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ABSTRACT

This module on tracking and reporting data is 1 in a series of 10 modules written for vocational education teacher education programs. It is designed to provide a basic understanding of Missouri's Vocational Instructional Management System (VIMS) and Vocational Administrative Management System (VAMS). Introductory materials include the following: a list of competencies/tasks to be covered, objectives, an overview of the module, a list of suggested resources, and content/instruction strategies, including prerequisite information. The module provides a review of the key components of VIMS and an overview of VAMS that includes a definition, its capabilities, information that VAMS manages, key features, and support software and hardware. A summary and review are provided. Thirteen transparencies are appended. (YLB)

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MODULE:

Tracking And Reporting Data Using VIMS And VAMS

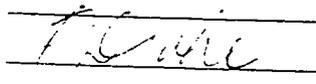
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Module : Tracking And Reporting Data Using VIMS And VAMS

Notes

MODULE: TRACKING AND REPORTING DATA USING VIMS AND VAMS

Competencies/Tasks:

Explain the components of the Vocational Instructional Management System (VIMS).

Identify the components of the Vocation Administrative Management System (VAMS).

Objectives:

1. Differentiate between the purpose of the Vocational Administrative Management System (VAMS) and the Vocational Informational Management System (VIMS).
2. Describe the following components of the Vocational Administrative Management System: (1) purpose, (2) characteristics, (3) definition of terminology, (4) flow chart/process, (5) format of instructional competencies, and (6) files.
3. Distinguish between student data based files and staff data based files that are available on the VAMS System and describe the five components.
4. List the profiles that are available on a VAMS System and specify the hardware, software, pricing and key features of the system.

Overview of the Module:

The basis of the content for this module came from two primary resources:

1. VIMS-Vocational Informational Management System For Missouri. Excellence Through Instructional Management. Department of Elementary and Secondary Education, Jefferson City, Missouri, July 1984.

This publication lays the foundation for performance based instruction which can be managed. This system evolved when, during the Summer of 1981, the Missouri State Board of Education formally adopted the concept of "Informational Management Systems" as a priority for the 1981-82 school year. The Board's official statement on instructional management reads, in part: "The Missouri State Board of Education encourages all school districts to adopt an Instructional Management System (IMS) as a practical means of defining objectives for teaching, recording the progress of individual students toward the objectives, and reporting student achievement in terms of the objectives. This approach may be used in all subjects and grade levels . . ."

The Department of Elementary and Secondary Education, in accordance with the Board's emphasis, had made a concerted effort to promote the Instructional Management System concept and to assist local school personnel in applying the techniques of instructional management in their schools. The Vocational Informational Management System (VIMS) grew out of this overall concept.

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Notes

2. VAMS Research Associate
PAVTE Department
University of Missouri-Columbia
Columbia, Missouri 65211

The Director of the VAMS Support Center (VAMS Research Associate) has provided the writer with a variety of instructional materials which pertain to the Vocational Administrative Management System (VAMS). The director is under contract by the Missouri Department of Elementary and Secondary Education to: (1) install and upgrade software and hardware on the VAMS System, and to (2) train personnel to effectively utilize the system.

In summary, this module is designed to provide a basic understanding of the Vocational Administrative Management System.

Suggested Resources:

1. Supplies, handouts, media, guest lecturers, etc.
 - transparencies #I - XIII
2. Assignment
 - describe the role of the vocational teacher in the VAMS process.
 - administer a quiz and have the data entered into the VAMS System.
 - enter the course evaluation scheme into the VAMS System and issue quarterly grade reports from data obtained via the system.
 - enter a competency profile into the VAMS System.
 - input student data into the VAMS System.
 - describe the advantages and disadvantages of having students participate in grading their own individual/group work. Discuss whether you think that students in general are inclined to grade their own work higher or lower than its actual worth. Provide rationale which was used to form the basis of your decision.
3. References and Bibliography
 - VIMS-Vocational Instructional Management System For Missouri, Excellence Through Instructional Management, Department of Elementary and Secondary Education, Jefferson City, Missouri, July 1984

Content/Instructional Strategies

Prerequisite Information:

Before undertaking this module, students should have already been exposed to and mastered duty A-25.

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Notes

VAMS

Introduction:

The Vocational Administrative Management System (VAMS) is a computer based management information system designed for use in Missouri vocational schools. The system is designed to make vocational instructional management a practical reality.

VAMS facilitates competency based vocational education by: (1) easing the burden of school record keeping, (2) continuously supporting the monitoring and evaluation of student progress, and (3) providing demographic and student performance reports.

VAMS is a joint effort of the Missouri State Department of Elementary and Secondary Education, Adult and Vocational Division, Jefferson City and International Software Solutions of Atlanta, Georgia. The VAMS Support Center, located on the campus of the University of Missouri-Columbia, provides VAMS customers access to the following kinds of support:

- Five days of on-site training as needed during the first year
- over-the-phone assistance - to answer customer questions
- updating VAMS software as refinements are made available through the use of a modem and MULTILINK communications software to directly update customers' VAMS software
- a user's manual

Body of Lesson:

Perhaps a review of the key components of the Vocational Instructional Management System (VIMS) would be in order.

Vocational Instructional Management System (VIMS)

A. VIMS definition

An approach for planning, organizing, and controlling (managing) vocational instruction. It is a concept that is similar to management by objectives which are used in private sector.

VIMS, which is grounded in mastery learning theory and practice, is based on:

- a. identifying important student learning outcomes
- b. defining successful performance for those outcomes and performance criterion
- c. students working on a skill until mastery (performs it to the criterion) is achieved

"VIMS is a practical way for a school to establish clear priorities, to define the scope and sequence of its instructional programs, and to insure student achievement." (From Missouri Department of Elementary and Secondary Education, Introduction to Vocational Educational Instructional Management", July 1984.)

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Notes

- B. Goals of VIMS
 - 1. A way to improve vocational instruction and student learning
 - 2. A vehicle for "standardizing" vocational programs
 - 3. A method for articulating vocational programs
 - 4. A system of instructional accountability
- C. Significance of VIMS
 - 1. Design of curriculum and other resources reflects VIMS
 - 2. Classroom activities of students will be affected by VIMS
 - 3. Teacher roles are impacted by VIMS
 - 4. Program evaluation includes standards related to VIMS
- D. State activities related to VIMS implementation
 - 1. Development of program area task lists (competency profiles)
 - 2. Development and revision of curricula
 - 3. Development of other evaluation tools
 - 4. Assistance for VIMS implementation and computer assisted information management
- E. Components of VIMS
 - 1. Program Goal (occupations for which training is provided)
 - 2. Occupational Analysis
 - a. DUTIES
 - b. TASKS
 - c. OBJECTIVES (based on instructional analysis)
 - 3. Performance Objectives (performance criteria)
 - 4. Instructional Delivery (materials and methods)
 - 5. Evaluation of Student Performance
 - 6. Competency Profiles (mastery reports)
- F. Minimum Requirements of VIMS
 - 1. Identify and communicate program's tasks
 - 2. Correlate instructional resources to tasks
 - 3. All student evaluation must be criterion referenced
 - 4. All students should receive reports of tasks mastered and not mastered
- G. Other Goals/Characteristics of the VIMS
 - 1. Total mastery learning practiced
 - 2. Individualized self-paced instruction
 - 3. Student selection of tasks to be learned
 - 4. Discrete curriculum modules for specific tasks
 - 5. Expanded flexibility in designing/defining vocational programs

Transparency # 1 - Component Parts of VIMS

As was previously noted, VAMS grew out of the VIMS System as an attempt to make it easier and less time consuming for vocational educators to manage a wide array of information.

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A brief overview of the VAMS System would include the following:

Vocational Administrative Management System (VAMS)

A. VAMS Definition

A computer software program for storing, processing, and reporting information from a competency based vocational education program. The major benefit of using the VAMS is the assistance provided in recording and reporting student masteries.

B. VAMS Capabilities

1. Stores and uses definition of program outcomes for mastery tracking
 - CIP — represents a vocational program (or course)
 - DUTY — a major area of responsibility on a job
 - TASK — a discrete meaningful unit of work performed on the job
 - OBJECTIVE — a specific learning outcome that enables or defines task performance
2. Records curriculum correlation activities by linking instructional materials descriptions to specific tasks
3. Maintains individual student mastery records for each task defined in a program area
4. Testing module scores tests for mastery and provides useful test analysis reports
5. Provides individual student mastery reports and summaries of class mastery performance

The close interrelationship which must exist between VIMS and VAMS is imperative. VAMS has no reason for being without VIMS and VIMS gives meaning to VAMS.

Transparency # II - VAMS-VIMS Diagram

VAMS is an organizational management tool that will manage information on the following:

- A. Student
- B. Staff
- C. Course Catalog
- D. Schedule
- E. Rooms
- F. Instructional Competencies
 - Program Areas
 - Duties
 - Tasks

Module : Tracking And Reporting Data Using VIMS And VAMS

Notes

G. Materials

H. Tests

I. Code/Cross Reference Files

Key features of the VAMS System would include the following:

- * Trained operator/controlled access
 1. Teachers provide information
 2. Trained operator runs computer to input information via keyboard and scanner and to generate reports
- * Demographic data base
- * Instruction data base
 - Intended curriculum
 - Intended student skills
 - Demonstrated skills
- * Search and sort
- * Report generation
- * Software maintenance and technical support

VAMS is supported by a variety of software and hardware. Most notable are the following:

- * Software
 - VAMS
 - Scan iter.ii
 - MULTILINK Communications
- * Hardware
 - IBM PC AT with 20 MB hard disk and 1.2 MB diskette drive, serial ports for modem and scanner, parallel port for printer, and DOS 3.1 operating system
 - Monochrome display
 - Printer -- parallel, 80 column, regular and compressed print options, with Epson control features
 - Hayes Smart modem 1200, dedicated phone line with RS232 cable and modular RJ11 jack
 - Scantron model 1200 or 2100 and scan forms
 - Cables for printer, scanner, and modem and power surge protector

A series of transparencies have been developed by the VAMS Research Associate which illustrate the components of the system. These transparencies are built around the software system which was developed by, and is the sole property of, International Software Solutions.

Transparency # III - VAMS

Transparency #IV - VAMS Master File

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One of the major components of the VAMS System is the Student Data Base File

Transparency # V - Student Data Base File

The following transparencies are designed to serve as examples of the detailed data which is available in the Student Data Base File. This is a very small sample of the 73 fields which are available.

Transparency # VI - Student History Profile

Transparency # VII - Class Summary Report Part I

Transparency # VIII - Class Summary Report Part II

The Staff File is another major component of the VAMS System which contains 37 fields for information.

Transparency # IX - Staffing

The Format for Instructional Competencies is the focal point of the interrelationship which exists between VIMS and VAMS.

TRANSPARENCY #X - Format For Instructional Competencies

Another major field involves testing. Two transparencies are provided to show the detailed data which is available.

Transparency # XI - Test Analysis by Task

Transparency # XII - Test Item Analysis

The last transparency which is provided serves to illustrate the data which is available on the master schedule.

Transparency # XIII - Schedule

Summary and Review:

In summary, a portion of this module has been devoted to the support services provided to vocational educators from the State of Missouri through the Vocational Administrative Management System (VAMS). This system provides vocational educators:

A. Automated information management for:

- Student and staff demographic data
- Performance based objectives
- Cross-referenced instructional materials
- Scoring of tests with scanner

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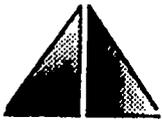
Notes

B. Reports on:

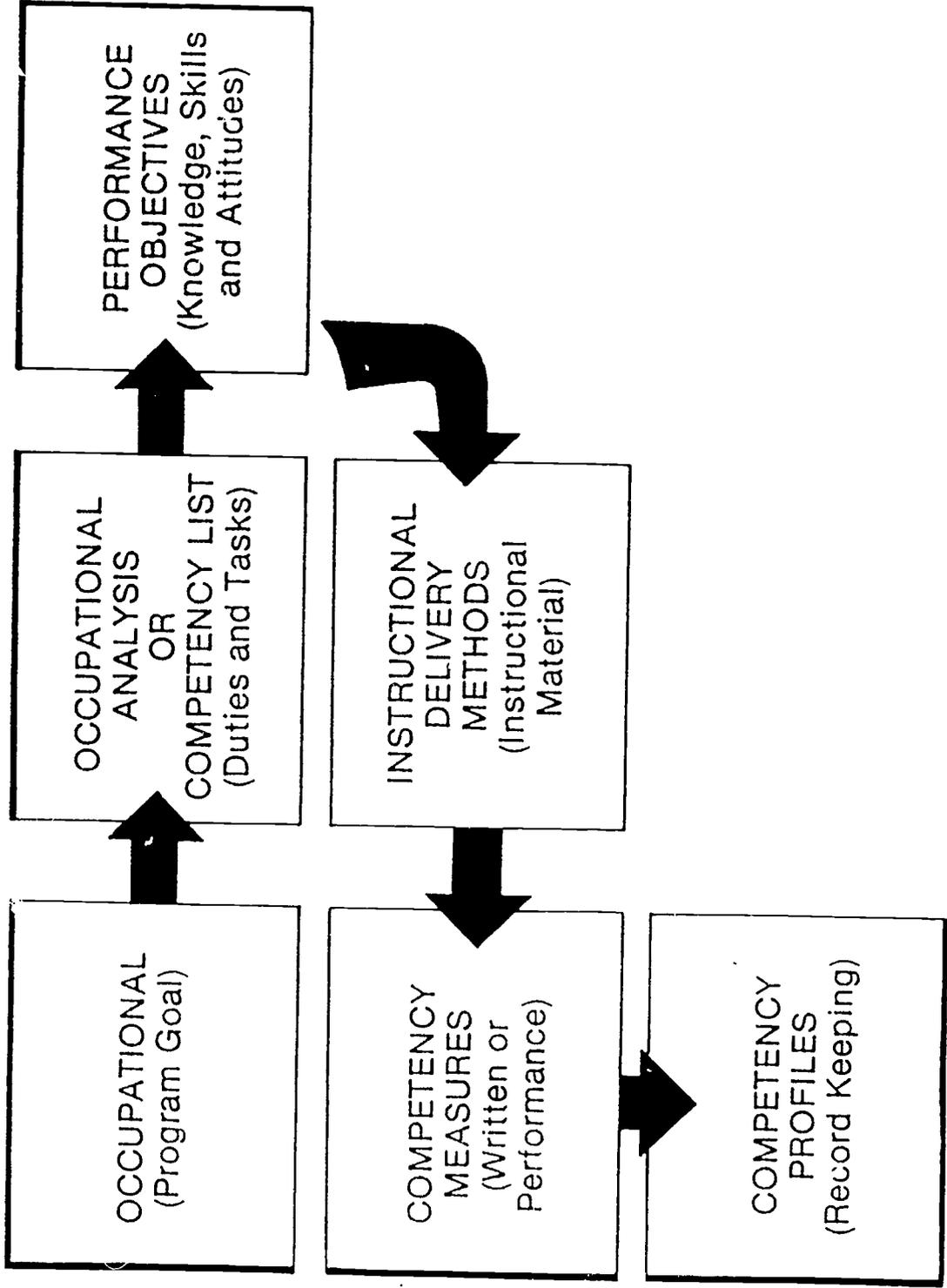
- Student mastery of performance objectives
- Test Analysis
- Vocational program areas (CAPS) - competencies, duties, tasks

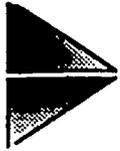
C. Allows the user to:

- Customize reports to meet individual needs
- Edit and update master files easily



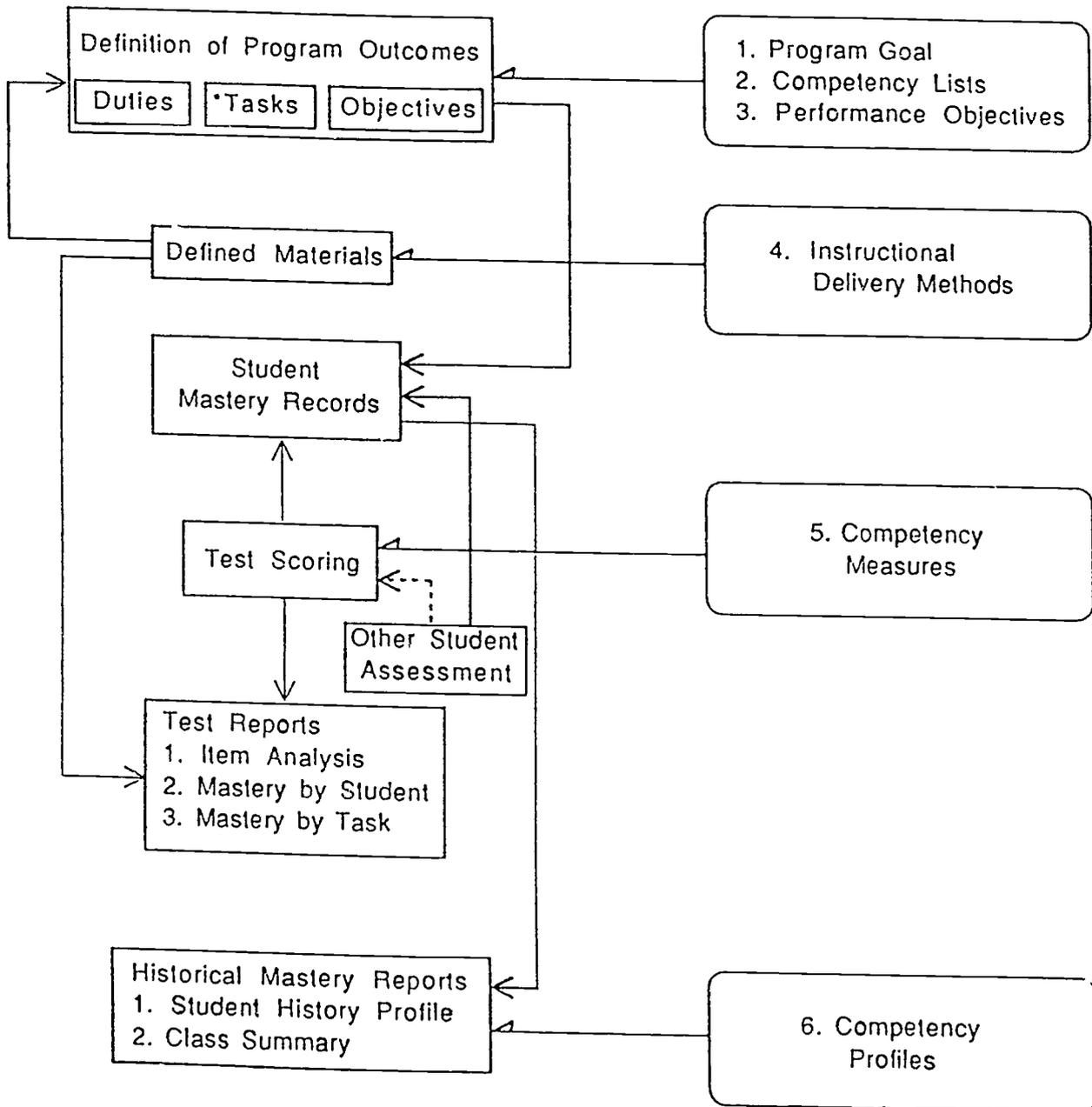
Component Parts of VIMS



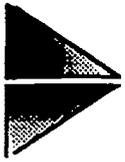


VAMS

VIMS



* All mastery tracking and reporting is conducted for tasks.



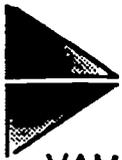
The Vocational Administrative Management System

VAMS was developed as a solution to the record keeping problems associated with competency based instruction in the vocational schools of Missouri. This school based management system uses computer technology to make competency based instructional management feasible and cost effective for vocational schools. Using a PC DOS, hard drive micro-computer along with a printer and optical scanner, vocational school staff can use VAMS software to store, retrieve, and report information concerning student characteristics, performance, and follow-up status.

VAMS enables administrators and teachers quick, selective, and convenient access to information related specifically to each school's competency based program. By using locally defined vocational competencies, tests, and instructional materials, VAMS can provide information geared specifically to the needs of the administrator, teacher, and student. For the administrator VAMS can provide easily interpreted information on student demographic data, instruction, and performance. For the teacher VAMS eases recordkeeping, test scoring, reporting and most of the burdensome paperwork associated with competency based instruction. For the student VAMS provides current reports on mastery of job-specific skills and can prescribe instructional materials for tasks not mastered.

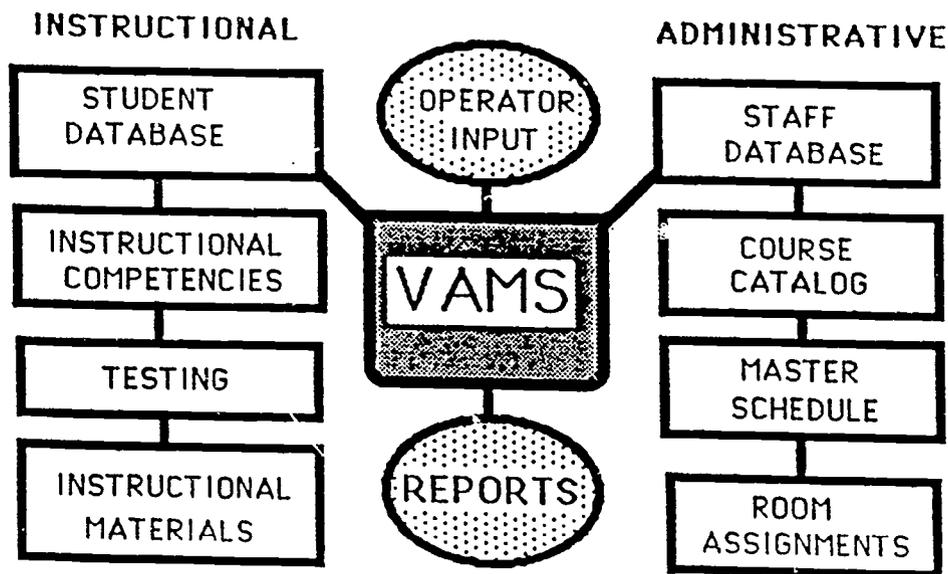
VAMS is intended to be located in the school office and operated by the director's clerical staff. It could also be used at the departmental level. Comprehensive operator training and support for the clerical staff will assure effective use of the system. Other staff may also be trained.

The following informational materials and sample reports are intended to illustrate key elements of VAMS and to help potential users consider how VAMS might be beneficial to them. Additional assistance for understanding this comprehensive system is available.



VAMS Master Files

VAMS provides a framework for entering and managing data on students, staff, and instruction through the following data files.



STUDENTS -- demographic and instructional related information

INSTRUCTIONAL COMPETENCIES -- as a framework for vocational instructional management, VAMS enables school staff to manage student competency data at three levels.

- (A) **Program Areas (CIP)** associated with occupational or vocational roles, such as Auto Mechanic.
- (B) **Duties** associated with each program area.
- (C) **Tasks** associated with each duty.

TEST -- answer keys for tests associated with student competencies

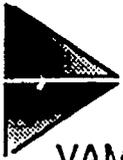
MATERIAL -- instructional materials that support mastery of tasks

STAFF- demographic and instructional assignment information

CATALOG-- information about the school course offerings

MASTER SCHEDULE -- data on the school's master schedule

ROOMS -- room name or number related to the schedule



Student Data Base File

VAMS keeps track of 73 fields, or pieces of information, on each student. Reports are available by menu. Customized reports may be developed through the Report Generator. Administrators may want a report on the field listed in bold face for the **VEDS REPORT**. Since the information is in the file, many types of reports are readily available. The following, lists 26 of the most commonly used feilds of the 73 in the student file.

STUDENT FILE

STUDENT ID #

NAME

ADDRESS

* ZIP CODE

SEX

BIRTH DATE

ENTRY DATE

EXIT DATE

HOME PHONE #

ANTICIPATED YEAR OF GRADUATION

* STATUS (ACTIVE OR INACTIVE)

* MARITAL STATUS

* **SPECIAL POPULATION STATUS ED, LD, VI**

* **BACKGROUND (RACIAL BACKGROUND)**

* COUNTY

* **FEEDER SCHOOL (SENDING SCHOOL)**

* GRADE LEVEL

EMERGENCY HEALTH DATA

ENTRY QUARTER

* **PROGRAM OCCUPATIONAL AREA (CIP)**

PROGRAM CODE (DAY, NIGHT, SECONDARY)

SCHEDULE

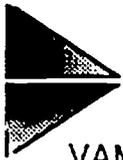
* **INSTRUCTIONAL STUDENT PERFORMANCE AND MASTERY DATA**

CLOCK HOURS OF INSTRUCTION

* FOLLOWUP PLACEMENT STATUS

* PROGRAM COMPLETION STATUS

* Code files speed up data entry speed. Type "LD" and the longer description **Learning Disabled** is entered. Type the zip code and **City and State** are entered automatically. An additional benefit of using previously defined codes to call up consistent data descriptions is the ability to do accurate and reliable information searches on these important fields.



Student History Profile

VAMS can provide a Student History Profile as seen on this page. Once the data has been entered into the computer through the instructional and administrative files, the profile is readily available. The profile gives a detailed list of all tasks a student has (1) mastered, (2) mastered with supervision, (3) not mastered, or (4) has had no exposure to. This is most useful to students since it gives them a constant progress report. Instructors can use the student profile for reporting individual student performance. Administrators find it helpful to monitor curriculum and use with prospective employers of the school's product, the student.

STUDENT HISTORY PROFILE

EVALUATION DATES: 10/01/85 TO 10/24/85

STUDENT NAME: MANNELL, DANIEL

STUDENT ID: 39573

GRADE: 11

PROGRAM AREA: AUTOMECHANIC

EVALUATION DESCRIPTION: MASTERY

CIP	DUTY	TASK	DESCRIPTION
-----	------	------	-------------

470605	A	004	Check steering system fluid levels and leaks
470605	A	005	Check steering gearbox lash, mounting, and seals
470605	A	006	Inspect power steering pump
470605	A	007	Inspect steering column
470605	A	012	Balance tires and wheels
470605	B	001	Inspect and test pressure cap
470605	B	002	Pressure test and inspect cooling system for leaks
470605	B	003	Inspect, test, and add coolant
470605	B	004	Inspect and replace hoses

EVALUATION DESCRIPTION: MASTERY WITH SUPERVISION

CIP	DUTY	TASK	DESCRIPTION
-----	------	------	-------------

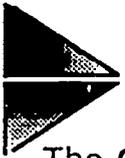
470605	A	001	Diagnose steering and suspension system
470605	A	002	Diagnose tire wear pattern
470605	A	003	Inspect manual and power steering system

EVALUATION DESCRIPTION: NOT MASTERED

CIP	DUTY	TASK	DESCRIPTION
-----	------	------	-------------

470605	A	008	R/R rear axle housing
470605	A	009	R/R sway bars and housing
470605	A	010	R/R torque control arms
470605	A	011	Check alignment for front and rear wheels

EVALUATION DESCRIPTION: NO EXPOSURE



Class Summary Report

(Part 1)

The Class Summary Report provides three types of comparisons, the class, the individual student, and the individual tasks. Part 1 shows the mastery level for each task for the entire class. This can be used for instructional grouping for students that need reinforcement. It can also help to identify tasks most of the students are having trouble with. The report is dated and shows the period of time on which the performance is being reported. The mastery codes for this example are listed below the comparison chart. These codes for mastery are defined by the instructor at the time of VAMS implementation. The specific tasks are described at the bottom of the page in Part 1.

=====

CLASS SUMMARY REPORT PART 1

EVALUATION DATES: 10/01/85 TO 01/24/86

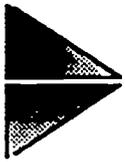
SECTION NO. 47060501-A
PROGRAM AREA AUTOMOBILE MECHANIC
PROGRAM CODE 470605

ID	NAME	A001	A002	A003	A004	A005	A006	A007	A008	A009	A010
46343	BENJAMIN, TROY	2	2	2	1	1	1	1	3	3	3
55535	BUFFORD, BILL G.	2	2	2	1	1	1	1	3	3	3
10535	HALEY, MARTHA	2	2	2	1	1	1	1	3	3	3
52286	HUGHES, CHRIS	2	2	2	2	1	1	1	3	3	3
11881	JONES, ALFRED	1	1	1	1	1	1	1	3	1	1
55472	JONES, RUSSELL	1	1	1	1	1	1	1	3	1	1
39573	MANNELL, DANIEL	2	2	2	1	1	1	1	3	3	3
49102	MERMAN, DALE	2	2	2	1	1	1	1	3	3	3

Codes: 1 MASTERY 2 MASTERY WITH SUPERVISION 3 NOT MASTERED 4 NO EXPOSURE

TASK DESCRIPTION

- A 001 Diagnose steering and suspension system
- A 002 Diagnose tire wear pattern
- A 003 Inspect manual and power steering system
- A 004 Check steering system fluid levels and leaks
- A 005 Check steering gearbox lash, mounting, and seals
- A 006 Inspect power steering pump
- A 007 Inspect steering column
- A 008 R/R rear axle housing
- A 009 R/R sway bars and housing
- A 010 R/R torque control arms



Class Summary Report

(Part 2)

Part 2 of the Class Summary shows for each student, the number of tasks mastered, not mastered, and the percentage of tasks the student has mastered.

CLASS SUMMARY REPORT PART 2

STUDENT BY STUDENT COMPARISON OF CLASS

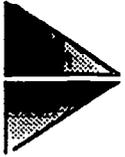
STUDENT NAME	NUMBER MASTERED	NUMBER NOT-MASTERED	PERCENT MASTERY
BENJAMIN, TROY	7	3	70
BUFFORD, BILL	7	3	70
HALCY, MARTHA	7	3	70
HUGHES, CHRIS	7	3	70
JONES, ALFRED	9	1	90
JONES, RUSSELL	9	1	90
MANNELL, DANIEL	7	3	70
MERMAN, DALE	7	3	70

Part 3 of the Class Summary Report shows how many students have been evaluated on each task, which is represented by possible mastery. The third column shows how many actually did master the task and the fourth column shows the percentage. This can give a very quick but indepth analysis of what tasks are being evaluated and how effective the instruction has been for each task.

CLASS SUMMARY REPORT PART 3

CLASS MASTERY PERCENTAGE

TASK(S)	POSSIBLE TOTAL MASTRIES	TOTAL STUDENT MASTRIES	PERCENT STUDENT MASTRIES
A 001	8	2	25
A 002	8	2	25
A 003	8	2	25
A 004	8	7	88
A 005	8	8	100
A 006	8	8	100
A 007	8	8	100
A 008	8	0	0



Staffing

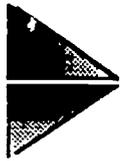
The Staff file serves as a personnel file with 37 fields. This information can be used in several ways. For example, the director might want a report on all staff, their certificates held, and their expiration dates. Since the computer has that information stored, reports are available upon request.

STAFF FILE

Fields frequently used by vocational schools

- STAFF ID # OR SOCIAL SECURITY #
- NAME
- ADDRESS
- PHONE #
- * ZIP CODE
- BIRTH DATE
- DATE BEGAN
- DATE LEFT
- * STATUS (ACTIVE OR INACTIVE)
- SEX
- * BACKGROUND
- * SPECIAL POPULATION STATUS
- * MARITAL STATUS
- * OCCUPATIONAL PROGRAM AREAS (CIPS)
- CERTIFICATES HELD AND DATE EXPIRES
- SCHEDULE
- MONTHS OF CONTRACT
- COMPENSATION
- EMERGENCY INFORMATION
- SPOUSE INFORMATION

- * CODE FILES



Format of Instructional Competencies

VAMS is an open program in the sense that the instructional competencies on which student performance is to be evaluated are selected or defined by the local school. A school might choose to use competencies developed externally, such as, by a vocational education consortium. With the permission of the outside group, the VAMS user could "load" these competency lists into VAMS for use by local teachers. On the other hand, a school might want to use some externally developed competencies along with ones the local school staff has developed.

In either case, the framework for the competency statements in VAMS are the same. VAMS defines a program area on three levels of generality. At the broadest level, a course addressing a program area is defined according to the Classification of Instructional Programs (CIP). Each duty is further defined by the specific TASKS a worker would need to be able to perform in accomplishing the duties. VAMS allows the user to define each program area at all three levels: CIP, DUTY, and TASK. Instructional materials, tests, and student performance are related to specific tasks within each program area.

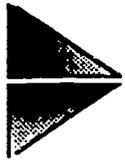
The user can easily edit existing competencies or add new ones to the VAMS program through the keyboard while simply following on-screen instructions much like word processing.

DEFINITIONS

CIP: (Classification of Instructional programs) program area defined in terms of a job title (Auto Mechanic) and coded by a 6 digit number, (470605).

DUTY: Major duties or activities involved in performing a job, coded as the 6 digit CIP plus a letter designating the duty, (470605A).

TASK: Units of work an individual performs in completing a duty. A task number could be the CIP plus the duty and the task, (470605A001). Once these Program Areas, Duties and Tasks are entered a complete report on the curriculum is available.



Test Analysis by Task

The **Test Analysis by Task** shows how many questions addressed each task, and which test items these were. This report also displays the task, the number, percentage and names of students that showed mastery or non mastery of the task. The mastery level percentage is defined by the instructor and entered in VAMS by the operator.

TEST ANALYSIS BY TASK
TEST ID: 470605A-2 ANSWER CODE: TEST
DESCRIPTION: STEERING & SUSPENSION (SAMPLE TEST)
4 ITEMS PER TASK FOR 12-TASKS
SCANNER AND REPORT SAMPLE FOR TEST

TASK ID DESCRIPTION

470605A001 Diagnose steering and suspension system

Number of Questions: 4 Questions: 1, 2, 3, 4

Students Mastered: 2 25%

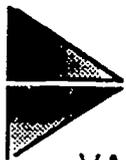
IDNUMBER STUDENT NAME

10641 MILLS, ARLEE RAY
11881 JONES, ALFRED TODD

Students Not-Mastered: 6 75%

IDNUMBER STUDENT NAME

10535 HALEY, MARTHA ANN
30128 YOUNGER, RICHARD LEE
39573 MANNELL, DANIEL THOMAS
42284 ZIMMERON, DELBERT WAYNE
46343 BENJAMIN, TROY BALLARD
47253 WATTLEY, ELIZABETH ANN



Test Item Analysis

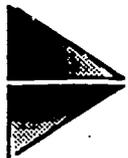
VAMS can provide a detailed Test Item Analysis for any test that has been scanned. A teacher uses this Item Analysis for examining student response patterns on a particular test. This report indicates for each test question the correct answer, marked by an asterisk, as well as the number and percentage of students who answered A, B, C, and so on for all of the possible answers on the multiple choice tests.

The Item Analysis might alert the teacher to test questions that may not be testing a concept reliably or to an element of instruction that may need changing. In this manner VAMS becomes a valuable tool in the process of program improvement

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TEST ITEM ANALYSIS

QUE	A		B		C		D		E		OTHER
1	12*	86%	0	0%	2	14%	0	0%	0	0%	0
2	7	50%	3*	21%	1	7%	2	14%	1	7%	0
3	9*	64%	1	7%	2	14%	0	0%	0	0%	0
4	10*	71%	0	0%	4	29%	0	0%	0	0%	0
5	8	57%	3	21%	3*	21%	0	0%	0	0%	0
6	9*	64%	4	29%	1	7%	0	0%	0	0%	0
7	8	57%	2	14%	2	14%	2*	14%	0	0%	0
8	1	7%	3	21%	7*	50%	3	21%	0	0%	0
9	11*	79%	3	21%	0	0%	0	0%	0	0%	0
10	7*	50%	1	7%	3	21%	3	21%	0	0%	0
11	1	7%	9*	64%	4	29%	0	0%	0	0%	0
12	1	7%	11	79%	1	7%	0	0%	1	7%	0
13	1	7%	8*	57%	4	29%	0	0%	1	7%	0
14	0	0%	9	64%	1	7%	1	7%	3*	21%	0
15	3	21%	6	43%	1	7%	3*	21%	1	7%	0
16	2	14%	10*	71%	1	7%	1	7%	0	0%	0
17	1	7%	10*	71%	2	14%	1	7%	0	0%	0
18	0	0%	5	36%	1	7%	8*	57%	0	0%	0
19	3	21%	11*	79%	0	0%	0	0%	0	0%	0
20	1	7%	11*	79%	2	14%	0	0%	0	0%	0
21	3	21%	1	7%	10*	71%	0	0%	0	0%	0
22	1	7%	10*	71%	0	0%	0	0%	0	0%	0
23	2	14%	1	7%	11*	79%	0	0%	0	0%	0
24	3	21%	1	7%	6	43%	1	7%	0	0%	0
25	2	14%	0	0%	11*	79%	1	7%	3*	21%	0
TOTAL	106	30%	117	34%	89	26%	26	7%	10	3%	0 0%



Schedule/Course Listing

The Master Schedule provides a listing of the course number, section, course name, teacher, and the room assigned. The schedule also shows the periods, current enrollment, maximum, deviation from the average class size, and the number of students enrolled in each grade.

MASTER SCHEDULE LISTING

Course #	S	Course Name	Teacher	Room	I	Periods	Enr	Max	Dev	10	11	12
17069901	A	HEALTH SERV	ALLEN	6	1	1,2,3	10	15	-5	0	0	10
20010601	A	FOOD SERVIC	KINNEY	3	1	5,6	11	15	-4	0	5	6
46020102	A	CARPENTER	JONES	5	1	5,6,7	8	15	-2	0	1	7
46020101	A	CARPENTER	JONES	5	1	1,2,3	12	15	+2	0	0	12
47010101	B	ELEC. MECH	CARSON	13	1	5,6	15	15	0	2	13	0
47010101	A	ELEC. MECH	CARSON	13	1	3,4	15	15	0	5	5	5
47060402	A	AUTO TECH	MCNALL	4	1	1,2,3	10	15	-2	0	0	10
47060401	A	AUTO TECH	LARSON	11	1	1,2,3	14	15	+2	0	8	6

COURSE CATALOG

Since the appropriate data has been entered into the system files, a current Course Catalog can be printed at any time.

CATALOG COURSE LISTING

Course #	Course Name	Term	Credit	Taken	MAX	OPT
20040601	FOOD SERVICE WORKER	12	1.00	1	15	12
46020102	CARPENTRY II	12	3.00	1	15	15
46020101	CARPENTRY I	12	3.00	1	15	15
47010101	ELECTRONICS MECHANIC	12	3.00	1	15	15
47060401	AUTOMOBILE TECHNICIAN	12	3.00	1	15	15
47060601	SMALL ENGINE REPAIR	12	1.00	1	15	15
01010701	AGRIBUSINESS MANAGEMENT	12	3.00	1	15	12
01020101	TRACTOR MECHANIC	12	2.00	1	15	15
07030501	PROGRAMMER	12	2.00	1	15	15
07060101	CLERICAL/SECRETARIAL	12	2.00	1	15	12
08000101	FUNDAMENTALS OF MARKETING	12	1.00	1	15	12
08000201	ADVANCED MARKETING	12	2.00	1	15	12

Term: Terms in which the course is expected to be taken
 Credit: Credit hours for the class
 Taken: Maximum number of times the course can be taken for credit
 MAX: Maximum number of students allowed in a class
 OPT: Optimum number of students for a class