up to 2 months).
15 A lot (2-6 months).
26 Heavy participation (more than 6 months).
9 no answer

b. Prison industries.

46 No participation.
11 Some (up to 2 months).
9 A lot (2-6 months).
17 Heavy participation (more than 6 months).
10 no answer

c. Maintenance and other institutional jobs.

26 No participation.
13 Some (up to 2 months).
14 A lot (2-6 months).
32 Heavy participation (more than 6 months).
8 no answer

d. Educational programs.

33 No participation.
20 Some (up to 2 months).
17 A lot (2-6 months).
18 Heavy participation (more than 6 months).
1 self study

e. Work Furlough.

77 Did not participate.
6 Participated.
10 no answer

f. Temporary release to look for job.

71 Did not participate.
10 Participated.
11 no answer

12. How useful were each of the following programs in preparing you for a successful release and parole?

a. Vocational education:	30 Very useful. 15 Average.	14 Not very useful. 22 Didn't participate. 12 no answer
b. Prison industries:	11 Very useful. 6 Average.	22 Not very useful. 40 Didn't participate. 14 no answer
c. Maintenance and other institutional jobs:	16 Very useful. 14 Average.	25 Not very useful. 23 Didn't participate. 15 no answer
d. Educational programs:	29 Very useful. 17 Average.	11 Not very useful. 25 Didn't participate. 11 no answer
e. Work furlough:	6 Very useful. 0 Average.	7 Not very useful. 60 Didn't participate. 20 no answer
f. Temporary community release to look for job:	7 Very useful. 2 Average.	5 Not very useful. 61 Didn't participate. 18 no answer

13. Do you have a job lined up right now?

33 Yes.	3 Probably, no.
26 Probably, yes.	29 No.
	2 no answer

14. If you do have a job lined up, through what agency or person did you obtain the job? (If you don't have a job, leave blank.)

2 Parole officer
6 Union
1 TAC (trade advisory committee)
11 Yourself (through ads, etc)
2 State employment agency (Employment Development Department)
3 Institutional personnel
29 Family and friends.
3 Other (private employment agencies, M2, 7th Step, etc.)

15. If you do have a job lined up, how long do you expect to stay with this particular employer? (If you don't have a job, leave blank.)

43 A short time, until something better comes along.
16 A long time, because this is a job I really want.

16. If you don't have a job lined up, do you expect to:

18 Go to school.
40 Look for a job.
2 Stay at home and do nothing for a while.
4 Other. Please specify.

OTHER EX-OFFENDER PROBLEMS

Housing

17. Do you have a place to live when you get out?

75 Yes.
11 Maybe, not certain.
7 No.

18. Where will you be living?

17 With spouse.
44 With parents or other family.
10 With friends.
4 Alone.
9 In a halfway house or some other group housing.
8 Don't know.

19. If you do have housing arranged, how satisfactory is the housing?

7 no answer
43 Very satisfactory--would be happy to stay there for a long time.
14 Fairly satisfactory.
29 Not very satisfactory--would like to move out as soon as I can get something better.
___ Don't know yet.

Transportation

20. What kind of transportation will you have available when you get out?

23 I own a car.
5 I can afford to buy a car.
11 Most of the time, I can borrow a car when I need it.
7 I can borrow a car some of the time.
38 I will use public transportation--buses.
4 Other.
2 no answer

Money

21. How much money will you have when you get out?

50 $199 or less.
31 $200 to $499.
1 $500 to $999.
3 $1,000 to $1,999.
5 $2,000 or more.
3 no answer

22. Do you expect to get financial help from family or friends?

17 Yes.
21 Probably, yes.
14 Probably, no.
41 No.

23. Do you expect to have to borrow money during the first six months after release?

25 Yes.
21 Probably, yes.
21 Probably, no.
26 No.

Clothes

24. How adequate is your supply of clothing?

14 Very adequate. I have most or all of the clothes I will need.
13 Fairly adequate. I may have to buy a few items, but not more than $50 worth.
64 Not very adequate. I will have to spend quite a lot of money just to get a basic wardrobe.
2 no answer

Other Items

25. Other than clothes and a car, people need a great many incidental things for living--like furniture, pots and pans, a TV, work tools, and so forth. Which of the following best describes how well equipped you will be with these types of essential things?

10 Very well equipped. I won't have to spend much for these things during the first six months I am out.
15 Fairly well equipped.
15 Not well equipped.
50 Very poorly equipped. I don't own a lot of essential items, and won't be able to get them unless I can pay to buy new ones.
3 no answer

QUESTIONS ABOUT PRISON PROGRAMS

26. Do you feel confident that your parole or release will be a success?

58 Very confident.
28 Fairly confident.
4 Not very confident.
3 no answer

27. Which of the following will contribute the most to your success after release? (Check only one answer.)

65 I have a better attitude toward life.
4 I have a good job lined up.
5 I have enough money to survive until a good job comes along.
11 I have good support from family and friends.
7 no answer

28. Which of the following will contribute the least to your success after release? (Check only one answer.)

18 I have a better attitude toward life.
12 I have a good job lined up.
30 I have enough money to survive until a good job comes along.
16 I have good support from family and friends.
16 no answer

29. When you entered prison, did you feel that you needed some kind of job training?

47 Yes.
9 Probably, yes.
4 Probably, no.
32 No.
1 no answer

30. Did you get the kind of job training you wanted? (If you answered "no" to the last question, don't answer this one.)

17 Yes, definitely.
13 Maybe.
26 No.

31. Did you participate in a job training program which you feel that you did not need?

15 Yes. If so, which program?_____
70 No.
8 no answer

32. Do you plan to get more education or job training after you leave prison?

49 Yes.
22 Probably, yes.
5 Probably, no.
10 No.
7 no answer

33. If you had a choice during this prison term, would you have preferred to: (Check only one answer.)

33 Earn more money at prison jobs.
23 Take more academic education courses.
25 Take more vocational courses.
7 None of the above.
4 no answer

34. This is an open-ended question. Tell us, if you can, what kinds of things the prison does well in preparing you for a successful parole; and what kinds of things you would change. (Write on the back side of the page, if necessary.)

APPENDIX C

VOCATIONAL PARTICIPATION AND RECIDIVISM

Correctional research thus far has failed to find any relationship between vocational participation and recidivism. One area of investigation usually overlooked is the attainment of skill and its effect on recidivism. Using length of vocational training as a measure of skill level, we found that the chance of parole success is 0.9 percent greater with each additional 100 hours of training.

A sample of 245 vocational participants who had been paroled to Alameda, Contra Costa, San Francisco, and Santa Clara counties during 1973 was selected from CDC files. These files were examined to extract data on vocational hours, age, race, crime, alcohol or other drug problems, and institution and length of confinement. Recidivism, defined as revocation of parole or reincarceration in jail or prison, was traced for an 18 month post-release period.

The relationship between hours of vocational participation and recidivism shows that as the length of participation increases, a smaller percentage of parolees fail during 18 months on parole. Approximately 50 percent of those inmates who completed less than 1,000 hours recidivated. Participants who logged between 1,000 and 1,499 hours failed at a slightly lower rate. The recidivism rate for those who completed more than 1,500 hours was 20 percent.

TABLE C-1

RECIDIVISM RATE DROPS 33 POINTS
FROM LOW TO HIGH VOCATIONAL
PARTICIPATION

Hours	0-499	500-999	1,000-1,499	Above 1,500
Number of Participants	34	33	15	40
Recidivism Rate	52.9%	48.5%	46.7%	20.0%

To establish the independence of vocational training from other explanatory variables, ordinary least squares multiple regression equations were obtained. The addition of age and length of incarceration had very little impact on the significance of the vocational hours variable (equations 1 and 2 below).

(1) $R = .446 - .0000878\ V$

SE (.3661) (.0000406)

SIG (.000) (.033)

$F = 4.68$ Multiple $R = .209$ $R^2 = .044$ $\bar{R}^2 = .035$

(2) $R = .443 - .0000875\ V + .000612\ A - .000905\ I$

SE (.297) (.0000441) (.0440) (.017)

SIG (.140) (.050) (.989) (.996)

$F = 1.53$ Multiple $R = .209$ $R^2 = .044$ $\bar{R}^2 = .015$

where,

R = Recidivism
V = Vocational hours
A = Age at release
I = Length of incarceration

Other equations show that institution of training did not influence parole success. Alcohol and drug use, however, exhibited significant coefficients; both were associated with parole failure.

From a subsequent regression equation formulated with only those trainees who had secured between 500 and 2,000 hours of training, the coefficient for vocational hours was augmented. For this group of inmates, each additional 100 hours of training are associated with 2.8 percent less recidivism.

These results can be explained by the possibility that prisoners who are well-motivated prior to entering a class are more likely to complete and would be less likely to recidivate regardless of their institutional program participation. On the other hand, the fact that recidivism does decline as vocational hours increase opens up the possibility that vocational training programs do have an independent effect. We conclude that modest efforts to encourage class completion are justified.[1]

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[1] For details of this study, see Brian L. Miller, "The Impact of Vocational Participation on the Post-Release Behavior of Correctional Inmate," Master's Thesis, University of California, Berkeley, Graduate School of Public Policy, 1977.

APPENDIX D

COST-BENEFIT ANALYSIS

This section supplements Chapter II, "Benefits and Costs," and provides the detailed technical backup to support the major discussions in the text. The assumptions for each calculation as presented in Table D are reviewed and sources for these data are cited. Calculations for institutional benefits were estimated after many interviews with instructors, CDC and CYA administrators, industry surveys and other sources. The files for institutional benefit derivations are in our office and are available by contacting Steve Gould. A sample computation for the CYA welding course is offered to illustrate the details of the benefit-cost ratio calculation.

CDC Benefit-Cost Assumptions

1. The relevant cost and benefit in the analysis are the cost and benefit associated with the training of an inmate up to "termination" (see "6" below) and obtaining some entry level skills.

2. All personnel costs are adjusted to include fringe benefits of 27.5 percent. Vocational supervisor costs and administrative costs are estimated by prorating the program total supervisor and administrative costs by the number of classes offered in the specific trade. CDC was offering a total of 150 classes in October 1976. Based on this, we computed total supervisor and administrative costs to be $4,657 ($4,279 + $378) per vocational class. Depending on the total number of classes offered in any trade throughout CDC institutions, each trade may have different costs for supervisor and administrative personnel.

3. Except for culinary arts skill centers, where support personnel can be readily identified as part of the vocational program operation, support personnel such as clerical positions, custodial positions, and counsellors have not been included in the computations.

TABLE D1

CDC BENEFIT-COST CALCULATIONS

Vocational Course	Quota	Instructor Costs	Total Personnel Costs	Total Direct Costs	Total Cost Per Student Termination	Expected Employment Rates Related and Total (Percent)	Entry Level Wage (Hourly)	Expected Earnings Over 3 Years With Training	Expected Difference in Earnings Due To Training	Institutional Benefits Per Year	Institutional Benefits Per Student Termination	Total Benefit Per Student Termination	Benefit-Cost Ratio
Auto Body & Fender	110	$200,226	$278,168	$278,844	$3,076	26%/60%	$5.21	$16,064	$3,567	NE	NE	$3,567	>1.16
Auto Mechanics	272	490,741	551,282	770,925	3,439	31%/69%	5.00	18,162	5,665	$ 5,607	$ 30	5,695	1.66
Baking	98	120,348	148,290	162,960	2,018	11%/42%	4.50	10,334	-2,163	$ 80,630	998	-1,165	-0.58
Building Maintenance	70	82,023	95,994	108,872	1,888	18%/36%	3.36	7,849 M (6,205) F	-4,648 M (-1,544) F	37,500	650	-3,998 M (-894) F	-2.12 M (-0.47) F
Business Ed.	20	17,993	22,650	32,697	1,984	42%/54%	3.50	10,353	2,604	7,950	482	3,086	1.56
Cosmetology	30	48,241	52,898	70,753	2,862	14%/46%	4.10	8,113	364	1,800	73	437	0.15
Culinary Arts	230	702,009	917,114	963,074	5,082	21%/61%	3.83	14,299 M (10,647) F	1,802 M (2,898) F	504,938	2,663	4,465 M (5,561) F	0.89 M (1.09) F
Data Processing	20	25,092	29,749	49,528	3,005	19%/62%	3.02	13,682	1,185	NE	NE	1,185	>0.39
Drafting	74	99,391	118,018	144,851	2,376	12%/53%	4.50	12,999	502	4,765	78	580	0.24
Dry Cleaning	98	149,049	176,991	211,575	2,620	13%/50%	3.30	11,392	-1,105	NE	NE	-1,105	>-0.42
Electricity	12	27,341	31,998	41,591	4,206	17%/61%	5.26	16,371	3,874	3,680	373	4,247	1.01
Electronic Tech.	90	158,194	186,136	254,704	3,434	23%/63%	3.37	14,129 M (10,476) F	1,632 M (2,727) F	9,340	126	1,758 M (2,853) F	0.51 M (0.83) F
Landscaping	80	126,944	150,229	167,694	2,544	16%/59%	3.75	13,830	1,333	24,000	492	1,825	0.72
LVN - SQ	12	43,284	47,941	56,695	5,734	48%/70%	4.03	16,580	4,063	8,200	831	4,914	0.86
Machinist	93	187,303	215,245	332,131	4,334	33%/63%	4.00	14,900	2,403	NE	NE	2,403	>0.55
Masonry	51	82,022	95,994	111,220	2,647	22%/58%	6.86	17,445	4,968	NE	NE	4,968	>1.87
Meatcutting	97	136,706	159,991	170,231	2,130	12%/63%	6.24	15,224	2,727	80,630	1,011	3,814	1.79
Mill/Cabinet	91	160,834	188,776	250.012	3,334	30%/67%	3.85	15,622	3,125	NE	NE	3,125	>0.94
Painting (Offset)	25	54,682	63,996	84,282	4,091	26%/54%	7.45	18,014	5,517	NE	NE	5,517	>1.35
Printing	59	126,623	154,565	215,813	4,439	20%/64%	4.43	15,736	3,239	NE	NE	3,239	>0.73
Refrig./Air Cond.	60	69,634	83,605	120,655	2,440	21%/67%	7.59	20,341	7,844	NE	NE	7,844	>3.21
Sheet Metal	76	135,252	158,537	206,532	3,298	30%/71%	3.58	16,128	3,631	NE	NE	3,631	>1.10
Shoe Repair	76	109,103	132,388	184,783	2,951	20%/48%	3.60	10,924	-1,573	100,300	1,614	41	0.01
Upholstery	78	103,005	121,633	177,073	2,755	10%/58%	3.11	13,348	851	6,933	107	958	0.35
Welding	149	249,192	281,791	386,497	3,148	41%/67%	5.00	18,192	5,695	NE	NE	5,695	>1.81

NOTE: Institutional benefits were calculated for those courses which we visited. NE designates no estimate available for institutional benefits; Benefit-Cost ratios with > signs indicate that the ratio is a low estimate since no benefits for the institution were estimated.

TABLE D2

CYA BENEFIT-COST CALCULATIONS

Vocational Course	Quota	Instructor Costs	Total Personnel Costs	Total Direct Costs	Total Cost Per Student Termination	Expected Emp. Rates Related and Total (percent)	Entry Level Wage (Hourly)	Expected Earnings Over 3 Years With Training	Expected Difference in Earnings Due To Training	Institutional Benefits Per Year	Institutional Benefits Per Student Termination	Total Benefit Per Student Termination	Benefit-Cost Ratio
Auto Mechanics	26	$ 54,682	$ 64,772	$ 94,547	$ 2,409	8%/48%	$ 5.00	$ 9,438	$ 1,697	$ 0	$ 0	$1,697	.704
ARCO	11	27,341	31,939	46,814	2,362	55%/55%	5.00	13,105	5,364	0	0	5,364	1.123
Carpentry	30	53,046	63,936	92,976	2,054	14%/52%	6.42	11,687	3,946	14,549	326		
Culinary Arts	60	126,167	140,285	149,673	1,653	7%/48%	3.83	8,939	1,248	112,076	1,254	2,502	1.514
General Shop (and Machine Shop)	30	54,673	64,193	86,599	1,913	22%/58%	2.85	9,952	2,211	2,240	50	2,261	1.182
Janitorial/Bldg. Mnt.	60	103,520	108,118	116,150	1,283	12%/47%	3.36	8,620	879	53,856	603	1,482	1.155
Landscaping	30	81,710	87,505	114,105	2,521	6%/49%	3.75	9,282	1,541	61,211	1,370	2,911	1.155
Masonry	15	27,341	31,939	60,494	2,673	17%/52%	6.86	12,393	4,652	9,000	403	5,055	1.891
Mill/Cabinet	15	27,341	31,939	52,839	2,334	18%/50%	3.85	9,465	1,724	9,211	412	2,136	.915
Plastering	15	27,341	31,939	48,947	2,162	6%/47%	6.86	9,781	2,040	20,000	895	2,935	1.358
Printing/Graphic Arts	30	54,682	64,202	96,202	2,125	0%/59%	4.43	11,241	3,500	27,400	613	4,113	1.936
Small Engine Repair	30	54,682	64,772	79,732	1,761	0%/59%	3.00	9,509	1,768	586	13	1,781	1.011
Upholstery	15	20,737	25,335	33,735	1,490	17%/33%	3.11	5,708	-2,033	0	0	-2,033	-1.364
Welding	60	104,866	114,956	185,163	2,078	27%/51%	5.00	11,176	3,435	13,996	157	3,592	1.729

NOTE: Institutional benefits were calculated for those courses which we visited. Benefit-Cost ratios with > signs indicate that the ratio is a low estimate since no benefits for the institution were estimated.

4. Equipment costs are estimated from information provided by vocational instructors. Some estimates are obtained from an ongoing CDC inventory study of vocational shop equipment. The study as yet is not complete, so that only preliminary data are available. In our computations, total equipment replacement costs are used, and an annual cost is estimated by depreciating the total replacement cost over 20 years.

5. Facilities are provided by the institutions, which also lease out space for use by correctional industries. It is assumed that training shops, if closed, will be converted for other use. A rate of 20 cents per square foot per month is used to impute the cost of facilities for vocational classes. We referred to several community colleges which have leased facilities for similar vocational shops. The rates range from $0.09 (not including utilities which run several hundred dollars per month) to $0.35 per square foot per month. A 20 cents rate is more in line with the rates charged by General Services (15 cents per square foot for warehouse space, and 49 cents per square foot for office space). Using the 20 cents rate also will account in part for other operating incidental costs such as utilities, which are otherwise not included in the calculations.

6. "Termination" is defined as those students who have had more than 500 hours of training, and those who have completed classes which require less than 500 hours of training. Most CDC vocational courses have long, 2000 hour completion requirements. Since vocational education staff has defined entry level skills as 500 hours of training for most trades, it is assumed that training of less than 500 hours confers no employability advantage to the individual and that trainees in this group will get no benefit out of this slight amount of training. This assumption, however, does not apply to those courses which require a relatively short time to complete. In 1975/76, of all those inmates leaving vocational training 12 percent had completed such short courses. This approach builds into the model a factor adjusting for any wastage of resources on trainees who do not acquire entry level skills. For CDC, 1975/76 data show only 61 percent termination according to our definition. The actual cost of training an inmate to termination with skills is therefore scaled upward by a factor of 1/0.61 or 1.64.

7. For 1975/76, all CDC terminations had a weighted average of 1,121 hours of trade training. Assuming training to be conducted on a 1,680 hours per year basis (at 35 hours per week for 48 weeks), and allowing for an average of 90 percent attendance rate, average training hours equate to approximately 0.75 years. Thus, the cost of training an average trainee up to termination would be less than the average student cost per year. In fact, it only would be 0.74 of the average student cost per year.

8. The cost of vocational training of an inmate in CDC up till termination with skills is:

total cost per student quota per year x 1.64 x 0.74

9. "Related employment" which is used as a measure of the effectiveness of vocational training is rather nebulous in definition. For instance, it is conceivable that a trainee in baking is considered as "relatedly employed" when he is actually employed as a baker's aide, or at a task of loading and unloading baked goods. Without better employment and placement data, it is assumed that "related employment" refers to employment requiring explicit usage of acquired skills. To the extent that there are cases similar to the example above, the estimate is an overstatement of the effect of vocational training.

10. To compute the expected change in earnings of vocational trainees, it is assumed that the primary objective of vocational training is the raising of the wage earnings and employability of the trainees after training. It is expected that the earnings after training would be higher than that prior to training. Implicit in this is the assumption that all trainees are homogeneous in the degree of lack of skill, and in the motivation for obtaining training--to work in the trade.

11. Estimation of expected change in earnings due to vocational training requires estimates of prior earnings, and earnings after training, as well as some estimation of the probability of employment--with training versus without. These probabilities vary with the state of the economy. In applying data of a certain year in our estimation, such structural changes are not accounted for.

12. The Bregman Report of Study on Vocational Programs in Selected California Correctional Institutions for Male Felons, June 30, 1975, p. 113, reports the various median income per week for the last year the individual sample trainees worked full time. The median interval for salary earned by dropouts (with less than 500 hours) was $101-125, and for completers (with more than 500 hours of training) $126-145.

    For the group as a whole, including dropouts and completers, the weighted average weekly salary amounts to $132,([(55 x 112) + (409 x 135)]/462).

    The estimated annual salary would then be $6,864 in 1972, which is the appropriate year of reference assuming that at the time of the interviews, the sample group have served 16 months of an average 32 month term.

    Adjusting for cost of living increases at 5 percent per year, the same type of job would pay an adjusted annual salary of $8,343 in 1976 (approximately $160 per week).

    In our survey, 437 inmates responded to the question regarding their wage rate before the current prison term. The average for the sample is $150 per week. Assuming this group has been in prison for an average of two years, and adjusting for cost of living increases, the same type of jobs would pay $165 per week, or $8,580 a year in 1976.

13. The expected earnings without vocational training depends not only on the salary earnings of a typical job not requiring any training but also on the probability of securing a job. According to the Bregman report, 48 percent of the completers were unemployed prior to the prison term. Thus, this group can expect a 52 percent chance of obtaining employment if they did not have vocational training.

14. Using Bregman's data on prior employment of completers, employment probabilities are adjusted accordingly for probabilities of recidivating. Using data from CDC, the average rates of return to prison after release on parole or by discharge from prison for male and female felons together are estimated to be:

year after release (average 6 months)	4.9%
1st year after release (6-12 months)	15.4%
2nd year after release (13-24 months)	11.6%
3rd year after release (25-36 months)	6.0%

15. After adjusting for the probability of recidivism, the expected employment rate of an inmate if he had no vocational training is:

up to 6 months	52.0%	
6-12 months	44.0%	(0.52 x 0.846)
13-24 months	38.9%	(0.44 x 0.884)
25-36 months	36.6%	(0.389 x 0.94)

16. Based on the estimated employment probabilities, and the estimated annual salary, the expected annual salary for a trainee had he not had vocational training will be projected for three years, and the present value of the amount is estimated by discounting at 5 percent.

1st year = (0.5 x 8,580 x 1.1 x 0.52) + (0.5 x 8,580 x 1.18 x 0.52 x 0.846) = 2,454 + 2,227 = $4,681

2nd year = 8,580 x 1.26 x 0.52 x 0.846 x 0.884 = $4,204

3rd year = 8,580 x 1.34 x 0.52 x 0.846 x 0.884 x 0.94 = $4,203

Present Value = $4,681 + 4,204/(1.05) + 4,204/(1.05)^2 = $12,497

Therefore, if a trainee did not have the vocational training, and worked for three years upon release from prison in the same type of job he had prior to his prison term, the present value of his total earnings is $12,497.

17. According to the U.S. Bureau of Labor Statistics, female workers from 1970-1975 had average median incomes which were approximately 62 percent of those of male workers. Since the Bregman report applies to male inmates only, the estimated earnings for female inmates if they had no training (projected for three years) would be $7,749.

18. The expected earnings for a trainee after vocational training in 1976 can be estimated in a similar fashion.

The average hourly earnings for various trades is estimated using data from the Bureau of Labor Statistics and the California Employment Development Department (EDD). In our survey, instructors have been asked to estimate the hourly wage for their trades, and this information is used to validate and update data supplied by the EDD. By applying a statewide average, it is assumed that ex-offenders with vocational training are equally productive and therefore are able to command the same wage rate as the average worker in that occupational area.

In our computations, the beginning wage rate is used for individual trades. Wages are then adjusted upward over time according to A.D. Witte's wage index.

19. According to A.D. Witte's "Earnings and Jobs of Exoffenders: a Case Study," Monthly Labor Review, December 1976, pp. 31-39, ex-offenders have the most difficult time in the job market in the first year after release but find improved wages and jobs as time goes on. Measuring the improvement in wage earnings over time for a sample of ex-offenders, the wage index (= wage at number of months after release/wage at release) is as follows:

at release	1.00	
less than 6 months	1.10	
6-12 months	1.18	
12-18 months	1.24	
18-24 months	1.28	
24-36 months	1.27	(1.34)

The actual decrease in the wage index for 24-36 months after release seems unlikely. In our computations of expected income, this index has been modified to adjust for a 5 percent cost of living increase over the 18-24 months index. Thus, the 24-36 months index used is 1.28 x 1.05 = 1.34.

The Witte wage index (with adjustment) will be used as an escalator in the estimation of earnings after release.

20. The expected employment rates for vocational education trainees are taken from CDC, Vocational Education and Correctional Industries Report of Trainees Released to Parole, 1971, 1972, 1973. The rates at six months after release are used since they are likely to be a better reflection of the longer term effects of vocational training on job retention. The employment rates for 12 months after release, and for later periods are therefore computed by using employment rates at six months after release with adjustment for recidivism rates during those periods.

21. In "Earnings and Jobs of Ex-offenders," A.D. Witte also found that for the ex-offenders, "wages rise rapidly during the first year, continue to rise but a slower rate during the second year, taper off during the third year, and then commence a further rapid rise." (p. 34.) In this analysis, it is assumed that the effect of vocational training in the form of rapid wage rises lasts for only three years, such that wage increases in subsequent years are not considered to be a direct result of vocational training, but rather a result of experience gained during the first three years on the job.

22. Benefits which accrue to trainees would be in the form of net income, that is gross income after taxes. The amount of taxes paid due to the positive effect of vocational training appears as a component of the total external benefits which accrue to the government as an increase in tax receipts. For computational purposes, therefore, the expected increase in gross earnings due to vocational training is used. However, it should be kept in mind that part of the expected increase in gross income earnings accrue to the government.

23. In taking vocational training, the trainees do not have time to participate in other paid programs, for instance, jobs in prison industries and prison maintenance. Thus, there may be a negative benefit associated with taking vocational training.

    In our inmate questionnaire survey, trainees were asked what they would rather be doing if they were not enrolled in the current (vocational) class (question 29). Of the total responses, only 17 percent would rather be working in prison industries or doing institutional maintenance work. The remaining 83 percent would rather take another vocational or academic class or do nothing. Thus, the foregone income for an inmate to be in a vocational class is not significant.

    In our cost-benefit analysis, the possible negative benefit in the form of foregone income is assumed to be offset by the possible positive benefit of vocational training facilitating the obtaining of work in correctional industries or maintenance in subsequent periods.

24. Another external benefit which accrues to society, but not reflected in the earnings of the trainees is the expected decrease in welfare payments to the trainees. To the extent that an ex-offender getting employment in the trained trade may be directly displacing someone seeking that job, there may be an offsetting increase in welfare payments. The expected decrease in welfare payments due to vocational training can be estimated to be:

    expected decrease in welfare payment =
    expected net change in unemployment rate due to vocational training x welfare payment rate x time period eligible for welfare

Though someone else may be added on to the welfare recipient list due to displacement, this does not mean that the welfare payment decrease to one individual will be totally offset by the increase in payment to another. There will most likely be some payment differential.

However, no data are available for the estimation of this item, therefore, it has not been included in our computations.

25. Another external benefit which may result from vocational training is a reduction in the rate of recidivism. The assumption is that most crimes, especially property crimes, are economic related.

In 1972, 48.9 percent of all male felons and 35.7 percent of all female felons in California were committed for property crime offenses--robbery, burglary, theft including auto, and forgery. Training ex-offenders to be more capable of obtaining a job therefore would lower the need for criminal behavior to supplement their income. In "Measuring Benefits from Prison Reform," (in P.H. Haveman, et. al. (ed.) Benefit-Cost and Policy Analysis 1973 (Aldine; Chicago, 1974) pp. 491-516), John Holahan used 1969 (and some 1968) data for the Washington D.C. area to estimate the benefit from a program which reduces recidivism by one person who would have been, had he recidivated, arrested for one of the crimes of robbery, burglary, larceny, or auto theft.

Using Holahan's estimates, and weighting these estimates by their respective probabilities of such crimes being committed, the reduction of one (composite) crime in 1976 is estimated to have a cost savings of $13,127.

26. To estimate the benefit of reduction of recidivism due to vocational training, it is necessary to know whether vocational trainees upon release do recidivate less than other groups of inmates. Research in the area does not support conclusively the hypothesis that increased employment results in a corresponding decrease in recidivism. (See Robert Evans, Jr. "The Labor Market and Parole Success," Journal of Human Resources, Vol. 3, Spring 1968; and McRae and others, A Study of Community Parole Orientation.) On this basis, the initial assumption made in this model is that there is no reduction in recidivism directly attributable to vocational training.

As mentioned in the text, we have found some positive correlation between the length of training and recidivism. This may bear on the optimal length of training which would maximize the reduction in recidivism.

27. Corresponding to an increase in earnings due to an increase in employability of trainees is the loss of earnings of individuals displaced in the process. Most evaluation of manpower training programs assume that the enhanced employment and income status of

the trainees have not been at the expense of someone else. This would be true only during periods of high employment, or labor shortages. In times of economic slack, it is expected that displacement within certain job markets is not trivial.

Little has been done to quantify and estimate the extent of displacement as an effect of any manpower training programs. Due to the lack of any reliable estimates, this factor has not been included in our computations.

28. Vocational training also generates benefits which accrue to the institutions. These activities include the production of goods and services necessary for the operation of the institutions. A number of training courses, including culinary arts, baking, meatcutting, welding, upholstery, shoemaking/repair, drycleaning, printing, etc. produce goods and services as a byproduct of the training process. The institutional benefit of such courses is the least cost alternative of obtaining equivalent services to facilitate the operation of the institutions.

CYA Benefit-Cost Assumptions

1. The computations for CYA vocational courses follow the same basic assumptions as the computations for CDC vocational courses. Minor modifications are adopted wherever necessary to take into account the difference in characteristics and operations of the two programs.

2. Courses in the vocational training program in CYA institutions are offered primarily only in Preston and YTS. While some trade courses are offered in other CYA institutions, they are more of a prevocational nature than vocational; that is courses are offered mainly as an introduction to various type of trades so that wards become aware of the variety of trades and gain some idea of what each trade involves, rather than concentrating on the acquisition of trade skills. Thus, the cost-benefits analysis for CYA institutions is confined to an analysis of the cost-benefit of vocational courses offered in Preston and YTS.

3. On the average, the length of stay of wards in CYA institutions is shorter than of inmates in CDC institutions. In 1972, the median length of time served in CDC prisons was 32 months. In 1975, the mean length of stay in Preston was 18.1 months, and that in YTS was 15.2 months. Given the shorter mean length of stay in CYA institutions, the vocational courses in both Preston and YTS are, in general, shorter than those in CDC institutions.

4. To accommodate for shorter stays, most courses are taught in phases. The basic phase usually runs from 200 to 300 hours. If a ward stays longer in the institution, then he can participate in the advanced phase of the course.

In the basic phase, tool identification and usage are taught along with some basic manipulative skills. After finishing the basic phase of any course, a ward theoretically is able to qualify for an entry level job in that trade, or becomes a first year apprentice in that trade.

In our computations, therefore, it is assumed that below 300 hours of training, a ward would not have learned enough to qualify for such entry level jobs, and with that minimal amount of training, he would have no advantage over those who have had no training at all. The cost spent on training a ward for less than 300 hours is considered to be wastage.

This assumption relaxes the CDC vocational assumption, where 500 hours is the critical level for cost wastage consideration. Implicit in the difference is the assumption that since CYA parolees are generally younger than the average CDC parolee, it is easier for them to get entry level jobs than the CDC parolees.

5. The percentage of students completing at least 300 hours in CYA vocational course is estimated to be 70 percent. This figure is estimated based on instructors' responses, as well as wards' responses to questionnaires. The actual cost of training a ward for a minimum of 300 hours is:

   cost per student quota x 1/0.70

   or

   cost per student quota x 1.41

6. For a sample of 127 YTS releasees in 1975, with over 300 hours of vocational training, the average length of training was 726 hours. Assuming training to be conducted on a 30 hour/week basis (e.g. YTS vocational classes meet for 6 hours a day, 5 days a week), this is equivalent to a period of approximately 24.2 weeks, or 0.47 year. Thus, the cost of training a student up till termination would be less than the average student cost per year. In fact, it only would be 0.47 of the average student cost per year.

7. The cost of vocational training of a CYA ward up till termination is therefore

   total cost per student quota per year x 1.41 x 0.47

8. From the questionnaire survey of CYA wards in vocational training, out of 182 wards, 41 did not work prior to their current CYA term. For the 138 who worked, the average pay was $3.90/hour. Based on a 40 hour work week, and 52 weeks per year, the full time annual wage equivalent is $8,112. Assuming an average of six to nine months served by the students, this estimate for annual income would be reasonable for our 1976 based benefit-cost calculations without adjustments. A comparison with the average annual income of $8,580

for a CDC inmate (adjusted to 1976 terms) shows the two groups to be closely aligned. It appears that both groups had similar types of jobs prior to their respective CYA and CDC terms. Occupations range from farm laborer, to truck driver, to construction worker, to waiters, etc.

9. To estimate the probability of getting employment upon release from CYA without training, a sample of releasees from Preston and from YTS were examined. The sample is divided into two groups: one with vocational training, and another without vocational training. Out of a sample of 54 wards, 22 were employed, amounting to a 40.7 percent employment rate for the group with no training.

   For the group with some vocational training, out of a sample of 294 wards, 137 were employed (both full time and part time included), so the employment rate for those with some vocational training is 46.6 percent.

10. Employment probabilities are adjusted accordingly for probabilities of recidivating. Using data from 1975 CYA Annual Report (Table 24) the adjusted rate of removal of wards from parole due to violations (wards released in 1973) are estimated to be:

0 - 6 months after parole	11.17%	
7 - 12 months after parole	18.76%	
13 - 24 months after parole	25.79%	
24 - 36 months after parole	17.96%	(data for 1971 releasees)

11. Based on the estimated employment probabilities, and the estimated annual salary, the expected annual salary for a trainee with no vocational training while in a CYA institution will be projected for three years, and the present value of that sum is estimated by discounting at 5 percent.

   The Witte wage index (with adjustment) is again used as an escalator in the estimation of earnings after release.

   1st year = (0.5 x 8,112 x 1.1 x 0.407) + (0.5 x 8,112 x 1.18 x 0.407 x 0.81) = 1,816 + 1,578 = 3,394

   2nd year = 8,112 x 1.26 x 0.407 x 0.81 x 0.74 = 2,494

   3rd year = 8,112 x 1.34 x 0.407 x 0.81 x 0.74 x 0.82 = 2,174

   Present Value = $3,394 + 2,494/(1.05) + 2,174(1.05)^2$
   = 3,394 + 2,375 + 1,972 = $7,741

   Therefore, if a trainee did not have vocational training, and worked for three years upon release from a CYA institution in the same type of job he had prior to his CYA term, the present value of his total earnings over that period is $7,741.

12. The employment rates for vocational trainees have been estimated to be 46.6 percent.

    Estimates of employment rates in related jobs are obtained by using a weighted average of employment rates in different trades as given in CYA, Educational Research Series, Report No. 12, "Jobs Related to Training--Final Report" (May 1973), and rates obtained from a sample of parolees from YTS and Preston who have had training in different trades.

13. Since the average employment rate in related trade jobs are computed for three to four months after release, the rates are adjusted by the probabilities of recidivating in subsequent periods to obtain employment rates estimates for up to three years after release.

14. CYA parolees with vocational training are assumed to be able to earn entry level wages equal to those obtained by CDC parolees with vocational training. Implicitly, this assumes that vocational training allows a trainee entry into a trade, and the length of vocational training in the institution does not significantly affect the level of entry wages. To the extent that employers may prefer people that are more trained (i.e., with longer vocational training period), this preference is reflected in the differential in employment rates in jobs in a trade area. Though employers may prefer people with longer and more training, it is at the same time probable that employers hiring at the entry level would prefer younger employees to be trained on the job rather than older people. The extent of these employers' preferences is not known, and the effect of such preferences can only be conjectured upon.

15. Compared to CDC, CYA institutions are more academic and vocational oriented. At CYA there are few positions for wards in maintenance or work crews and no parallel to correctional industries. With the possible exception of culinary arts classes, the vocational classes in both YTS and Preston are not highly involved in doing work for the institution. Thus, institutional benefits generated by the various vocational classes in CYA institutions are substantially less than the institutional benefits generated by similar courses in CDC institutions.

Benefit-Cost Calculations

A sample course calculation will serve to explain the details for the benefit-cost estimation.

The welding classes at YTS and Preston yield an overall benefit-cost ratio of 1.729. The costs for this figure are estimated by summing personnel costs and other direct costs. Personnel costs consist of instructor costs (column 3), which for four classes (three at YTS and one at Preston) amounts to $82,248 plus 27.5 percent fringe benefits equals $104,866. The supervisor and administrative costs also were considered by prorating salaries for these positions over the number of courses offered at each institution.

Personnel	Costs
Instructors	$104,866
YTS supervisors	4,028
Preston supervisors	5,169
Administrative	893
Total	$114,956 (column 4)

Other direct costs includes material and operating costs, equipment costs, and facilities costs.

Operating/Materials	Cost
YTS	$28,000
Preston	4,500
Total	$32,500

Equipment	Replacement Cost	Annual Depreciation Cost (20 years)
YTS	$ 65,000	$3,250
Preston	35,000	1,750
Total	$100,000	$5,000

Facilities	Area (square feet)	Cost (@ 20¢/sq.ft./month)
YTS	6,480	$15,552
Preston	8,400	20,160
Total	14,880	$35,712

Total direct cost is the sum of these personnel and other direct costs:

Source	Cost
Personnel	$114,956 (column 4)
Operating/Materials	32,500
Equipment	5,000
Facilities	35,712
Total	$188,168 (column 5)

Column 6 is derived by first, calculating the annual cost per full-time quota trainee. For welding the quota amounts to 60 students (column 2). The cost per quota is $188,168 divided by 60, or $3,136. Using the factors developed in assumptions 5, 6, and 7 (for CYA) mentioned in the previous section, the cost per student termination is calculated as follows:

$3,136 x 1.41 x 0.47 = $2,078 (column 6)

The benefits side of the ratio is the sum of benefits gained by the individual as a result of training plus institutional benefits. Assumptions 8, 9, 10, and 11 form the basis for estimating the expected employment earnings a ward could accumulate over three years had he not participated in a training program. That present value figure of $7,741 weights several factors including: prior working wage levels, employment rates, recidivism rates, a wage index accelerator, present value rate,

and term for extending benefits. The same type of factors are associated with the calculation for benefits wards could expect to gain as a result of training. There is an additional factor to account for employment benefits gained in related employment as opposed to other employment. Each year is calculated separately, then summed as follows:

1st Year	Subtotals
(0.5 x 1.1 x 10,400 x 0.275	$1,573
+ 0.5 x 1.18 x 10,400 x 0.275 x 0.81)	1,367
(0.5 x 1.1 x 8,112 x 0.235	1,048
+ 0.5 x 1.18 x 8,112 x 0.235 x 0.81)	911
2nd Year	
(1.26 x 10,400 x 0.275 x 0.81 x 0.74)	2,160
+ (1.26 x 8,112 x 0.235 x 0.81 x 0.74)	1,440
3rd Year	
(1.34 x 10,400 x 0.275 x 0.81 x 0.74 x 0.82)	1,884
+ (1.34 x 8,112 x 0.235 x 0.81 x 0.74 x 0.82)	1,256

Year	Totals		Present Value
1st	$4,899		$ 4,899
2nd	3,600		3,429
3rd	3,140		2,848
		Total	$11,176 (column 9)

The factors for each period above are explained as follows:

Period	Wage Index	Non-Recidivism Rate
1st 6 months	1.1	0
2nd 6 months	1.18	.81
2nd Year	1.26	.74
3rd Year	1.34	.82

Entry level wage rates and employment rates are constant in each period:

Entry wage with training (welding)	=	$10,400
Entry wage with no training	=	8,112
Employment rate for welding	=	27.5%
Employment rate for nonwelders	=	23.5%

The individual's benefits from training are the net difference obtained by subtracting $7,741 from $11,176 or $3,435 (column 10).

THe main source for estimating institutional benefits from the welding classes was the interviews with the welding instructors at both institutions. All the tasks performed by the classes were identified and estimates for hours of labor obtained. The labor was valued according to the alternative resources available at each institution. In one case the lowest cost alternative was a staff maintenance welder, in the other, contracted services seemed most economical. We valued YTS institutional benefits at $11,052 and Preston's at $2,944, totalling $13,996 (column 11). On an individual student basis:

$13,996/(0.70 x 60) x 0.47 = $157 (column 12)

The sum of all benefits for welding is $3,435 plus $157, or $3,592 (column 13).

The resulting benefit to cost ratio is simply derived by dividing total benefits by total costs, or $3,592 divided by $2,078, equals 1.729.

END