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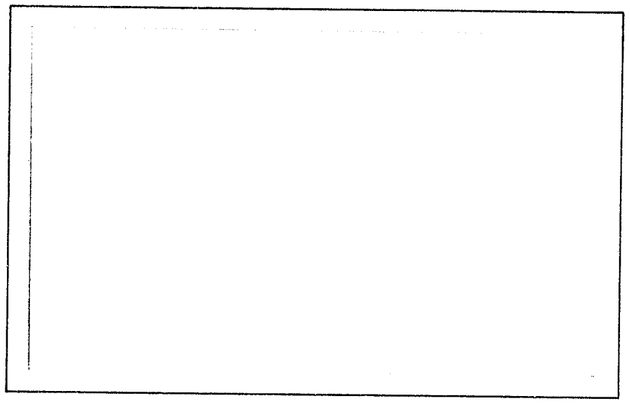
Program Bureau Report



Michigan Department of Corrections

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VOCATIONAL PROGRAMS:

AUTOMOTIVE MECHANICS, SMALL ENGINE REPAIR, AND WELDING

Report Number 4

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PREFACE

This document is one of a series of reports prepared by the Facility Program Evaluation Unit of the Program Bureau. These reports examine the operations of the service delivery system associated with academic and vocational education programs, and other therapeutic programs, available within the Michigan Department of Corrections.

There are four principal components of that delivery system: (1) Client intake and selection for programs; (2) Classification and placement into programs; (3) Program design, content, and delivery; and (4) Promotion of client skill utilization in the community following program involvement.

These reports describe and analyze:

1. The intended functioning of component operations.
2. The actual implementation of component operations.
3. The system problems leading to differences between actual implementation and intended functioning.
4. Staff perceptions of the implementation of component operations.

Weaknesses in the implementation of each component are identified and analyzed. Recommendations for improvements in the implementation of component operations, based on empirical findings, are also presented.

The information contained in the reports was primarily obtained through (1) open-ended, exploratory interviews with line, supervisory, and administra-

tive staff having responsibility for component operations, and (2) on-site observation of component operations in action. In addition, written policies and procedures governing the service delivery system were obtained and reviewed. Policies and practice were compared with existent national standards related to delivery system processes.

Key staff at all facilities were not always asked identical questions and they did not always respond in the same way. They often had to estimate items like time spent with clients or program completion rates. There was little opportunity to verify the accuracy of some statements. Also, when information about new problem areas surfaced in an interview, time did not permit going back to staff interviewed earlier to ask them about the same areas.

Review of the entire series of reports as a collective body of information, will assist decision-makers in their efforts to improve the delivery system.

INTRODUCTION

The Michigan Department of Corrections (MDC) administers a variety of vocational training programs at correctional facilities located throughout the state. In evaluating the effectiveness of these programs, the Facility Program Evaluation Unit has taken the position that it is important to broaden the scope of the evaluation to include more than exclusive focus on outcomes. Program outcomes are the ultimate measure of program success, but it is essential to understand the program processes and delivery system which lead to these as well.

No matter how carefully planned, formal program adoption does not guarantee that program implementation will proceed as intended. As programs evolve, they are unavoidably subject to an assortment of pressures and problems ranging from minor inconveniences to major impediments. These pressures and problems sometimes cause deviations or even complete shifts from the planned course of program development. With process evaluation, the evaluator does not have to presuppose that implementation occurred as planned, without major deviation.

Thus, the Facility Program Evaluation Unit is describing the Department's vocational programs and analyzing their implementation as a precursor to the evaluation of their outcomes. This report is a descriptive implementation analysis of three (3) of those programs - Automotive Mechanics, Small Engine Repair, and Welding.

The purposes of this report are as follows:

(1) To describe the common elements of the three vocational programs and their delivery mechanisms as they presently exist in the MDC education system.

(2) To identify the salient differences, within each of the three programs, between facilities offering the programs.

(3) To provide feedback to both program and administrative staff about each other's perceptions of program implementation.

(4) To identify program design and implementation problems, analyze their impact upon program delivery, and recommend strategies for remediation of the problems.

Program Selections For Descriptive Evaluation

Given the size of the Facility Program Evaluation Unit and the depth of the evaluation needed to ensure useful findings, only a few vocational programs have been targeted for evaluation during each project year. Programs are selected for study which:

1. Have relatively large enrollment.
2. Are available at more than one correctional facility.
3. Serve clients of different age groups and custody levels.
4. Offer training in occupations for which the marketability of corrections' clients is uncertain.

The selection of Automotive Mechanics, Small Engine Repair, and Welding as targets of evaluation in the Unit's first year was based upon the above criteria and discussions with MDC Central Office Treatment and Education staff in January, 1978. Two other programs, called Light Duty Mechanics and Auto Servicing, were also included because they are basically shorter, less comprehensive versions of the Auto Mechanics program. The programs are offered at the following facilities[1]:

Automotive Mechanics

Camp Ojibway[2]
Kinross Correctional Facility (KCF)
Michigan Training Unit (MTU)
Muskegon Correctional Facility (MCF)
Trusty Division, State Prison of Southern Michigan (SPSM-TD)

Light Duty Mechanics

Cassidy Lake Technical School (CLTS)

Auto Servicing

Michigan Reformatory Dormitory (MR Dorm)

Small Engine Repair

Camp Ojibway[2]
Michigan Reformatory (MR)
Northside Unit, State Prison of Southern Michigan

Welding

Cassidy Lake Technical School
Central Complex, State Prison of Southern Michigan
Marquette Branch Prison (MBP)
Michigan Reformatory
Michigan Training Unit
Trusty Division, SPSM

Procedures

During a four-week period from July 18 to August 8, 1979, the three vocational programs were observed at each facility where they are offered, and open-ended, exploratory interviews of approximately two hours in length were held with each vocational instructor.[3] Shorter interviews were also conducted with the school principal at each facility visited.

[1] In July, 1980, Marquette Branch Prison Trusty Division terminated Automotive Mechanics and Welding programs it had offered through Northern Michigan University. Neither of these programs was studied.

[2] The Camp Ojibway Automotive Mechanics and Small Engine Repair programs are operated by Gogebic Community College. The teachers are employees of the college although the programs are physically delivered at the Camp.

[3] The Small Engine Repair program at Camp Ojibway, the Welding program at SPSM Central Complex, and the Auto Mechanics program at Muskegon Correctional Facility were not included in this study for the following reasons: (a) The instructor was on vacation when the Camp was visited, (b) the teacher was absent from SPSM on extended medical leave during the evaluation period, and (c) the MCF program did not start until September, 1979, after all data collection was completed.

Prior to the interviewing period, requisites for effective implementation of the vocational programs were posited, and major questions of concern related to those requisites were developed to guide the semi-structured interview format.

The Facility Program Evaluation Unit identified five requisites for effective implementation:

1. Compatibility of Instruction Across Facilities - To facilitate program reentry after transfer for clients who are unable to complete the programs prior to transfer; to facilitate communication of detailed program progress and skill acquisition information among MDC staff, and to community agencies and prospective employers; to facilitate monitoring of program delivery; to facilitate equity in resource allocation; to foster cooperation rather than isolation between facility schools.

2. Adequate Student Needs Assessment Upon Program Entry - To determine the appropriate instructional starting point for each client who enters one of the vocational programs.

3. Adequate Resources (Comprehensive and Available) - To assist the students to achieve the required performance objectives; to enable the programs to operate at full capacity; and to give the instructors the flexibility necessary to work with each student on an individualized level.

4. An Adequate Records System - To facilitate maintenance and communication of information pertaining to client background, needs, program involvement, and skill acquisition.

5. Program Development and Staff Training - To promote continual updating and refinement of program structure and curriculum to increase effectiveness; and to promote collaboration among facilities offering the programs to ensure continued compatibility of instruction after program change.

Interview questions developed from these requisites focused primarily on the delivery system and program processes, rather than on curriculum content. Curricular performance objectives and vocational education resource lists have already been well developed and documented by MDC educators.

The interviews were designed to elicit information about the actual nature of the programs being evaluated, the problems the instructors have faced and are facing in working to implement the programs, and the attitudes and opinions of the instructors toward their programs, their students, and the Corrections education delivery system.

Central Office Treatment and Education administrative staff were also interviewed to determine how the vocational programs are intended to operate, and how program monitoring, coordination, development, and other administrative support functions are executed.

Written MDC policies and procedures governing vocational program delivery were obtained and reviewed, and policies and practice were compared to relevant standards for vocational training found in the American Correctional Association's Manual of Standards for Adult Correctional Institutions (1977).

Report Structure

This report is composed of three sections. Section I reviews the goals, target population, and entry prerequisites of the MDC vocational education programs.

Section II describes the three programs and their implementation using the requisites identified earlier as points of focus. This section is especially concerned with documenting conspicuous variations in the delivery of the vocational programs from facility to facility, in addition to identifying common elements. Consequently, the reader may find the section to be laborious at times, but this information is crucial to decision-makers as they attempt to improve program functioning, and later assess outcome data.

Section III reviews the problems of vocational program implementation that were identified by the study, and it assesses the impact of those problems on program delivery. Strategies for minimizing or eliminating the problems are reviewed and preliminary recommendations are presented.

SECTION I: VOCATIONAL PROGRAM GOALS, TARGET POPULATION, AND ENTRY PREREQUISITES

VOCATIONAL PROGRAM GOALS

"Job readiness" is the central goal of all the Department's vocational education programs, which means that the aim is to make Corrections residents employable by "developing adequate job skills" and creating "willingness and ability to work dependably and at a reasonable rate" (PD-DWA-40.01). Vocational programs are also intended to "produce graduates for whom employment opportunities are likely to exist" (PD-BCF-41.03). In addition, of course, one other goal of correctional programs in general applies to vocational education as well - namely, the promotion of constructive use of time by residents. Another unwritten goal of many of the Department's vocational programs is the provision of services useful to the facilities (e.g., repair of State vehicles) as a byproduct of the training.

OVERALL TARGET POPULATION

Department policy indicates that the target population for vocational education programs is "those offenders with patterns of unemployment where the failure or inability to maintain adequate employment appears to have contributed to criminality" (PD-DWA-40.01). An attachment (entitled "Job Readiness Programming") to Director's Office Memorandum 1976-1, supplementing PD-DWA-40.01, further specifies which clients need vocational education and/or other job readiness programming:

Residents needing job readiness programming include those:

(a) With employment histories indicating a consistent inability to maintain steady employment.

(b) Who have never been involved in the world of work.

(c) With no marketable skills.

(d) Dissatisfied with their area of work and desirous of change.

Residents should be excluded if they:

(a) Have professional training or a skilled trade.

(b) Have experience in a semi-skilled occupation with demonstrated ability to perform in that area.

(c) Show relatively stable employment histories.

(d) Are too old or disabled to be realistically employable.

The target population identified above constitutes the pool of residents from which participants for all of the Department's vocational programs are selected. However, there is no guarantee that all residents in the overall target population will receive vocational education programming. Residents who fit into the target population as defined above might not receive trade training if any of the following conditions exist:

1. They lack motivation for vocational education.

2. They have insufficient time to complete a vocational program before they become eligible for reduced custody or parole.

3. They lack the aptitudes or academic skills required for entry into a vocational program.

4. They are excluded from participation for medical or disciplinary reasons.

5. There are no openings in the vocational programs of interest to them, so they enter some other activity.

6. There are no vocational programs available at the facilities where they become incarcerated (or at least no vocational programs of interest to them).

However, just as inclusion in the overall target population according to policy criteria does not guarantee vocational program involvement, the existence of one or more of the above restrictive conditions does not always prevent vocational program involvement.

PROGRAM-SPECIFIC TARGET POPULATION

On the surface at least, the Reception and Guidance Center (R&GC) process of recommending program activities for residents appears to establish a specific target population for each vocational program. Upon entry into the Michigan Corrections system, every resident is assessed at one of the Department's R&GC's in order to determine his/her programs needs including whether or not the resident should become involved in trade training. All of the criteria and conditions that help define eligibility for vocational program involvement are to be taken into consideration during this needs assessment process.

Whenever trade training is recommended for a resident, the R&GC staff also specifies the first and second preferred vocational programs for which the

resident qualifies. In other words, the R&GC process not only identifies which residents should participate in trade training and which should not, but it also identifies exactly which residents should be placed into which specific vocational programs.

Each resident leaves the R&GC with a program plan that is supposedly tailored to his/her needs, and the receiving facilities can presumably use these program plans both to avoid the time, manpower, and expense of providing individual needs assessments of their own, and to better determine the appropriate allocation of their program resources to meet the ongoing and future program needs of their clients.

Unfortunately, when facility staff determine actual program placement, a variety of problems often interfere with implementation of the R&GC recommendations. Consequently, R&GC recommendations are seldom fulfilling their purpose as advance indicators of the specific target population for each vocational program. (SEE Problem #1 in Section III.)

ENTRY PREREQUISITES

The real decision as to which residents will enroll in which specific vocational programs is made on an individual basis at the receiving facilities. Some institutions, such as the Michigan Training Unit, place the entire responsibility for program placement in the hands of the Classification Director during program classification (usually with the assistance of a school representative). At other facilities, notably the SPSM complex, the Classification Director merely decides whether or not to assign the resident to school, and the school staff then decides specific program placement.

In either case, the decision process is essentially the same. The resident's institutional records are reviewed, and he/she is interviewed. Applicable vocational program entry prerequisites, R&GC recommendations, and current program availability are all taken into consideration. Typical entry prerequisites include:

(a) Expressed interest in the program on the part of the resident.

(b) Minimum academic skill levels.

(c) Sufficient time to complete the program.

(d) Health clearance.

(e) Familiarity with or experience in the use of tools and tool processes.

(f) Passage of a safety test with 100% accuracy.

For the most part, facility school staff and the Classification Directors are allowed to exercise their own judgment as to how to apply the prerequisites. The most commonly mentioned entry prerequisites are (1) expressed interest in the program, (2) minimum academic skill level, and (3) passing the safety test. All of the school principals indicated that resident interest is the primary criterion for deciding which vocational program to provide.

Student Academic Skill Level

Department policy is not specific as to what minimum academic skill level is required for vocational program entry. Generally speaking, a 6.0 Average

Grade Equivalency (A.G.E.) in reading and math is the preferred minimum according to MDC educators, but the Central Office Education Unit indicated that the 6.0 A.G.E. is not mandatory. Hence, the facility schools do not use a consistent minimum A.G.E. as a standard prerequisite. Furthermore, some of the schools strictly adhere to the minimum grade level requirements they decide to use (this varies from 6.0 to 9.0 A.G.E.) while others allow some flexibility or even bypass this prerequisite entirely if there is very strong resident interest.

The vocational instructors who were interviewed complained about the present use of A.G.E. scores to determine which students have the academic skills necessary for vocational program involvement. They reported that many residents entering the programs cannot handle the required reading in the textbooks, instructional modules, and written tests. A few instructors claimed that more than half of their students have inadequate reading skills. All instructors emphasized that poor readers are not dropped from the programs; the teachers simply spend more time with them. (SEE Problem #2 in Section III.)

Three facilities are successfully using alternative means to determine whether students' reading skills are adequate for vocational program participation. Residents interested in the Auto Servicing program at the Michigan Reformatory Dorm must read a few selected passages out of the program's textbook during program classification to show that they will be able to handle its reading requirements. Using this method, the MR principal regretfully reported that it is difficult to find enough residents who can read well enough to enroll in the program!

The other two facilities, Marquette Branch Prison and the Michigan Reformatory require that students take and pass a pre-vocational trade

orientation course prior to the determination of vocational program placement. The course takes about 2 weeks to complete. Course topics include safety, measurement, work habits, basic blueprint reading, and tool orientation (i.e., exposure to different types and uses of tools). If the pre-vocational course identifies gross reading or math deficiencies, the resident is referred to academic school for Adult Basic Education (ABE) enrollment. Residents who pass the course are allowed to choose which vocational program they want to attend, or they can decide against vocational programming if they wish.

Student Aptitude and Vocational Counseling

The "Job Readiness Programming" attachment to Director's Office Memorandum 1976-1 (supplementing PD-DWA-40.01) states that, "Aptitude testing and vocational counseling is needed to assess and help residents in finding career choices consistent with their abilities and interests." It goes on to say, "Both the R&GC and the institutions should develop vocational counseling capabilities to assist residents in this important area."

The Reception and Guidance Center in Jackson administers the General Aptitude Test Battery (GATB) to all residents as part of its total testing program. GATB test results are used by R&GC staff as one of the factors leading to recommendations for specific vocational program involvement. The scores are usually recorded in the residents' institutional files.

Only the Michigan Training Unit gives any consideration to residents' GATB scores when considering vocational program placements different from those recommended by the R&GC. This situation is largely due to the fact that institutional personnel have never been trained in GATB test score interpretation and use. (SEE Problem #1 in Section III.)

As of this writing, neither the R&GC's nor the institutions systematically provide vocational counseling to residents prior to vocational program placement. (SEE Problem #1 in Section III.)

SECTION II: VOCATIONAL PROGRAM DESCRIPTIONS
AUTOMOTIVE MECHANICS, SMALL ENGINE REPAIR, AND WELDING

GENERAL PROGRAM CHARACTERISTICS

OBJECTIVES

Automotive Mechanics, Light Duty Mechanics, and Auto Servicing

The primary objective of the Auto Mechanics program is "to prepare the student for employment as a beginning mechanic in a garage or automobile dealership." The chief objective of the Light Duty Mechanics and Auto Servicing programs is "to prepare the student with the necessary skills and knowledge so that he can seek entry level employment as a service station mechanic, in new car preparation for delivery, or as a mechanic's helper" (Official program descriptions).

Secondary objectives, espoused by the instructors, are common to all three programs:

(a) To prepare the student for employment in an auto parts store or the parts department of an automobile dealership.

(b) To train the student to at least be able to perform maintenance and repair work on his personal vehicles after returning to the community, thus saving money and gaining self-confidence.

(c) To perform maintenance and repair work on State vehicles brought into the class shop, as a side-benefit to State government for monetary savings, practicality, and enhancement of facility image.

The last objective stated above is supported by all of the instructors, but some of the facilities are not utilizing their shops in this manner.

Small Engine Repair

The foremost objective of the Small Engine Repair program is "to prepare the student with the vocational skills and knowledge needed to seek employment

as a small engine mechanic in the repair of chain saws, snowmobiles, outboard engines, and lawn equipment" (Offical program description). Motorcycle repair has been added to the program at the Northside Unit of SPSM as an optional training objective.

Secondary objectives include: (1) To prepare the student for work in the parts department of a small engine servicing shop, (2) To prepare the student to maintain and repair his personal small engine equipment after release to the community, and (3) To maintain and repair small engine equipment used at the facilities by forestry, maintenance, and other work crews.

Welding

The principal objective of the Welding program is to provide the student with "the vocational skills and knowledge necessary for him to seek employment ranging from production welder to all-position welder. . . in the areas of oxy-acetylene welding, TIG, MIG, arc welding, and cutting" (Official program description). A subordinate objective is to provide welding services for the facilities as needed.

PROGRAM CAPACITIES

All of the vocational programs divide each day of training into class sessions of approximately three hours in length. Most of the programs hold two sessions per day, but the Auto Mechanics and Welding programs at the Trusty Division of SPSM are able to operate four sessions per day because both of those programs have two teachers assigned to them (i.e., one day shift and one night shift instructor).

The capacity of the programs per class session ranges from a low of 12 to a high of 40 per session. Capacity per session is primarily determined by the

number of work stations available in the shops. All but two of the vocational programs teach a different group of students during each class session, both to increase the overall enrollment capacity of the programs and to enable students to participate in a mix between vocational and academic programming (e.g., Welding in the morning and GED in the afternoon). The exceptions to this procedure are the Auto Mechanics programs at the Michigan Training Unit and Camp Ojibway; they train the same group of students during both class sessions.

The overall capacities of the programs are as follows:

TABLE I

Overall Program Capacities

	Auto Mechanics, Light Duty Mechanics, Auto Servicing	Small Engine Repair	Welding
Michigan Reformatory	40	30	60
Marquette Branch Prison			24
SPSM-Northside		32	
Michigan Training Unit	18		40
Kinross Corr. Facility	30		
Cassidy Lake Tech. School	30		30
SPSM-Trusty	60		80
Camp Ojibway	40		

WAITING LISTS

Waiting lists for the vocational programs vary widely in both the average number of residents on the lists and the maximum waiting times before program entry. Camp Ojibway does not have a regular waiting list in its Auto Mechanics program because it operates on a college semester group enrollment basis (it is a college-operated course). The Welding program at Marquette Branch Prison (MBP) is usually filled to capacity, but it has no waiting list. Facility school principals reported waiting lists for the

other programs ranging in size from 1-2 residents to 25-40 residents. Waiting times differ just as broadly, with maximum estimates of as little as 1-2 weeks on up to 4-6 months. The sizes and lengths of the waiting lists fluctuate from month to month.

Most of the residents placed on vocational program waiting lists ultimately get into the programs. When they do not, it is usually due to either inter-facility transfer while they are still on the waiting list, or their own refusal to enter the program once an opening becomes available.

TEACHER AIDES

The availability and use of teacher aides is not uniform across facilities or programs. Four of the instructors have no aides; the rest have anywhere from one to ten assistants. Only two of the aides are civilians. Resident teacher aides are usually former students of the programs.

Teacher aides typically serve one or more of three general roles:

(1) They may act as clerks, in which case their function is to maintain and distribute tools, equipment, parts, tests, and resource materials.

(2) They may act as teaching assistants, in which case their function is to help students learn the course work.

(3) They may act as shop workers, in which case their function is to perform actual work for the institution related to the program trade.

Aides commonly serve the third function when the institution jobs coming into the class shop are too difficult for the students to handle, or when

the volume of jobs outstrips the capacity of the students to finish them in a reasonable amount of time. An extreme example of this is the Auto Servicing program at the Michigan Reformatory (MR) which places a premium on servicing State vehicles. The program has anywhere from 6 to 10 aides acting as shop workers at any given time.

In order to get by without (or with fewer) aides, the vocational instructors frequently ask more experienced students to work with newer students. The Welding instructor at Cassidy Lake Technical School (CLTS) does not have any aides, so he encourages program graduates to come to the shop informally and help the current students.

Despite the variations in teacher aide availability, there were few complaints from the instructors. The most serious problem was identified in the Welding program at SPSM-TD. The instructor does not have an aide to work on institution welding jobs, so he is forced to spend part of his class time doing welding instead of teaching. (SEE Problem #3 in Section III.)

COMPATIBILITY OF INSTRUCTION ACROSS FACILITIES

METHOD OF INSTRUCTION

The vocational programs are all designed to use the Competency Based Instruction (CBI) approach. Basically, CBI programs require that students demonstrate mastery of certain fundamental skills while proceeding at their own learning speed. Each course within each vocational program is made up of a series of distinct learning modules which tell the student what he is expected to learn (performance objectives) and define the activities which will result in his learning. In vocational programs, the emphasis is on demonstration of the learned skill rather than paper and pencil test performance.

The CBI approach allows for an open entry system because the students work on the modules individually, so that a student can begin at any time on the level of learning for which he is ready. The modules are organized into a sequential pattern with each module building on the skill and knowledge gained from the one preceding it. Some modules must be completed in a standardized sequence while others (especially the first few modules of a course) can be completed in any order that is convenient for the instructor, given the availability of resources.

The feature of open entry is supposed to enable students to continue a course of study even though they move from one receiving facility to another through inter-facility transfers. Of course, since each type of vocational program is only offered at a few of the State's correctional facilities, students often do not have any opportunity to continue unfinished vocational programs after transfer simply because their new receiving facilites do not offer the programs. (SEE Problem #4 in Section III.)

Even if the student is fortunate enough to transfer to another facility which offers the vocational program he has been taking, there is no guarantee that he will be re-enrolled in the program; and even if he is re-enrolled, it is unlikely that he will easily pick up where he left off because of the operational variations of each vocational program between facilities. There are almost as many versions of each vocational program as there are facilities that offer each program. (SEE Problem #5 in Section III.)

Some of the more conspicuous facility variations existing for each program type are presented throughout the rest of Section II.

DEVELOPMENT AND USE OF MDC CBI CURRICULAR PACKAGES

Competency Based Instruction was a logical approach for the MDC vocational programs to adopt. In fact, the CBI approach has its roots in industry where tasks naturally must be completed in stepwise fashion. Several of the vocational instructors noted that they were essentially using a CBI approach even before the MDC curricular packages were developed.

MDC educators decided to develop their own vocational CBI curricula rather than adopt existent curricula or performance objectives already developed by commercial establishments or other organizations such as the Michigan Department of Education. The assumption was that MDC vocational instructors should be able to design curricula better suited to the Corrections classroom environment and the special needs of their students.

After a two-week workshop (1975) in which MDC teachers were taught how to construct and use CBI modules, a curriculum committee was formed for each

vocational program. Each committee member was assigned to write CBI modules for a portion of the program. As chairman of each curriculum committee, the former MDC Vocational Coordinator collected the modules and reviewed them with Citizen Trade Advisory Councils that he established to evaluate course content. (The composition and role of Citizen Trade Advisory Councils are explained later in this report.) When the review process was completed, the modules were combined into CBI packages and distributed to the vocational instructors.

Several of the vocational instructors voiced three complaints about the development process:

1. They claimed that many of the modules were rewritten by the former Vocational Coordinator without further teacher input.

2. They claimed that they never received copies of parts of the CBI packages.

3. They claimed that many of the modules are written with poor grammar and content.

Despite their dissatisfaction with many of the CBI modules, the Welding and Small Engine Repair programs generally use all of their CBI materials, and the auto servicing and repair programs use CBI for at least part of their courses. Some of the auto servicing and repair modules were apparently never completed; others are felt to be so poorly written that instructors simply do not use them. (SEE Problem #6 in Section III.)

Although all instructors do use CBI curricula in their programs[1], those materials are not always used in the same way from one facility to another. Some instructors use the CBI modules as actual course content; other instructors just use the modules as an outline or framework for course delivery with the major content coming from other resources. The Small Engine Repair programs use a commercially developed curriculum, so the instructors wrote their CBI modules to correspond to the structure of the commercial system, and they simply use the modules to record student skill mastery. The Michigan Reformatory Auto Servicing instructor also restricts his use of CBI modules to student progress recording because his primary resource is a series of workbooks that do not correspond to the CBI structure. (SEE Problem #7 in Section III.)

All but one of the instructors indicated that the CBI modules need to be revised and updated, and eight instructors stated that they are planning to make or have already made module additions, deletions, updates, and revisions on their own without communicating these changes to others or getting official approval. (SEE Problem #8 in Section III.)

PROGRAM COURSE OFFERINGS

Automotive Mechanics, Light Duty Mechanics, and Auto Servicing

Facilities offering auto servicing and repair programs have not established a common set of courses. The Auto Mechanics program at the Michigan Training Unit (MTU) is the most comprehensive in terms of courses offered

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[1] Although the instructor is using a CBI approach, the MDC CBI package for Auto Mechanics is not being used at Camp Ojibway yet. However, the instructor has ordered and received the Department's package.

with 24 or 25 areas of instruction covering almost all kinds of mechanical work including such areas as Occupational Basics (an elementary introduction to the auto mechanics trade), engine tune-up, engine tear-down and repair, brake systems, automatic and standard transmissions, rear axles, front-end alignment, fuel systems, electrical systems, and steering systems.

Although less comprehensive in scope, the Auto Mechanics programs at other facilities do provide training in many of the main areas of auto servicing and repair. For example, the program at SPSM-TD offers training in three categories:

(a) Occupational Basics

(b) Basic Auto Servicing and Repair (courses in engine tune-up, brakes, basics of front-end alignment, introduction to transmissions).

(c) Advanced Auto Repair (courses in advanced front-end alignment, engine tear-down, complete engine overhaul, advanced transmission adjustment and repair).

Kinross Correctional Facility includes a small welding course in its Auto Mechanics program. Camp Ojibway offers a total of 6 courses for 19 college credits.

The CLTS Light Duty Mechanics and MR Auto Servicing programs are even less comprehensive, focusing primarily on auto servicing and more minor repairs. They do not prepare students for transmission repair or complete engine overhaul, and they do not provide training in any of the wide variety of additional courses offered by the MTU Auto Mechanics program.

Small Engine Repair

Both Small Engine Repair programs offer the following courses: (a) Small Engine Technician (the program's basic course in two-cycle, four-cycle, and applications small engine repair training), (b) Chain Saw Technician, and (c) Marine Engine Technician. In addition, the program at the Michigan Reformatory (MR) offers a Wankel Rotary Engines course, and the program at the Northside Unit of SPSM has recently introduced a Motorcycle Technician course. Program plans for the near future include a Diesel Engines course at MR and a Small Engine Transmissions course at the Northside Unit.

Welding

All five of the Department's Welding programs offer training in four areas of welding and cutting including oxy-acetylene, TIG, MIG, and arc welding. The program at the Michigan Training Unit also provides instruction in squirt ("innershield") welding.

SEQUENCE AND METHOD OF COURSE DELIVERY

Automotive Mechanics, Light Duty Mechanics and Auto Servicing

The sequence and method of course delivery is a major stumbling block to compatibility of instruction across the Department's auto servicing and repair programs:

1. SPSM-TD Auto Mechanics - Students work individually and they must take Occupational Basics, Basic Auto Servicing and Repair, and Advanced Auto Repair, respectively. Courses within each category may be studied in any order.

2. CLTS Light Duty Mechanics - Sequence and method of course delivery is similar to that at SPSM-TD except that CLTS training does not include auto repair courses.

3. KCF Auto Mechanics - Students work individually and they can start with any area of training they wish because there is no established sequence of courses.

4. Camp Ojibway Auto Mechanics - The program follows an established course sequence, and it is operated on a college semester basis. It has not allowed for open entry in the past, but it is scheduled to begin allowing for open entry in June, 1980.

5. MR Auto Servicing - Classroom study and shop work are completely separated. The students spend the first one to three months of the program (depending on their learning speed) in the classroom studying all of the areas of training associated with the program. They study individually using workbooks. After finishing the workbooks, the students enter the class shop and get actual practice on State cars that are brought in for servicing. Shop work practice cannot follow the established order of the CBI modules because student exposure to servicing work is dependent upon the servicing needs of the State cars.

6. MTU Auto Mechanics - This program uses a much more complex approach. Each student begins with Occupational Basics when he enrolls, but after completing it, he joins the other students as they move through the other courses as a group. The program is delivered on a cyclical basis in which each of the courses is taught once and only once during a curriculum delivery cycle of one full year. Consequently, each student must remain in the program for one full year in order to complete it.

The courses are taught in the same sequence in every curriculum delivery cycle. Each student begins his instruction on whatever course is being taught at the time he completes Occupational Basics.

Many of the courses in the MTU program do not have CBI modules developed for them. These courses are taught by classroom lecture sessions presented to all of the students as a group followed by benchwork practice, wherein the students sit at classroom tables individually or in small groups and practice taking apart and reassembling auto parts pertaining to the area of instruction (e.g., carburetors).

Each program day at MTU is divided into three activity sessions. During the first program hour, the students study shop math and receive automotive drawing instruction which involves study of cutaway, cross-sectional, and other types of repair manual diagrams. The second and third hours are also spent in the classroom, but during this activity session, the students learn the theory behind auto repair procedures and they engage in benchwork practice. Student activity shifts to the class shop for the fourth, fifth and sixth hours. Some of the students work on cars brought into the class shop for actual repairs, others continue to practice on benchwork parts, and the remainder of the students work on CBI modules and tests.

In order to ensure a variety of shop activity, when the MTU instruction cycle was established, the course presentation sequence was arranged in such a way as to prevent consecutive teaching of courses that rarely have actual repair work available on cars brought into the shop.

Small Engine Repair

The sequence of course delivery in the two Small Engine Repair programs is as follows:

Michigan Reformatory - Small Engine Technician, Marine Engines, Wankel Rotary Engines, Chain Saws, Diesel Engines (once it is implemented).

Northside Unit of SPSM - Small Engine Technician, Small Engine Transmissions (once it is implemented), Chain Saws, Marine Engines or Motorcycles (both optional).

Both Small Engine Repair programs use an automated teaching system produced commercially by the Ken Cook Transnational Company of Milwaukee, Wisconsin. Each course area and element of instruction is provided to the student automatically by means of a tape console that has a visual display screen and an audio component. The system presents step-by-step instruction to the student under simulated work conditions. The students work independently, and each can work at his own pace because the tape stops after each program step until the student completes the "hands-on" activity.

The automated system also poses occasional questions to the student. He responds by selecting one of three multiple choice answers, and the machine provides feedback appropriate to his selection.

Welding

Students work individually in all of the Welding programs, but the programs do differ with regard to the order in which the courses are taken. For example, Welding students at the Trusty Division of SPSM usually begin with arc welding followed by MIG, oxy-acetylene, and TIG welding, respectively; but Michigan Training Unit Welding students normally start with oxy-acetylene welding followed by arc, TIG, and MIG welding, in that order. The

instructors commented that they sometimes have to alter their course sequences because of insufficient welding equipment for the beginning courses.

The MTU welding instructor indicated that he prefers to start students on oxy-acetylene welding because he feels it is the most difficult course, and it thus provides the students with a better grasp of all the principles of welding. The other welding processes will then be easier to learn. If he finds that a student does not have sufficient dexterity, patience, or other skills necessary for successful oxy-acetylene welding, he starts the student on the next most difficult course that the student can handle successfully. Students who have insufficient time to learn oxy-acetylene welding are also started on one of the easier welding types.

PERFORMANCE OF ACTUAL WORK IN THE CLASS SHOPS

All of the Small Engine Repair and Welding programs perform actual work for the institutions, but only two of the auto servicing and repair programs - MTU Auto Mechanics and MR Auto Servicing - currently work on State vehicles that are still in use. The Auto Mechanics program at SPSM-TD used to work on cars for the institution, but the practice was discontinued when an old car had a dangerous mechanical malfunction after being worked on in the class shop. The SPSM-TD instructor hopes to eventually return to doing actual repairs, and the other instructors expressed a similar interest because they feel that their students would benefit from real practice on operable vehicles (especially in the area of troubleshooting). (SEE Problem #9 in Section III.)

QUALITY AND PRODUCTION STANDARDS IN THE CLASSROOM

All of the vocational program instructors require that their students perform each trade-related skill well enough to meet the quality standards expected by employers in the community. Production standards for output (i.e., expected speed with which a task is completed) do not receive the same degree of attention.

Some of the instructors do not deal with production standards at all because (1) they feel that quality is much more important than speed, or (2) they feel that the setup of their programs is not conducive to teaching production expectations, or (3) they feel that the students do not have enough actual experience to justify considerations of output.

Other instructors do not require that students meet production standards, but they do at least try to create an atmosphere of what would be expected in a job in the community.

Lastly, a few instructors do emphasize production standards to the extent that they require students to perform trade-related skills within established time frames (e.g., ten welds in 30 minutes) while maintaining adequate quality standards.

The instructors who do emphasize production standards commented that they do so because employers have told them that prison-trained employees are much slower on the job than other employees. (SEE Problem #9 in Section III.)

REWARDING STUDENTS FOR PERFORMANCE EXCELLENCE

Many of the vocational instructors have developed methods to provide incentives for quality student performance. Typical incentives include (a) assisting better students to enter on-the-job training programs in the institutions, (b) assisting better students to get trade-related work assignments after program completion, and (c) allowing former students to remain in the class after program completion, if they are interested, to work on institution equipment, cars, and other trade-related items.

As another incentive, the Welding instructor at CLTS encourages former students to come into the class and compete with current students to see who can make the best welds.

The MTU Welding instructor has a display on the wall of his welding shop with actual examples of each type of weld learned in the program. The instructor has made a standing offer to replace any weld on the display with an improved version made by any student.

USE OF TESTING IN THE PROGRAMS

As stated earlier, determination of program mastery depends more heavily on actual demonstration of vocational skills than on book learning measured through the use of written tests. Nevertheless, most of the vocational programs do use some form of testing to document student competence. Some of the tests were written in conjunction with the development of CBI materials; others were prepared by individual instructors for their personal classroom use; and still others are commercially prepared tests extracted from program resource materials.

Accuracy in the range of 70-80% is usually required before the student can move on to the next course module. An exception to the latter is at SPSM-TD where the Welding instructor requires 100% accuracy due to the fact that he designed his tests to cover "everything the student absolutely must know about welding."

The Small Engine Repair program at the Northside Unit of SPSM has its own unique requirements for testing proficiency. The required test scores for course mastery increase as the students progress into the advanced courses. Seventy percent accuracy is required to pass the Small Engine Technician course, but the student cannot enroll in the Chain Saw Technician course unless his overall SET test scores reflected at least 80% accuracy. Similarly, entry into the Marine Engine Technician course requires 90% accuracy on the Chain Saw Techncian course tests.

The Small Engine Repair program at MR is unique in that its students must sign contracts on which they select the grade they want to obtain in the program. Once a student has chosen a grade, he must achieve a corresponding percent accuracy on each program module test. If he does not reach the level of accuracy, he must repeat the module in question until his score is raised. The Small Engine Repair instructor at the SPSM Northside Unit used to contract with students in this fashion, but he stopped doing so because (1) he felt that it was unfair to better students since students who had to repeat modules could get the same grade as students who passed all modules on the first try, and (2) he found that students who had to repeat modules were eventually memorizing the module tests and getting their selected grades without being able to perform the actual work on the engines.

Much of the testing for the vocational programs is still in the developmental stages. For example, the Small Engine Repair instructor at the Northside Unit is developing "final exams" of 30-40 questions each for use in measuring student retention of the SER materials, and the KCF Auto Mechanics teacher is constructing a pre-test for predicting student ability to pass the auto mechanics tests required for State certification.

PROGRAM COMPLETION CRITERIA

In the past few years, there has been a lot of talk about program completion rates in the Michigan Corrections system. Facility audit reports and other sources have expressed concern about apparently low rates of completion. However, there has been little investigation into what constitutes or should constitute vocational program completion.

Just what is a program completion? Does completion mean that the student has taken and mastered all of the program courses? This report has already shown that course offerings within each vocational program are different from one facility school to another. There are also differences regarding what courses are required and what courses are optional.

Does completion mean that the student has received a specified number of hours of training? The CBI approach is designed to enable students to work individually at their own learning speed. Does completion mean that the student has finished as much as he can prior to transfer? Or, does completion mean that the student has mastered enough usable skills to become employable in the trade? If so, how much is enough?

A standard definition of completion for each vocational program has not been established. (SEE Problem #10 in Section III.)

The program completion criteria being used currently are presented below.

Automotive Mechanics, Light Duty Mechanics and Auto Servicing

Four of the six auto servicing and repair programs require mastery of the entire curriculum before the programs are considered to be completed. Of

course, the "entire curriculum" is not the same from one facility to another.

One of the two exceptions to the above practice is the Auto Mechanics program at KCF in which students can choose to learn and thus specialize in only one or two areas of training (e.g., engine tune-up or brake systems) rather than taking the entire program.

The other program with different completion criteria is Light Duty Mechanics at CLTS. Students at CLTS are often permanently pulled out of the program for other educational needs after they have completed Basic Auto Servicing, yet prior to starting Advanced Servicing. In fact, the instructor estimated that only about 10% of the students go on to the advanced courses. Students are taken out of the program prior to enrollment in advanced courses if they have been judged to have other educational needs, or to have little chance of completing the advanced courses prior to transfer. The assumptions are that these students have at least received enough instruction to enable them to qualify for a beginning level job in the trade; and that, hopefully, the program has generated sufficient interest in the trade such that these students will be motivated to seek additional training after their release to the community.

Small Engine Repair

Completion of the Small Engine Technician course is considered to be the terminal objective for the program at both facilities, unless the student is qualified and desires to go on to the advanced courses.

Welding

Strictly speaking, completion of the Welding program requires that the students take and pass all of the courses. However, the teachers noted that

former students can become employed as welders even if they can only do one or two types of welding.

INSTRUCTOR ESTIMATES OF TIME NEEDED TO COMPLETE PROGRAMS

The CBI approach allows students to work at their own learning speed, but self-paced does not mean the students can chose to spend class time lazily or aimlessly. All students are expected to make reasonable progress. With this fact in mind, and recalling that there is variation across facilities in how completion is defined, each vocational instructor was asked to estimate how long it usually takes his average students to complete the program.

Completion of the auto servicing and repair programs was estimated to usually require from 3 months (Camp Ojibway) to one full year (MTU). Every instructor's estimate was different, but they all fell into that range.

It was estimated to take about 8 months to complete the entire Small Engine Repair program at the Northside Unit of SPSM and nearly one year at MR. The primary course - Small Engine Technician - takes from 3 to 4 months to complete at both facilities.

Students generally can be expected to complete the entire Welding program at CLTS in about 3 months, but Welding programs at other locations usually take longer with estimates ranging from 4-10 months (SPSM-TD) to one full year (MBP & MR).

PROGRAM COMPLETION RATES

The vocational program instructors were also asked to estimate what percentage of their students complete the programs. In a few instances, this

information had to be acquired from the school principals. Surprisingly, in most cases neither the teachers nor the principals could provide precise figures concerning full completion, partial completion, and non-completion of the programs. Rather, reported percentages were usually "guesstimates." The percentages were specifically based on the past year's program enrollments in only four cases. (SEE Problem #10 in Section III.) There was a great deal of variation in the program completion estimates, so they are reported separately.

Automotive Mechanics, Light Duty Mechanics, and Auto Servicing

Between August 1, 1978, and August 1, 1979, only 14% of the Auto Mechanics students at MTU completed the entire program (6 of 43 students who were enrolled sometime during the period). This completion rate is not surprising since the overall program capacity is only 18 students and the program takes about one full year to complete.

The principal at KCF estimated that about 50% of the Auto Mechanics students have been completing the entire program, but he stressed that the program is relatively new at KCF, so the long-term completion rate may come out differently.

Approximately 90% of the SPSM-TD Auto Mechanics students complete Occupational Basics and Basic Auto Repair, but only about 60% of them go on to finish Advanced Auto Repair.

The Auto Servicing instructor and the principal at MR concurred in their estimate that only 5% of the students complete the program because the students usually transfer out of the MR Dormitory within one to three months while program completion takes 4 months.

Ninety-two percent of the Light Duty Mechanics students at CLTS completed Occupational Basics and Basic Auto Servicing in 1978 (110 of 120 students). Usually, only 10% of the students remain in the program to take and complete the advanced courses.

The Camp Ojibway Auto Mechanics instructor complained that the completion rate for his program is steadily growing worse. To illustrate his point, he said that only 26% of the students completed the program in 1978, while 73% completed the program in a previous year.

Small Engine Repair

As mentioned earlier, both Small Engine Repair programs are considered to be completed after the Small Engine Technician (SET) course is passed, unless the student is qualified and desires to continue. Seventy-three percent of the students completed the SET course at the Northside Unit of SPSM in the 1977-78 fiscal year (54 of 74 students), and the instructor at MR estimated that 90-95% complete the SET course in his program. About 1/3 of the students go on to take some of the advanced courses.

Welding

The instructors estimate that somewhere between 75% and 95% of all Welding students complete at least one or two of the four Welding courses. The completion rate for the entire Welding program at each of the facilities was estimated to be 25% at MR and MTU, 50% at MBP, 60% at CLTS, and 75% at SPSM-TD.

REASONS FOR NONCOMPLETION

There are a variety of reasons for failure to complete vocational programs, but all of the teachers said that inter-facility transfer is by far the most

prevalent reason. To a lesser extent, student lack of interest, student aptitude deficiency, and facility actions (e.g., disciplinary actions) were also mentioned as causes of noncompletion.

The Central Office Superintendent of Education disputed the contention that inter-facility transfers cause most of the vocational program noncompletions. He stated that the monthly statistical reports submitted by the principals usually show facility or school actions and non-performance by the students to be as responsible for program terminations as inter-facility transfer. It is not clear why the instructor's statements and the statistical reports differ in this regard. To some extent, the discrepancy may lie in the ambiguity concerning what constitutes program completion versus noncompletion. (SEE Problem #10 in Section III.)

STUDENT NEEDS ASSESSMENT

The CBI approach is intended to enable each student to begin his training on the level of instruction that best fits his current ability level. Students who have had some exposure to a trade before they became incarcerated can skip over familiar material and start their training on more advanced modules. Similarly, students who terminate from a program due to inter-facility transfer should be able to re-enroll in the program at their new receiving facility and start where they left off rather than starting over at the beginning.

In order to make this work, the vocational instructor must have a way of determining the student's ability level at the time of program entry. The mechanism currently used for making this determination is to start each student at the beginning of the vocational program, and have him try progressively more advanced learning modules until his performance indicates an appropriate starting point. In other words, the student actually demonstrates his current vocational skills by attempting to meet the module objectives without receiving any corresponding instruction, and when he gets to a module he cannot perform, his vocational training begins at that level. This procedure is used with students enrolling in the program for the first time and students re-enrolling after inter-facility transfers.

The only exceptions to the latter are in the MTU Welding and CLTS Light Duty Mechanics programs. Students who re-enroll in those programs are asked to demonstrate their skills at the highest level of instruction they profess to have completed prior to transfer. If the students can perform as they claimed, they begin their training on the next immediate module; if they cannot, the instructor has them try some earlier modules until an appropriate starting point is determined.

The procedure now being used to determine appropriate instructional starting points is largely satisfactory. The technique is a decidedly reliable indicator of vocational proficiency; and, in cases where the student is entering the program for the first time, any other method would probably require nearly as much time to accomplish. Cases involving re-enrollment after transfer could be handled faster by systematic communication of student progress information between facilities, but the vocational instructors feel that review of earlier modules is always beneficial to the students and sometimes even essential if very much time has elapsed between program involvements.

Most importantly, since students entering the vocational programs rarely have any prior vocational experience and re-enrollment in vocational programs after transfer occurs infrequently, classroom needs assessment to determine instructional starting points is usually not even necessary. Furthermore, the instructors assert that students who do re-enroll or have prior vocational experience are generally assessed for ability level in less than two hours. Consequently, the current method of assessment is probably not a significant drain on program time and resources.

Besides, the vocational instructors presently have no viable alternatives to the use of actual demonstration of current vocational skills. Module-matched pre-tests cannot be used to determine entry ability level because none have been developed for the vocational programs. Information in the institutional files pertaining to student educational background and work history is not sufficient to help in this regard. Documentation of previous skill mastery cannot be used in the event of re-enrollment after inter-facility transfer because the information is not transmitted between facilities. Some of the above may eventually become practicable as supplements or alternatives to current practice.

RESOURCES

Resources in the vocational programs include the CBI curricular packages, textbooks and reference materials (e.g., specifications manuals), audio-visual supplies, tools, shop equipment, replacement parts, general supplies and classroom space. The former Vocational Coordinator was responsible for calculating start-up and maintenance costs, and developing general plans (e.g., shop layout) for each program. His efforts led to the creation of authorized resource lists which describe what resources can be acquired and used. The allowable quantity, unit price, and total cost of each tool, piece of equipment and other resource is specified. The lists were approved by the Citizen Trade Advisory Councils.

Instructors are generally supposed to restrict their resource acquisition to the items on the authorized lists. Alternative or additional resources can be ordered if the instructors obtain approval by submitting requests documenting the need to program administrators who then decide if the purchases are warranted and whether the proposed resources should be added to the authorized lists. In reality, some resources that do not appear on the lists are ordered and used without going through the above process. There was broad agreement that the lists could stand to be updated to include technical manuals and other resources that have been produced since the lists were developed. Nevertheless, on the whole, the vocational instructors are pretty well satisfied with the comprehensiveness of the authorized resource lists.

RESOURCE AVAILABILITY

Resources are acquired in three ways which include (1) distribution by the Central Office Education Unit (this is the case for the CBI curricular

packages), (2) direct facility school purchase from commercial suppliers, and (3) donations from business and industry (e.g., cars from auto manufacturers and scrap metal from fabricating companies).

Several of the instructors reported problems of one kind or another with resource availability. The most commonly reported problem was acquisition of CBI materials. Some instructors claimed they never received all of the CBI modules for their programs, and others cited difficulty in obtaining replacement modules. The cause of this problem is a complete disintegration of the vocational CBI distribution process. On the one hand, the vocational instructors rarely take the trouble to ask for additional CBI modules; and, on the other hand, CBI orders usually could not be filled anyway because the Central Office Education Unit does not have complete sets of the CBI packages for the vocational programs. (See Problem #6 in Section III.)

Numerous other resource availability problems were identified, but each was only mentioned by one or two instructors. The problems may or may not be limited to the facilities where they were noted. (See Problem #11 in Section III.) Instructors identified problems with acquisition of the following resources:

(a) New auto mechanics benchwork materials to replace those which are becoming worn and unusable (SPSM-TD, CLTS).

(b) Welding rods (SPSM-TD).

(c) Replacement parts for small engine equipment (SPSM-Northside).

(d) Sufficient numbers of operable cars for students to work on in the class shop (MTU).

(e) Newer cars with mechanical innovations that have come out in the last several years (CLTS).

(f) Adequate work station and storage space in the auto mechanics class shop (SPSM-TD, Camp Ojibway).

(g) A welding classroom to give students a place to study their texts, to permit use of audio-visual materials, and to permit other program activities that are presently inhibited by the environment of the class shop (CLTS).

(h) Equipment servicing to keep auto mechanics equipment in working order (CLTS).

(i) Speciality small engine repair tools, such as a master thread repair kit (SPSM-Northside).

(j) Current automobile manufacturer manuals (CLTS).

(k) Gasoline for small engine equipment (SPSM-Northside).

VOCATIONAL INSTRUCTOR ATTITUDES TOWARD MDC CBI PACKAGES

When instructors were asked about their general impressions of the CBI packages, they acknowledged the potential advantages of using the CBI approach, but they also articulated several criticisms of the MDC CBI curricula.

The potential advantages they mentioned include: (1) allowance for open entry, (2) facilitation of individualized instruction, (3) usefulness as a

recordkeeping device to verify what skills a student has mastered and when he mastered them, and (4) facilitation of program re-entry after inter-facility transfer.

Criticisms of the MDC CBI curricula can be summarized into two major categories:

(1) The instructors are not fully satisfied with the quality of the CBI modules. They claim that insufficient time was spent on the developmental process prior to CBI implementation; they claim that lack of inter-facility teacher communication has prevented adequate module revision; and they insist that the CBI modules must be subjected to continual revision and updating in order to keep up with the constantly changing demands of the trades. (See Problem #6 in Section III.)

(2) There is a lack of consensus regarding the proper role of the CBI packages in the classroom. (See Problem #7 in Section III.) On the one hand, the former Vocational Coordinator felt that the module narratives should be written with enough detail to "tell the student how to do the module tasks." Some instructors agree with this approach because they feel that it enables the faster students to work alone while the instructor attends to the needs of the slower students. They complain that the modules are too superficial and incomplete.

On the other hand, the current Vocational Coordinator and several other teachers have a different philosophy. They feel that the CBI modules should only serve as an outline or framework to be followed by the teacher while he delivers the course content as he sees fit. These educators would prefer to eliminate the module narrative and retain only

the performance objectives and measures of criterion mastery. They insist that vocational students need lots of additional explanation, practice, and supervision beyond CBI module content because technical skills cannot always be written in black and white.

In spite of the criticisms of the MDC CBI curricula, most of the instructors feel that it is basically useful. They would just like to see improvement. One instructor stated that his critical comments simply reflect his opinion that the Department should never "sit back and be satisfied with what it has." Several other instructors said that CBI seems to be the best way to deliver the program, given the realities of the Corrections education environment.

RECORDS SYSTEM

The records system, as defined in this report, is composed of all mechanisms used to maintain and communicate information pertaining to MDC vocational programs and students.

Descriptive information about the vocational programs is very limited. No information is regularly communicated throughout the Michigan Corrections system regarding actual program content, structure, and entry prerequisites. (See problem #12 in Section III.) The program information which does exist is largely management-oriented. Monthly reports are generated which contain statistical data about such things as waiting lists, program enrollments and terminations, and contact hours. A Semi-Annual Treatment Update is also prepared by the MDC Treatment Director in accordance with PD-DWA-25.02. The Update is an inventory of all MDC treatment and education program offerings broken down by facility where offered and containing enrollment figures as of a certain calendar day.

Vocational student information consists of pertinent facts about student background, program participation, and achievement. This information is maintained in five chief records system locations:

(1) Institutional Files (Copies maintained in Central Office).
(2) Counselor (Treatment) Files.
(3) Facility School Files (Located in school offices).
(4) Classroom Files (Located in program classrooms).
(5) Program and Assignment Reporting (PAR) Computer System.

STUDENT BACKGROUND

Student background information consists of facts such as student work history, occupational identity, educational background, vocational aptitude, medical history, program involvement recommendations, and prison release dates. Institutional and counselor files are the primary repositories for this information. When making program classification decisions, the facility classification directors routinely use background information as a supplement to the residents' expressed program interests and the current needs of the institutions. Principals and school counselors refer to background information less systematically when they make program placement decisions because they do not have ready physical access to institutional and counselor files, and they consider resident background to be of less importance than other program placement decision criteria.

Vocational instructors rarely consult student background information. Four of the teachers commented that they would probably review the information more often if there was easier access to it. These instructors expressed the opinion that such information might sometimes help them determine whether students are putting forth reasonable effort and identify areas in which extra teacher assistance will be needed. The other teachers either stated that the information would not really be useful, or they expressed concern about the potential for teacher bias.

STUDENT PROGRAM PARTICIPATION AND ACHIEVEMENT

Program participation and achievement information consists of facts about the students' vocational program involvement and skill acquisition. Six different forms are typically used to record this information. Each form is examined below.

(1) Classification Review Form (CSO-175) - This form is used by facility classification directors and treatment teams/counselors to record program classification and reclassification decisions and pre-transfer summaries of unit social adjustment and program achievement. The form is placed in the institutional and treatment files. In working with institutional files, the Facility Program Evaluation Unit (FPEU) staff found numerous instances where program assignment changes had taken place, but corresponding Classification Review Forms were not in the files. Appropriate CSO-175 distribution is not indicated on the forms or in Department policy. Furthermore, although PD-BCF-40.01 requires that the forms contain summaries of the rationale for program classification decisions, the FPEU staff has noticed that such summaries are often absent. (See Problem #1 in Section III.)

(2) Program and Work Assigment Entry/Report Form (CSX-363) - This form is used by principals, school counselors, and teachers to record student program entries, terminations, and achievement. The form's primary purpose is to communicate student program information to the MDC Bureau of Management Services for inclusion on the PAR computer system. The PAR system is designed to establish a computerized record of each resident's program participation and achievement as well as to enable the Department to monitor all residents enrolled in any program or work assignment.

Unfortunately, a long series of problems has prevented the PAR system from becoming fully operative. Facility schools do not have direct access to the system yet, and the PAR reports that are available have been severely criticized by MDC educators because of prolific information gaps and errors. (See Problem #13 in Section III.)

Since the computerized system is still essentially nonfunctional, the PAR forms are being used to manually store and communicate student program information. Copies of each PAR form are distributed to Management Services, the "originator", the treatment file, and the resident. Facility school "originator" copies may be maintained in either the classroom files or the facility school files.

(3) Progress Plotters - These forms are used by vocational instructors to keep track of which CBI modules the students have finished, and which modules remain to be done. Some instructors use master progress plotters which record the curricular progress of all the students in the class. Other instructors use personal progress plotters that are placed into individual classroom files.

(4) Course Maps - These forms are used by vocational instructors for the same purpose as progress plotters. However, in addition to showing progress to date, the course maps are graphic illustrations of the CBI module sequence to be followed for each course within a program. With course maps, the students can readily see how far they have come, how far they have to go, and what modules must be done next. To that end, copies of the course maps are often provided to the students. The instructors' copies are placed into the classroom files.

(5) Certificates of Achievement - All of the vocational instructors provide students with certificates of achievement upon termination from the programs, but the certificates are not standardized according to format or the information they convey. (See Problem #15 in Section III.) Usually, the certificates simply indicate whether they are for partial

or full program completion; but, in some cases, the instructors also indicate other program details such as the number of hours of training the student received in each skill area. Some of the instructors provide one certificate for the whole program, while others provide a separate certificate for each course in the program. A few of the instructors do not give out certificates unless the students have completed at least one-half of the program courses. Certificate copies are normally placed in facility school files and/or classroom files. They are sometimes found in institutional files.

Most of the certificates are not officially recognized by any organization or agency outside the Michigan Department of Corrections. (See Problem #15 in Section III.) Exceptions to this include the Small Engine Repair programs which use certificates provided by the Ken Cook Transnational Company, and the Michigan Reformatory Auto Servicing program which provides its students with an opportunity to acquire certificates from the Educational Department of the Automotive Marketing Division of the Dana Corporation. The latter certificates are acquired by passing mail-order true and false tests directed at overhaul of gasoline and diesel engines. Acquisition of the Dana Corporation certificates is optional, so the MR instructor also provides internal certificates.

The majority of the teachers have no direct knowledge about how their certificates are received by employers. The Auto Mechanics instructor at SPSM-TD assumes that the certificates are appreciated more by the residents who earn them than by prospective employers. The CLTS Light

Duty Mechanics teacher commented that the certificates are significant to the extent that the employer knows for a fact that the student has had an introduction to auto servicing. The MR Auto Servicing instructor mentioned that the Dana Corporation certificates "have the respect of at least some employers." The MR Welding instructor asserted that his certificates are highly thought of in the local community, and the MTU Welding teacher said he expects that employers proceed with caution and provide added training even though they do value the MTU certificates.

(6) Parole Eligibility Reports - Among other things, these reports are intended to provide a "comprehensive and concise summary of a resident's institutional adjustment and programming." (PD-DWA-45.11). The above policy also states that, "The type, the length of training, level of accomplishment, skills acquired, and certificates acquired in the area of vocational training should be reported." The FPEU staff has reviewed several hundred Parole Eligibility Reports over the course of its research, and it has found that the reports rarely do more than list the type of vocational training received and note whether the training was "completed". Details about the length of training, skills acquired, and certificates acquired are seldom present. (See Problem #14 in Section III.)

COMMUNICATION OF STUDENT PROGRAM INFORMATION

Institutional and counselor files regularly follow residents on inter-facility transfers. Unfortunately, these files contain very little detailed information about a resident's program participation and achievement. Classroom and facility school files, which do contain more detailed infor-

mation are rarely sent with transferring residents. Also, classroom files are sometimes thrown away after program termination at a given facility. (See Problem #14 in Section III.)

POST-PROGRAM FEEDBACK

Prior to the creation of the FPEU, there was no mechanism for routinely providing MDC educators with feedback information pertaining to program graduate community adjustment and use of vocational training. Feedback was limited to informal inquiries and comments from employers and former students. The vocational instructors were in complete agreement about the need for more feedback information to assist in program development and follow-through.

PROGRAM DEVELOPMENT AND STAFF TRAINING

MDC vocational program development is a shared responsibility of the teachers, principals, Vocational Coordinator, Vocational Steering Committee, and Citizen Trade Advisory Councils. Each has a role to play, but written documentation of program development procedures and responsibilities is virtually nonexistent. In addition, lack of time to devote to program revision is a common complaint among all staff responsible for it. Consequently, little organized vocational program development has taken place in the last couple of years, although most vocational instructors have unofficially made occasional internal curricular changes. (See Problem #8 in Section III.)

TEACHER ROLE IN PROGRAM DEVELOPMENT

The MDC Superintendent of Education stated that the vocational instructors are supposed to initiate curriculum committee meetings whenever they identify a need for updating or refinement of program structure and curricula. On the other hand, the vocational teachers are under the impression that initiation of organized program revision is the bailiwick of the principals, the Vocational Coordinator, and the Vocational Steering Committee.

Some of the instructors would like to see the curriculum committees meet again, but other instructors said that they would prefer to have the Vocational Coordinator make any necessary program revisions on his own with input from individual instructors.

PRINCIPAL ROLE

Most of the principals seem to prefer to take a reactive stance toward vocational program development. The vocational instructors are given fairly

wide lattitude to run their programs as they see fit, and the principals expect them to take responsibility for coming forward if program changes are needed.

VOCATIONAL COORDINATOR ROLE

According to his position description, the MDC Vocational Coordinator is primarily responsible for the following:

(1) Development of vocational program goals and objectives.

(2) Vocational program zero-based budgeting and resource planning.

(3) Biannual assessment visits to the vocational programs in all institutions to determine whether the programs are: (a) using space wisely, (b) using the authorized curricula, (c) equipped according to the authorized resource lists, and (d) using resources correctly. He identifies problems and recommends solutions.

(4) Coordination and supervision of Citizen Trade Advisory Council and curriculum committee meetings.

The Vocational Coordinator position was filled in March, 1980, after having been vacant for approximately one year due to the retirement of the former Coordinator.

VOCATIONAL STEERING COMMITTEE ROLE

The Vocational Steering Committee has been inactive for well over a year. It is composed of MDC educators, and it is responsible for reviewing the

vocational programs and making decisions about program design, curricula, and delivery.

CITIZEN TRADE ADVISORY COUNCIL ROLE

PD-BCF-41.03 declares that "Citizen Trade Advisory Councils and input from the Department of Labor will be utilized in evaluating course content and relevance to the current market, and in interpreting correctional programs to employers." Each type of vocational program would normally have its own Advisory Council, but there were only eight active Councils prior to the retirement of the former Vocational Coordinator, and there are no active ones as of this writing.

PD-BCF-41.03 also provides the following guidelines related to the Councils:

> Membership should be predominately from outside the field of education, and should include representatives of business, industry and labor. Each council's purpose is to advise on the development, operation and evaluation of particular programs. Each council's functions will include activities such as conducting occupational surveys, recommending appropriate physical activities, analyzing course content, selecting equipment, public relations, and identifying community resources.

The Vocational Coordinator is responsible for recruiting Advisory Council members. Participation is voluntary, and there is no payment for service on the Councils. In the past, Council members were commonly employed in large industry shops at the foreman level or they were owner/operators of small vocational trade shops because those people were likely to be direct supervisors of employees at the occupational level at which program graduates are likely to become employed.

CURRENT PROGRAM DEVELOPMENT STATUS

All of the vocational instructors subscribe to the opinion that their current programs sufficiently train students for at least beginning level employment in the trades. Even so, the teachers emphasized that although program graduates have learned the basic skills, on-the-job training is often necessary at the place of employment because the students generally need more practical experience than the programs are able to provide.

Most of the time the on-the-job training is merely needed to teach the program graduates how to apply the basic skills to the tasks of specific work situations. But sometimes program graduates need refresher training because they lack the self-confidence needed to perform the skills in the workplace. Refresher training also becomes necessary in cases where skill retention suffers due to significant passage of time between program completion and release to the community.

The Small Engine Repair and Welding curricula are pretty stable at present, but the MDC auto servicing and repair curriculum is scheduled to be changed during 1980 to bring it more in line with the curriculum offered by a community program called the Special Training Opportunity Program (STOP). The STOP program is designed to train ex-offenders for eventual State certification in auto mechanics and to place STOP program graduates in jobs with members of the Michigan Auto Dealers Association.

STATE CERTIFICATION REQUIREMENTS

Automotive Mechanics, Light Duty Mechanics, and Auto Servicing

State certification is becoming increasingly necessary for employment in auto mechanic shops. The Michigan Motor Vehicle Service and Repair Act went

into effect on April 1, 1975. The Act provides for the registration of motor vehicle repair facilities and for the training and certification of mechanics. As of January 1, 1978, the Act required that every registered repair facility employ at least one mechanic certified by the Department of State in the categories of major repair offered by the facility. Noncertified mechanics can still perform major service and repair functions as long as their work is inspected and approved by a mechanic who is certified in the pertinent specialty. However, the Act declares that on January 1, 1981, all motor vehicle mechanics will have to be certified by the State if they wish to engage in servicing and repair activities.

Certification is obtained by passing examinations designed to test ability to correctly diagnose and repair motor vehicles in specific repair categories. The state requires certification for eight specific automotive repair categories:

(1) Engine Tune-up
(2) Engine Repair
(3) Brakes and Braking Systems
(4) Front End and Steering Systems
(5) Manual Transmission and Front & Rear Axles
(6) Automatic Transmission
(7) Electrical Systems
(8) Heating and Air Conditioning

Auto mechanics have two options open to them regarding certification; they can apply for either a Specialty Mechanic's Certificate or a Master Mechanic's Certificate. Specialty Mechanics are certified in one or more specific repair categories and they can only perform the work associated with their areas of specialization. Master Mechanics are certified in all

of the specific repair categories so they can do all types of auto servicing and repair work. Individuals who are unable to obtain a Specialty or Master Mechanic Certificate will have a third alternative available to them starting in January, 1981. They may apply for a Mechanic Trainee Permit which will enable them to acquire employment at a motor vehicle repair facility provided that they work under the direct supervision of a Specialty or Master Mechanic. Mechanic Trainee status is good for a maximum of two years after which time the trainee must become certified.

PD-BCF-41.03 declares that "Vocational programs will provide licensure whenever possible"; and, "Where licensing or certification exists . . . those are the terminal standards." In keeping with this policy, program staff have made arrangements for qualified students to take the certification tests at the correctional facilities. However, many Auto Mechanics students are not getting to the point where they are ready for certification. Those who do take the tests almost always apply for Specialty Mechanic Certificates (especially in engine tune-up and brakes) rather than Master Mechanic Certificates.

Small Engine Repair

The Michigan Motor Vehicle Service and Repair Act includes motorcycles in its definition of "motor vehicles." Consequently, motorcycle mechanics are subject to the same rules and regulations, under the law, as auto mechanics except that there are no specialty mechanics certificates for motorcycle repair. In order to qualify for certification, motorcycle mechanics must be able to perform all phases of motorcycle repair, including engines and fuel systems, electrical systems, drive chains and chassis, and related practices and procedures.

The Motorcycle Technician course in the Small Engine Repair program at the SPSM Northside Unit is much too new to have been affected by the Act, but this law will be a relevant consideration as the course becomes fully operational. There are no other State certification requirements pertaining to the Department's Small Engine Repair programs.

Welding

As far as has been determined, State certification is not required to work as a welder in the State of Michigan unless the job entails welding on Michigan Department of Transportation (DOT) projects. DOT project welders must acquire annual certification from the DOT Testing and Research Division.

VOCATIONAL PROGRAM STAFF TRAINING

Vocational instructors claimed to have few opportunities to participate in staff training or other professional development activities. Other than the original workshop, there has not been any in-service training regarding proper use of the vocational CBI curricula. In addition, instructors who teach the same programs rarely get to communicate or collaborate with one another; there are few chances to attend trade-related conferences; and the instructors seldom get the opportunity or have the time to visit other vocational training sites or industry shops. (See Problem #16 in Section III.)

SECTION III: PROGRAM IMPLEMENTATION PROBLEMS AND RECOMMENDATIONS

As stated in the introduction, this section reviews the problems of vocational program implementation that were identified earlier. Problem impact is assessed, and strategies and recommendations for problem resolution are presented.

PROBLEM #1: Various problems often interfere with implementation of Reception and Guidance Center recommendations for resident involvement in specific vocational programs. Consequently, R&GC recommendations are seldom fulfilling their purpose as advance indicators of the specific target population for each vocational program.

In April, 1979, FPEU staff randomly reviewed 331 institutional files (approximately 30 files from each major Lower Peninsula facility). The 331 files contained 204 R&GC recommendations for resident involvement in vocational programming. In initial program classification at their first facility placements, only 50 of these residents were actually assigned to vocational programs (or placed on waiting lists). Forty-six of the 50 had vocational recommendations, but only 19 were assigned to one of the vocational programs specifically recommended by the R&GC.

During program classification and school program placement, the resident's specific vocational program recommendations are noted, but they are not considered to be binding because:

(1) The recommended vocational programs may not be offered at the receiving facility.

(2) The majority of residents have more than one R&GC recommendation and the sequence or priority of delivery is not specified.

(3) The resident may not meet the vocational program entry prerequisites, or he/she may not have sufficient time to complete the recommended programs.

(4) Receiving facility personnel assume that they have complied with the R&GC recommendations for trade training regardless of what particular vocational program is provided to the resident.

(5) The receiving facility may have waiting lists for the recommended vocational programs, whereas it has an opening in a different vocational program, in which case the staff may suggest to the resident that he try the program with the opening to "see how he likes it."

(6) The resident may change his mind and request a vocational program other than the ones recommended due to: (a) the availability of a program he was not informed about while at the R&GC, (b) a decision on his part that the recommended programs were not what he expected, or (c) the length of the waiting lists for the recommended programs is considered too great.

(7) The resident may decide to opt out of vocational programming entirely; to force the programs on him/her is not viewed as productive use of resources.

(8) Residents who were not recommended for vocational programs at the R&GC may express a strong interest in the vocational programs after they arrive at a receiving facility.

When specific R&GC recommendations are not followed, the receiving facilities must spend time and manpower duplicating much of the R&GC needs assessment process, and some residents may be placed in unsuitable programs. Also, lack of a specific target population for each vocational program makes it difficult for facility schools to determine the appropriate allocation of their program resources to meet the ongoing needs of the resident population.

If the Department decides to continue making specific vocational program recommendations at the R&GC's, and to authorize receiving facility staff to consider placing residents in vocational programs other than those specified, we recommend the following:

(1) The R&GC's should only recommend vocational program involvement based upon program need determined through vocational counseling. Program availability should only be a consideration to the extent that recommendations should not be made for programs that are not offered anywhere in the Corrections system.

(2) The receiving facilities should follow the specific R&GC vocational program recommendations unless the recommended programs are not offered or the residents refuse to enroll in those programs. Placing residents in vocational programs other than those specified should only be considered if the residents have sufficient aptitude, time, and interest to make successful use of the alternative training a distinct possibility.

(3) MDC administration should periodically review the R&GC vocational program recommendations of the resident population to determine whether current program availability is meeting the identified needs. The types of program offerings, the locations of the offerings, the program capacities, and the mean lengths of time required to complete the programs are all relevant availability considerations and are consistent with ACA Standard #4394.

(4) The Central Office Education Unit should periodically review vocational job markets to determine what trades have favorable outlook trends, and consider changes in program offerings based upon these findings. A canvass of residents and vocational staff should be considered as a means of determining whether proposed changes would be appropriate and accepted.

(5) The Central Office Education Unit should provide the R&GC's with current information about vocational program offerings, entry prerequisites, course content, career opportunities, and other relevant facts so that R&GC staff can make informed recommendations and answer resident questions about the programs. This information should be updated whenever program changes take place.

(6) The R&GC's and the receiving facilities should identify clients who need vocational counseling and provide such assistance to residents in determining realistic career choices, consistent with ACA Standard #4396, PD-BCF-41.03, and the attachments to Director's Office Memorandum 1976-1.

(7) R&GC recommendations for resident involvement in programs should appear in priority sequence on the Transcase Form when more than

one program is recommended. Documentation of program placement decisions should include the rationale for deviation from the priority sequence.

(8) When receiving facilities place residents in vocational programs other than those recommended by the R&GC's, the Classification Review Forms (CSO-175) should contain summaries of the rationale for the alternative placement, in accordance with PD-BCF-40.01.

(9) Appropriate CSO-175 distribution should be indicated on the forms and/or in Department policy, and it should be followed so that program classification decisions can be effectively communicated and monitored.

(10) R&GC and receiving facility personnel responsible for placing residents into vocational programs should be trained to interpret and use General Aptitude Test Battery (GATB) results. (In March, 1980, the MDC Director of Treatment submitted a request for this training to the Test Unit of the Michigan Employment Security Commission in Detroit.)

PROBLEM #2: Vocational instructors reported that many students entering the three vocational programs cannot read well enough to handle the required reading in the textbooks, CBI modules, and written tests. There are several possible causes of this problem:

(1) Average Grade Equivalency (A.G.E.) reading score prerequisites are not used consistently.

(2) Program staff continue to insist that A.G.E. scores which are used may be inaccurate. That is, the instrument used to obtain the scores, the method of administering the instrument, or the scoring of the instrument may be resulting in inaccurate scores. Past evidence has tended to refute this, but the concern remains. Consequently, some students may actually be reading at lower levels than their scores indicate.

(3) The current minimum reading level prerequisites may be set too low for the actual reading requirements of the vocational programs.

(4) The CBI materials and other resources may be written at a higher reading level than necessary for instruction to occur.

(5) Reading level scores may not be the best indicator of ability to read vocational program course materials because vocational terminology is rarely encountered in lower level reading courses.

The reading problem is important because of its effect on program efficiency in a system with limited resources:

(a) The time spent reading tests and materials to students and/or teaching individual students to read is an inefficient use of vocational instructor skills. Also, vocational teachers may not be adequately trained to teach reading effectively.

(b) Students who enter the vocational programs lacking essential reading skills must remain in the programs longer, in order to complete them, than students without severe reading deficiencies. Consequently, fewer students can participate in the programs

because fewer openings become available. This means fewer program graduates annually without a concomitant increase in graduate competence.

(c) The longer time required to complete vocational programs also increases the probability that the poor readers will either (1) be transferred before they can finish the program; or, (2) be kept in a more restrictive custody setting so that they can complete the program even though they may qualify for reduced custody.

(d) Some of the vocational trades are very technical, and all of the trades are continually revising old techniques and designing new processes. Students who cannot read service manuals and other resources may get through the programs with the teachers' help, and the State of Michigan does have oral certification exams to test auto mechanics who cannot read very well, but poor readers will still be at a disadvantage on the job.

We recommend that MDC educators study the cause(s) of the reading problem. Depending on what is discovered, one or more of the following corrective strategies should be implemented:

(1) Determine appropriate minimum grade level requirements for the vocational programs, and strictly adhere to them as standard prerequisites.

(2) Change the vocational program resources to allow for instruction of students functioning at lower reading levels.

(3) Have potential students demonstrate their ability to read the vocational program materials prior to program placement.

(4) Offer a pre-vocational trade orientation course taught by academic or vocational teachers at all facilities, and require that potential students pass the course prior to vocational program placement. Include an introduction to common vocational terminology in the pre-vocational course.

PROBLEM #3: Teacher aide availability is not uniform across facilities or programs. In fact, some vocational instructors have no aides. This is unfortunate because instructors can devote more time to teaching when routine classroom tasks are performed by aides. Teacher aides can also be a real asset in programs using individualized instruction because the aides can work with students who would otherwise have to spend time waiting for the instructor to finish helping others.

We recommend that MDC educators review current vocational teacher aide availability and use. Standards for teacher aide allocation in PD-BCF-41.03 should be followed, and appropriate classroom roles for teacher aides should be defined and documented.

PROBLEM #4: Students often do not have any opportunity to continue unfinished vocational programs after inter-facility transfer simply because their new receiving facilities do not offer the programs. This obviously depresses the completion rate.

The most sure-fire way to eliminate this problem would be to offer all vocational programs in a standardized fashion at all facility locations. This option is clearly unreasonable. However, we do recommend that MDC administrators take a close look at current vocational program locations to assess the need for and feasibility of some program relocation or expansion

to improve re-enrollment prospects. Development of linkages with more post-release, community vocational programs (like the STOP program) should also be considered.

A second strategy for eliminating the above problem would be to restrict program entry to those residents whose custody reduction eligibility dates make it highly likely that they can finish the programs prior to transfer. PD-BCF-41.03 states that, "Vocational placement should be made only for students with time to complete the trade training program. However, it goes on to say that, "Exceptions can be made when the likelihood of program continuity at the next custody level may be reasonably assured." This action requires a working knowledge of vocational program locations and the time frames necessary for vocational program completion. MDC educators should provide program location and completion time frame information to staff responsible for program assignment.

Delay of resident transfer until vocational program completion is the Department's latest strategy for minimizing the above problem. PD-DWA-30.02 declares that, "Transfer will be delayed for program completion if the program is not available at the transfer destination and...there has been considerable investment of resources and completion of the program is imminent." The policy also lists vocational programming as one of the program types for which, "Transfers of residents involved...should be made only as a last resort."

We recommend that present practice surrounding the above policy statements be monitored closely to determine whether they are having the desired effect. It should be pointed out, though, that the two policies tend to conflict in this area because strict adherence to the statements in

PD-BCF-41.03 would nearly eliminate the need for the statements in PD-DWA-30.02.

PROBLEM #5: There are almost as many versions of each vocational program as there are facilities that offer each program. Major program variations (identified in Section II) interfere with:

(1) Student program continuation after inter-facility transfer.

(2) Communication of detailed program progress and skill acquisition information among MDC staff, and to community agencies and prospective employers.

(3) Monitoring of program delivery by the Central Office Education Unit.

(4) Equitable resource allocation.

(5) Cooperation and collaboration between facility schools offering the same programs.

Difficulty in achieving compatibility of instruction seems to be aggravated by school staff perceptions of the Central Office interpretation of "compatibility." Some school staff reacted very negatively to what they see as a Central Office intent to equate "compatibility" with "absolute uniformity." Assessment visits by the former Vocational Coordinator were viewed as attempts to force conformance (for the convenience of the Central Office) rather than to improve service delivery.

These presumably mistaken impressions are probably the natural result of the Department's attempts to move to a more integrated educational system with measurable learning objectives. As program specificity increases, disagree-

ment about what should be taught also increases. Unfortunately, this has tended to prevent the Department's educational effort from falling together as a system. Individual facility schools are sometimes so overly protective of their individuality and flexibility that they even insist on giving different names to the same vocational programs, a practice which serves to add to the degree of confusion which already exists.

We recommend that MDC educators recognize the importance of functioning as a holistic system which is ultimately interested in the same objectives. In-service training should be provided to decrease staff resistance by communicating exactly what is meant by compatibility of instruction, the reason such instruction is needed, and to devise strategies for its achievement. MDC educators should (1) document the fundamental criteria which must be met by each vocational program, and (2) develop written guidelines which outline the areas of program delivery that are open to individual adaptation.

PROBLEM #6: Some vocational CBI modules were apparently never written; others are felt to be so poorly written that instructors simply do not use them; all but one of the instructors indicated that the modules need to be revised and updated; and there has been an almost complete disintegration of the curriculum distribution process.

Assuming that the Department intends to continue using its vocational CBI curricula, we recommend that the curricula be revised to eliminate all weaknesses identified by the instructors and administrators. Complete sets of the vocational CBI packages should be maintained by the Vocational Coordinator, and provisions should be made for adequate duplication and distribution.

PROBLEM #7: There is a lack of consensus regarding the proper role of the CBI packages in the classroom. As a result, some instructors feel the modules are too superficial and incomplete, while other instructors feel the modules are already too detailed.

We recommend that the Central Office Education Unit develop and distribute written guidelines for appropriate CBI use. We further recommend that the CBI modules be revised wherever necessary so that they contain enough detail to tell the student how to do the module tasks. This will meet the needs of the instructors who want more module specificity. Instructors who prefer to use the modules as program outlines (or even merely as recordkeeping devices) can do so by simply ignoring the module narrative, if this is judged to be in keeping with the Central Office Education Unit's policy on the use of CBI.

PROBLEM #8: Written documentation of program development procedures and responsibilities is virtually nonexistant; lack of time to devote to program revision is a common complaint among all staff responsible for it; the Vocational Steering Committee is inactive; and the Citizen Trade Advisory Councils are disbanded and inactive.

Consequently, little organized vocational program development has taken place in the last couple of years, although most vocational instructors have unofficially made occasional, internal curricular changes. We recommend the following:

(1) MDC educators should develop and distribute an educational handbook containing written procedures and guidelines for vocational program development. All other policies, procedures, and guidelines per-

taining to MDC education should also be included in the handbook. The program development material should explain who is responsible for initiating CBI modifications under what circumstances, and it should trace the steps to be taken during the revision process.

(2) MDC administration should conduct a comparative analysis of staff roles in the MDC educational system and a similar-sized public school system. The analysis should explore whether the current MDC staffing pattern is adequate to meet program development and administration needs; it should lead to changes in the educational staffing pattern which are commensurate with the findings.

(3) The Vocational Steering Committee should be reactivated, and written procedures should be developed to define its role and guide its activities.

(4) Citizen Trade Advisory Councils should be re-established in accordance with PD-BCF-41.03 and ACA Standard #4399. Guidelines should be developed for Advisory Council membership, duration of service, and meeting frequency.

(5) Our review of PD-BCF-41.03 seems to indicate a contradiction or inconsistency with respect to the authority invested in the Superintendent of Education. We recommend that the policy be reviewed to determine whether this is in fact true. If so, the policy should be revised to reflect needed changes.

PROBLEM #9: MDC educators have major differences of opinion on several important issues related to vocational program delivery. For instance, all

of the vocational instructors place different degrees of emphasis on production standards in the classroom (i.e., expected speed with which tasks are completed). Some believe it is crucial to job readiness; others do not. In another example, the auto mechanics instructors and the Vocational Coordinator disagree about the need for students to have an opportunity to perform actual work on operable cars in the class shops. Lack of communication between vocational program staff has prevented meaningful dialogue around these issues.

The Vocational Coordinator should have the authority to make the decisions on important issues related to program delivery, but in keeping with good management practices, open discussions with vocational teachers should occur prior to making those decisions, and written rationale for those decisions should be disseminated. This should lead to mutual understanding and greater teacher acceptance.

PROBLEM #10: A standard definition of completion for each vocational program has not been established. The completion rate problem cannot be adequately addressed until this is done.

We recommend that MDC educators review the vocational program curricula and establish standard, minimum, completion criteria for each vocational program in accordance with the principles of job readiness. After the basic training parameters have been defined, advanced courses should only be offered if the student desires to continue and there are sufficient resources to accommodate him/her. Each facility school should collect and maintain cumulative statistical information about its vocational program completion rates and reasons for noncompletion.

PROBLEM #11: Numerous resource availability problems were identified in Section II, but each was only mentioned by one or two instructors. The problems may or may not be limited to the facilities where they were noted.

We recommend that facility school principals take a more active role in ensuring that their instructors obtain needed resources in a timely fashion.

PROBLEM #12: No information is regularly communicated throughout the Michigan Corrections system regarding vocational program content, structure, and entry prerequisites. Consequently:

(1) Reception and Guidance Center personnel are less able to make informed recommendations and answer residents' questions about the programs.

(2) MDC institutional and field services staff are not fully aware of what specific skills residents obtain by completing the vocational

(3) Community agencies and prospective employers are not accurately informed about the quality and content of the MDC vocational programs.

We recommend that MDC educators develop and distribute a comprehensive, general information package to pertinent staff which describes the particulars of the Department's vocational program offerings.

PROBLEM #13: A long series of problems have prevented the computerized Program and Assignment Reporting (PAR) system from becoming fully operative.

Facility schools do not have direct access to the system yet, and the PAR reports that are available have been severely criticized by MDC educators because of prolific information gaps and errors.

Facility school staff have become extremely critical of the volume of paperwork required to manually update PAR, and the total lack of feedback they receive in return. Nonetheless, most program staff see potential for a system like PAR. They hope that it will eventually:

(1) Provide current program involvement information on each resident.

(2) Enable immediate access to comprehensive data regarding each student's past program activity and performance.

(3) Facilitate the identification of residents whose program assignments should not be interrupted (except as a last resort) for purposes of inter-facility transfer.

(4) Facilitate immediate re-enrollment of residents after inter-facility transfer.

(5) Eliminate (or at least reduce) the amount of manual reporting the schools must now perform to satisfy various Central Office requests.

(6) Assist Field Services staff in job placement efforts for program graduates.

We recommend continued development and implementation of the PAR system as quickly as feasible. Given the long, unanticipated delay which has

occurred, and the sentiments of program staff at this time, we recommend that Management Services give a status report and enlist the continued cooperation of those staff implementing the system. We also recommend the following actions to improve PAR quality:

(1) MDC educators should continue their efforts to complete all PAR forms correctly and accurately.

(2) The structure of the PAR system should be designed to permit tracking of all CBI module completions within the vocational programs.

(3) Vocational program and course labels should be standardized across facilities, and the PAR system should be revised to incorporate the changes resulting from the standardization.

PROBLEM #14: Until the PAR system becomes fully operative, the responsibility for communication of program involvement information will rest with the Department's manual records system. The manual system is not meeting this challenge:

(1) Institutional and counselor files regularly follow residents on inter-facility transfers, but these files contain very little detailed information about resident program participation and achievement.

(2) Facility school files contain more participation and achievement information, but the information is not sent with transferring residents, file content is not standardized, and details about resident progress through the curricula are not typically included.

(3) Classroom files typically contain the most thorough student progress information, but the information is not sent with transferring residents, and these files are sometimes thrown away after student program termination at a given facility.

(4) Parole Eligibility Reports seldom contain details about the length of training, skills acquired, and certificates acquired by vocational program participants, although PD-DWA-45.11 requires this information.

(5) The PAR forms are not detailed enough to stand alone as the source of program involvement information.

The end result of the above is that when a resident transfers, details about his program activity remain behind and sometimes become irretrievable. Furthermore, if the resident participates in vocational programs at more than one facility, then the documentation of his program activity is scattered across those placements.

Program staff have been reluctant to consider efforts to improve the manual records system. They have been completing PAR forms for a long time with the expectation that PAR makes manual retention and communication of information unnecessary.

Nevertheless, in recognition of the crucial need for cumulative program involvement information, the MDC Superintendent of Education is currently

developing a procedure for manual transfer of student information between facilities during inter-facility resident transfers.

We recommend that MDC educators support and follow this procedure when it is instituted. A computerized information system like PAR is needed to meet the growing demands of management, budgeting, accountability, and research, but an adequate manual substitute should be available in the interim. We also recommend: (1) standardization of facility school file content, (2) retention of all classroom file information after resident program termination, and (3) compliance with PD-DWA-45.11 requirements for Parole Eligibility Report content.

PROBLEM #15: Certificates of achievement for the vocational programs are not standardized according to format or the information they convey. In addition, most of the certificates are not officially recognized by any organization or agency outside the MDC. This hinders the Department's ability to convey student accomplishment and competence to employers in a credible fashion.

We recommend that MDC educators establish standardized achievement certificates and seek official trade recognition or sponsorship for those certificates.

PROBLEM #16: Vocational instructors claimed to have few opportunities to participate in staff training or other professional development activities. This situation hampers the instructors' efforts to keep up on innovations in the trades, and it decreases their effectiveness and morale.

We recommend development of a written plan which sets standards for vocational instructor in-service training, conference attendance, inter-facility collaboration, and contact with trade-related business and industry. Program staff should be assured of regular opportunities to update and upgrade their occupational skills and teaching methods.

CONCLUSION

This report is a descriptive implementation analysis of the MDC Automotive Mechanics, Small Engine Repair, and Welding programs. It was prepared with the expectation that it will serve three important functions:

(1) It provides a written description of the three vocational training programs. Dissemination of this general information will increase MDC staff awareness, knowledge, and understanding of the programs.

(2) It provides written documentation of the present status of implementation of the three vocational programs. This will help MDC educators identify areas in which actual program delivery has deviated from intended program design to an unacceptable degree. This will also help FPEU staff to evaluate the programs as they actually exist, rather than as they were originally planned.

(3) It provides a written review and analysis of the major problem areas facing the three vocational programs. This will serve as a vehicle for promoting discussion and needed actions aimed at resolving those problem areas.

The recommendations presented in this report are based upon the perspectives of the FPEU given its study of the entire MDC service delivery system. As always, alternative measures may exist which are seen as more appropriate from the perspective of other Department personnel. Yet all agree on the desirability of improving program implementation in order to increase the prospects for successful program outcomes.

Consequently, our last recommendation is for the Department to establish a mechanism for reviewing and acting on the findings and recommendations contained herein. The mechanism should include a means of follow-up to ascertain what actions have been taken, and to assess the degree to which remediation of the problems has occurred. This mechanism should encourage collaboration between all affected parties to respond to the issues in an open forum that cuts across the various lines of responsibility represented in the service delivery system. In this way, the technical feasibility of competing alternatives, and the organizational capacity to implement them, will be given due consideration. Program goal attainment will surely benefit from such an effort.