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ABSTRACT

A 1-year study was conducted to implement a computerized data system for the comprehensive evaluation of Individualized Manpower Training System (IMTS) Learning Resource Centers (LRCs). Data for the system were collected by the administration of student, staff, and center summary forms especially designed for the purpose by the University of West Florida. Original plans were to collect data at eight IMTS and three control sites. Data from five IMTS and two control sites entered the system. All completed forms were sent to the Florida Vocational Technical Adult Education (VTAE) Computer Service Center at St. Petersburg where the data was keypunched and machine-stored. A copy of the punch card deck was sent to Baltimore, Maryland, where the analysis programs for the system were designed, written, and executed. In general it was found that the installation of the IMTS procedures at the five LRCs were sufficiently uniform to permit meaningful comparison among the sites. If it is taken into account that this first run of the data system must be viewed as much an evaluation of the system itself as it was aimed at evaluating the IMTS programs, then the overall outcome of the experience can be rated as highly positive. (The report contains chapters on description of the IMTS system, aspects of evaluation system design and implementation, data collection procedures, results of implementation, and summary, conclusions, and recommendations. Approximately half of the contents are appendixes of related materials, e.g., list of IMTS training packages, data collection forms, software for the analysis of the computerized data system, and raw data of IMTS site summary file.) (Author/JT)

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FINAL REPORT

A Comprehensive System for the Evaluation of Individualized Manpower Training Sites

(Project Number: 498AH50021)

Conducted by
Technical Education Research Centers
Donna M. Seay, Project Director

418 South Perry Street
Montgomery, Alabama 36104

Submitted
September, 1976

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Due to its scope, this research project required cooperation and assistance from many people who were both interested and willing to contribute their time and talent. I am especially grateful to these people because, without such help, the project's size and limited funds available would not have allowed us to even attempt all that was required in order to achieve the objectives of this project.

The help of IMTS (Individualized Manpower Training System) experimental and the control site staff members was invaluable – as was that of their coordinators, who recorded the data pertaining to their facilities, staffs, and students.

At the IMTS experimental sites, persons responsible for this task were: Elizabeth Healy, Lively Vocational Technical Center; Dale Drew, Lake City Community College; Marilyn Mitchell, Seminole Community College; Dennis J. Catagirone, Hernando County Adult and Community Education Center; and, Lynn A. Ward, St. Augustine Adult Vocational Technical Center.

At the control sites those who recorded data included: Judy Hertz, Sarasota County Area Vocational Technical Center; and, Martha Sue Blythe, Taylor County Area Vocational Technical Center.

Joe D. Mills, C.M. Lawrence, and James A. Barge of the Florida Division of Vocational, Technical, and Adult Education were very supportive and provided helpful advice regarding planning and implementation. Others on the state staff, including Francis Watson and Ray Parker at the Florida Vocational Technical Adult Education (VTAE) Computer Service Center, contributed the essential key punch services necessary for the computer analyses of data.

My appreciation also goes to members of the University of West Florida faculty – Dr. Hobdy Perkins, Dr. Carl W. Proehl, Dr. Dan Wallace, Nash R. Hightower, Jack Bragg, and John Phillips – who designed the computer forms and procedures used to collect information stored on the state computer. This was the information that was analyzed from the IMTS sites involved.

Last, but certainly not least, my thanks go to the United States Office of Education, and Jack A. Wilson, USOE Project Officer, for providing the opportunity to pursue the goals of this project.

Donna M. Seay
Project Director

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SUMMARY

This report describes the results of the use of a computerized data system for the comprehensive evaluation of Individualized Manpower Training System (IMTS) Learning Resource Centers.

The data for this system were collected by the administration of student, staff, and center summary forms, especially designed for the purpose by the University of West Florida.

Originally, it had been planned that data would be collected at eight IMTS and three non-IMTS, or control, sites. Due to a number of administrative and technical difficulties, data from only five IMTS and two control sites entered the system. However, even from these seven locations not all the data which had been planned for was actually obtained.

All completed forms were sent to the Florida Vocational Technical Adult Education (VTAE) Computer Service Center at St. Petersburg, where the data was keypunched and machine-stored. A copy of the punch card deck was sent to Baltimore, Maryland, where the analysis programs for the system were designed, written, and executed.

In general, it was found that the installation of the IMTS procedures at the five LRCs were sufficiently uniform to permit a meaningful comparison among the sites. If it is taken into account that this first run of the data system must be viewed as much an evaluation of this system itself as it was aimed at evaluating the IMTS programs, then the over-all outcome of the experience can be rated as highly positive. The following synopsis summarizes the major results of the data collection, compilation, and analysis procedures:

1. There was a high degree of cooperative compliance with the data collection requirements at both the IMTS and control sites.

2. Due to the unfamiliarity with a new system, and because this first run was a necessary learning experience for the students and staff, there was a substantial data attrition rate.

3. Based on the analysis of the socio-demographic data in the personal enrollment segment of the student records, it was found that the compositions of the student bodies at all sites were highly similar.

4. On the basis of an analysis of the pre-posttest gainscore data for the Tests of Adult Basic Education (TABE) test in reading, language, and arithmetic, an estimated average grade equivalent gain of nearly 1.5 was obtained by the students at the IMTS sites in less than three months. This compares most favorably with an estimated .5 grade equivalent at the control sites over a period of more than four months.

5. The rate of utilization of the learning modules, mainstay of the IMTS procedures, was found to be excellent, with an over-all efficiency quotient of better than 90 percent.

6. Primarily because of the need for tightening up the data collection and transmission procedures, the results on such augmentation components as complementary skills, employability skills, work station experience, and goal setting were somewhat ambiguous. In many cases, no assessment was possible. However, where data and information were made available, the effects were seen to be positive and constructive toward a goal of increased student achievement levels.

7. Data on the staffing patterns in IMTS sites, staff use of time, staff/learner ratios, and use of available facilities showed a highly efficient and productive operation to be carried out in all sites where such data were available.

Albeit with some reservations because of the observed data loss due to the newness of the computerized data system, the following tentative conclusions emerge from the findings outlined previously:

1. The computerized data system is indeed a viable instrument for the comprehensive and ongoing evaluation of the IMTS programs. It can and does fulfill the goals and objectives for which it was designed.

2. The IMTS approach to individualized instruction proves to be a highly efficient, adaptive, and productive strategy to fill the needs of individual students who have unique learning problems. In a majority of cases, dramatic improvements in the level of student achievement and performance are demonstrated.

3. The IMTS procedures permit a high degree of consistency and uniformity in installation, as is demonstrated by a good congruence of results in widely divergent geographic areas.

CHAPTER I
INTRODUCTION

"The only difference between stumbling blocks and stepping stones lies in the way you use them."

Henry Clay

This report covers the results of the one-year project, "A Comprehensive System for the Evaluation of Individualized Manpower Training Sites," funded by the Division of Vocational, Technical and Adult Education, Office of Education, Department of Health, Education, and Welfare, from July 1, 1975 until June 31, 1976. Donna M. Seay, Southeast Director of Technical Education Research Centers, conducted the project with the assistance of: the University of West Florida; the Florida VTAE Computer Service Center; the Division of Vocational, Technical, and Adult Education, Florida Department of Education; and, two non-Individualized Manpower Training System (IMTS) sites plus five IMTS sites located in vocational technical schools and community colleges in both rural and urban areas of Florida.

In order to understand the significance of this project, a brief description of the IMTS is included as a part of the introduction to this report.

IMTS is a facilitating vehicle for the systematic delivery of Developmental, Vocational, and Technical Education. The IMTS operational component programs for Developmental Education, which are presently available, are adult and occupationally oriented. These components include programs for occupational explorations, the basic academic training (reading, language, and arithmetic), complementary skills (personal-social skills, health, consumer economics, etc.), prevocational training, and employability behavior shaping. The IMTS occupational training programs for Vocational and Technical education are not operational except in a few areas where instructional materials are available for related studies. Additional developmental work and field testing are needed before the occupational training component reaches the same operational stage as the Developmental Education components.

The Developmental Education component programs in the IMTS represent the major outcome of a project entitled "A Model Program To Instruct Manpower Training Personnel in the Selection and Application of Remedial Instruction Materials To Meet Individual Training Needs." This two phase project was funded by the Manpower Administration, Department of Labor, under the provisions of Title I of the Manpower Development and Training Act, Public Law 87-415, as amended. The project was directed

by Donna M. Seay, Southeast Director of Technical Education Research Centers (TERC).

Phase I (January, 1971 – June, 1972) included the development of the following IMTS materials: establishing and operating guides; budget and specifications for programs in complementary skills, reading, employability behaviors; and, an occupational cluster, "Internal Combustion Reciprocating Engine." Also included was a revision of the original IPI* prescribing catalog for individualized delivery of language and arithmetic.

During Phase II (July, 1972 – June, 1974), the project staff revised and expanded all the prescribing instruments and procedures; developed the Formative Assessment and Management (FAM) procedures and instruments; and, expanded the individualized system to include occupational exploratory, prevocational, and occupationally related programs. (See Appendix A for the list of training packages developed in Phase I and II.)

The Developmental Education components of the IMTS offer "one shot," or short term, intermittent, and/or concurrent administration of services to trainees who lack the appropriate knowledge and skills for employment. In order to prepare themselves for entry into an occupational training course or job, the trainees complete interest inventories and receive career information, exposure to hands-on occupational exploratory work samples and personal vocational guidance in establishing an occupational goal. This service is supported by a program called "Achieving Individualized Motivational System" (AIMS). A small group process, the AIMS program provides guidance and opportunities designed to improve student and staff self-concepts by helping them to recognize their values and motivating factors in setting short and long range goals. A positive motivating approach is used throughout the program.

Other IMTS exploratory activities include assessment of an individual's strengths and weaknesses that would facilitate or prevent the achievement of his goals. This is accomplished through standardized achievement and criterion-referenced tests, observations of performance in various subject-matter areas, and work sample evaluations.

Once a trainee's needs are assessed through this IMTS diagnostic process, the teachers (called learning managers in the system) prescribe the necessary instructional materials and experiences that will help the trainee to overcome his deficiencies and build upon his strengths. The IMTS learning managers are then responsible for managing the prescribed learning activities, in a previously established priority sequence. The learning managers are also responsible for providing an environment conducive to learning and for determining the motivating forces that will help the student perform to the maximum of his ability.

Daily, weekly, and monthly analyses of individual progress play an important role in evaluating the effectiveness and efficiency of the IMTS. At the same time, this formative

*Individually Prescribed Instruction (IPI), title of the arithmetic and language prescribing catalog, was developed by the Rehabilitation Research Foundation in 1968.

assessment is important in motivating the staff as well as the trainees. The results of the formative assessment also provide the feedback necessary for management decisions to improve the effectiveness of the System.

The term *Formative Assessment and Management* (FAM) was derived from these evaluation and management procedures – which are automatically operational when the System is used as designed.

A major goal of the project was an analytical assessment of the FAM procedures. Trainees were expected to produce grade gains in reading, language, and arithmetic performance as measured by the Tests of Adult Basic Education (TABE), one of the System's diagnostic instruments. This grade gain is computed according to the hours and minutes of study, test and tutoring time required. Although a high level of IMTS effectiveness was demonstrated by this initial attempt in assessment, it was recognized that the long range achievements attributable to the IMTS would require a considerable amount of further study.

Because more detailed assessments of the System, its staff, and student performance are being required by the State Departments of Vocational, Technical, and Adult Education, and by the manpower planners under the Comprehensive Employment and Training Act (CETA), and other secondary, and postsecondary education programs, it was imperative to conduct the project, "A Comprehensive System for the Evaluation of Individualized Manpower Training Sites." Because the IMTS basic procedures, instruments, and instructional materials used in Developmental Education are now consistent, this project was possible. Therefore, resulting data offer a basis for comparative analysis in the evaluation of the IMTS sites, provided uniform implementation is an apparent factor at all the sites.

The extent and scope of this project were limited because sufficient funds were not available to study and compare all elements that indicate effectiveness. For example, one very important element, cost effectiveness, was not evaluated because money and time were too limited. However, outcomes in terms of grade gains by time and processes were compared between five IMTS sites, and between the five IMTS sites and two non-IMTS sites. Data used for the comparison were collected by the University of West Florida (UWF) in a project funded by the Florida Division of Vocational, Technical, and Adult Education in 1974 through 1976. (See Appendix B for the original proposal for the UWF project, the "Development of a Computerized Information System for School Programs Using Individualized Manpower Training System Concepts.") The data collected were then stored in the state computer system for the Division of Vocational, Technical, and Adult Education located in St. Petersburg, Florida.

Because of various unforseen circumstances, it was impossible for the UWF to collect the required data or to provide the type of assistance needed by the sites to complete

the data collection forms appropriately. The fact that the State Department does not have the final authority over local school systems limited the UWF's ability to collect data not willingly provided by the cooperating sites.

Included in the body of this report are: the original problems; goals and objectives; design and procedures; results and accomplishments; evaluation analysis of the data; conclusions; and, recommendations. Supporting informational tables, can be found in the appendices.

CHAPTER II
ASPECTS OF DESIGN AND IMPLEMENTATION

"Oh Dear, this is not said quite right," sighed Alice, "I am afraid some of the words have got altered."

Lewis Carroll, Alice in Wonderland

1. Problems and Needs

In April of 1974, the Manpower Administration of the U.S. Department of Labor issued a *Program Assessment Guide* that contains excellent guidelines for the construction of a data and information collection system aimed at satisfying Federal reporting requirements, and also provides invaluable assistance in the organization of a plan to measure program performance, impact, and cost effectiveness. However, the *Guide* is strategic in nature. It does not present operational components, nor systems analyses, nor a ready-made package of software which, when implemented, would generate the necessary collection, compilation, and analysis of the suggested data and evaluate information. The problems and needs addressed by the project reside at this operational level.

In particular, with respect to the IMTS programs, the following questions urgently require specific answers:

1. To what extent can the IMTS procedures for each component be installed in a sufficiently uniform manner to insure comparability among IMTS sites?

2. What installation features are most essential at an IMTS site to optimize the effectiveness of operation?

3. What are the specific benefits of the IMTS to its clients as compared to other educational programs?

4. What is the cost effectiveness of the IMTS as compared to other educational programs?

Of even greater importance, however, are the questions regarding precisely what data elements should be collected and in what manner, and how it should be analyzed so that answers to the previous questions can be formulated in a meaningful way. What is needed, is the design and installation of a comprehensive evaluation system in operational form. A system that, once implemented, would generate not only the necessary

management information for Federal reporting purposes, but at the same time provide the state and local administrators with feedback data basic to a formative and summative evaluation of program effectiveness.

2. **Design Elements of the Evaluation System.**

As originally conceived, the design of the computerized data system proceeded according to the following specifying objectives:*

1. Compile and analyze IMTS data and information (to be collected by the University of West Florida) on which to base management decisions leading to uniform, precise, and effective implementation of the IMTS procedures at six IMTS sites.

2. Collect non-IMTS data and compile and analyze the necessary data and information at IMTS sites and non-IMTS sites to define relevant, distinguishing factors.

3. Collect, compile, and analyze the necessary data and information leading to a comparative evaluation of student achievement at each IMTS site, among the various sites, and among IMTS and non-IMTS sites.

4. Recommend permanent data collection procedures to serve as inputs to a computerized information system currently being constructed by the University of West Florida.

5. Document all results in a final report.

In order to achieve these objectives in a straightforward manner, the storage elements of the system were organized to contain three basic record types: (a) a Student Record (SR), (b) a Teacher Record (TR), and (c) Learning Resource Center (LRC) summary file. In the tabulation that follows, the contents of these records are shown indexed according to the types of variables measured by the data:

Input Variables:

LRC Installation Characteristics (LRC)

- Types of curriculum components installed, such as OEP, language, reading, and arithmetic programs;
- Number of staff (by type) operating the IMTS or control sites;
- LRC floor plan, by code;
- Number (by type) of learning stations;
- Materials and equipment inventory based on the specifications of each

*Quoted from Proposal No. 498AH50021, Amendments, p. 4.

component program;
- o Establishing and staff pre-service training costs.

Student Characteristics and Entry Level Behaviors (SR)
- o Age, sex, and race;
- o Highest grade level attained;
- o Language spoken;
- o Vocational program enrollment, if any;
- o TABE pretest score;
- o GED passed.

Process Variables:

Learning Resource Center (LRC)Operating Characteristics and Cost Factors
- o Number of students served;
- o Number of hours LRC open for students;
- o Number (by type) of modules utilized.

Staff Performance Measures
- o Number of hours staff perform LRC tasks;
- o Percent of time spent in student counseling.

Student In-school Behaviors and Program Measures
- o Number (by type) of modules completed;
- o Efficiency Quotient;
- o Hours of counseling sessions.

Product Variables:

LRC Output Variables
- o Number of students completing training;
- o Number of job placements.

Staff Output Variables
- o Staff/student ratio.

Student Terminal Behaviors and Follow-up (SR)
- o Number of prescribed modules completed;
- o Postscore on TABE.

The actual creation of the data files was planned to result from the following implementation procedures. At each site, students, teachers, and LRC managers would fill

out specially created data collection forms, which would be sent to the University of West Florida on a monthly basis. At UWF, keypunching and verification would take place, permitting the cumulative development of a complete data storage file. The within-and between-site evaluation analysis was then scheduled to take place according to the following strategic steps:

LRC Level Evaluation:

- Determine differential gainscore levels between full and partial IMTS program participants;
- Rank the means of gainscores computed over students according to their academic areas;
- For each module, compute its average time of student use, to assess learning rates;
- Compute the mean time devoted by the trainees to each of the IMTS components;
- For each module, compute its efficiency quotient by averaging the efficiency quotients for the students, defined by TP/TT x 100%, where TP is the number of tests passed and TT is the number of tests taken by the student;
- Compute the average gainscores per module in the complementary skills program;
- Compute the frequency of prescription, by trainee and by learning manager, of the complementary skills modules;
- Perform an inter-LRC comparison on all of the previous indices computed for each LRC.

Staff Level Evaluation:

- Compute the correlations between the student mean gainscore on each task and the two staff performance indices (time and counseling) on those tasks;
- Compute the cross-tabulation of staff positions by task assignment and student achievement level;

- Differentiate and compare student achievement levels as resulting from task performance specified by TERC and task performance which deviates from these specifications;

- Compute the inter-LRC comparisons on each of the previous indices;

- Compute the optimum manager-trainee ratio in an IMTS by construction of a bivariate scattergram, ratio versus achievement;

- Enumerate all those tasks, at each site, which are performed according to the established criteria for performance, and determine the size and contents of the intersections among the listings.

Student Level Evaluation:

- Compute pre-posttest gainscores in reading, language, and math for each student, per prescription and compile over duration of training;

- For each gainscore computed, determine the amount of associated time spent by the student in terms of attendance hours and hours in the relevant subject area;

- For each student and module, compute the efficiency quotient given by TP/TT x 100%, where TP is the number of tests passed and TT is the number of tests taken by the student on the module;

- Compute the average perception of usefulness associated with each complementary skills component among the trainees who completed the component;

- Construct the curve that plots Employability Behaviors against performance and determine if the curve has an optimum. Plotting over time, determine how long it takes to reach that optimum and how long it persists;

- Compute the cross-tabulation of trainees participating in work sampling versus those who select an occupational training and check for contingency;

- Cross-tabulate the frequency of change in selection of occupational choice with participation in work sampling, and check for contingency;

- Compute gainscores in language and reading for those trainees who speak foreign languages and participate in exploratory experiences versus those who speak foreign languages and do not participate in exploratory experiences;

- Compare mean task performance gainscores of participants in the AIMS program with those of students who do not participate in the AIMS program;

- Perform a cluster analysis of the gainscores with grade level entry as the seed variable;

- Compile each of the previous student level indices for each LRC and perform an inter-site discriminate analysis.

3. Requisites for Implementation

The analysis procedures of the previous section on design are all straightforward and elementary computations. However, in order to carry out these computations on a single data file, certain elements of informational contents and storage format form absolute requisites which must be satisfied. These are:

- Keypunching of the data for the various records must be 100 percent accurate, since any file editing procedures can at best locate missing data but not correct faulty information. Because of the very large number of data points in each record relative to the total number of records for any one LRC, imputation of even a small rate of missing data is precluded, and results in questionable accuracy of LRC compiled indices;

- For any set of linked data elements, the linkage must be uniquely positional and consistent within the set. For instance, in order to properly associate gainscores with the number of intervening tests, modules, attendance hours, subject hours, etc., each student record requires the presence of specific segments where this linked information is stored by appropriate format specification;

- Since individual student records are of variable size, with an enormous potential length, these records must be capable of blocking or segmentation, with clear and unique identifyers for processing purposes.

4. **Sources of Error**

It is obvious that failure to comply with the requisites listed here constitutes a major source of error, usually fatal to the completion of the computational routine involved. There are, however, some additonal sources of error, which are listed as follows:

- o If a module code transcription contains an incorrect alpha-numeric entry, it cannot be detected as "missing data" but is considered as a valid, different module. This would create data on a number of nonexisting modules and at the same time give incorrect totals on the remaining actual modules.

- o For the purpose of computing gainscores, it is necessary that the type, level, and form of the pre- and posttest are the same, and data on both be present in the student record. Missing or incorrectly coded test designations lead at once to spurious gainscores.

- o Because the social security number was used as student identifyer for each record, and for each segment of a blocked student record, any error in that nine digit code would cause a failure in the proper linking of blocked student data, with the consequent failure to compute accurately any compiled indices on students, modules, and LRCs.

As actually implemented, the computerized data system was created and operated on from many widely dispersed geographic areas – the actual data forms being completed by students and staff in the various LRCs; the data punched, machine-read, and stored at St. Petersburg, and the analyses designed and performed at the University of Maryland. That such a decentralization of enterprise should lead to some failures to meet completely the requisites for implementation and permit an activation of the error sources is perhaps inevitable. Just how detrimental this was to the accuracy, reliability and completeness of the available data and information, and the extent the strategy for analysis was affected as a result will become clear in the remaining sections of this report. It must be pointed out, however, that this was a first run of a heretofore untried system and therefore constitutes a pilot study. That any useful results can be reported at all is a testimony to the spirit of determination and cooperation of the many people who worked hard and long on the project.

CHAPTER III
DATA COLLECTION PROCEDURES

"He prepares to go mad with fixed rule and method, and a joy which only the madmen know."

John Dryden

1. Criteria for Participation Developed

Before possible control sites (non-IMTS sites) were recommended, Donna M. Seay, TERC Project Director – with the assistance of Dr. Lawrence H. Perkins, Chairman, Division of Vocational Education, University of West Florida, and C.M. Lawrence, Assistant Director, Florida's Division of Vocational, Technical, and Adult Education – developed the following criteria for participation in the project as control sites:

- o Job preparatory programs included in curriculum;
- o Remedial and/or related subjects available to trainees;
- o Trainees over 16 years of age;
- o Trainees considered educationally disadvantaged;
- o School either trade, technical, or community college;
- o School located in either rural or uban areas;
- o School administrators and staff willing to cooperate.

The same criteria applied to the experimental sites as well. In addition, the experimental sites to be selected would be IMTS sites presently participating in the UWF project, "The Development of a Computerized Information System for School Programs Using Individualized Manpower Training System Concepts."

James A. Barge, Director, Special Program Section, Florida's Division of Vocational, Technical, and Adult Education, Dr. Perkins and Donna M. Seay listed potential sites to survey in order to determine whether these sites would meet the criteria for participation in the project as either experimental or control sites.

2. **Possible Sites Surveyed**

Each site considered as a possible participant was contacted by phone. In addition, a letter from Mr. Barge to introduce the Project Director was sent to each location before her visit. (See Appendix C for the letter of introduction and list of people receiving the letter.) A schedule of visits for the two weeks of July 7 and July 21, 1975, was then planned by the Project Director. Phone confirmations of the proposed visits were made with six IMTS sites and five non-IMTS sites before the survey schedule was finalized and approved by the people to be contacted at each site.

During the visit at each location, objectives and benefits of the project and the role of the cooperating sites were reviewed and discussed in detail with the presidents or directors. In some cases, discussions were held with their assistants and staff members who would have direct responsibilities for the work involved. It was also established that a nominal fee of $200 would be paid to the person performing project tasks that were considered above and beyond the regular expected work load. Brief tours of the facilities were also made by the Project Director during the visits.

After completing the survey, the Project Director selected those sites that met the criteria for participation.

3. **Control Sites Selected**

Administrators of all sites, except of one non-IMTS site, indicated willingness to cooperate; one site, however, failed to meet the criteria. Therefore, the six IMTS sites visited were selected as the experimental sites and three out of five non-IMTS sites visited were selected as the control sites.

The experimental sites selected were:

1. Blanch – Ely Community Career Complex, Pompano Beach
2. Hernando County Adult and Community Education Center, Brooksville
3. Lake City Community College, Lake City
4. Lively Vocational Technical Center, Tallahassee
5. Seminole Community College, Sanford
6. St. Augustine Adult Vocational Technical Center, St. Augustine

Those selected as control sites were:

1. Taylor County Area Vocational Technical Center, Perry
2. Sarasota County Area Vocational Technical Center, Sarasota
3. Manatee Community College, Bradenton

By referring to the results of the project, it is possible to see how each site met the criteria for selection. A telephone call from the Project Director at the end of July notified each director or president that his school had been selected to participate. At that time, the name of the staff person who would be responsible for checking and tabulating data, and providing pertinent information to TERC was requested by the Project Director.

4. Data Collected Audited

In August, the Project Director went to UWF in Pensacola to audit the computer printout of IMTS data that was produced by the Florida Education Computer Center. The data stored in the computer were taken from the forms designed by the UWF staff as a part of their responsibility in achieving the objectives of their project. (See Appendix B for the UWF project plan.) Problems in tabulating data from the different forms had already been noted and revisions were in the process of being made to solve these problems.

5. Workshops Conducted

In August, at Orlando and Tallahassee, the Project Director discussed with the UWF staff, and Mr. Barge and Mr. Lawrence of the state staff, limitations in analyzing the data. These limitations were due to incomplete or inaccurate data being recorded and reported by the IMTS sites. Plans were made to conduct a one-day workshop in order to instruct IMTS staff members how to fill in the IMTS forms properly. At the same time, recommendations for improving the design of the forms and corresponding instructions would be sought. Workshop plans for the IMTS sites were developed by the Project Director with the assistance and approval of Mr. Barge and the UWF staff.

Another one-day workshop was scheduled for the control site staffs in order to develop their data collection forms and procedures so that it would be possible to compare their results with IMTS site results. Both workshops also were planned for the purpose of reviewing the objectives, procedures, and schedule of the project plans. (See Appendix D for the workshops' agenda.)

The first workshop for the six participating IMTS site staffs was held September 18, and the second one for the three control sites immediately followed on September 19, 1975.

Attending both workshops were:

Nash R. Hightower, Consultant, UWF;
James A. Barge, Director, Special Program Section, Florida Division of VTAE;
Ray Parker, Director, Florida VTAE Computer Service Center;

Eileen B. Lineham, doctoral student, Nova University; and,
Donna M. Seay, Project Director, TERC.

Others attending the workshop for IMTS site staffs included:

Elizabeth Healy, IMTS Coordinator, Lively Vocational Technical Center;
Marilyn Mitchell, IMTS Coordinator, Seminole Community College;
Dale Drew, IMTS Coordinator, Lake City Community College;
G. Douglas Marshall, IMTS Coordinator, Blanch – Ely High School;
Dennis Caltagirone, Director, Hernando County Adult and Community Education Center; and,
Lynn Ward, Division Head of IMT, St. Augustine Adult Vocational Technical Center.

Attending the workshop for the control sites were:

Martha Sue Blythe, Student Personnel Coordinator, Taylor County Area Vocational Technical Center;
Judy Hertz, Teacher, Adult Basic Education, Sarasota County Area Vocational Technical Center; and,
Laura Wiggins, Head, Learning Resource Center, Manatee Community College.

Specific activities at the workshop for IMTS staffs included:

1. A review of the UWF computer printout of IMTS data and the data collection forms.

2. A discussion that covered the justifications for each item included on the data collection forms designed by UWF.

3. Recommendations for revisions on the IMTS forms that would either reduce the number of forms needed, simplify the recording data, or include additional data needed. The UWF was to revise the forms and procedures before mailing them to the sites.

4. A discussion of problems involved in recording data about IMTS trainees. Suggestions of strategies and techniques that could be used in solving data collection problems were made by the site staffs.

5. The establishment of a data collection schedule which called for submission of the Personal Data on new students at the end of the month they enrolled, and other forms at the end of each month. (See Appendix E for a copy of different

IMTS data collection forms designed by the UWF, and student data codes by cards.) The beginning date for recording data was set for September 1975, and the final date for data to be analyzed was February 1976.

6. A discussion of procedures for submitting and processing the completed IMTS data collection forms. Each site was to send its forms to the UWF, with each form checked to assure completeness and accuracy – before mailing to the VTAE Computer Center. If errors occurred, the IMTS sites were to be called or the forms returned by the UWF for correction. The Computer Center was to provide TERC with the key punch cards for each site and these data files were to be used to analyze the results from each site.

The workshop for the non-IMTS, or control, site staffs followed the workshop for IMTS staff members. During this workshop, much of the same orientation information included in the first workshop was covered. In addition, the characteristics of each control site were reviewed in detail through an oral questioning process and the responses were noted for the purpose of developing appropriate data collection forms for storing information in a computer. Types of installation characteristics covered were those pertaining to curriculum, content, staff, students, enrollment schedules, floor plans, furniture, and intructional equipment and materials. Certain process and product variables, such as operating hours, number of students served, flexibility in scheduling, staff hours, means of measuring student progress, and motivating activities, were reviewed for each control site.

Enrollments anticipated for the control sites during the five months data were to be collected were:

Taylor County Area Vocational Technical Center	300 students
Sarasota County Area Vocational Technical Center	125 students
Manatee Community College	650 students

It was emphasized that the control sites were not expected to record any data for the project other than that ordinarily kept. The important fact was that these sites did have programs comparable to the IMTS sites, and the same goals for enrollees – providing the necessary educational achievement level for either entering or progressing in an occupation, training course, or job. Thus, a comparison of data, if available, could be analyzed for evaluation purposes.

6. Control Site Assessment Forms and Procedures Designed

Special forms and procedures for collecting data were designed by the Project Director for the control sites so the data could be compared to the IMTS sites. The

information accumulated about each site from the on-site visits and from the workshop dictated the content and procedures used. Format was designed to accommodate the requirements for storing data for the computer. The same schedule for collecting data at the IMTS sites was used for the control sites.

7. Control Site Staffs Trained

As soon as the draft forms were completed in October 1975, another meeting was conducted with staff members at each control site in order to review the relevancy of the form's content to the different educational programs, and to train staffs to record data properly. As a result of meetings with Martha Sue Blythe in Perry, Judy Hertz in Sarasota, and Laura Wiggins in Bradenton, minor modifications were made, and reviewed by the statistician and computer programmer, Dr. Marinus Kip, in Baltimore, to assure adequacy for the computer analysis. Final revisions in the forms and instructions were completed, typed, duplicated, and mailed to the control sites in November 1975. (See Appendix F for the final copies of the three control site data collection forms designed by TERC and student data codes by cards.)

8. IMTS and Control Sites Assisted

Data for seven months were recorded concerning trainees in the IMTS experimental sites, and for five months in the control sites. At the end of each month, the IMTS sites mailed the data forms to the UWF where their accuracy and completeness were checked. Restriction on UWF staff time prevented the amount of personal contact needed for follow-up of IMTS sites that failed to submit complete and accurate data. Therefore, the VTAE Computer Service Center was able to store only that which was recorded by the IMTS sites.

After the first data were received, the Project Director met with the state staff in St. Petersburg during January 1976, to determine how to solve the problem presented by incomplete and inaccurate data, and, in some cases, nonexistent data. Since the project was not funded for personally monitoring data collection at each site, reliance had to be placed on telephone calls and the UWF to encourage IMTS staffs to improve data recording. Unfortunately, the project was forced to depend upon whatever information the site staffs were willing to provide.

Two of the control sites sent the completed forms to TERC and these were forwarded to the computer programmer. However, in many cases, certain data were not recorded because they were not normally kept. In addition, administrative problems at one control site compelled the staff to abandon involvement in the project.

Data from the control sites were organized and keypunched on cards in preparation for the comparative analysis with IMTS sites. The final data from the control sites arrived in March 1976. However, the final data file on the IMTS experimental sites did not arrive

until May 1976. The VTAE Computer Service Center required March and part of April to keypunch the cards. Mailing and delivery of the cards to the computer programmer by the postal service consumed the remainder of April.

CHAPTER IV
RESULTS OF IMPLEMENTATION

"Observations are arbitrary slices of reality. And only the idea of an average enables us to offer an image of this reality."

Albert Camus, Notebook II

1. Discussion of Raw Data Files

The initial collection of data for the computerized data system began with students and staffs filling out specially designed forms. The number and type of forms used can be indexed as follows:

	IMTS SITES	CONTROL SITES
STUDENT	five forms	two forms
STAFF		one form
LRC	one form	one form

In order to permit a clear picture of the nature of the data collected on these forms, and for the purpose of facilitating a direct comparison between the information actually solicited and the data called for in the design of the system, a tabulation of the elements in each form is presented here:

IMTS Site Student Form 1: (Personal and Enrollment Data)

- o ID: County, School, and Social Security numbers
- o Date of enrollment and student's name
- o Sex, race, date of birth, and highest grade completed
- o Type of enrollment in additional programs
- o Educational benefits, handicaps, and GED status
- o IMTS schedule: occupational interest, information, tours, work sample, counseling, orientation, goal setting, and employment benefit program
- o Job placement, occupational exploration, career goal
- o Termination, monthly total hours, number of languages spoken, and goal set

IMTS Student Form 2: (Pre-Posttest Information)

- o County, School, and Social Security numbers
- o Locator score, type, level, and form of test taken
- o Reading scores: vocabulary, comprehension, and total

- o Arithmetic scores: reasoning, fundamentals, and total
- o Language scores: grammer, spelling, and total

IMTS Student Form 3: (Language, Arithmetic Modules)

- o County, School, and Social Security numbers
- o Module TABE level and code, date taken
- o Grades and times on modules and tutoring

IMTS Student Form 4: (Reading Modules)

- o County, School, and Social Security numbers
- o Module TABE level and code
- o Total time spent on module

IMTS Student Form 5: (Complementary Skills)

- o County, School, and Social Security numbers
- o Module code, date taken, and time
- o Test grades and times, tutoring time
- o Work stations utilized

Since the data on the computer files at St. Petersburg were transmitted to Maryland using a card medium, several cards were needed to accommodate a student record. The correspondence of these cards to forms is as follows: Form 1 to Card 1, Form 2 to Card(s) 2, Form 3 to Card(s) 3, Form 4 to Card 4, Form 5 to Cards 1, 5, 6. The actual student forms used, together with the data coding function (by card), are displayed in Appendix E.

Control Site Student Form 1: (Personal and Enrollment data)

- o School code
- o Student name and Social Security number
- o Date of enrollment
- o Sex, race, date of birth, bilingualism, grade completed
- o Program status, benefits, employment, handicap
- o Dependents, GED status, goal setting, termination

Control Site Student Form 2:

- o School code
- o Date, days present, days absent
- o Counseling experience, social behavior
- o Pre-Posttests reading, arithmetic, Botel, and subject
- o Number of hours studied and student/teacher ratio

The data on these forms were keypunched directly on cards – Form 1 on Card 1, Form(s) 2 on Card(s) 2. Both the forms and the data coding junction (by card) are displayed in Appendix F.

IMTS LRC Summary Form

- o County and school numbers
- o Date and hours LRC was in use
- o Number of new students, job placements, illnesses, completions, transfers, unaccounted for absences

- o Number of carrels, desks, tables, equipment
- o Maximum and minimum number of students present
- o Number of terminations

The form and the coding function are shown in Appendix G.

For the purpose of summarizing the composition, volume, and origin of the raw data files received in Maryland for processing, Table 1 shows the number of processable student records, by card number, contained in the file.

Table 1
Number of Processable
Student Records, By Record Segment (Card)

CENTER AND CODE	NUMBER OF RECORDS, BY SEGMENT						
	1	2	3	4	5	6	7
Lake City Community College (120111)	119	108	1241	0	0	87	5
Hernando County Adult Center (270152) (270152)	91	0	0	0	0	0	0
Lively Voc-Tech Center (370361)	536	318	2105	35	0	54	118
St. Augustine Adult Voc-Tech Center (550231)	245	228	2398	0	0	217	12
Seminole Community College (590441)	65	35	137	0	0	32	0
Taylor (Control Center 1)	86	86	–	–	–	–	–
Sarasota (Control Center 2)	66	66	–	–	–	–	–

In the lefthand column of Table 1 are shown the names and code numbers for which some data were in the file. The numbers above the remaining seven columns refer to the card index number as it appeared punched in column 80 of each card. The entries in these seven columns are the actual number of cards contained in the files as received from the Florida VTAE Computer Service Center at St. Petersburg.

Note that all entries in Table 1, column 5 contain zeros. This means that the data for the complementary skills modules simply were not present in the files and that all discussion and analysis of this area of concern are eliminated from this report.

It must not be supposed that for a given LRC, its row entries in Table 1 count cards across the columns for the same students. For instance, the entries 119, 108, and 1241 in columns 1, 2, 3 for Lake City Community College do not indicate that for 108 students at the LRC there were records composed of cards with 1, 2, 3 codes. To the contrary, in any one LRC, a student entered with a Card 1 was as likely as not to have any or none of the remaining data cards present in the file. In fact, not a single student in any of the LRCs had a complete set of cards on file. This state of affairs had a major impact on the strategy for analysis and necessitated a complete redesign of the software programs already prepared.

Instead of entering a complete student record, consisting of linked cards 1 through 6 and then compiling over centers, the analysis actually performed first sorted the cards by index and compiled the data for each center over the records with the same card index. Appendix H lists all the computer routines in the software package as redesigned and actually used.

The major implication of this necessary adaptation is the fact that an opportunity for some of the higher level analysis was lost. Clearly, any sort of cross-tabulation, correlational analysis, or multiple discriminate function analysis involving variables with data dispersed among these segmented records was out of the question. Such analyses require vectors of multiple observations, one complete vector for each student. If the data had been subjected to the multivariate analysis programs anyway, nearly all the student data cases would have been rejected for reasons of "missing data" occurrences, with the few remaining ones giving rise to spurious results because of the lack of degrees of freedom. All of which is not to say that no useful tabulations of results were possible. Quite to the contrary, as will be shown in the sequel, a great number of interesting and informative computations could, and were performed. To these, the remainder of this report is devoted.

2. Comparative Description of Student Bodies

Of all the records in the computerized data file, those generated by the Student Form 1 were the most complete. In fact, all LRCs drawn into the study by any data at all had some information on enrollments. Table 2 shows the enrollment figures, by month,

and broken out by sex, for the five IMTS and two control sites providing inputs to this study.

From an inspection of the marginal totals in this Table 2, a wide variation in student records on file among the LRCs is at once apparent, ranging from the low of 65 at Seminole to the high of 536 at Lively Vocational Technical Center. In spite of this great flux, with its concomitant indication of a possible high incidence of missing records, the expected similarity of enrollment patterns over the months is certainly present. In all LRCs, the beginning of the academic year and the beginning of a new calendar year are the periods during which the centers enroll most of their new students, according to tabulation of student records on file.

The distribution of these records according to sex is in a random pattern over the months, but shows some differences in the marginal totals for the year from center to center. Lively, and the Taylor control site produced a statistical predominance of male student records; Seminole, a predominance of female student records, with the other sites showing a statistical balance between male and female.

Table 3 displays these same enrollment figures broken out according to ethnic or racial group membership.

No statistical test of significance is required to see that most LRCs serve specific minority groups. Even a cursory inspection of the marginal totals shows at once this interesting pattern: Spanish Americans and American Indians are dominantly represented at Lake City, Hernando County, Lively, St. Augustine, and Seminole, with the Spanish Americans in a strong numerical majority. At the control sites Sarasota and Taylor, the black and white groups form the majority, with blacks clearly predominant at Sarasota but with representation at Taylor more nearly congruent with the proportions in the general population.

The question arises as to whether the entries in both Tables 2 and 3 can really be properly termed as enrollment figures. To do so would require the assumption that for each student who enrolled, a record was created by filling out Form 1 correctly, that the information on the form was punched accurately, and that the record entered the master file, was re-punched, and forwarded in the card deck sent to Maryland. With the decentralized managerial functions that obtained during the course of this study, this assumption is extremely difficult to verify. However, some light can be cast on the question by comparing the marginal enrollment totals with those reported in the LRC summary information file, a full printout of which is displayed in Appendix I. This datum is tabled and fully discussed under subsection 6 of this chapter, but for the purpose of this comparison, some relevant figures are shown in Table 4.

Table 2
Enrollments by Sex, by Month of Students and the IMTS and Control Sites

SITE	SEX	PRIOR SEP	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
Lake City										
	M	12	19	1	3	0	21	0	0	56
	F	13	19	4	6	2	17	2	0	63
	T	25	38	5	9	2	38	2	0	119
Hernando County										
	M	0	18	0	1	12	5	0	0	36
	F	0	23	0	8	16	8	0	0	55
	T	0	41	0	9	28	13	0	0	91
Lively										
	M	45	98	31	16	11	63	40	4	308
	F	25	38	30	25	31	33	42	4	228
	T	70	136	61	41	42	96	82	8	536
St. Augustine										
	M	19	59	13	3	5	13	8	2	122
	F	6	53	16	11	21	11	4	1	123
	T	25	112	29	14	26	24	12	3	245
Seminole										
	M	0	5	5	1	1	1	5	1	19
	F	1	4	3	22	2	2	6	6	46
	T	1	9	8	23	3	3	11	7	65
Taylor (Control 1)	M	27	13	10	3	4	6	6	0	69
	F	6	7	1	3	0	0	0	0	17
	T	33	20	11	6	4	6	6	0	86
Sarasota (Control 2)	M	7	3	2	3	4	10	7	0	36
	F	4	1	9	3	4	4	5	0	30
	T	11	4	11	6	8	14	12	0	66

Table 3
Enrollments by Race or Ethnic Group Membership,
By Months, of Students at the IMTS and Control Sites

SITE		PRIOR SEP	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL
Lake City										
	BL	0	0	0	0	0	0	0	0	0
	W	0	0	1	0	0	0	0	0	1
	AI	3	7	0	1	0	10	0	0	21
	AA	2	1	1	1	0	3	0	0	8
	SA	20	30	3	7	0	25	2	0	87
	UN	0	0	0	0	2	0	0	0	2
	TOTAL	25	38	5	9	2	38	2	0	119
Hernando County										
	BL	0	0	0	0	0	0	0	0	0
	W	0	0	0	0	2	0	0	0	2
	AI	0	8	0	1	9	1	0	0	19
	AA	0	3	0	0	1	0	0	0	4
	SA	0	30	0	8	16	12	0	0	66
	UN	0	0	0	0	0	0	0	0	0
	TOTAL	0	41	0	9	28	13	0	0	91
Lively										
	BL	0	0	0	0	0	1	0	0	1
	W	1	3	1	0	0	4	2	1	12
	AI	34	63	25	13	7	49	31	2	224
	AA	4	6	3	4	4	7	6	0	34
	SA	31	64	31	21	21	34	41	5	248
	UN	0	0	1	3	10	1	2	0	17
	TOTAL	70	136	61	41	42	96	82	2	536
St. Augustine										
	BL	0	0	0	0	0	0	0	0	0
	W	0	1	0	0	0	0	0	0	1
	AI	17	23	12	5	7	8	8	3	83
	AA	1	3	0	0	0	0	0	0	4
	SA	7	84	17	9	7	16	4	0	144
	UN	0	2	0	0	12	0	0	0	13
	TOTAL	25	112	29	14	26	24	12	3	245
Seminole										
	BL	0	0	0	1	0	0	0	0	1
	W	0	0	0	0	0	0	0	0	0
	AI	0	3	4	3	1	0	6	0	17
	AA	0	1	0	2	0	1	2	2	8
	SA	1	5	3	17	1	2	3	5	37
	UN	0	0	1	0	1	0	0	0	2
	TOTAL	1	9	8	23	3	3	11	7	65
Taylor (Control 1)	BL	7	6	2	0	1	0	2	0	18
	W	25	13	8	6	3	4	4	0	63
	AI	0	0	0	0	0	0	0	0	0
	AA	0	0	0	0	0	0	0	0	0
	SA	0	0	0	0	0	0	0	0	0
	UN	1	1	1	0	0	2	0	0	5
	TOTAL	33	20	11	6	4	6	6	0	86
Sarasota (Control 2)	BL	3	4	5	2	1	8	2	0	25
	W	3	0	2	2	1	1	9	0	18
	AI	0	0	0	0	0	0	0	0	0
	AA	0	0	0	0	1	0	0	0	1
	SA	5	0	3	0	2	2	1	0	13
	UN	0	0	1	2	3	3	0	0	9
	TOTAL	11	4	11	6	8	14	12	0	66

Table 4
Comparison of Student Enrollment Records on File
With New Students and Terminations as Reported on LRC Summary Files

IN STUDENT FILE (e.g., in Tables 2,3)	IN LRC SUMMARY FILE	LRC SUMMARY DATA * REPORTED MONTHLY LCCC	SATC	SCC
Enrolled	SEP	63	137	10
	New Students	–	231	–
	Terminations	–	63	–
Enrolled	OCT	5	29	8
	New Students	67	33	25
	Terminations	0	52	0
Enrolled	NOV	9	14	23
	New Students	4	–	25
	Terminations	4	–	0
Enrolled	DEC	2	26	3
	New Students	11	29	22
	Terminations	0	55	5
Enrolled	JAN	38	24	3
	New Students	–	25	19
	Terminations	–	24	10
Enrolled	FEB	2	12	11
	New Students	39	45	21
	Terminations	33	45	7
Enrolled	MAR	0	3	7
	New Students	2	30	17
	Terminations	8	27	1
Total on File		119	245	65
	NS Total on File	123	393	129
	T Total on File	45	266	23

* Dashes indicate missing data

Except in the case of St. Augustine Adult Vocational Technical Center, there is scant resemblance, on a month-to-month basis, between the number of new students reported on the LRC Summary Files, and the number of student records showing date of enrollment, even when terminations are taken into account. No doubt, there is a serious possibility that lag time causes much of the problem. Inspection of the totals in Table 4 shows that this may be the case, since here the congruence is much better. However, in all LRCs, the number of new students reported in the totals exceeds the number of student enrollment records in the student file. This is a strong indication that the process of student record creation, from Form 1 - to key punch card - to tape - back to key punch card, suffered a high rate of attrition. Hence, the inter-LRC comparison of the student body characteristics must now procede on the assumption that this attrition was random with respect to these descriptive characteristics.

That the same disparity was not observed for the control sites Taylor and Sarasota is not surprising. The student forms, staff forms, and LRC summary forms were sent from these sites, together in one shipment, to Maryland, where keypunching took place for direct loading onto the analysis programs.

This made it simple for the site managers to verify and correct such numbers just prior to sending the data into the system.

Table 5 shows the frequencies of response to various questions by students who completed the student enrollment forms. A glance through the entries of this table shows that for the IMTS sites comparative data was on file for the following variables only: age level of the students, additional program enrollment, educational benefits, handicaps, and passing of GED. On the remaining variables, bilingualism, related employment, dependents, number of children, help in goal setting, and type of goal set, all IMTS sites absorb their totals into the "unknown" catagory. This was caused, no doubt, either by a failure of response or by a failure to link Card 7, where some of this data was punched, successfully to Card 1, to which the computer processing program was cued. Whatever the cause, the comparative analysis on these latter variables had to be excluded for the purpose of this report.

The age level of the students as compared from LRC to LRC showed strong patterns of similarity. Except for a predominance of students under 21 at Lively and St. Augustine, Page's L - test* on the rank-orders of age categories showed no statistically significant differences. In general, the age distribution of students shows the LRC to be attended by younger students, with 49 percent in the "under 21" and 32 percent in the "21 to 30" brackets.

The additional program enrollment variable shows no such striking similarity among the LRCs. At Lake City Community College, for instance, better than 60 percent of the

*re: Dayton, C.M., "The Design of Educational Experiments," p. 54.

Table 5
Student Body Characteristics as Measured by
The Response Frequencies on Selected Variables

VARIABLE	LCCC	HCAC	LVT	SATC	SCC	T	S	TOTAL
BILINGUALISM OF STUDENTS								
Spanish	0	0	0	0	0	1	14	15
Korean	0	0	0	0	0	0	1	1
Vietnamese	0	0	0	0	0	1	4	5
Other	0	0	0	0	0	1	6	7
Unknown	119	91	536	245	65	83	41	1475
Total	119	91	536	245	65	86	66	1503
AGE LEVEL OF STUDENTS								
Under 21	43	66	255	144	14	9	24	735
21-30	47	11	187	66	27	37	25	479
31-40	9	9	50	10	11	19	9	133
41-50	17	4	29	10	4	15	5	97
51-60	1	0	4	2	6	5	3	23
Over 60	0	1	2	1	2	1	0	8
Unknown	2	0	9	16	1	0	0	28
Total	119	91	536	245	65	86	66	1503
ADDITIONAL PROGRAMS								
PSV 1, Full-time	0	1	3	0	5	9	2	21
Part-time	0	1	2	0	0	0	0	3
PSV 2, Full-time	0	27	28	0	0	4	0	65
Part-time	1	16	26	0	0	1	1	207
AVT, Full-time	32	1	64	179	0	41	51	428
Part-time	3	9	102	11	0	19	10	159
SEC, Full-time	0	9	4	4	7	2	0	32
Part-time	0	5	41	1	7	1	1	106
Unknown	76	25	267	45	46	9	1	482
Total	119	91	536	245	65	86	66	1503
EDUCATIONAL BENEFITS								
CETA	6	0	1	20	6	9	10	122
WIN	0	0	2	4	0	0	0	7
VR	0	0	3	1	3	0	0	40
V	0	3	5	0	1	5	1	15
M	0	0	10	42	3	0	32	99
VA	23	4	30	9	39	55	1	164
WS	6	1	0	1	1	2	0	11
Other	11	1	32	7	1	4	2	58
Unknown	73	82	415	161	11	11	20	987
Total	119	91	536	245	65	86	66	1503
RELATED EMPLOYMENT								
Directly	0	0	0	0	0	24	31	55
Indirectly	0	0	0	0	0	13	24	37
Unknown	119	91	536	245	65	49	11	1411
Total	119	91	536	245	65	86	66	1503
DEPENDENTS								
Husband	0	0	0	0	0	4	3	7
Wife	0	0	0	0	0	43	7	50
Unknown	119	91	536	245	65	39	56	1446
Total	119	91	536	245	65	86	66	1503

Continued

Table 5 (continued)
Student Body Characteristics as Measured by
The Response Frequencies on Selected Variables

VARIABLE	LCCC	HCAC	LVT	SATC	SCC	T	S	TOTAL
NUMBER OF CHILDREN								
None	0	0	0	0	0	11	6	17
1	0	0	0	0	0	21	5	26
2	0	0	0	0	0	11	10	21
3	0	0	0	0	0	6	1	7
4	0	0	0	0	0	2	2	4
5	0	0	0	0	0	1	1	2
More than 5	0	0	0	0	0	0	0	0
Unknown	119	91	536	245	135	34	41	1426
Total	119	91	536	245	135	86	66	1503
HANDICAPS								
Deaf	1	3	0	1	1	1	0	7
Blind	0	0	1	0	0	0	0	1
Deaf and Blind	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	1	1
Unknown	118	88	535	244	64	85	65	1494
Total	119	91	536	245	65	86	66	1503
PASSED GED								
Yes	4	1	39	6	6	11	7	79
No	12	79	338	225	46	17	32	1026
Unknown	103	11	159	14	13	58	27	398
Total	119	91	536	245	65	86	66	1053
HELP IN GOAL SETTING								
Help OCC	0	0	0	0	0	8	27	35
Help AC	0	0	0	0	0	2	7	9
Unknown	119	91	536	245	65	76	32	1459
Total	119	91	536	245	65	86	66	1503
GOAL SET								
Yes	0	0	0	0	0	0	0	0
Mechanic	0	0	0	0	0	4	4	8
Welder	0	0	0	0	0	6	5	11
Carpenter	0	0	0	0	0	3	0	3
Electronics	0	0	0	0	0	7	2	9
Cosmetology	0	0	0	0	0	1	0	1
Cook	0	0	0	0	0	0	0	0
Office	0	0	0	0	0	2	4	6
Horticulture	0	0	0	0	0	1	0	1
Forestry	0	0	0	0	0	2	0	2
Nurse, LPN	0	0	0	0	0	0	6	6
Upholstery	0	0	0	0	0	0	1	1
Sewing	0	0	0	0	0	0	2	2
Interior Dec.	0	0	0	0	0	0	1	1
GED	0	0	0	0	0	9	9	18
Heat/Ref.	0	0	0	0	0	8	2	10
ESL	0	0	0	0	0	0	2	2
Data Processing	0	0	0	0	0	1	0	1
No	0	0	0	0	0	11	9	20
Unknown	119	91	536	245	65	31	19	1401
Total	119	91	536	245	65	86	66	1503

students are in PV 2 programs, part-time, with an additional known enrollment of 19 percent in part-time secondary programs. In contradistinction, at St. Augustine, some 73 percent of its students reported enrollments in full-time AVT programs with little additional enrollment in other types of programs. Strong participation in AVT is observed also at Lake City and Lively. Other than these, additional program enrollment appears to be a function of needs peculiar to each individual LRC. From the point of view of a programmatic interest, the total student population of 1503 on file across the LRCs show the following percentage breakout according to enrollment type:

PSV 1, Full-time	1.4%	AVT, Full-time	28.5%
PSV 1, Part-time	.2%	AVT, Part-time	10.6%
PSV 2, Full-time	4.3%	SEC, Full-time	2.1%
PSV 2, Part-time	13.8%	SEC, Part-time	7.1%
		Unknown	32.0%

The type of educational benefit students reported to enjoy displays much the same apparent response to individual needs as did additional program enrollment. Except for Veterans Administration benefits (which understandably were reported by some students at all LRCs), there appears to be a fairly random scattering of these benefits across the LRCs. The percentage breakout looks like this:

CETA	8.1%	V	1.0%	WS	.7%
WIN	.5%	M	6.6%	Other	3.9%
VR	2.7%	VA	10.9%	Unknown	65.6%

Although not falling in the category of lost data, only six-tenths of one percent of all students reported any kind of handicap. Hence, as a comparative characteristic among LRCs, this variable has little to contribute.

The data on GED passed present an interesting enigma: Does the 68 percent "No" response (which also is amazingly uniform across the LRCs) for all students, versus a scant 5 percent "Yes" response indicate that a high school diploma is generally lacking among these students? If this is so, one would have expected a much higher secondary program enrollment rate as compared to PS 1 and PS 2 program participation observed previously. Of course, it is entirely possible that "No" responses came also from students who had obtained a high school diploma along channels of prior day-school experience.

In summary, the comparative data on the IMTS and control sites show these LRCs to be highly similar in student body composition, with an appropriate degree of flexibility to respond to individual needs.

3. Pre-posttest and Gainscore Analysis

The discussion of pre-posttest and gainscores of this section is in reference to student scores obtained on the Test of Adult Basic Education (TABE) for any of its 54 possible distinct subscores according to the various combinations of forms (1 and 2), difficulty level (E, M, D) and subtest (LM, LS, LT, AR, AF, AT, RV, RC, RT). By definition, a gainscore is simply the difference found by subtracting a pretest score from a posttest score, thus giving rise to positive, zero, or negative values. However, such a gainscore is a meaningless quantity, unless both pre- and posttest scores concern the same test, subtest, form, difficulty level, and student. This means, for instance in the case of Lively with 536 student records, that given an arbitrary pair of pre-posttest scores, there are no less than $2 \times 3 \times 9 \times 536 - 1 = 28{,}943$ chances the pair cannot be used to compute a gainscore. As a result, just having many pre- and posttest scores does not mean very much, unless these scores are very carefully matched as to subtests, forms, difficulty levels, and students. Because pretests and posttests are usually administered, scored, and results recorded at different times and places, and different student group combinations are involved, the hazards to the meaning and value of gainscores are tremendous. Unless extreme care is taken during the administration of the tests, computation of scores, and transmission of data to preserve this precarious correspondence, severe data attrition is inevitable.

Failure to exercise this care is no doubt responsible for the fact that from the more than 8,000 pre - posttest scores in the data file only 116 gainscores could be computed, and these were divided among the 54 TABE subtests and three LRCs of origin.

Table 6 presents a summary of what the pre - posttest gainscores looked like, in terms of the three most important subtests: Reading Total (RT), Arithmetic Total (AT), and Language Total (LT).

The column headed "N" in Table 6 contains the number of successful matches on subtest, forms, difficulty levels, and students. Note that the only LRC with a figure near a substantial number of such matches was Lake City Community College, on the Arithmetic Total, form 2 of medium difficulty level. The associated number of calendar days was derived by subtracting the date reported with the pretest from the date reported with the posttest, using an appropriate modular arithmetic based on the number of days in the months. It must be pointed out that some hazard is involved with respect to this calendar day computation, as well as the proper identification of the form and level of the test. To wit, a pre-post student record was composed using the following format:

[ID, DATE, PRE-POST, FORM, LEVEL, RV, RC, RT, AR, AF, AT, LG, LS, LT]

As long as all the subtests but one were valued blank or zero, there was no trouble in associating the date and test type with the remaining subtest. But what about a record

Table 6
Pre-posttest Average Gainscores on Reading, Arithmetic, And Language Totals by Form, Difficulty Level, and LRC, With Intervening Times in Average Calendar Days

				MATCHING PRE – POST					NONMATCHING PRE – POST			
	TEST	F	DL	N	PRE	POST	GAIN	TIME	N	PRE	N	POST
Lake City	RT	2	M	9	9.4	10.6	1.2	64				
	RT	2	D						20	9.1	3	8.8
	AT	1	D	1	8.5	8.5	.0	67				
	AT	2	M	32	9.0	10.8	1.8	68				
	AT	2	D	1	10.3	10.3	.0	59	25	8.1	16	10.4
	LT	1	D	1	6.0	7.0	1.0	76				
	LT	2	M	4	10.0	11.0	1.0	36				
	LT	2	D						26	7.8	4	10.2
Total N				48				65	71		23	
Lively	RT	1	D	1	5.8	5.8	.0	96				
	RT	2	E	2	4.3	5.6	1.3	54				
	RT	2	D	5	8.3	9.4	1.1	50	78	7.8	7	7.7
	AT	1	D	1	12.8	14.4	1.6	99				
	AT	2	E	4	5.7	6.9	1.2	48				
	AT	2	M	2	8.8	9.5	.7	60				
	AT	2	D	9	7.9	9.8	1.9	75	76	7.3	20	8.2
	LT	1	D	1	5.9	5.7	-.2	87				
	LT	2	E	2	6.0	6.4	.4	69				
	LT	2	D	7	8.4	10.0	1.6	65	79	7.6	15	9.2
Total N				34				63	233		42	
St. Augustine	RT	1	D	1	5.0	5.0	.0	23				
	RT	2	D						76	7.8	4	8.6
	AT	1	D	2	5.3	5.8	.5	83				
	AT	2	E	1	13.8	15.6	1.8	56				
	AT	2	M	12	8.2	9.7	1.5	65				
	AT	2	D	2	9.1	9.1	.0	71	79	7.6	71	8.6
	LT	1	D	2	7.6	5.2	-2.4	44				
	LT	2	E	2	6.8	7.4	.6	64				
	LT	2	M	10	8.0	9.4	1.4	70				
	LT	2	D	2	10.0	9.6	-.4	52	72	7.3	56	9.0
Total N				34				64	227		131	
Seminole	AT	2	D						5	9.6		
	LT	2	D						8	8.4		
Total N									13			
Grand Total N				116					544		196	

showing scores in all subtests? Did this mean that the date, form, and difficulty designators applied to all three subtests, reading, arithmetic, and language? The analysis proceeded on the assumption that it did. Without it, the pre - posttest gainscores would have all but vanished. Still, this possible source of error should be considered at such time as interpretation of the data must be made.

A more concise overview of the gainscore data is afforded by the inspection of Table 7, which shows some pertinent statistics along with the gains for those LRCs where the number of such scores was nontrivial.

Table 7
Means and Standard Deviations for Gainscores, Intervening Calendar Days, Number of Modules Taken, And Average Time in Minutes Spent on Modules *

LRC	TEST				GAINSCORES MN	GAINSCORES SD	CALENDAR DAYS MN	CALENDAR DAYS SD	NUMBER MODS MN	NUMBER MODS SD	AV MOD TIME MN	AV MOD TIME SD
Lake City												
	RT	2	M	9	1.2	.9	64	25	—	—	—	—
	AT	2	M	32	1.8	1.7	68	37	10	5	55	30
Lively												
	AT	2	D	9	1.9	1.1	67	28	8	3	51	25
	LT	2	D	7	1.6	1.4	65	30	11	6	52	34
St. Augustine												
	AT	2	M	12	1.5	.8	65	33	10	9	39	61
	LT	2	M	10	1.4	1.3	70	29	9	7	45	50

* A dash indicates no data available

A cursory inspection of Table 7 shows a good degree of similarity among the LRCs with respect to the average amounts of gain, time lag, number of modules, and module times. However, because of the rather high fluctuation in the standard deviations (e.g. variances), the sharp differences in the cell frequencies, and the low over-all number of cases, no attempt was made to perform a multivariate analysis of variance on the data to check on the hypothesis of exact congruence among the LRCs as populations. It suffices to note that all LRCs have their average gains clustered quite closely around 1.5, which took about 68 calendar days to attain, by the use of some 10 modules, with about one classroom period per hour. If a gain of 1.5 gradepoint average was indeed achieved by

these students in a little over two months, this data is highly significant educationally, and attests strongly to the effectiveness of the IMTS educational methodology.

At its face value, the number of modules utilized appears to be rather small. However, the strong possibility exists that this number is low because of missing data.

By the way of comparison with control sites, Taylor County Area Vocational Technical Center reported no meaningful gainscores. The Sarasota County LRC reported an average gain of a .5 grade equivalent in reading and grade equivalent gain of .6 in arithmetic over the period from September to December. By any sort of measure, and in spite of the lack of precision in all measurement aspects, this comparison is a strong evaluative observation on the IMTS enterprise.

One question of considerable interest is the empirical relationship among the gainscores, number of modules, and time. The full correlation matrix among these variables follows:

	1	2	3	4
1. Mean Gainscores	1.0			
2. Mean number calendar days	.2	1.0		
3. Mean number of modules	-.3	.2	1.0	
4. Mean time on modules	.7	.1	.1	1.0

Note that the only substantially nonzero correlation is the one between the gainscores and the amount of time spent per module. This implies that in the long run, thoroughness with which a module is studied tends to contribute more to over-all learning than the mere number of modules utilized.

4. Module Utilization Analysis

Two basic measures - time and test grades - were employed for the purpose of characterizing and distinguishing the manner in which students used the various modules in response to their prescriptions. A very important derived measure was the efficiency quotient (EQ), defined by the formula TP/TT x 100%, in which TT is the number of tests a student took and TP the number of tests a student passed. The following is range of values this EQ could take: 1, .5 , .33, and .25.

Table 8 presents the results of taking these measures on the modules.

Care should be taken in the reading and interpretation of the entries in this table. The "total times" reported are in fact weighted averages of averages. To see why this is so, one needs to remember that not all students took all tests. To the contrary, the number of students taking test 1, test 2, test 3 was a sharply, monotone decreasing number, as the high efficiency quotients do indicate. Therefore, each of the average times

Table 8
Times and Achievement Grade Averages
Obtained on the Arithmetic and Language Modules by LRC

ARITHMETIC MODULES	LCCC	LVTC	ST. AUG	SCC
Times on Module	54.5	93.6	50.7	39.2
Tutorial	15.1	34.2	22.7	13.1
Pretest	15.1	13.4	13.6	17.6
Test 1	16.0	15.3	16.5	20.2
Test 2	19.9	12.5	17.0	28.2
Test 3	24.3	11.2	17.3	19.6
Total Time	63.5	101.8	55.9	51.2
Grades Pretest	9.0	7.9	9.3	9.9
Test 1	8.9	8.7	9.0	9.2
Test 2	8.7	8.7	9.4	9.0
Test 3	8.8	8.6	11.2	8.5
Efficiency Quotient	.9	.8	.9	1.0
Combined Module Size	1133	108	1525	1586
LANGUAGE MODULES	**LCCC**	**LVTC**	**ST.AUG**	**SCC**
Times on Module	44.8	92.1	112.9	29.4
Tutorial	11.1	7.5	11.0	.0
Pretest	12.4	18.0	19.7	10.0
Test 1	18.5	17.8	17.4	13.3
Test 2	11.0	18.1	17.2	12.5
Test 3	17.1	12.5	20.0	.0
Total Time	49.0	113.8	135.2	18.9
Grades Pretest	9.1	7.6	8.4	8.0
Test 1	9.3	8.8	8.5	9.4
Test 2	8.6	8.9	8.2	9.0
Test 3	8.5	9.3	9.3	.0
Efficiency Quotient	1.0	.8	.8	1.0
Combined Module Size	727	51	49	83

on these tests made a smaller and smaller contribution to the over-all average of the total time on the modules. The index termed "module size" is merely a count of the total number of times some module was used at a LRC, thus giving an index of differential weighting when between -LRC comparisons are made.

It hardly requires sophisticated statistical analysis to see the high degree of similarity among the LRCs with respect to the obtained efficiency quotients. In any case, such analysis is precluded by the fact that the reported module utilization indices can hardly be considered as random samples. In general, with the EQs taken as descriptive measures, these values do not differ materially among the LRCs, nor in terms of a comparison between arithmetic and language modules.

5. IMTS Site Schedules and Work Stations

The data that were compiled on the student records punched in cards 6 and 7 left a great deal to be desired. In the majority of these records, even if they marked the use of a work station at all, no time of utilization was recorded. Because of this, and because of their low incidents, analysis of data coming from card 7 was not considered for the purpose of this report.

Table 9 shows the rate of involvement, together with the averages of the lengths of time of such involvement, with the IMTS Schedules (data on card 6).

From an inspection of the differential completion rates among the three LRCs for which some data were available, it appears that these schedules are followed pretty much in a unique order for each individual LRC. Nor does any consistent pattern emerge, either within a LRC or between the various LRCs as to the average lengths of time with which the students reported to be involved.

6. IMTS Site and Control Site Summary Data

In the profiles that follow, summary descriptions for each IMTS and non-IMTS site are given, according to selected characteristics:

- **Lake City Community College:**

  LCCC has two classrooms for individualized instruction, 1,512 sq. ft. and 528 sq. ft. The studies conducted in these rooms are reading, language, mathematics, and tool technology.

  There is one office of 144 sq. ft. for the coordinator's use, while the managers and aides use open office space in the classroom area.

Table 9
Utilization, Completion, and
Mean Time Requirements of IMTS Schedules*

	LCCC		LVT		ST. AUG.	
	N	AV TIME	N	AV TIME	N	AV TIME
Occupational Interest	—		16	79	30	43
Completed	53		29	3	89	—
Occupational Information	—		41	138	70	46
Completed	53		4	—	49	—
Occupational Tours	—		19	174	52	30
Completed	53		26	14	67	1
Work Sample	3	900	—	—	31	499
Completed	50		45	—	84	—
Counseling	4	180	44	171	117	50
Completed	41	60	1	—	2	45
Orientation	53	1550	45	60	122	41
Completed	0		—	—	7	31
Goal Setting	0		—	—	5	33
Completed	53		45	—	114	—
Empl. Ben. Prog.	0		—	—	88	342
Completed	53		45	—	31	61

* A dash indicates missing data

The amount of available closet and storage space is 72 ft. in storage room, 96 ft. in tabletop cabinets, and 20 sq. ft. of wall cabinets.

In addition to the materials and equipment specified by the IMTS component program, there are also a Cambridge TV, reading, math, and language. Less Xerox program, and Singer Graflex cooking and baking.

o **Lively Vocational Technical Center**

LVTC has one open classroom, of 2740 sq. ft., and a OEP classroom of 1711 sq. ft.. The open classroom follows the IMT system: reading, math,

language, complementary skills and employability skills. The OEP has fifteen Singer carrels used for work exploration, four stations for tool technology, and two stations for Xerox exploration units.

There is one office, of 117 sq. ft., used for counseling, evaluation, record keeping and small meetings.

Storage facility consists of ten bookcases, four steel cabinets and 130 feet of linear shelving.

Equipment available is that specified by the IMTS program components.

- **Hernando County Adult and Community Education Center**

HC has two classrooms, 1600 sq. ft. and 150 sq. ft. These rooms are used for reading, language, math, exploratory skills, and counseling.

There is one office of 260 sq. ft., used for interviewing clients.

Storage space consists of twenty-five feet of shelving, two lock cabinets, and seven drawers of lateral files.

All IMTS specified materials were available except the Xerox kits. The PAL reading system was extra.

- **St. Augustine Adult Vocational Technical Center**

St. Augustine has two classrooms, each 1000 sq. ft. Studies conducted are GED preparation, remedial/vocational compensatory and non-readers through level 13.

There is one office, of 100 sq. ft., used by the coordinator.

Storage facilities include five storage cabinets, two portable bookcases, and four filmstrip and Cassette cabinets.

- **Seminole Community College**

SCC has three classrooms, each 760 sq. ft. in size, used for both pre-vocational and academic training.

There are three offices, each 200 sq. ft. in size, used for administration, counseling, storage, and teacher preparation.

In addition to the IMTS specified materials, there is a JEVS system, a VALPAR system, and 100 books for E.S.L. (Dixon's).

o **Sarasota County Area Vocational Technical Center (Control 1)**

SVT has four classrooms for individualized learning, 600 sq. ft. in size. Studies include ESL, orientation, math, reading, language arts, and GED training.

There is an office for the coordinator's use and one for the reading specialist.

The preceding information was obtained by direct inquiry. The remainder of this section deals with the data and information as they were collected, compiled, and analyzed via the LRC summary data forms. Appendix I shows the data as they were sent in by Lake City Community College, St. Augustine Adult Vocational Technical Center, and Seminole Community College. Tables 10, 11, and 12 display the first level compilation of this data on a monthly basis.

From Table 10, the following average number of hours per month that the LRCs were open for training were computed: Lake City, 168; St. Augustine, 114; and, Seminole, 163. Also derived from this table was the average number of new students enrolled, per month: Lake City, 25; St. Augustine, 66; and, Seminole, 22. No doubt, the failure of Lake City and Seminole to include a September report caused the average for St. Augustine to appear inflated, since this latter LRC reported no less than 231 new students for September. With no exhaustive data of known accuracy available, there can hardly be a meaningful comparison of these two sets of averages, particularly not in terms of actual production levels. Nevertheless, it is interesting to observe that St. Augustine enrolled, on the average, a little more than double the number of students than both the other LRCs, and yet was open, on a monthly average basis, some 50 hours less.

The data on job placements and reported illness are so sparse that little analytic comparisons are meaningful beyond mere inspection of the frequencies.

On the remaining variables, the following interesting comparison obtains:

	Total Frequency		
	LCCC	SATC	SCC
Completions	3	42	11
Transfers	23	77	10
Leavers for "unknown" reasons	8	50	8
Leavers for "other" reasons	175	75	1
	209	244	30

Table 10
Learning Resource Center Characteristics
As Reported on the LRC Summary File by the IMTS Sites*

VARIABLE	SITE	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Total Hours	LCCC	–	195	196	141	–	150	156
	SATC	126	138	–	96	90	114	120
	SCC	–	177	212	153	102	168	168
New Students	LCCC	–	67	4	11	–	39	2
	SATC	231	33	–	29	25	45	30
	SCC	–	25	25	22	19	21	17
Job Placements	LCCC	–	0	0	0	–	0	0
	SATC	4	2	–	0	0	3	2
	SCC	–	0	0	0	1	1	1
Reported Illnesses	LCCC	–	0	1	0	–	1	0
	SATC	0	4	–	0	1	5	1
	SCC	–	0	1	1	0	1	0
Completions	LCCC	–	0	0	0	–	1	2
	SATC	1	5	–	16	8	5	7
	SCC	–	5	0	2	2	2	0
Transfers	LCCC	–	0	2	6	–	15	0
	SATC	29	10	–	16	5	8	9
	SCC	–	2	2	0	4	2	0
Leavers for Reasons Unknown	LCCC	–	0	0	0	–	8	0
	SATC	4	14	–	11	7	9	5
	SCC	–	0	3	2	2	1	0
Other Leavers	LCCC	–	35	35	35	–	35	35
	SATC	25	17	–	12	3	15	3
	SCC	–	0	1	0	0	0	0
Maximum Number of Students per Hour	LCCC	–	0	28	28	–	30	30
	SATC	60	82	–	88	87	73	73
	SCC	–	25	25	25	25	25	25
Minimum Number of Students per Hour	LCCC	–	0	6	6	–	6	6
	SATC	30	40	–	64	59	63	63
	SCC	–	15	15	15	15	15	15
Terminations	LCCC	–	0	4	0	–	33	8
	SATC	63	52	–	55	24	45	27
	SCC	–	0	0	5	10	7	1

* Dashes indicate missing data

As compared with the total reported new students of 113, 393, and 129, it shows only Lake City to have a net loss in student enrollment for the year. The total number of terminations reported are: Lake City, 55; St. Augustine, 256; and, Seminole, 23. These terminations add to the attrition already noted.

The following are the ranges from minimum to maximum number of students present per hour, on the basis of monthly averages:

	Students/Hr Min	Max	Average Hrs Open
Lake City	6	29	168
St. Augustine	53	77	114
Seminole	15	25	163

When the midpoints of these range intervals are multiplied with the average number of hours the LRCs were open, a crude production function results in terms of the average number of student hours of training per month. The comparison among the LRCs then looks like this:

Lake City:	[(6 + 29)/2] x 168	= 2940 St. hrs/mnt
St. Augustine:	[(53 + 77)/2] x 114	= 7410 St. hrs/mnt
Seminole:	[(15 + 25)/2] x 163	= 3260 St. hrs/mnt

The data tabulated in Table 11 were, in some sense, verifying information of that transmitted on an informal basis in the beginning of this section. In any case, the data are augmentations of this information and serve to round it out.

Table 12 shows the number of each type of staff member employed at each LRC.

Note that the staffing patterns of the three sites reporting the data are very similar, except for the absence of a vocational evaluator and an "other staff" member at Lake City, and the very high preponderance of learning managers at St. Augustine. The latter, no doubt, is responsible for the fact that St. Augustine enjoyed the highest value on the student hours production function noted earlier. In all three LRCs, the staffing patterns prove to be extremely stable over the calendar months of the school year.

Tables 13A, 13B, and 13C display the patterns of time spent by each staff member on IMTS, non-IMTS, and total duties, respectively. In terms of monthly averages, the inter-site comparison takes the following form:

		LCCC	SATC	SCC
		Mean hrs/month/staff member		
Center Manager/Counselor	IMTS	160	157	20
	Non-IMTS	3	10	20
	TOTAL	163	167	40
Learning Managers	IMTS	181	86	37
	Non-IMTS	0	1	0
	TOTAL	181	87	37
Aides	IMTS	163	122	40
	Non-IMTS	0	0	0
	TOTAL	163	122	40
Vocational Instructors	IMTS	—	117	20
	Non-IMTS	—	0	20
	TOTAL	—	117	40
Other Staff	IMTS	—	146	12
	Non-IMTS	—	0	0
	TOTAL	—	146	12

The preceding central tendencies show a wide range of divergence. At Lake City, the monthly hour load is by far the greatest. On the other hand, percentage-wise at least, the amount of "other hours" at the LRC is nearly 50 percent of the total at Seminole, with barely one percent of such extra time at the other LRCs.

Table 11
Items of Equipment
Reported on the LRC Summary Data Form

VARIABLE	SITE	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Carrels	LCCC	—	10	10	10	—	10	10
	SATC	0	0	—	0	0	0	0
	SCC	—	19	19	19	19	19	19
Desks	LCCC	—	5	5	5	—	5	5
	SATC	49	7	—	7	7	7	7
	SCC	—	1	1	2	2	2	2
Tables	LCCC	—	0	0	0	—	0	0
	SATC	15	15	—	15	15	15	15
	SCC	—	3	3	6	6	6	6
Other Equipment	LCCC	—	0	28	28	—	30	30
	SATC	60	82	—	88	87	73	73
	SCC	—	0	0	1	1	1	1

Table 12
Number of Staff Members,
By Type, Reported at Each Center

SITE	VAR.	MNT.	MGR COUN	MGR LRN	BEH	AIDE	AV SPEC	AC SPEC	VOC EVAL	OTH STF	TOTAL
LCCC	#	OCT	1	2	0	1	0	0	0	0	4
		NOV	1	2	0	1	0	0	0	0	4
		DEC	1	2	0	1	0	0	0	0	4
		FEB	1	2	0	1	0	0	0	0	4
		MAR	1	2	0	1	0	0	0	0	4
SATC	#	SEP	1	8	0	4	0	0	1	1	15
		OCT	1	9	0	4	0	0	1	1	15
		DEC	1	9	0	4	0	0	1	1	15
		JAN	1	9	0	4	0	0	1	1	15
		FEB	1	9	0	4	0	0	1	1	15
		MAR	1	9	0	4	0	0	1	1	15
SCC	#	OCT	1	1	0	1	0	0	1	1	5
		NOV	1	1	0	1	0	0	1	1	5
		DEC	1	2	0	1	0	0	1	1	6
		JAN	1	2	0	1	0	0	1	1	6
		FEB	1	2	0	1	0	0	1	1	6
		MAR	1	2	0	1	0	0	1	1	6

Table 13A
Number of Hours, By Month,
Spent at the LRC by Each Staff Member on IMTS Duties

SITE	VAR	MNT	MGR COUN	MGR LRN	BEH	AIDE	AV SPEC	AC SPEC	VOC EVAL	OTH STF	TOTAL
LCCC	HRS	OCT	168	390	0	168	0	0	0	0	726
		NOV	184	383	0	184	0	0	0	0	751
		DEC	144	321	0	144	0	0	0	0	609
		FEB	160	324	0	160	0	0	0	0	644
		MAR	144	392	0	160	0	0	0	0	696
SATC	HRS	SEP	168	714	0	480	0	0	126	157	1645
		OCT	184	928	0	547	0	0	172	172	2003
		DEC	160	827	0	543	0	0	15	143	1822
		JAN	136	691	0	446	0	0	127	127	1527
		FEB	136	630	0	399	0	0	127	127	1419
		MAR	160	833	0	518	0	0	136	150	1797
SCC	HRS	OCT	20	40	0	40	0	0	20	12	132
		NOV	20	40	0	40	0	0	20	12	132
		DEC	20	60	0	40	0	0	20	12	152
		JAN	20	60	0	40	0	0	20	12	152
		FEB	20	60	0	40	0	0	20	12	152
		MAR	20	60	0	40	0	0	20	12	152

Table 13B
Number of Hours, By Month,
Spent at the LRC by Each Staff Member on Non-IMTS Duties

SITE	VAR	MNT	MGR COUN	MGR LRN	BEH AIDE	AV SPEC	AC SPEC	VOC EVAL	OTH STF	TOTAL
LCCC	OTH	OCT	0	0	0 0	0	0	0	0	0
	HRS	NOV	0	0	0 0	0	0	0	0	0
		DEC	0	0	0 0	0	0	0	0	0
		FEB	0	0	0 0	0	0	0	0	0
		MAR	16	0	0 0	0	0	0	0	16
SATC	OTH	SEP	18	0	0 0	0	0	0	0	18
	HRS	OCT	5	21	0 0	0	0	0	0	26
		DEC	10	21	0 0	0	0	0	0	31
		JAN	6	0	0 0	0	0	0	0	6
		FEB	10	0	0 0	0	0	0	0	10
		MAR	6	6	0 0	0	0	0	0	12
SCC	OTH	OCT	20	0	0 0	0	0	20	0	40
	HRS	NOV	20	0	0 0	0	0	20	0	40
		DEC	20	0	0 0	0	0	20	0	40
		JAN	20	0	0 0	0	0	20	0	40
		FEB	20	0	0 0	0	0	20	0	40
		MAR	20	0	0 0	0	0	20	0	40

Table 13C
Total Number of Hours, By Month,
Spent at the LRC by Each Staff Member

SITE	VAR	MNT	MGR COUN	MGR LRN	BEH	AIDE	AV SPEC	AC SPEC	VOC EVAL	OTH STF	TOTAL
LCCC	Total	OCT	168	390	0	168	0	0	0	0	726
	HRS	NOV	184	383	0	184	0	0	0	0	751
		DEC	144	321	0	144	0	0	0	0	609
		FEB	160	324	0	160	0	0	0	0	644
		MAR	160	392	0	160	0	0	0	0	712
SATC	Total	SEP	186	714	0	480	0	0	126	157	1663
	HRS	OCT	189	949	0	547	0	0	172	172	2029
		DEC	170	848	0	543	0	0	150	143	1853
		JAN	142	691	0	446	0	0	127	127	1533
		FEB	146	630	0	399	0	0	127	127	1429
		MAR	166	839	0	518	0	0	136	150	1809
SCC	Total	OCT	40	40	0	40	0	0	40	12	172
	HRS	NOV	40	40	0	40	0	0	40	12	172
		DEC	40	60	0	40	0	0	40	12	192
		JAN	40	60	0	40	0	0	40	12	192
		FEB	40	60	0	40	0	0	40	12	192
		MAR	40	60	0	40	0	0	40	12	192

CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

"Statistics are no substitute for judgment."

Calvin Lloyd

Couched in terms of its essentials, this report describes the experience with the first run of a computerized data system designed for the purpose of evaluating a number of IMTS Learning Resource Centers. Using specially created forms, data were collected on the student, teacher, and Center levels at five such IMTS sites: Lake City, Hernando County, Lively, St. Augustine, and Seminole. In addition, data were collected at two non-IMTS sites: Taylor County and Sarasota County, for control purposes.

In general, it was found that the installation of the IMTS procedures at the five LRCs were sufficiently uniform to permit a meaningful comparison among the sites. If it is taken into account that this first run of the data system must be viewed as much an evaluation of this system itself as it was aimed at evaluating the IMTS programs, then the over-all outcome of the experience can be rated as highly positive. The following synopsis summarizes the major results of the data collection, compilation, and analysis procedures:

1. There was a high degree of cooperative compliance with the data collection requirements at both the IMTS and control sites.

2. Due to the unfamiliarity with a new system, and because this first run was a necessary learning experience for the students and staff, there was a substantial data attrition rate.

3. Based on the analysis of the socio-demographic data in the personal enrollment segment of the student records, it was found that the compositions of the student bodies at all sites were highly similar.

4. On the basis of an analysis of the pre-posttest gainscores data for the TABE test in reading, language, and arithmetic, an estimated average grade equivalent gain of nearly 1.5 was obtained by the students at the IMTS sites in less than three months. This compares most favorably with an estimated .5 grade equivalent at the control sites over a period of more than four months.

5. The rate of utilization of the learning modules, mainstay of the IMTS procedures, was found to be excellent, with an over-all efficiency quotient of better than 90 percent.

6. Primarily because of the need for tightening up the data collection and transmission procedures, the results on such augmentation components as complementary skills, employability skills, work station experience, and goal setting were somewhat ambiguous. In many cases, no assessment was possible. However, where data and information were made available, the effects were seen to be positive and constructive toward a goal of increased student achievement levels.

7. Data on the staffing patterns in IMTS sites, staff use of time, staff/learner ratios, and use of available facilities showed a highly efficient and productive operation to be carried out in all sites where such data were available.

Albeit with some reservations because of the observed data loss due to the newness of the computerized data system, the following tentative conclusions emerge from the findings outlined previously:

1. The computerized data system is indeed a viable instrument for the comprehensive and ongoing evaluation of the IMTS programs. It can and does fulfill the goals and objectives for which it was designed.

2. The IMTS approach to individualized instruction proves to be a highly efficient, adaptive, and productive strategy to fill the needs of individual students who have unique learning problems. In a majority of cases, dramatic improvements in the level of student achievement and performance are demonstrated.

3. The IMTS procedures permit a high degree of consistency and uniformity in installation, as is demonstrated by a good congruence of results in widely divergent geographic areas.

Pursuant to the lessons learned from the experience with this first implementation of the computerized data system, the following constructive recommendations are offered:

1. The full development of this computerized data system should be pursued with strong application and vigor.

2. Since salvation does not lie in the multiplicity of words, all data elements should be carefully reviewed and considered before retention in the system.

Such bits of information as "number of children," "dependents," etc., probably cost more in terms of over-all accuracy, loss of data, collection, and transmission costs than they contribute to the precision of the IMTS program evaluation.

3. The administration and supervision of all data collection procedures, proctoring, keypunching, tape transcription, compilation, and analysis should be housed at once under a centralized, enforcing authority. There are strong indications of a serious need for the appointment of a full-time director, whose training and background would be suited to performance of all managerial, monitoring, and systems analytic functions.

APPENDIX A

LIST OF IMTS TRAINING PACKAGES DEVELOPED IN PHASES I AND II

"A Model Program To Instruct Manpower Training Personnel in the Selection and Application of Remedial Instructional Materials To Meet Individual Trainee Needs"

CONTENT OF STAFF TRAINING PACKAGES FOR IMTS

PRE–PLANNING PACKAGES

A. Preplanning Guide
   1. Trainer's Guide
   2. Printed version of Introduction to the IMTS
   3. IMTS Brochure
   4. Justification Information
      a. Questionnaire
      b. Concept Paper, "Toward an IMTS"
   5. Description of Staff Training
      a. Script for Transparencies
      b. Transparency Copy
      c. Samples of Workshop Agendas *(Also used in each workshop)*
      d. Chart of Staff Training Plan
   6. Chart of Funding Resources
   7. Commitment Checklist
   8. Application for Staff Training

B. Introduction to the IMTS (Tape/Slide)

C. Monograph: The Total IMTS

D. Brief Review of Project

ORIENTATION WORKSHOP PACKAGE

A. Orientation Workshop Folder
   1. Agenda (Sample) *[Same as in Preplanning Package]*
   2. Discussion Guide
   3. Brief Review of IMTS Project
   4. Questionnaire
   5. Application for Staff Training

B. Tape/Slide: "Introduction to the IMTS" *(Same as one for Preplanning)*

C. "The Total IMTS" (Monograph)

D. Prescribing Exercise *(Same one used for Operating Workshop)*
   1. Tape/Slide *(Same one used for Operating Workshop)*
   2. Printed Sample Set

E. FAM Introduction

F. Suggested Floor Plans *(Also used in the Establishing Workshop)*
   1. Printed
   2. Transparencies

ORIENTATION WORKSHOP PACKAGE (Continued)

G. Component Program Prescribing Catalogs and Guides *(Reading, Language, Arithmetic, Occupational Exploratory Manual, and Complementary Skills*

H. AIMS Orientation
   1. Tape
   2. Forms

I. Budget Specifications for Establishing the IMTS *(Also used for Establishing Workshop)*

J. Establishing Guide and Forms *(Also used in Establishing Workshop)*

ESTABLISHING WORKSHOP PACKAGE

A. Establishing Workshop Folder
   1. Agenda (Sample)
   2. Expected Outcomes Chart
   3. "Boiler Plate" *(Narrative Proposal)*

Also needed from Preplanning and Orientation Packages:

- Establishing Guide and Forms
- Budget and Specifications for the IMTS
- Management Plan Transparencies
- Answers to Questionnaire in Preplanning Package
- Chart of Staff Training Plan *(Printed & Transparency)*

PRE–WORKSHOP ASSIGNMENTS PACKAGE FOR OPERATING

A. Assignments and Discussion Guide

B. Copy of Employability Program for Staff Training

C. Operating Guides
   1. Complementary Skills
   2. Language and Arithmetic

D. Establishing and Operating the Occupational Exploratory Program (OEP)

E. FAM Introduction

F. Demonstration Recommendations

CONTENT OF STAFF TRAINING PACKAGES FOR IMTS

PRE–WORKSHOP ASSIGNMENTS PACKAGE FOR OPERATING (Continued)

G. Case Studies *(Interviewing, Diagnosing, Testing, Prescribing, Managing and Evaluating, and Managing the IMTS*

Also needed from the Preplanning Package:

- Concept Paper, "Toward an IMTS"

OPERATING WORKSHOP PACKAGE

A. Operating Workshop Folder

1. Agenda (Sample)
2. Assessment Instruments
3. IMTS Task Assignment Forms
4. Self–Directed Study List with Progress Chart

B. Trainee Orientation

1. Printed Script
2. Tape/Slide

C. Case Study Set *(Interviewing, Diagnosing, Testing, Prescribing, Managing and Evaluating, and Managing the IMTS*

1. Tape/Slide *(interviewing, Diagnosing & Prescribing)*
2. Printed Programmed Modules
3. Workbooks for Diagnosing, Testing and Prescribing

D. Reading Programmed Module and Forms

E. Sample Case Exercise for Complementary Skills

F. Employability Program

1. Tape/Slide
2. Sample Case Exercise *(Printed)*

G. AIMS Leader's Guide (PMA Institute)

H. AIMS Participant's Manual (PMA Institute)

I. AIMS Set of Tapes (PMA Institute)

J. Tape/Slide "Programming is a Process" (Tiemann Assoc.)

K. FAM Study Guide *(optional)*

L. Prescribing Catalog *(Language and Math) [Notebook]*

M. TABE Tests and Answer Forms (CTB)

N. FAM Action Line Form *(For Technical Assistance)*

OPERATING WORKSHOP PACKAGE (Continued)

O. Complementary Skills Prescribing Catalog

P. Diagnostic Check Set

Q. Guide to Observations and Appraisals by IMTS Establishment and Operation

Also needed from Preworkshop Assignment:

- Operating Guide for Language and Math
- Operating Guide for Complementary Skills
- Establishing and Operating the Occupational Exploratory Program

TWO–WEEK INTERNSHIP AND INSERVICE TRAINING PACKAGE

(Use materials from Operating Workshop Package as references)

A. Assessment Instruments Performance Checklist for Self–assessment and Monitoring

B. P.I. Process and Products Programmed Module

1. Tape/Slide
2. Workbook
3. Printed Programmed Module

APPENDIX B

University of West Florida's Plan for the "Development of a Computerized Information System for School Programs Using Individualized Manpower Training System Concepts"

THE DEVELOPMENT OF A COMPUTERIZED INFORMATION SYSTEM FOR SCHOOL PROGRAMS USING INDIVIDUALIZED MANPOWER TRAINING SYSTEM CONCEPTS

I. NATURE OF THE PROPOSED PROJECT

The project will be established to develop a computerized information system for the Individualized Manpower Training System (IMTS) sites operating in Florida. The IMTS is an individualized method for delivery of basic remedial and related education for prevocational and exploratory activities. The Individualized Manpower Training System provides remedial education in reading, arithmetic and language. Component programs on complementary skills (consumer education, health and personal - social skill training), employability behavior (time-keeping, job performance and care of property and resources), and work sampling are available with the System. At present there are eight operating sites in Florida using the IMTS concepts with additional sites scheduled to begin operation in the near future. While the projected number of IMTS sites is expected to increase to twenty-five in the near future, the information system will be developed on the basis of data from the following sites presently in operation:

Beggs Educational Center, Pensacola

Blanch-Ely Adult Education Center, Pompano

Hernando County Adult Center, Brooksville

Lake City Community College, Lake City

Lively Voc-Tech Center, Tallahassee

Miami Skill Center, Miami

St. Augustine Adult Voc-Tech Center, St. Augustine

Seminole Junior College, Sanford

Information requirements will be compiled from the staff of the schools implementing IMTS concepts and the Florida State Department of Education. Based on these informational requirements, a computerized information system for school programs using Individualized Manpower Training System concepts will be designed. The project will include the development of a system design and information collecting procedures. Workshops will be conducted for area supervisors and IMTS site managers to examine the information system design, operational procedures and the expected results. After the initial computer run another workshop will be conducted to analyze the computerized information. The project will be documented by a final report submitted to each IMTS site and the State Department of Education.

Coordination will be maintained with the Technical Education Research Center (TERC) staff to insure that the Florida information system will be coordinated with any national attempt at evaluating IMTS sites. The State of Florida, as well as other states, will benefit from the development of comparable data and compatible evaluation systems.

II. NEED FOR THE PROPOSED PROJECT

Despite the favorable acceptance of the IMTS in Florida, no formalized statewide data information system has been developed. With the expected increase in IMTS sites, it becomes more and more important to have a centralized, computerized system for collecting data on IMTS student outcomes. Student gain information is needed by the schools implementing IMTS concepts, the State Department of Education and district school boards and community colleges who will be requested to assume continuation funding for the sites.

A comprehensive information processing procedure for IMTS is required to insure satisfaction of the needs of the persons served and to facilitate the development of new instructional materials and teaching strategies.

III. PROCEDURE OF THE PROPOSED PROJECT.

The flow chart in Figure I outlines the developmental procedure for the Florida IMTS information system. Each activity is identified and more fully explained in the following text.

Activity Number 1. Consult with IMTS site managers and the State Department of Education staff on the exact information and type of reports needed by each. This activity will be the responsibility of the project director and will be accomplished by on site consultation with each of the eight IMTS managers.

Activity Number 2. Design a computerized system to process the information received from the IMTS centers. The system design will be a joint activity to be completed by the project director, the project coordinator, a TERC consultant, and the Division of Vocational, Technical and Adult Education (VTAE) computer services staff. The programming will be the responsibility of the VTAE computer services staff. The system design will include coding of existing data collection forms so that they are compatible with a computerized system. The project coordinator in consultation with IMTS site managers will code existing data and design modified data collection forms, coded for key punch operator use. Key punching the data will be the responsibility of the VTAE computer services staff.

Activity Number 3. Conduct a one-day workshop for Department of Education Adult Area Vocational Supervisors to explain the information system. The project director and coordinator will conduct the workshop and request the area

supervisors assistance in implementing the information system.

Activity Number 4. Conduct a one-day workshop for Managers of existing and future IMTS sites for the purpose of providing information on the system design, operational procedures and expected results. This activity will be the responsibility of the project director and coordinator.

Activity Number 5. Coordinate the IMTS sites' standardized use of the revised forms. This activity will be completed by the project coordinator by visitation to the individual sites for form utilization training and to insure standardized data recording. Area supervisors will be requested to assist in the accomplishment of this activity.

Activity Number 6. Audit the IMTS site data collection and data forwarding processes during the trial run. Auditing will be the responsibility of the project coordinator in cooperation with the area supervisors.

Activity Number 7. Conduct the computer trial run using one month's data from all operating IMTS sites. This activity will be conducted by the VTAE computer staff and will result in a computerized evaluation report.

Activity Number 8. Revise the information system as necessary. Revision of the computer program if necessary, will be joint responsibility of the project coordinator and the VTAE computer staff.

Activity Number 9. Revise data collection forms as necessary. This activity will be the responsibility of the project coordinator.

Activity Number 10. Conduct a workshop for IMTS Managers to discuss the trial run and usefulness of the first computer report. Evaluation of the initial computer report will involve the project director and project coordinator, VTAE computer services staff, Technical Educational Research Center consultant, and IMTS site managers.

Activity Number 11. Revise the system as necessary. If additional revision are required after the initial computer analysis, the revisions will be the responsibility of the project coordinator and the VTAE computer staff.

Activity Number 12. Submit the final report to the State Department of Education and each IMTS site on completion of the project. The final report will be written by the project coordinator under the direction of the project director. It will explain the information system, collection procedures and information obtainable through the computerized reporting system.

Several activities will be continuous during the project as indicated by the flow chart. In summary, the systems design will be a joint activity to be completed by the project director, project coordinator and VTAE Computer Services staff after consultation with IMTS site managers. Data collection and distribution of the computerized analysis will be the responsibility of VTAE Computer Services staff. The remaining activities covered by the project procedure will be the responsibility of the project director and coordinator.

IV. PROJECT PERSONNEL

Director:

The project director has the overall responsibility for the computerized information system project. Dr. Donald F. Wallace, Assistant Professor, Department of Vocational-Technical Education, University of West Florida will be assigned this position.

Coordinator:

The project coordinator is to be selected by the project director. The person assigned this position should possess a Master's Degree, be familiar with IMTS concepts, and have a basic knowledge of computer programming.

VTAE Staff:

The Department of Vocational Technical Education computer services staff personnel are to be selected under the direction of Mr. Francis Watson. System design personnel and key punch personnel will be selected by Mr. Watson.

TERC Staff:

The Technical Education Research Center consultant will be selected under the direction of Mrs. Donna Seay, Southeast Director, Technical Education Research Center, Montgomery, Alabama.

Secretary:

The project secretary will be selected by the project director. The secretary assigned to the project should possess the rank of Secretary III.

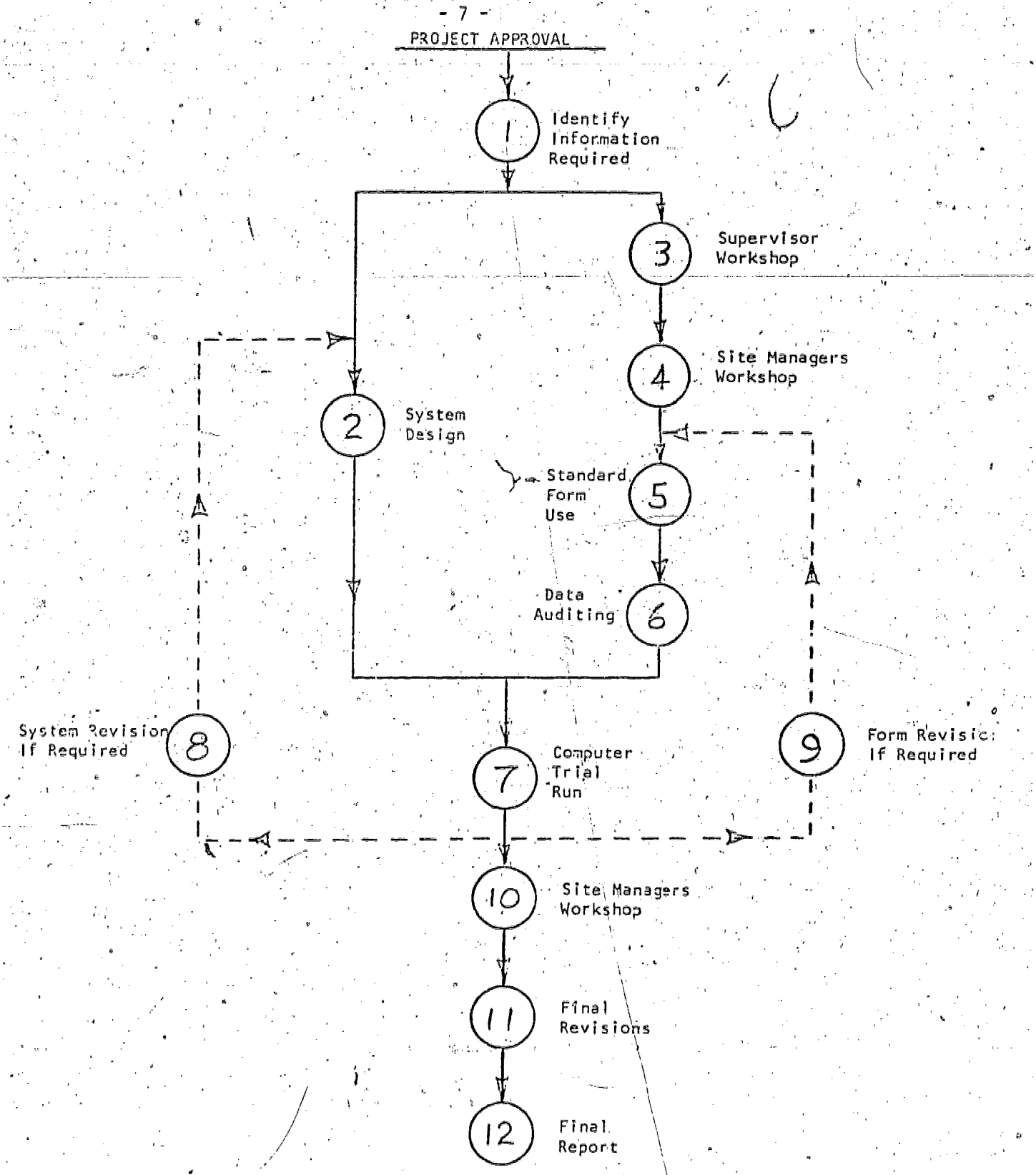
PROJECT APPROVAL
1
Identify Information Required
3
Supervisor Workshop
4
Site Managers Workshop
2
System Design
Standard Form Use
5
Data Auditing
6
System Revision If Required
8
7
Computer Trial Run
9
Form Revisic: If Required
10
Site Managers Workshop
11
Final Revisions
12
Final Report

FIGURE 1
63

APPENDIX C

LETTER OF INTRODUCTION AND LIST OF PEOPLE RECEIVING LETTER

RALPH D. TURLINGTON
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

July 1, 1975

Mr. James Joyce, Director
Lively Area Vocational-Technical Center
Appleyard Drive
Tallahassee, Florida 32304

Dear Mr. Joyce:

This letter is to introduce Mrs. Donna M. Seay, Montgomery, Alabama. She is conducting a research project funded by the U. S. Office of Education and in cooperation with the Division of Vocational Education, Florida Department of Education, to improve the delivery system for vocational compensatory education for educationally disadvantaged persons. In the very near future, Mrs. Seay will be in communication with you regarding this project.

The Division of Vocational Education will use the product of this project and is therefore soliciting your cooperation in its conduct. Mrs. Seay desires to provide you with an orientation to the study and a proposal for your participating in the project.

Thank you for your cooperation.

Sincerely,

J. A. Barge, Director
Special Program Section

JAB:pv

cc: Mr. Joe D. Mills
Mr. C. M. Lawrence

Letter Recipients:

Mr. James Joyce, Director
Lively Vocational Technical Center
Appleyard Drive
Tallahassee, Florida 32304

Mr. Ralph Upton, Director
St. Augustine Adult Vocational Technical Center
Collins Avenue
St. Augustine, Florida 32084

Mr. John Porter, Director
Hernando County Adult and Community Education Center
1036 Varsity Drive
Brooksville, Florida 33512

Mr. Willie Latson, Director
Blanch–Ely Community Career Complex
801 Northwest 10th Street
Pompano Beach, Florida 33060

Mr. Herbert Attaway, Director
Lake City Community College
Lake City, Florida 32055

*Dr. Samuel R. Neel, Jr., President
Manatee Community College
5840 26th Street West
Bradenton, Florida 33507

*Mr. James Talbot, Principal
A. Quinn Jonas Adult Education Center
716 N.W. 10th Street
Gainesville, Florida 32601

*Mr. Harry Holmbraker, Director
Sarasota County Area Vocational Technical Center
4748 Beneva Road
Sarasota, Florida 33581

* Non-IMTS sites

Letter Recipients, continued

Dr. E.A. Johnson, Director
Adult and Continuing Education
Seminole Community College
Sanford, Florida 32771

*Dr. E.B. Williams, Director
Taylor County Area Vocational Technical Center
3233 Hwy. 19 S.
Perry, Florida 32347

Chipley Community College
Chipley, Florida

* Non-IMTS sites

APPENDIX D

WORKSHOPS' AGENDA

A G E N D A

PROJECT PLANNING MEETING

"A Comprehensive System for the Evaluation of Individualized Manpower Training Sites"

Tampa Airport Hotel
Tampa, Florida
September 18 or 19, 1975*

10:00 a.m.	Welcome and Introductions	Donna Seay
10:15 a.m.	Project Plans Objectives Procedures Schedule	Donna Seay
	Discussion	Participants
12 Noon	Lunch	
1:00 p.m.	Review of Data Forms	Representative from University of West Florida
2:00 p.m.	Responsibilities of Site Representatives	Donna Seay
3:00 p.m.	Discussion	Participants
3:30	Adjourn	

*September 18 for IMTS Site Representatives
September 19 for non-IMTS Site Representatives

APPENDIX E

IMTS STUDENT DATA COLLECTION FORMS

(Designed by the
University of West Florida)

and

Student Data Codes by Cards

PERSONAL DATA FORM

CARD NO. 1

LRC NUMBER (1–6)

STUDENT I.D. NUMBER

SOCIAL SECURITY NUMBER (7–15)

DATE (MO / DAY / YR) (21 / 26)

STUDENT'S NAME: LAST (27–39) FIRST (40–48) MI (49)

SEX (50) Female 1; Male 2 RACE (51) American Indian 1; Asian American 2; Black 3; Spanish Surnamed 4; White 5; Other 6

NAME USED BIRTHDATE (MO / DAY / YEAR) (52–57) HOME ADDRESS

TELEPHONE NUMBER OR NEIGHBOR'S NUMBER NAME OF LAST SCHOOL ATTENDED (OR PRESENTLY ENROLLED)

GRADE COMPLETED (58 59) LEFT SCHOOL IN: PRESENTLY ENROLLED IN ANOTHER TRAINING PROGRAM (60) Yes 1; No 2

TIME (61) Full Time 1; Part Time 2 LEVEL (62) Elementary 1; Secondary 2; Post-Secondary 3; Adult Basic 4; Adult General 5

TYPE EDUCATION PROGRAM (63) Post Secondary Vocational, 1st year 1; Post Secondary Vocational, 2nd year 2; Adult Vocational Technical 3

EDUCATION BENEFITS (64) CETA 1; WIN 2; VR 3; VOC 4; MIG 5; VA 6; Work Study 7; Other 8; None 9

EMPLOYMENT EXPERIENCE

TYPE OF WORK	NAME OF ORGANIZATION	LOCATION	DATES FROM	DATES TO

DEPENDENTS: Husband Wife Number of Children at Home Health - Currently Undergoing Treatment For:

PHYSICAL HANDICAPS (65) Deaf 1; Blind 2; Deaf & Blind 3 OTHER HEALTH PROBLEMS

IN CASE OF EMERGENCY CONTACT: TELEPHONE

PASSED GED TEST: (66) Yes 1; No 2 LOCATION: GOAL SET: IF YES, WHAT IS GOAL:

WOULD LIKE HELP IN CHOOSING: Occupational Goals Academic Goals

FLA. IMTS FORM #1, Revised 03/75

ARITHMETIC AND LANGUAGE STUDY SCHEDULE

Card No. 2

STUDENT'S NAME _____ MANAGER _____

GOAL: _____

SOCIAL SECURITY NUMBER [ ][ ][ ] [ ][ ] [ ][ ][ ][ ] (7–15)

CONCURRENT TRAINING: _____

LRC _____ NUMBER [ ][ ][ ][ ][ ][ ] (1–6)

ACHIEVEMENT TEST RESULTS-GRADE PLACEMENTS

(Fill in Name of Test (Level & Form), Date Taken, and the Achievement Test Results from Profile Sheet.)

LOCATOR SCORE (16 17)	LEVEL E, M, or D. (19)	FORM 1or2 (20)	DATE TAKEN MO. DAY YR. (21–26)	READING RV	READING RC	READING TR (27–38)	ARITHMETIC AR (39)	ARITHMETIC AF	ARITHMETIC TA (50)	LANGUAGE NE (51)	LANGUAGE S	LANGUAGE TL (62)	TOTAL
(PRE)													
(POST)													
(PRE)													
(POST)													
(PRE)													
(POST)													

PRESCRIPTION

Cat. Pg. No. (16 17)	G.P. (18)	Module Code (19–21)	Name of Material (22–27)	DATE MO. DAY YR.	Pre-Test (28)	Est. Hours (29–31)	Time on Module Min. (32–39)	Time on Test (Min.) Attempt Number Pre	1	2	3	Module Test Grade (40–51) Attempt Number Pre	1	2	3	Tutor Time Min (52 53)
		Arithmetic - Time Alloted Daily														
		A														
		A														
		A														
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Social Security Number ____________ CARD NO. 3

PRESCRIPTION

Ca. Pg. No	G.P	Module Code	Name of Material	Date Mo. Day Yr.	Pre-Test	Est. Hours	Time on Module Min.	Time on Test (Min.)				Module Test Grade				Tutor Time Min.
		Arithmetic	- Time Alloted Daily					Attempt Number				Attempt Number				
								Pre	1	2	3	Pre	1	2	3	
	16 17	18 21		22 27	28		29 31	32			39	40			51	52 53
		A														
		A														
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		A														
Total Estimated Study Time-Arith.																

FLA. INTC FORM #2
Revised 03/75

Social Security Number ____________ CARD No. 3.

PRESCRIPTION

Unit Pg. No.	G.P.		Module Code	Name of Material	Date Mo.	Day	Yr.	Pre. Test	Est. Hours	Time on Module Min.	Time on Test (Min.) Pre	1	2	3	Module Test Grade Pre	1	2	3	Tutor Time Min
			Language -	Time Alloted Daily							Attempt Number				Attempt Number				
	16	17	18 21		22		27	28		29 31	32			39	40			51	52 53
			L																
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			L																

Total Estimated Study Time-Lang.:

Grand Total of Estimated Study Time:

MTS FORM #2
d 03/75

CARD NO. 4

READING STUDY SCHEDULE

STUDENT'S NAME: _____

GOAL: _____

MANAGER'S NAME: _____

SOCIAL SECURITY NUMBER [ ][ ][ ] [ ][ ] [ ][ ][ ][ ] (7–15)

LRC _____ [ ][ ][ ][ ][ ][ ] (1–6)

CONCURRENT TRAINING: _____

ACHIEVEMENT TEST RESULTS-Grade Placements

(Fill in Name of Test - Level & Form - Date Taken, and the Achievement Test Results from Profile Sheet)

Locator Score: _____ Name of Test (Level & Form)	Date Taken	Reading			Arithmetic			Language			Total Battery
		RV	RC	TP	AR	AF	TA	ME	S	TL	
Pre											
Post											

General Skills: _____

Specific Skills: _____

READING ASSIGNMENT

DATE MO. DAY YR. (21–26)	G.P. (27 28)	LEVEL (29 30)	MODULE CODE (31–34)	SUPPLEMENTARY READING (35–39)	ASSIGNED MATERIAL	TIME - MINUTES START	FINISH	TOTAL (40–42)
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				
		R		S R				

READING STUDY SCHEDULE

Social Security Number ______________

CARD NO.
4

DATE			G.P.	LEVEL	MODULE CODE	SUPPLEMENTARY READING	ASSIGNED MATERIAL	TIME - MINUTES		
MO.	DAY	YR.						START	FINISH	TOTAL
21		26	27 28	29 30	31 34	35 39				40 42
					R	S R				
					R	S R				
					R	S R				
					R	S R				
					R	S R				
					R	S R				
					R	S R				
					R	S R				
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					R	S R				
					R	S R				
					R	S R				

PROGRAM	TOTALS		
	CYCLES OR CARTRIDGES	INSTRUCTIONAL HOURS	COMMENTS
READING TECHNOLOGY			
EDL			
OTHER			

IMTS FORM #3
ed 03/75

CARD No.

5

COMPLEMENTARY SKILLS STUDY SCHEDULE

STUDENT'S NAME ______________________ LRC ____________ NUMBER ☐☐☐☐☐☐ 1 6

MANAGER'S NAME ______________________

PROGRAM ______________________ SOCIAL SECURITY NUMBER ☐☐☐ ☐☐ ☐☐☐☐ 7 15

Cat. Pg. No.	G.P.	Module Code 16 20	Name of Material (Frame Number)	Est. Time Hrs.	Date Mo. Day Year 21 26	Time on Module Min. 27 29	Time on Test Min. 30 35		Module Test Grade 36 41		Tutoring Time Min. 42 44
							Pre	Post	Pre	Post	
		C S									
		C S									
		C S									
		C S									
		C S									
		C S									
		C S									
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FLA. IMTS FORM #1
Revised 03/75

CARD No. 6

SCHEDULE OF IMTS ACTIVITIES

LRC _____ NUMBER [ ][ ][ ][ ][ ][ ] (1–6)

SOCIAL SECURITY NO. [ ][ ][ ] [ ][ ] [ ][ ][ ][ ] (7)

DATE MO. [ ][ ] DAY [ ][ ] YR. [ ][ ] (15–21, 26)

EXPLORATORY ACTIVITIES	PRIORITY	COMPLETED	TIME (MIN.)
Occupational Interest Inventory		[ ] Yes 1; No 2 (27)	[ ][ ][ ] (28–30)
Occupational Information		[ ] Yes 1; No 2 (31)	[ ][ ][ ] (32–34)
Occupational Tours		[ ] Yes 1; No 2 (35)	[ ][ ][ ] (36–38)
Work Sampling Program		[ ] Yes 1; No 2 (39)	[ ][ ][ ] (40–42)
MOTIVATIONAL ACTIVITIES	PRIORITY	COMPLETED	
Counseling		[ ] Yes 1; No 2 (43)	[ ][ ][ ] (44–46)
Orientation Program		[ ] Yes 1; No 2 (47)	[ ][ ][ ] (48–50)
Goal Setting Program (AIMS)		[ ] Yes 1; No 2 (51)	[ ][ ][ ] (52–54)
Employability Behavior Program		[ ] Yes 1; No 2 (55)	[ ][ ][ ] (56–58)
ACADEMIC ACTIVITIES	PRIORITY	COMPLETED	
TABE Locator			
TABE Level E M D			
Study Schedule Interview			

FLA. IMTS FORM #5

Social Security Number _____ CARD No. 7

7. WORK STATIONS UTILIZED

	Number	
Basic Tools		27 28
Bench Assembly		29 30
Drafting		31 32
Electrical Wiring		33 34
Plumbing and Pipefitting		35 36
Carpentry & Woodworking		37 38
Refrigeration, Heating, & Air Cond.		39 40
Soldering & Welding		41 42
Office & Sales Clerk		43 44
Needle Trades		45 46
Masonry		47 48
Sheet Metal Working		49 50
Cooking & Baking		51 52
Small Engines		53 54
Cosmetology		55 56
Data Collection and Recording		57 58
Agricultural		59 60
Evaluator Package		61 62
Job Survival Skills Program Complete		63 64

8. Reason For Termination [ ] (65 66) Job Placement 1; Illness 2; Program Completion 3; Transferred to Another Program 4; Family moved 5; Benefits Terminated 6; Other 7; Unknown 8.

TIME TO BE SPENT IN LRC

Daily From _____ to _____

Monday From _____ to _____

Tuesday From _____ to _____

Wednesday From _____ to _____

Thursday From _____ to _____

Friday From _____ to _____

9. MONTHLY TOTAL HOURS [ ] (67 69)

10. Did student have a career goal upon entry to the program?

[ ] (70) Yes 1; No 2

11. Did student receive OEP?

[ ] (71) Yes 1; No 2

12. Did student set goal in the course of his/her participation?

[ ] (72) Yes 1; No 2

13. Language Spoken [ ] (73) English 1; Spanish 2; English and Spanish 3; Other 4.

FLA. IMTS FORM #5 (Revised 03/75)

STUDENT DATA CODES
(AFTER EDIT)

Column	Card 1, Personal Data
1-2	County number
3-6	School number
7-15	Social Security number
16-20	Blank
21-26	Date of enrollment
27-49	Student's name
50	Sex: 1 = male, 2 = female, 3 = unknown
51	Race: 1 = black, 2 = white, 3 = American Indian 4 = Asian American, 5 = Spanish American 6 = unknown
52-57	Date of birth
58, 59	Grade completed; 99 = unknown
60, 63	Additional program enrollment: 1 = yes, 2 = no
61	1 = full time, 2 = part time, 3 = unknown
62	1 = PSV 1, 2 = PSV 2, 3 = AVT, 4 = SEC, 5 = unknown
64	Benefits: 1 = CETA, 2 = WIN, 3 = VR, 4 = V, 5 = M, 6 = VA, 7 = WS, 8 = Other, 9 = unknown
65	Handicap: 1 = deaf, 2 = blind, 3 = deaf and blind, 4 = other, 5 = unknown
66	Passed GED: 1 = yes, 2 = no, 3 = unknown
67-79	Blank or to be ignored
80	Card number = 1

	Card 2, Arithmetic and Language
1-2	County number
3-6	School number
7-15	Social Security number
16, 17	Locator score
18	1 = PRE, 2 = POST
19	Level: E = easy, M = median, D = difficult
20	Form: 1 = Form 1, 2 = Form 2
21-26	Date taken
27-30	Reading score (vocabulary)
31-34	Reading score (comprehension)

Column	Card 2, continued
35-38	Reading score (total)
39-42	Arithmetic score (reasoning)
43-46	Arithmetic score (fundamentals)
47-50	Arithmetic score (total)
51-54	Language score (grammar)
55-58	Language score (spelling)
59-62	Language score (total)
63-79	Blank or to be ignored
80	Card number = 2

	Card 3, Prescription
1-2	County number
3-6	School number
7-15	Social Security number
16	Grade placement on TABE for module
17-20	Module code
21-26	Date module was taken
27	1 = PRE, 2 = POST
28-30	Time on module
31-32	Test time for pretest
33-34	Test time for first try
35-36	Test time for second try
37-38	Test time for third try
39-41	Test grade on pretest
42-44	Test grade on first try
45-47	Test grade on second try
48-50	Test grade on third try
51-52	Tutorial time
53-79	Blank or to be ignored
80	Card number = 3

	Card 4, Reading Modules
1-2	County number
3-6	School number
7-15	Social Security number
16-20	Blank
21-26	Date module was taken
27-28	Grade placement
29-30	Level
31-34	Module code
35-39	Blank or to be ignored

40-42	Total time
43-79	Blank or to be ignored

Card 5, Complementary Skills

1-2	County number
3-6	School number
7-15	Social Security number
16-20	Module code
21-26	Date taken
27-29	Time on module
30-32	Test time (pretest)
33-35	Test time (posttest)
36-38	Test grade (pretest)
39-41	Test grade (posttest)
42-43	Tutor time

Card 6, IMTS Schedules

1-2	County number
3-6	School number
7-15	Social Security number
16-20	Not used
21-26	Date completed
27-30	Occupational Interest Inventory
	Column 27: 1 = completed
	Column 28-30: time
31-34	Occupational Information
	Column 31: 1 = completed
	Column 32-34: time
35-38	Occupational tours
	Column 35: 1 = completed
	Column 36-38: time
39-42	Work sample
	Column 39: 1 = completed
	Column 40-42: time
43-46	Counseling
	Column 43: 1 = completed
	Column 44-46: time
47-50	Orientation
	Column 47: 1 = completed
	Column 48-50: time

	Column 51: 1 = completed
	Column 52-54: time
55-58	Employment benefit program
	Column 55: 1 = completed
	Column 56-58: time
59-79	Blank or to be ignored
80	Card number = 6

Card 7, Work Stations Utilized

1-2	County number
3-6	School number
7-15	Social Security number
16-20	Not used
21-26	Date
27-28	Basic tools
29-30	Bench assembly
31-32	Drafting
33-34	Electricity
35-36	Plumbing
37-38	Carpentry
39-40	Refrigeration and Air Conditioning
41-42	Welding
43-44	Office occupations
45-46	Needle
47-48	Masonry
49-50	Sheet metal
51-52	Cook
53-54	Engines
55-56	Cosmetology
57-58	Data Processing
59-60	Agriculture
61-62	Evaluation
63-64	Job
65-66	Termination
67-69	Monthly total hours
70	Career goal: 1 = goal set, 2 = no goal
71	Occupational exploration program
	1 = registered, 2 = did not register
72	Goal set after enrollment: 1 = yes, 2 = no
73	Number of languages: 1 = English only,

74-79	Blank or to be ignored
80	Card number = 7

APPENDIX F

CONTROL SITE STUDENT DATA COLLECTION FORMS

(Designed by TERC)

and

Student Data Codes by Cards

Last First Middle Initial

Sex: Male ☐ Female ☐

Race: Black ☐ White ☐ American Indian ☐ Asian American ☐ Spanish Surnamed ☐

Other: _____ Languages Spoken: _____

Date of Birth: _____ Month _____ Day _____ Year

Home Address: _____ Number _____ Street _____ City _____ State

Telephone Number or Neighbor's Number: _____

Name of Last School Attended (or Presently Enrolled): _____

Grade Completed: _____ Left School in: _____ Date

Presently Enrolled in Another Training Program? ☐ Yes ☐ No Time in School: ☐ Full Time ☐ Parttime

Level: ☐ Elementary ☐ Secondary ☐ Post Secondary ☐ Adult Basic ☐ Adult General

Type of Education Program: ☐ Post Secondary Vocational, 1st Year ☐ Adult Vocational Technical
☐ Post Secondary, 2nd Year ☐ Secondary

Education Benefits: ☐ CETA ☐ WIN ☐ Vocational Rehabilitation ☐ Vocational ☐ Migrant
☐ Veteran Administration ☐ Work Study ☐ Other _____ ☐ None

EMPLOYMENT EXPERIENCE:

TYPE OF WORK	NAME OF ORGANIZATION	LOCATION	FROM	TO

In Case of Emergency Contact: _____ Telephone: _____

Passed GED Test: ☐ Yes ☐ No Location: _____

Would Like Help in Choosing Goals: ☐ Occupational ☐ Academic

Goal Set: ☐ Yes ☐ No (If Yes, Give Goal): _____

ACHIEVEMENT TEST SCORES ON PRETEST:

Name of Test	Total Amount of Class Time Between Pre–Post Test	SCORES (Grade Level or % Rank)		% or Grade Change
		Pretest	Last Posttest	
ABLE				
SAT				
Florida – 12th Grade				
Nelson–Denny				
Other:				

Date of Termination: _____

Reason for Termination: _____

Social Security No.: _____ _____ _____ Name of School: _____

Goal: _____

ACHIEVEMENT TEST RESULTS:

Name of Test	PRETEST		POSTTEST		Total No. Of Hours In School	% or Grade Change Between Pre–Post
	Date	Score	Date	Score		

SUBJECT–MATTER STUDIED DURING MONTH:

Courses or Subjects Studied	Total No. Hours Studied	Average Test Scores	Total Tutor Time	Ratio of Staff To Students

Hours of Counseling: Individual _____ Group _____

Number of Motivational Activities: Personal Interviews and Contacts _____ Social Gatherings Attended _____

CAREER ACTIVITIES:

Career Activities	Amount of Time Spent	Staff in Charge

Qualify for Occupational Training Course: ☐ Yes ☐ No

Name of Occupational Course (If Enrolled in One): _____

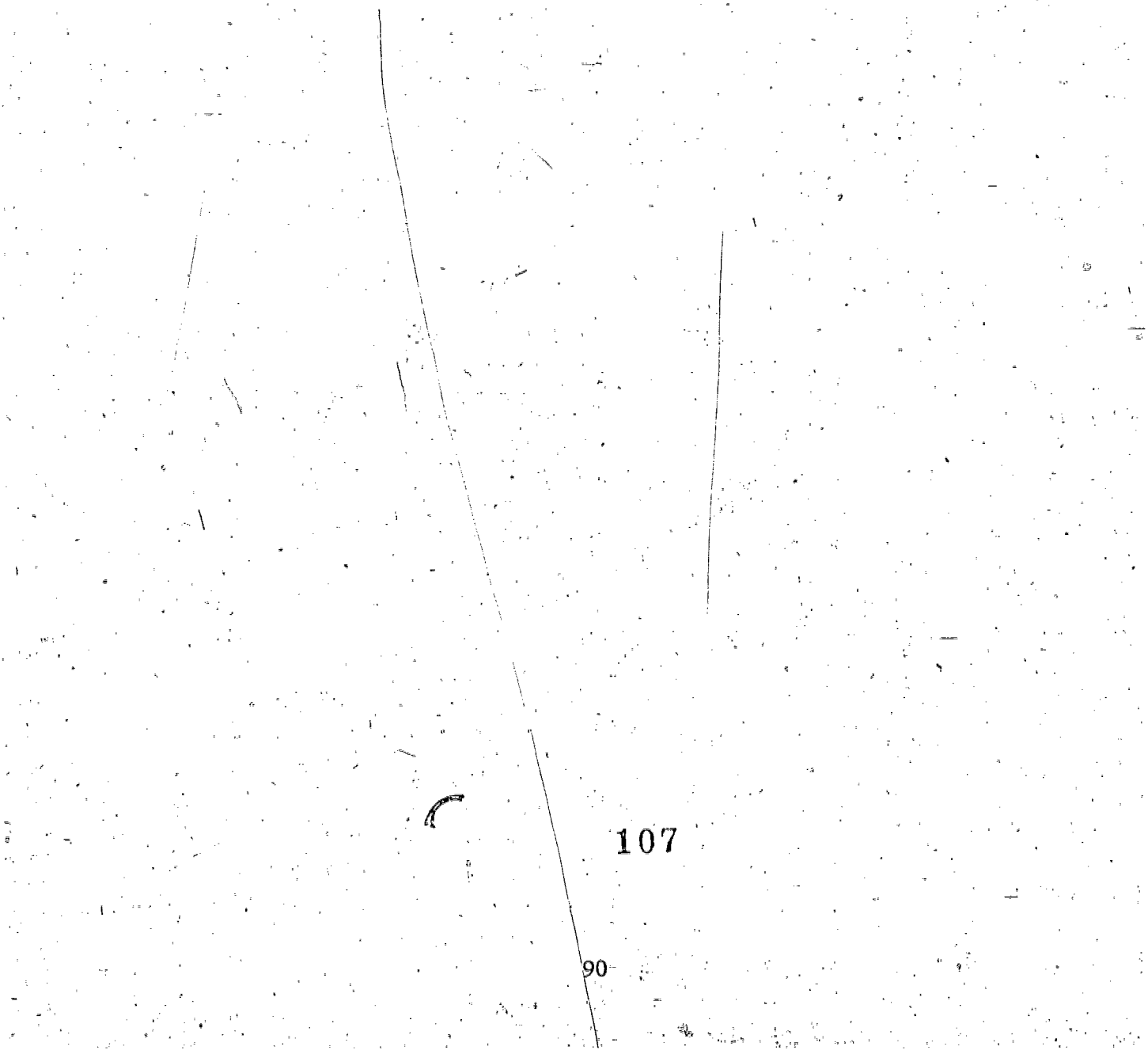
Attendance: Days Present _____ Days Absent _____

Column	Card 1
1	School code
2-4	Student sequence number (right adjusted)
5-21	Student name (left adjusted)
22-30	Social Security number
31-36	Date of enrollment
37	Sex: 1 = male, 2 = female, 3 = unknown
38	Race: 1 = black, 2 = white, 3 = American Indian, 4 = Asian American, 5 = Spanish American, 6 = unknown
39	Bilingualism: 1 = Spanish, 2 = Korean, 3 = Vietnamese, 4 = other, 5 = unknown
40-45	Date of birth
46, 47	Grade completed; 99 = unknown
48	Additional program enrollment: 1 = yes, 2 = no
49	1 = full time, 2 = part time, 3 = unknown
50	1 = PSV 1, 2 = PSV 2, 3 = AVT, 4 = SEC, 5 = unknown
51	Benefits: 1 = CETA, 2 - WIN, 3 = VR, 4 = V, 5 = M, 6 = VA, 7 = WS, 8 = other, 9 = unknown
52	Related employment: 1 = directly, 2 = indirectly, 3 = unknown
53	Dependents: 1 = husband, 2 = wife, 3 = unknown
54	Number of children: 9 = unknown
55	Handicap: 1 = deaf, 2 = blind, 3 = deaf and blind, 4 = other, 5 = unknown
56	Passed CED: 1 = yes, 2 = no, 3 = unknown
57	Help in goal: 1 - OCC, 2 = AC, 3= unknown
58	Goal set: 1 = yes, 2 = no, 3 = unknown
59-68	Goal title (left adjusted)
69-70	Goal title code
71-76	Date of termination
77-78	Number of cards per student
79-80	Card sequence

Goal Title Codes

01	Mechanic	03	Carpenter
02	Welder	04	Electronics, TV

07 Office worker, secretary
08 Horticulturist
09 Forester
10 Nurse, LPN, Med. Technician
11 Upholsterer
14 GED
15 Heat/Ref
16 ESL
17 Data Processing



6, 7	Record month
8, 9	Number of days present
10, 11	Number of days absent
12,13	Hours of individual counseling
14, 15	Hours of group counseling
16,17	Number of personal interviews or contacts
18, 19	Number of social gatherings attended
20	Qualifications: 1 = yes, 2 = no, 3 = unknown
21-23	Reading pretest
24-27	Reading gainscore
28-30	Math pretest
31-34	Math gainscore
35-37	Botel pretest
38-40	Botel gainscore
41-42	Subject code
43-44	Subject grade
45-47	Number of hours studied
48-49	Number of students per teacher (if 99, unknown)

Subject Codes

11 = Reading
12 = English or language
13 = ESL
14 = Mathematics
15 = Science
16 = History
17 = Mechanics
18 = Cosmetology
19 = Agriculture
20 = Heat/Ref
21 = Office occupations
22 = Welding
23 = Carpentry
24 = Electronics, TV
25 = Cooking
26 = Health
27 = Horticulture
28 = Sewing
29 = Spelling
30 = Forestry

Grade Codes

95 = A
85 = B
C
60 = D
50 = E or F
11 = not recorded

APPENDIX G

INSTRUMENTATION FOR THE IMTS AND NON-IMTS MONTHLY SUMMARY REPORT AND DATA CODES FOR IMTS SITE SUMMARY DATA

SUMMARY OF IMTS OPERATION

CARD NO.

FOR MONTH OF _____, 1975

LRC _____ NUMBER [ ][ ][ ][ ][ ][ ] (1–6) A

DATE MO [ ][ ] (7) DAY [ ][ ] YEAR [ ][ ] (12)

INSTITUTE _____

Total Hours LRC Operated in Month for Students [ ][ ][ ] (16–18)

No. of New or Returning Students Started in Month [ ][ ][ ] (19–21)

No. Leaving IMT by Reason:

Job Placement [ ][ ][ ] (22–24) Illness [ ][ ][ ] (25–27) Program Completion [ ][ ][ ] (28–30) Transferred To Another Program [ ][ ][ ] (31–33) Unknown [ ][ ][ ] (34–36) Other [ ][ ][ ] (37–39)

Equipment: No. of Student Stations

Carrels [ ][ ][ ] (40–42) Desks [ ][ ][ ] (43–45) Tables [ ][ ][ ] (46–48) Other [ ][ ][ ] (49–51)

No. of Students Routinely Scheduled in Any One Hour Period: Maximum [ ][ ][ ] (52–54) Minimum [ ][ ][ ] (55–57)

No. of Students Terminating in Month [ ][ ][ ] (58–60)

LRC Staff:	Number & Hours During Month																																				
LRC Staff:	Mgr-Coor Couns.			Learning Mgr.			Behavior Spec.			Aides			AV Spec.			Acad. Eval.			Voc. Eval.			Other Staff			TOTAL											
	16		18	19		21	22		24	25		27	28		30	31		33	34			37	38		40	41			44								
No. of Staff																																					
	45		47	48		50	51		53	54		56	57		59	60		62	63			66	67		69	70			73								
LRC Task Hours in Center																																					
	16		18	19		21	22		24	25		27	28		30	31		33	34			37	38		40	41			44								
Outside LRC Duties (Hrs.)																																					
	45		47	48		50	51		53	54		56	57		59	60		62	63			66	67		69	70			73								
Nominal Total (Hrs.)																																					

B

C

FOR MONTH OF _____, 197_____

Name of School: _____

No. of New of Returning Students Started in Month: _____ Full Time _____ Parttime Referral _____

No. of Students Leaving by:

- Job Placement _____
- Illness _____
- Program Completion _____
- Transferred to Another Program _____
- Unknown _____
- Other _____

No. of Students Terminating in Month: _____

No. of Student Stations:

- Carrels _____
- Desks _____
- Tables _____
- Business Stations _____

No. of Students Routinely Scheduled in Any One Hour Period:

Maximum _____ Minimum _____

	Instructor w/Master	Instructor w/BSorBA	Aides	Student Assistant	Counselors	Occup. Specialist	Clerical	Admin.
No. of Staff								
Tasks Hours in Class								
Duties Outside Class								
Nominal Total Hours								

Hours of Pre or Inservice Staff Training: _____

Costs of Staff Training: _____

Student Instructional Cost:

- Hardware _____
- Software _____

IMTS SITE SUMMARY DATA CODES

Column	Card A
1-2	County number
3-6	School number
7-12	Date
13-15	Not used
16-18	Total hours site was in operation
19-21	Number of new students
22-24	Number of job placements
25-27	Number of reported illnesses
28-30	Number of completions
31-33	Number of transfers
34-36	Number of students left for unknown reasons
37-39	Other leavers
40-42	Number of carrels at site
43-45	Number of desks
46-48	Number of tables
49-51	Number of items of other equipment
52-54	Maximum number of students hourly
55-57	Minimum number of students hourly
58-60	Number of terminations
80	Card type = 'A'

	Card B
1-2	County number
3-6	School number
7-12	Date
13-15	Not used
16-18	Number of counseling managers
19-21	Number of learning managers
22-24	Number of behavioral specialists
25-27	Number of aides
28-30	Number of AV specialists
31-33	Number of AC specialists
34-37	Number of vocational evaluators
38-40	Number of other staff members

Column	Card B, continued
41-44	Total staff
45-47	Number of tasks hours in LRC by Coun. Mgrs.
48-50	Number of tasks hours in LRC by Lrn. Mgrs.
51-53	Number of tasks hours in LRC by BEHs
54-56	Number of tasks hours in LRC by Aides
57-59	Number of tasks hours in LRC by AV Specs.
60-62	Number of tasks hours in LRC by AC Specs.
63-66	Number of tasks hours in LRC by Voc. Evals.
67-69	Number of tasks hours in LRC by Other Staff
70-73	Number of tasks hours in LRC by Total
80	Card code = 'B'

	Card C
1-2	County number
3-6	School number
7-12	Date
13-15	Not used
16-18	Number of hours outside LRC duties, Mgr. Coun.
19-21	Number of hours outside LRC duties, Mgr. Lrn.
22-24	Number of hours outside LRC duties, BEHs
25-27	Number of hours outside LRC duties, Aides
28-30	Number of hours outside LRC duties, AV Specs.
31-33	Number of hours outside LRC duties, AC Specs.
34-37	Number of hours outside LRC duties, Voc. Evals.
38-40	Number of hours outside LRC duties, Other Staff
41-44	Number of hours outside LRC duties, Total
45-47	Normal totals (hrs), Mgr. Coun.
48-50	Normal totals (hrs), Mgr. Lrn.
51-53	Normal totals (hrs), BEHs
54-56	Normal totals (hrs), Aides
57-59	Normal totals (hrs), AV Specs.
60-62	Normal totals (hrs), AC Specs.
63-66	Normal totals (hrs), Voc. Eval.
67-69	Normal totals (hrs), Other Staff
70-73	Normal totals (hrs), Total
80	Card code = 'C'

APPENDIX H

SOFTWARE FOR THE ANALYSIS OF THE COMPUTERIZED DATA SYSTEM

1. SUBROUTINE FOR THE PROCESSING OF IMT SITE CARD 1 DATA

```
!RUN KIP,900126,IMT1,5,100
!FOR,IS MAIN
      INTEGER A, B,R,M1,M2,M3,LB
      DIMENSION A(27),M1(9,9),M2(9,21),M3(86,10),R(22),LB(94,6)
      READ(5,101)(R(I),I=1,22)
      DO 4 I=1,94
    4 READ(5,102)(LB(I,J),J=1,6)
    5 DO 1 I=1,9
      DO 2 J=1,9
    2 M1(I,J)=0
      DO 1 J=1,21
    1 M2(I,J)=0
      DO 3 I=1,86
      DO 3 J=1,10
    3 M3(I,J)=0
      A(6)=5
      A(10)=99
      A(15)=3
      A(16)=3
      A(17)=9
      A(20)=3
      A(21)=3
      A(22)=0
      A(23)=3
   10 READ(5,103)B,(A(I),I=1,5),(A(I),I=7,9),(A(I),I=11,14),A(18),A(19)
      IF(B.EQ.888)GO TO 30
      IF(B.EQ.999)GO TO 16
      IF(A(1).LT.4)I=A(1)+5
      IF(A(1).GT.3)I=A(1)-7
      IF(I.LT.1)I=1
      J=A(4)
      IF(J.LT.1)J=1
      IF(J.GT.2)J=2
      K=A(5)
      IF(K.LT.1)K=6
      IF(K.GT.6)K=6
      M1(I,J)=M1(I,J)+1
      M1(9,J)=M1(9,J)+1
      M1(I,3)=M1(I,3)+1
      M1(9,3)=M1(9,3)+1
      M2(I,K)=M2(I,K)+1
      M2(9,K)=M2(9,K)+1
      M2(I,7)=M2(I,7)+1
      M2(9,7)=M2(9,7)+1
      IF(A(23).LT.4)L=A(23)+5
      IF(A(23).GT.3)L=A(23)-7
      IF(L.LT.1)L=1
      IF(L.LT.I)L=I
      J=J+3
      K=K+7
```

```
      M1(9,6)=M1(9,6)+1
      M2(L,K)=M2(L,K)+1
      M2(9,K)=M2(9,K)+1
      M2(L,14)=M2(L,14)+1
      M2(9,14)=M2(9,14)+1
      J=J+3
      K=K+7
      DO 11 M=I,L
      M1(M,J)=M1(M,J)+1
      M1(M,9)=M1(M,9)+1
      M2(M,K)=M2(M,K)+1
   11 M2(M,21)=M2(M,21)+1
      M1(9,J)=M1(9,J)+1
      M1(9,9)=M1(9,9)+1
      M2(9,K)=M2(9,K)+1
      M2(9,21)=M2(9,21)+1
      J=J-6
      K=K-11
      R(1)=A(6)
      A(9)=76-A(9)
      IF(A(9).LT.21)R(3)=1
      IF(A(9).GT.20.AND.A(9).LT.31)R(3)=2
      IF(A(9).GT.30.AND.A(9).LT.41)R(3)=3
      IF(A(9).GT.40.AND.A(9).LT.51)R(3)=4
      IF(A(9).GT.50.AND.A(9).LT.61)R(3)=5
      IF(A(9).GT.60)R(3)=6
      IF(A(9).EQ.76)R(3)=7
      I=1
      IF(A(12).EQ.2)I=0
      R(5)=2*A(13)-I
      DO 13 I=14,20
      M=2*I-21
   13 R(M)=A(I)
      R(21)=A(21)+A(22)
      IF(A(21).EQ.0)R(21)=1
      IF(A(21).EQ.2)R(21)=19
      IF(A(21).EQ.3)R(21)=20
      DO 14 I=1,10
      L=2*I+1
      M=L-1
      N=M+2
      R(L)=R(L)+R(M)
      IF(R(L).LT.R(M)+1)R(L)=R(N)-1
   14 IF(R(L).GT.R(N))R(L)=R(N)-1
      IF(R(1).LT.1)R(1)=5
      IF(R(1).GT.5)R(1)=5
      DO 15 I=1,22
      M=R(I)
      M3(M,J)=M3(M,J)+1
      M3(M,3)=M3(M,3)+1
      M3(M,K)=M3(M,K)+1
   15 M3(M,10)=M3(M,10)+1
      GO TO 10
   16 WRITE(6,104)
      WRITE(6,105)
      DO 17 I=1,8
```

```
      WRITE(6,108)
      DO 18 I=1,8
      J=I+86
   18 WRITE(6,109)(LB(J,K),K=2,6),(M2(I,L),L=1,21)
      WRITE(6,110)(M2(9,J),J=1,21)
      WRITE(6,111)
      DO 19 I=1,6
   19 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,113)
      DO 20 I=7,14
   20 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,114)
      DO 21 I=15,24
   21 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,115)
      DO 22 I=25,34
   22 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,116)
      DO 23 I=35,38
   23 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,117)
      DO 24 I=39,42
   24 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,118)
      DO 25 I=43,51
   25 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,119)
      DO 26 I=52,57
   26 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,120)
      DO 27 I=58,61
   27 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,121)
      DO 28 I=62,65
   28 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,122)
      DO 29 I=66,86
   29 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      GO TO 5
  101 FORMAT(22I2)
  102 FORMAT(6A5)
  103 FORMAT(I3,17X,3I2,23X,2I1,3I2,2X,3I1,1X,3I1)
  104 FORMAT('1',T47,'DESCRIPTION OF STUDENT BODY'///)
  105 FORMAT(' ',' STUDENT FLOW BY SEX',T41,'ENROLLED',T71,'TERMINATED',
     +T99,'AV MONTHLY ENROLLMENT'/' ',T35,'MALE   FEMALE    ALL',T67,
     +'MALE   FEMALE    ALL',T99,'MALE   FEMALE    ALL'/)
  106 FORMAT(' ',6A5,T35,2(I4,3X,I4,5X,I4,12X),I4,3X,I4,5X,I4)
  107 FORMAT('0',' TOTAL STUDENTS',T35,2(I4,3X,I4,5X,I4,12X),I4,3X,I4,5X,
     +I4///)
  108 FORMAT('0',' STUDENT FLOW BY RACE'//' ',T24,5X,'BL  WI  AI  AA  SA
     + UN  ALL',    5X,'BL  WI  AI  AA  SA  UN  ALL    BL  WI  AI  AA
     +SA  UN  ALL'/)
  109 FORMAT(' ',5A5,2(6I4,I5,3X),6I4,I5)
  110 FORMAT('0',' TOTAL STUDENTS',T27,2(6I4,I5,3X),6I4,I5)
  111 FORMAT('1',' BILINGUISM OF STUDENTS',T33,'MALE  FEMALE   TOTAL',T61
     +,'BL   WI   AI   AA   SA   UN  TOTAL'/)
```

```
  112 FORMAT(' ',6A5,I4,4X,I4,4X,I5,T58,6I5,3X,I5)
  113 FORMAT('0','AGE LEVEL OF STUDENTS'/)
  114 FORMAT('0','ADDITIONAL PROGRAMS'/)
  115 FORMAT('1','BENEFITS',T31,'MALE   FEMALE   TOTAL',T61,'BL   WI   A
     +I   AA   SA   UN   TOTAL'/)
  116 FORMAT('0','RELATED EMPLOYMENT'/)
  117 FORMAT('0','DEPENDENCIES'/)
  118 FORMAT('0','NUMBER OF CHILDREN'/)
  119 FORMAT('1','HANDICAPS',T31,'MALE   FEMALE   TOTAL',T61,'BL   WI
     +AI   AA   SA   UN   TOTAL'/)
  120 FORMAT('0','PASSED GED'/)
  121 FORMAT('0','HELP IN GOAL SETTING'/)
  122 FORMAT('0','GOAL SET'/)
   30 STOP
      END
'EOF
'XOT
   6  14  24  34  38  42  51  57  61  65  86
SPANISH
KOREAN
VIETNAMESE
OTHER
UNKNOWN
      TOTAL
UNDER 21
21-30
31-40
41-50
51-60
OVER 60
UNKNOWN
      TOTAL
PSV1  FULL-TIME
      PART-TIME
PSV2  FULL-TIME
      PART-TIME
AVT   FULL-TIME
      PART-TIME
SEC   FULL-TIME
      PART-TIME
UNKNOWN
      TOTAL
CETA
WIN
VR
V
M
VA
WS
OTHER
UNKNOWN
      TOTAL
DIRECTLY
INDIRECTLY
UNKNOWN
      TOTAL
HUSBAND
WIFE
UNKNOWN
```

4
5
MORE THAN 5
UNKNOWN
TOTAL
DEAF
BLIND
DEAF AND BLIND
OTHER
UNKNOWN
TOTAL
YES
NO
UNKNOWN
TOTAL
HELP OCC
HELP AC
UNKNOWN
TOTAL
YES
MECHANIC
WELDER
CARPENTER
ELECTRONICS
COSMETOLOGY
COOK
OFFICE
HORTICULTURE
FORESTRY
NURSE, LPN
UPHOLSTRY
SEWING
INTERIOR DEC
GED
HEAT/REF
ESL
DATA PROCESSING
N/
UNKNOWN
TOTAL

PRIOR TO SEP
SEP
OCT
NOV
DEC
JAN
FEB
MAR

```
'RUN KIP,900126,IMT2,5,100
'FOR,IS MAIN
      INTEGER C,ID,CID,LV,P,L,F,N,TN,LB,E,G
      REAL R,RM,AV
      DIMENSION LV(2),N(2,6,9),TN(3,9,12),R(9),RM(2,6,9),AV(3,9,12),LB(9
     +,2)
      DATA LV/'M','D'/
      DO 13 I=1,9
   13 READ(5,102)(LB(I,J),J=1,2)
    1 DO 3 J=1,9
      DO 2 I=1,2
      DO 2 K=1,6
    2 N(I,K,J)=0
      DO 3 I=1,3
      DO 3 K=1,12
      TN(I,J,K)=0
    3 AV(I,J,K)=0.0
      READ(5,101)C,ID,P,L,F,(R(I),I=1,9)
      IF(C.EQ.888)GO TO 30
      GO TO 5
    4 READ(5,101)C,ID,P,L,F,(R(I),I=1,9)
      IF(C.EQ.999)GO TO 11
      IF(ID.EQ.CID)GO TO 9
      DO 6 K=1,9
      DO 6 J=1,6
      I=6
      E=RM(1,J,K)+0
      G=RM(2,J,K)+0
      IF(E.NE.0.AND.G.NE.0)I=J+6
      DO 7 M=1,2
      AV(M,K,I)=AV(M,K,I)+RM(M,J,K)
    7 TN(M,K,I)=TN(M,K,I)+N(M,J,K)
      AV(3,K,I)=AV(3,K,I)+RM(2,J,K)-RM(1,J,K)
    6 TN(3,K,I)=TN(3,K,I)+N(2,J,K)
      DO 8 I=1,2
      DO 8 J=1,6
      DO 8 K=1,9
      RM(I,J,K)=0.0
    8 N(I,J,K)=0
    5 CID=ID
    9 I=1
      IF(P.EQ.2)I=2
      J=1
      IF(L.EQ.LV(1))J=J+2
      IF(L.EQ.LV(2))J=J+4
      IF(F.EQ.2)J=J+1
      DO 10 K=1,9
      E=0+RM(I,J,K)
      IF(E.NE.0)GO TO 10
      RM(I,J,K)=R(K)
      G=0+R(K)
   10 IF(G.NE.0)N(I,J,K)=1
      GO TO 4
```

```
      AV(I,J,K)=AV(I,J,K)/TN(I,J,K)
   12 CONTINUE
      DO 19 J=1,9
      DO 19 K=1,6
   19 AV(3,K,J)=0.0
      DO 14 I=1,3
      WRITE(6,103)
      WRITE(6,104)
      DO 14 J=1,9
      WRITE(6,105)(LB(J,K),K=1,2),(AV(I,J,K),K=1,12)
   14 WRITE(6,106)(TN(I,J,K),K=1,12)
  101 FORMAT(I3,6X,I6,2X,I1,A1,I1,6X,9F4.1)
  102 FORMAT(2A5)
  103 FORMAT('1',T41,'IMT SITES AVERAGE PRE-POSTTEST GAINSCORES'///)
  104 FORMAT('0',T21,'FORMS,LEVELS,OR STUDENTS DO NOT MATCH',T77,'FORMS
     +LEVELS,AND STUDENTS MATCH'/'0',T27,'FORM 1',T47,'FORM 2',T77,'FOR
     + 1',T97,'FORM 2'/'0',T23,'E     M     D',T43,'E     M     D',T73,
     + E     M     D     E     M     D'//)
  105 FORMAT('0',2A5,2X,'AV',T19,2(3F6.1,2X),T69,2(3F6.1,2X))
  106 FORMAT('0',14X,'N',T19,2(3I6,2X),T69,2(3I6,2X))
      GO TO 1
   30 STOP
      END
'EOF
'XQT
READING V
        C
        T
ARITHM  R
        F
        T
LANG    ME
        S
        T
```

3. SUBROUTINE FOR THE PROCESSING OF IMT SITE CARD 3 DATA

```
!RUN KIP,900126,IMT3,5,500
!PASSWD MARKIP
!FOR,IS MAIN
      REAL B(12),C(12)
      INTEGER A(12),F(12),N(12),P,AA
      DATA LNCT/51/,B/12*0./,C/12*0./,A/12*0/,F/12*0/,N/12*0/,AA/0/
      DATA IFLAG/2/,MC/'    '/
   10 READ(5,101,END=48)(A(I),I=1,12)
  101 FORMAT(I3,13X,A4,7X,I3,4I2,4I3,I2)
      IF(A(1).EQ.888) GO TO 999
      IF(A(1).EQ.999) GO TO 49
      IF(A(2).NE.MC) GO TO 50
   20 DO 21 I=4,7
      IF(A(I).EQ.0) GO TO 21
      B(I)=B(I)+A(I)
      C(I)=C(I)+A(I)
      F(I)=F(I)+1
      N(I)=N(I)+1
   21 CONTINUE
      P=0
      DO 22 J=8,11
      IF(A(J).EQ.0) GO TO 22
      B(J)=B(J)+(A(J)/10.)
      C(J)=C(J)+(A(J)/10.)
      F(J)=F(J)+1
      N(J)=N(J)+1
      P=P+1
   22 CONTINUE
      EQ=0.
      IF(P.EQ.0) GO TO 25
      EQ=1./P
      B(12)=B(12)+EQ
      C(12)=C(12)+EQ
      F(12)=F(12)+1
      N(12)=N(12)+1
   25 IF(A(3).EQ.0) GO TO 30
      B(2)=B(2)+A(3)
      C(2)=C(2)+A(3)
      F(2)=F(2)+1
      N(2)=N(2)+1
   30 IF(A(12).EQ.0) GO TO 31
      B(3)=B(3)+A(12)
      C(3)=C(3)+A(12)
      F(3)=F(3)+1
      N(3)=N(3)+1
   31 AA=A(12)
      DO 32 I=3,7
   32 AA=AA+A(I)
      IF(AA.EQ.0) GO TO 35
      B(1)=B(1)+AA
      C(1)=C(1)+AA
   35 F(1)=F(1)+1
      N(1)=N(1)+1
```

```
      GO TO 10
   48 IFLAG=-1
      GO TO 50
   49 IF(IFLAG.EQ.2) GO TO 66
      IFLAG=1
   50 IF(LNCT.LE.50) GO TO 51
      WRITE(6,102)
  102 FORMAT(1H1,1X,'MODULE',3X,'TOTAL',2X,'MODULE',3X,'TUTOR',2X,2('PRT
     +EST',2X,'TEST 1',2X,'TEST 2',2X,'TEST 3',2X),'EFFIC',2X,'MODULE'/
     +1H ,2X,'CODE',1X,7(4X,'TIME'),4(3X,'GRADE'),4X,'QUOT',3X,'SIZE'/
     +1H ,14(2X,6H======)/)
      LNCT=3
   51 DO 52 I=1,12
      IF(F(I).EQ.0) F(I)=9999
   52 B(I)=B(I)/F(I)
      WRITE(6,103) MC,(B(K),K=1,12),F(1)
  103 FORMAT(1H ,4X,A4,12F8.1,2X,I6)
      LNCT=LNCT+1
      DO 55 J=1,12
      B(J)=0.
   55 F(J)=0.
      MC=A(2)
      IF(IFLAG.EQ.0) GO TO 20
      IF(LNCT.LE.50) GO TO 61
      WRITE(6,104)
  104 FORMAT(1H1)
   61 WRITE(6,105)
  105 FORMAT(//1H ,15X,'CENTER AVERAGES'/1H ,15X,15('*')/1H ,10X,'TOTAL'
     +,2X,'MODULE',3X,'TUTOR',2X,2('PRTEST',2X,'TEST 1',2X,'TEST 2',2X,
     +'TEST 3',2X),'EFFIC',2X,'CENTER'/1H ,7X,7(4X,'TIME'),4(3X,'GRADE')
     +,4X,'QUOT',3X,'SIZE'/1H ,9X,13(2X,6H======)/)
      DO 63 I=1,12
      IF(N(I).EQ.0) N(I)=999999
   63 C(I)=C(I)/N(I)
      WRITE(6,106) (C(K),K=1,12),N(1)
  106 FORMAT(1H ,9X,12F8.1,2X,I6)
      LNCT=100
      DO 65 J=1,12
      C(J)=0.
   65 N(J)=0
      IF(IFLAG.EQ.-1) GO TO 999
   66 IFLAG=0
      MC=A(2)
      GO TO 20
  999 END
'EOF
'XQT
```

4. SUBROUTINE FOR THE PROCESSING OF IMT SITE CARD 4 DATA

```
'RUN KIP,900126,IMT4,1,100
'FOR,IS MAIN
      INTEGER A,B,C,T
      DIMENSION A(3),B(600,6)
    1 DO 2 I=1,600
      DO 2 J=4,6
    2 B(I,J)=0
      L=0
      READ(5,101)C,(A(I),I=1,3),T
      IF(C.EQ.88)GO TO 30
      I=1
      GO TO 5
    3 READ(5,101)C,(A(I),I=1,3),T
      IF(C.EQ.99)GO TO 7
      K=I
      L=0
      DO 4 J=1,3
    4 IF(A(J).NE.B(K,J)) L=1
      I=I+L
    5 DO 6 J=1,3
    6 B(I,J)=A(J)
      B(I,4)=B(I,4)+1
      B(I,5)=B(I,5)+T
      GO TO 3
    7 DO 8 J=1,I
    8 IF(B(J,5).NE.0)B(J,6)=B(J,5)/B(J,4)
      WRITE(6,102)
      WRITE(6,103)
      DO 9 J=1,I
    9 WRITE(6,104)(B(J,K),K=1,6)
      GO TO 1
  101 FORMAT(I2,24X,2A2,A4,5X,I3)
  102 FORMAT('1',T47,'READING MODULE UTILIZATION'//)
  103 FORMAT('0','MODULE',T20,'N   TOTAL TIME   AVERAGE TIME'/'0','GP LV,
     +  CODE'/)
  104 FORMAT(' ',A2,1X,A2,2X,A4,T17,I4,T28,I4,T43,I4)
   30 STOP
      END
'EOF
'XQT
```

6. SUBROUTINE FOR THE PROCESSING OF IMT SITE CARD 6 DATA

```
'RUN KIP,900126,IMT6,5,100
'PASSWD MARKIP
'FOR,IS MAIN
      INTEGER LB,N,T,R,C,D
      DIMENSION LB(23,6),N(7,16),T(7,16,2),R(16)
      DO 1 I=1,23
    1 READ(5,101)(LB(I,J),J=1,6)
    8 DO 2 I=1,7
      DO 2 J=1,16
      N(I,J)=0
      DO 2 K=1,2
    2 T(I,J,K)=0
    3 READ(5,102)C,D,(R(I),I=1,16)
      IF(C.EQ.99)GO TO 5
      IF(C.EQ.88)GO TO 30
      IF(D.GT.3)I=D-8
      IF(D.LT.4)I=D+5
      IF(I.LT.1)I=1
      IF(I.GT.7)I=7
      DO 4 J=1,8
      K=2*J-1
      L=K+1
      M=K
      IF(R(K).NE.1)M=L
      N(I,M)=N(I,M)+1
    4 T(I,M,1)=T(I,M,1)+R(L)
      GO TO 3
    5 DO 6 I=1,7
      DO 6 J=1,16
    6 IF(N(I,J).NE.0)T(I,J,2)=T(I,J,1)/N(I,J)
      DO 7 I=1,7
      WRITE(6,103)(LB(I,J),J=1,6)
      WRITE(6,104)
      DO 7 J=1,16
      M=J+7
    7 WRITE(6,105)(LB(M,K),K=1,6),N(I,J),T(I,J,1),T(I,J,2)
      GO TO 8
  101 FORMAT(6A5)
  102 FORMAT(I2,18X,I2,4X,8(I1,I3))
  103 FORMAT('1',T30,'SCHEDULE OF IMTS FOR',6A5//)
  104 FORMAT('0',T34,'N      TOT TIME     AVER TIME'/)
  105 FORMAT('0',6A5,I3,5X,I5,7X,I5)
   30 STOP
      END
'EOF
'XQT
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
```

OCC INTEREST INVENTORY
COMPLETED
OCC INFORMATION
COMPLETED
OCC TOURS
COMPLETED
WORK SAMPLE
COMPLETED
COUNSELING
COMPLETED
ORIENTATION
COMPLETED
GOAL SETTING
COMPLETED
EMPLOYMENT BENEFIT PROGRAM
COMPLETED

7. SUBROUTINE FOR THE PROCESSING OF IMT SITE CARD 7 DATA

```
'RUN KIP,900126,IMT7,5,100
'PASSWD MARKIP
'FOR,IS MAIN
      INTEGER LB,N,T,R,C,D
      DIMENSION LB(26,6),N(7,19),T(7,19,2),R(19)
      DO 1 I=1,26
    4 READ(5,101)(LB(I,J),J=1,6)
    8 DO 2 I=1,7
      DO 2 J=1,19
      N(I,J)=0
      DO 2 K=1,2
    2 T(I,J,K)=0
    3 READ(5,102)C,D,(R(I),I=1,19)
      IF(C.EQ.99)GO TO 5
      IF(C.EQ.88)GO TO 30
      IF(D.GT.3)I=D-8
      IF(D.LT.4)I=D+5
      IF(I.LT.1)I=1
      IF(I.GT.7)I=7
      DO 4 J=1,19
      IF(R(J).EQ.0)GO TO 4
      N(I,J)=N(I,J)+1
      T(I,J,1)=T(I,J,1)+R(J)
    4 CONTINUE
      GO TO 3
    5 DO 6 I=1,7
      DO 6 J=1,19
    6 IF(N(I,J).NE.0)T(I,J,2)=T(I,J,1)/N(I,J)
      DO 7 I=1,7
      WRITE(6,103)(LB(I,J),J=1,6)
      WRITE(6,104)
      DO 7 J=1,19
      M=J+7
    7 WRITE(6,105)(LB(M,K),K=1,6),N(I,J),T(I,J,1),T(I,J,2)
      GO TO 8
  101 FORMAT(6A5)
  102 FORMAT(I2,18X,I2,4X,19I2)
  103 FORMAT('1',T30,'WORK STATIONS USED IN ',6A5//)
  104 FORMAT('0',T32,'N     FREQ     AVFREQ'/)
  105 FORMAT('0',6A5,I4,5X,I4,5X,I4)
   30 STOP
      END
'EOF
'XQT
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
BASIC TOOLS
BENCH ASSEMBLY
```

DRAFTING
ELECTRICITY
PLUMBING
CARPENTRY
REFRIGERATION/HEATING
WELDING
OFFICE OCCUPATIONS
NEEDLE
MASONRY
SHEET METAL
COOK
ENGINES
COSMETOLOGY
DATA PROCESSING
AGRICULTURE
EVALUATION
JOB

1. SUBROUTINE FOR THE PROCESSING OF CONTROL SITE CARD 1 DATA

```
'RUN KIP,900126,CTR1,5,100
'FOR,IS MAIN
      INTEGER A, B,R,M1,M2,M3,LB
      DIMENSION A(27),M1(9,9),M2(9,21),M3(86,10),R(22),LB(94,6)
      READ(5,101)(R(I),I=1,22)
      DO 4 I=1,94
    4 READ(5,102)(LB(I,J),J=1,6)
    5 DO 1 I=1,9
      DO 2 J=1,9
    2 M1(I,J)=0
      DO 1 J=1,21
    1 M2(I,J)=0
      DO 3 I=1,86
      DO 3 J=1,10
    3 M3(I,J)=0
   10 READ(5,103)B,(A(I),I=1,27)
      IF(B.EQ.888)GO TO 30
      IF(B.EQ.999)GO TO 16
      IF(A(1).LT.4)I=A(1)+5
      IF(A(1).GT.3)I=A(1)-7
      IF(I.LT.1)I=1
      J=A(4)
      IF(J.LT.1)J=1
      IF(J.GT.2)J=2
      K=A(5)
      IF(K.LT.1)K=6
      IF(K.GT.6)K=6
      M1(I,J)=M1(I,J)+1
      M1(9,J)=M1(9,J)+1
      M1(I,3)=M1(I,3)+1
      M1(9,3)=M1(9,3)+1
      M2(I,K)=M2(I,K)+1
      M2(9,K)=M2(9,K)+1
      M2(I,7)=M2(I,7)+1
      M2(9,7)=M2(9,7)+1
      IF(A(23).LT.4)L=A(23)+5
      IF(A(23).GT.3)L=A(23)-7
      IF(L.LT.1)L=1
      IF(L.LT.I)L=I
      J=J+3
      K=K+7
      M1(L,J)=M1(L,J)+1
      M1(9,J)=M1(9,J)+1
      M1(L,6)=M1(L,6)+1
      M1(9,6)=M1(9,6)+1
      M2(L,K)=M2(L,K)+1
      M2(9,K)=M2(9,K)+1
      M2(L,14)=M2(L,14)+1
      M2(9,14)=M2(9,14)+1
      J=J+3
      K=K+7
      DO 11 M=I,L
      M1(M,J)=M1(M,J)+1
```

```
      M1(M,9)=M1(M,9)+1
      M2(M,K)=M2(M,K)+1
   11 M2(M,21)=M2(M,21)+1
      M1(9,J)=M1(9,J)+1
      M1(9,9)=M1(9,9)+1
      M2(9,K)=M2(9,K)+1
      M2(9,21)=M2(9,21)+1
      J=J-6
      K=K-11
      R(1)=A(6)
      A(9)=76-A(9)
      IF(A(9).LT.21)R(3)=1
      IF(A(9).GT.20.AND.A(9).LT.31)R(3)=2
      IF(A(9).GT.30.AND.A(9).LT.41)R(3)=3
      IF(A(9).GT.40.AND.A(9).LT.51)R(3)=4
      IF(A(9).GT.50.AND.A(9).LT.61)R(3)=5
      IF(A(9).GT.60)R(3)=6
      IF(A(9).EQ.76)R(3)=7
      I=1
      IF(A(12).EQ.2)I=0
      R(5)=2*A(13)-I
      DO 13 I=14,20
      M=2*I-21
   13 R(M)=A(I)
      R(21)=A(21)+A(22)
      IF(A(21).EQ.0)R(21)=1
      IF(A(21).EQ.2)R(21)=19
      IF(A(21).EQ.3)R(21)=20
      DO 14 I=1,10
      L=2*I+1
      M=L-1
      N=M+2
      R(L)=R(L)+R(M)
      IF(R(L).LT.R(M)+1)R(L)=R(N)-1
   14 IF(R(L).GT.R(N))R(L)=R(N)-1
      IF(R(1).LT.1)R(1)=5
      IF(R(1).GT.5)R(1)=5
      DO 15 I=1,22
      M=R(I)
      M3(M,J)=M3(M,J)+1
      M3(M,3)=M3(M,3)+1
      M3(M,K)=M3(M,K)+1
   15 M3(M,10)=M3(M,10)+1
      GO TO 10
   16 WRITE(6,104)
      WRITE(6,105)
      DO 17 I=1,8
      J=I+86
   17 WRITE(6,106)(LB(J,K),K=1,6),(M1(I,L),L=1,9)
      WRITE(6,107)(M1(9,J),J=1,9)
      WRITE(6,108)
      DO 18 I=1,8
      J=I+86
   18 WRITE(6,109)(LB(J,K),K=2,6),(M2(I,L),L=1,21)
      WRITE(6,110)(M2(9,J),J=1,21)
      WRITE(6,111)
      DO 19 I=1,6
   19 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,113)
```

```
      DO 20 I=7,14
   20 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,114)
      DO 21 I=15,24
   21 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,115)
      DO 22 I=25,34
   22 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,116)
      DO 23 I=35,38
   23 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,117)
      DO 24 I=39,42
   24 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,118)
      DO 25 I=43,51
   25 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,119)
      DO 26 I=52,57
   26 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,120)
      DO 27 I=58,61
   27 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,121)
      DO 28 I=62,65
   28 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      WRITE(6,122)
      DO 29 I=66,86
   29 WRITE(6,112)(LB(I,J),J=1,6),(M3(I,K),K=1,10)
      GO TO 5
  101 FORMAT(22I2)
  102 FORMAT(6A5)
  103 FORMAT(I3,17X,3I2,23X,2I1,3I2,2X,3I1,1X,3I1)
  104 FORMAT('1',T47,'DESCRIPTION OF STUDENT BODY'///)
  105 FORMAT(' ','STUDENT FLOW BY SEX',T41,'ENROLLED',T71,'TERMINATED',
     +T99,'AV MONTHLY ENROLLMENT'//' ',T35,'MALE   FEMALE    ALL',T67,
     +'MALE   FEMALE    ALL',T99,'MALE   FEMALE    ALL'/)
  106 FORMAT(' ',6A5,T35,2(I4,3X,I4,5X,I4,12X),I4,3X,I4,5X,I4)
  107 FORMAT('0','TOTAL STUDENTS',T35,2(I4,3X,I4,5X,I4,12X),I4,3X,I4,5X,
     + I4///)
  108 FORMAT('0','STUDENT FLOW BY RACE'//' ',T24,5X,'BL  WI  AI  AA  SA
     + UN  ALL',    5X,'BL  WI  AI  AA  SA  UN  ALL     BL  WI  AI  AA
     +SA  UN  ALL'/)
  109 FORMAT(' ',5A5,2(6I4,I5,3X),6I4,I5)
  110 FORMAT('0','TOTAL STUDENTS',T27,2(6I4,I5,3X),6I4,I5)
  111 FORMAT('1','BILINGUISM OF STUDENTS',T33,'MALE  FEMALE   TOTAL',T61
     +,'BL   WI   AI   AA   SA   UN   TOTAL'/)
  112 FORMAT(' ',6A5,I4,4X,I4,4X,I5,T58,6I5,3X,I5)
  113 FORMAT('0','AGE LEVEL OF STUDENTS'/)
  114 FORMAT('0','ADDITIONAL PROGRAMS'/)
  115 FORMAT('1','BENEFITS',T31,'MALE   FEMALE   TOTAL',T61,'BL   WI   A
     +I   AA   SA   UN   TOTAL'/)
  116 FORMAT('0','RELATED EMPLOYMENT'/)
  117 FORMAT('0','DEPENDENCIES'/)
  118 FORMAT('0','NUMBER OF CHILDREN'/)
  119 FORMAT('1','HANDICAPS',T31,'MALE   FEMALE   TOTAL',T61,'BL   WI
     +AI   AA   SA   UN   TOTAL'/)
  120 FORMAT('0','PASSED GED'/)
  121 FORMAT('0','HELP IN GOAL SETTING'/)
```

```
  122 FORMAT('0','GOAL SET'/)
   30 STOP
      END
'EOF
'XQT
   6   14   24   34   38   42   51   57   61   65   86
SPANISH
KOREAN
VIETNAMESE
OTHER
UNKNOWN
      TOTAL
UNDER 21
21-30
31-40
41-50
51-60
OVER 60
UNKNOWN
      TOTAL
PSV1  FULL-TIME
      PART-TIME
PSV2  FULL-TIME
      PART-TIME
AVT   FULL-TIME
      PART-TIME
SEC   FULL-TIME
      PART-TIME
UNKNOWN
      TOTAL
CETA
WIN
VR
V
M
VA
WS
OTHER
UNKNOWN
      TOTAL
DIRECTLY
INDIRECTLY
UNKNOWN
      TOTAL
HUSBAND
WIFE
UNKNOWN
      TOTAL
NONE
  1
  2
  3
  4
  5
MORE THAN 5
UNKNOWN
      TOTAL
DEAF
BLIND
```

DEAF AND BLIND
OTHER
UNKNOWN
TOTAL
YES
NO
UNKNOWN
TOTAL
HELP OCC
HELP AC
UNKNOWN
TOTAL
YES
MECHANIC
WELDER
CARPENTER
ELECTRONICS
COSMETOLOGY
COOK
OFFICE
HORTICULTURE
FORESTRY
NURSE, LPN
UPHOLSTRY
SEWING
INTERIOR DEC
GED
HEAT/REF
ESL
DATA PROCESSING
N/
UNKNOWN
TOTAL

PRIOR TO SEP
SEP
OCT
NOV
DEC
JAN
FEB
MAR

2. SUBROUTINE FOR THE PROCESSING OF CONTROL SITE CARD 2 DATA

```
'RUN KIP,900126,CTR2,5,100
'FOR,IS MAIN
      INTEGER D,B,C,RI,LB
      REAL RR,A
      DIMENSION A(7,3,4),B(7,20,10),C(7,7,3),RI(12),RR(6),LB(37,10)
      DO 5  I=1,37
    5 READ(5,101)(LB(I,J),J=1,10)
    1 DO 2 I=1,7
      DO 3 J=1,3
      DO 3 K=1,4
    3 A(I,J,K)=.0
      DO 4 J=1,20
      DO 4 K=1,10
    4 B(I,J,K)=0
      DO 2 J=1,7
      DO 2 K=1,3
    2 C(I,J,K)=0
    6 READ(5,102)D,(RI(I),I=1,8),(RR(J),J=1,6),(RI(K),K=9,12)
      IF(D.EQ.8)GO TO 30
      IF(D.EQ.9) GO TO 10
      I=RI(1)-8
      IF(I.LT.1)I=I+4
      IF(I.LT.1.OR.I.GT.12)I=1
      DO 7 J=1,3
      K=2*J-1
      L=K+1
      M=0+RR(K)
      N=0+RR(L)
      IF(M.EQ.0.AND.N.EQ.0)GO TO 7
      A(I,J,1)=A(I,J,1)+1.0
      A(I,J,2)=A(I,J,2)+RR(K)
      A(I,J,3)=A(I,J,3)+RR(K)+RR(L)
      A(I,J,4)=A(I,J,4)+RR(L)
    7 CONTINUE
      J=RI(9)
      IF(J.LT.1.OR.J.GT.20)GO TO 8
      B(I,J,1)=B(I,J,1)+1
      K=11
      IF(RI(10).EQ.95)K=3
      IF(RI(10).EQ.85)K=4
      IF(RI(10).EQ.70)K=5
      IF(RI(10).EQ.60)K=6
      IF(RI(10).EQ.50)K=7
      IF(K.EQ.11)GO TO 8
      B(I,J,2)=B(I,J,2)+1
      B(I,J,K)=B(I,J,K)+1
    8 B(I,J,8)=B(I,J,8)+RI(11)
      B(I,J,10)=B(I,J,10)+RI(12)
      DO 9 J=1,7
      K=J+1
      C(I,J,1)=C(I,J,1)+RI(K)
    9 C(I,J,2)=C(I,J,2)+1
      GO TO 6
```

```
   10 DO 12 I=1,7
      DO 11 J=1,3
      DO 11 K=2,4
      M=0+A(I,J,1)
      IF(M.EQ.0)GO TO 11
      A(I,J,K)=A(I,J,K)/A(I,J,1)
   11 CONTINUE
      DO 13 J=1,20
      IF(B(I,J,1).EQ.0)GO TO 13
      B(I,J,9)=B(I,J,8)/B(I,J,1)
      B(I,J,10)=B(I,J,10)/B(I,J,1)
   13 CONTINUE
      DO 12 J=1,7
      IF(C(I,J,2).EQ.0)GO TO 12
      C(I,J,3)=C(I,J,1)/C(I,J,2)
   12 CONTINUE
      DO 14 I=1,7
      WRITE(6,103)(LB(I,J),J=1,2)
      WRITE(6,104)
      WRITE(6,105)
      DO 15 J=1,3
      L=J+7
   15 WRITE(6,106)(LB(L,M),M=1,4),(A(I,J,K),K=1,4)
      WRITE(6,107)
      WRITE(6,108)
      DO 16 J=1,20
      L=J+10
   16 WRITE(6,109)(LB(L,M),M=1,4),(B(I,J,K),K=1,10)
      WRITE(6,110)
      DO 17 J=1,7
      L=J+30
   17 WRITE(6,111)(LB(L,M),M=1,10),(C(I,J,K),K=1,3)
   14 CONTINUE
      GO TO 1
  101 FORMAT(10A5)
  102 FORMAT(4X,I1,7I2,I1,2(F3.1,F4.1),2F3.1,2I2,I3,I2)
  103 FORMAT('1',T37,'PROGRAM CHARACTERISTICS FOR ',2A5//)
  104 FORMAT(' ','PRE-TO-POSTTEST GAINSCORES'/)
  105 FORMAT(' ',T21,'NUMBER OF STUDENTS',6X,'AVERAGE PRE-',T61,'AVERAGE
     +POST-',4X,'AVERAGE RECORDED'/' ',T21,'WITH RECORDED SCORES',4X,'T
     +EST SCORE',T61,'TEST SCORE',6X,'GAIN SCORE')
  106 FORMAT('0',4A5,T29,F5.1,T48,F5.1,T64,F5.1,T82,F5.1)
  107 FORMAT('0',' SUBJECT MATTER PERFORMANCE INDICATORS')
  108 FORMAT('0',T21,'NUMBER OF STUDENTS',6X,'NUMBER OF STUDENTS',6X,'GR
     +ADE DISTRIBUTION',5X,'TOTAL STUDY',4X,'AV REC',2X,'S/T'/' ',T21,'T
     +AKING THE SUBJECT',6X,'WITH RECORDED GRADES',3X,'A    B    C    D
     +    F    HRS RECORDED   STHRS  RATIO'/)
  109 FORMAT(' ',4A5,T28,I4,T51,I4,T65,5(2X,I3),T95,I5,T105,2(4X,I3))
  110 FORMAT('0',' ADDITIONAL PERFORMANCE DATA'/)
  111 FORMAT(' ',10A5,T52,I5,',PER ',I5,'STUDENTS =',I5,'AVERAGE')
   30 STOP
      END
'EOF
'XQT
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
```

FEBRUARY
MARCH

READING
MATHEMATICS
BOTEL
READING
ENGLISH
ENGLISH SL
MATHEMATICS
SCIENCE
HISTORY
MECHANICS
COSMETOLOGY
AGRICULTURE
HEAT/REF
OFFICE OCC
WELDING
CARPENTRY
ELECTRONICS/TV
COOKING
HEALTH
HORTICULTURE
SEWING
SPELLING
FORESTRY
TOTAL NUMBER OF STUDENT-DAYS RECORDED PRESENT
TOTAL NUMBER OF STUDENT-DAYS RECORDED ABSENT
TOTAL NUMBER OF HRS OF INDIVIDUAL COUNSELING
TOTAL NUMBER OF HRS OF GROUP COUNSELING
TOTAL NUMBER OF PERSONAL INTERVIEWS/CONTACTS
TOTAL NUMBER OF SOCIAL GATHERINGS ATTENDED
TOTAL NUMBER OF NEW QUALIFICATIONS RECORDED

APPENDIX I

RAW DATA OF IMTS SITE SUMMARY FILE

SITE DESCRIPTIVE DATA, BY CODED SITE IDENTIFIER

SITE 120111

```
1201111006750001950670000000000000000000350100050000000000000131903          A
1201111106750001690040000010010000020000350100050000280060040000000000726    A
1201111201750001410110000000070000060000350100050000280060000000000000751    A
1201110209760001500390000010080010150080350100050000300060033                 A
1201110303760001560020000000060020000000350100050000300060080016010000644    A

1201111006750000010020000010000000000000000041683900001680000000000000726    B
1201111106750000010020000010000000000000000041843830001840000000000000751    B
1201111201750000010020000010000000000000000041443210001440000000000000609    B
1201110209760000010020000010000000000000000041603240001600000000000000644    B
1201110303760000010020000010000000000000000041443920001600000000000000696    B

1201111006750000000000000000000000000000000001683900001680000000000000726    C
1201111106750000000000000000000000000000000001843830001840000000000000751    C
1201111201750000000000000000000000000000000001443210001440000000000000609    C
1201110209760000000000000000000000000000000001603240001600000000000000644    C
1201110303760000016000000000000000000000000001616039200016000000000000000712
```

SITE 139441

```
1394411130750001020340080010170000000010420050030000500260220000000000000000040A
1394411231750000900060080000190000010000420050030000500260230000000000000000040A

1394411130750000000300000100000000000010005000030000012000000000000120054000050B
1394411231750000000300000100000000000010005000030000012000000000000120054000050B

1394411130750000000600000000000000000000060000360000120000000000001200600000060C
1394411231750000000600000000000000000000060000360000120000000000001200600000060C
```

SITE 550231

```
5502310930750001262310040000010290040250400000490150600300630000000602221    A
5502311031750001380330020040050100140170550000070150820400520000000000000040A
5502311201750000960290000000160160110120400000070150880640550000000000000040A
5502310126760000900250000010080050070030550000070150870590240000000000000040A
5502310227760001140450030050050080090150550000070150730630450019020601221    A
5502310309760001200300020010070090050030550000070150730630270019020601221    A
```

```
55023109307500000100800000400000000010010015168714000480000000012615716458
55023110317500000100900000400000000010010016184928000547000000017217220030000508
55023100000000000100900000400000000010010016160827000543000000001514318220000508
55023112017500000100900000400000000010010016136691000446000000012712715270000508
55023101267600000100900000400000000010010016136630000399000000012712714190000508
55023103097600000100900000400000000010010016160833000518000000013615017978

55023109307500001800000000000000000000000018186714000480000000012615716638
55023110317500000502100000000000000000000026189949000547000000017217220290000608
55023100000000001002100000000000000000000031170848000543000000015014318530000608
55023112017500000600000000000000000000000614269100044600000001271271533000060C
55023101267600000100000000000000000000000101466300003990000000012712714290000608
55023103097600000600600000000000480000000012166839000518000000013615018098

SITE 560131

56013112317500016530800800210100100706503800002801909103118400000000000000000040A
56013101307600021417000000000000000000000038000028019079018000000000000000000040A

56013112317500001002000002000000000000900141562270002130000000000216081200005088
56013101307600000100200000200000000000090014204320000264000000000026410500000508

56013112317500000301300000000000000000000161442400002400000000000216084000006080
56013101307600000201600000000000000000000181763360003040000000000264108000006080

SITE 590441

59044110067500017702500000000500200000001900100300002501500091190206011114
59044111037500021202500000100000200300101900100300002501500000004001201814
59044112037500015302200000100200000200001900200600102501500514060201201814
59044101077600010201900100000200400200001900200600102501501000000000000000040A
59044102067600016802100100100200200100001900200600102501500715060206012214
59044103027600016801700100000000000000001900200600102501501000040012019814

59044110067500000100100000100000000010010005020040000040000000002001201364
59044111037500000100100000100000000010010005020040000040000000002001201364
59044112037500000100200000100000000010010006020060000040000000002001201524
59044101077600000100200000100000000010010006020060000040000000002001201520000508
59044102067600000100200000100000000010010006020060000040000000002001201524
59044103027600000100200000100000000010010006020060000040000000002001201524

59044110067500002000000000000000000020000040040040000040000000004001201814
59044111037500002000000000000000000020000040040040000040000000004001201814
59044112037500002000000000000000000020000040040060000040000000004001201984
59044101077600002000000000000000000020000040040060000040000000004001201980000608
59044102067600002000000000000000000020000040040060000040000000004001201984
59044103027600002000000000000000000020000040040060000040000000004001201984
```

APPENDIX J

SUPPORTING LETTER FROM FLORIDA DIVISION OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION

NOV 1 1 1974

lph D. Turlington
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

JOE D. MILLS
DIRECTOR
DIVISION OF VOCATIONAL, TECH
AND ADULT EDUCATION

November 7, 1974

Mrs. Donna M. Seay
Southeast Director
Technical Education Resource Centers
P. O. Box 4158
Montgomery, Alabama 36101

Dear Donna:

We have read your project proposal, "A Comparative System for the Evaluation of Individualized Manpower Training Sites", and we feel that the results of this project would definitely benefit the sites that are using the IMTS. At the same time, the State can use the assessment data as a basis for providing technical assistance in planning and making management decisions for establishing, operating and improving the System. It is our opinion that one of the greatest contributions will be the development of a model that can be used by Florida and other states for formative and summative evaluations.

Since this project will provide the analysis of data that will be collected in our computerized information project that was funded to the University of West Florida, we will cooperate with you and your staff by providing the necessary support that will make your work possible. If further confirmation of our willingness to cooperate is needed, please contact us.

Sincerely,

Joe D. Mills

Joe D. Mills, Director
Division of Vocational, Technical
and Adult Education

JDM/L/pfr

cc: C. M. Lawrence
J. A. Barge

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