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ABSTRACT

Instructors from two campuses of Milwaukee Area Technical College (MATC) in Wisconsin were asked to judge the effectiveness of two integrated learning systems (ILS): the Computer Systems Resource (CSR) and Foundations for Success (FFS) systems, both of which are designed to provide adult learners with remedial instruction in reading, writing, and mathematics. Ten instructors from MATC's west campus evaluated the CSR system, and 18 instructors from the college's downtown campus evaluated the FFS system. In addition, 14 MATC adult learners were asked to evaluate the effectiveness of the Microsoft Works (MSW) tutorial as a remedial instruction tool. The west campus instructors demonstrated strong support for the CSR system, just as the downtown campus instructors demonstrated strong support for the FFS system. The adult learners' evaluations of the MSW tutorial were also highly favorable. An attempt was made to have special needs adult learners evaluate the ILS. The attempt was unsuccessful, however, because neither ILS could be easily adapted to meet the learners' requirements. The ILS proved especially difficult to adapt to the needs of visually impaired students. (Appendixes constituting approximately 50% of this document contain the following: literature describing the two ILS evaluated; list of evaluating instructors; and questionnaires used in evaluating the ILS and tutorial system.) (MN)

Integrating Multimedia into a Remedial Instruction Pilot

ABSTRACT

PROJECT #09-080-150 - (604)
Integrating Multimedia Into a Remedial Instruction Pilot

The Evaluation Report on this project describes the experience the Milwaukee Technical College District had with a pilot study designed to find out how well various integrated learning systems (ILS) on the market today could be used to meet the needs of adult students for remedial education. The systems evaluated were Computer Systems Resource (Macmillan/McGraw-Hill) and Glencoe Foundations for Success (Glencoe - Macmillan/McGraw/Hill).

Also included is a separate report on the use of these systems by persons with disabilities.

EVALUATION RESULTS

ACTIVITY 1 - INTEGRATING MULTIMEDIA INTO A REMEDIAL INSTRUCTION PILOT

PLANNED OUTCOMES

Faculty will pretest computer multimedia applications with students and make recommendations.

RESULTS

Twenty-eight faculty across two Milwaukee Area Technical College campuses voluntarily participated in the evaluation of two application programs that address three students. Sample Special-Needs students within these groups participated in the use and critique of the software.

BARRIERS

Multimedia technology is not easily adaptable to the requirements of the visually impaired. It is apparent that most applications available for use are not designed, nor easily adaptable, to meet the requirements of Special-Needs populations--particularly when a limited physical capacity requires a computer adaptation.

EVALUATION

From the experiences of the instructors and the nine students directly involved with the grant, the evaluation of the software products lead to these conclusions:

1. Current trends in software development virtually ignore the requirements necessary for Special-Needs populations.

2. Application of integrated, multimedia, systems with Special-Needs users requires individual adaptations for each student's needs. Broader adaptation and documentation of adaptations should be encouraged to avoid "starting over" with each new student.

3. Campus use of multimedia applications will be influenced by the instructors' orientation to and perception of the adult learner. Too frequently, the Special Needs of a physical disability are overlooked when recommending software for classroom use.

4. Software vendors are insensitive to the Special-Needs students. There is currently no incentive for vendors to allow for Special-Needs users. Third party development and adaptation of the software will be the financial responsibility of the purchaser.

STATISTICS

This one-semester project served to define the rigors of placing new technology into the instructor-student relationship. Student access and use of the resources rested heavily on the instructors' orientation to the technology.

There was not sufficient time to go beyond the impression stage. A positive conclusion was seen as all students involved had the opportunity to see and observe trends in computer literacy. There was not enough time spent with the technologies to form conclusions on the students' progress with the applications.

ACTIVITY 2

Adding assistive devices to designated multimedia computers to remove potential barriers for Special-Needs users.

PLANNED OUTCOMES

Two multimedia computer systems will be equipped with assistive technology devices. Fourteen students will be taught usage proficiency with the units.

RESULTS

A primary success in this grant was to functionally demonstrate, via student usage, that Microsoft Windows and Windows Applications could be converted to speech for use with persons who are visually impaired. But in general, access to multimedia applications appears to be at the mercy of the vendors who show little or no expertise in adaptive technologies.

BARRIERS

A fundamental conclusion from this project is that most integrated learning/multimedia computer technology will introduce added barriers to use by Special-Needs students. In all likelihood, we will induce further problems if current integrated software evolves as an instructional standard.

EVALUATION

Workstations were adapted and now can function in a speech mode using Microsoft Windows. For Fall, two Special-Needs students, who are blind, will begin associate degree programs as a direct result of having these computers operational. No integrated learning software has been reliably adapted for Special-Needs students. In effect, we have demonstrated to the vendors of the software that they must release their systems programming code so adaptations can be made at minimal costs.

STATISTICS

Actual use by Special-Needs students was suspended when vendor software was unreliably adapted.
Example: Several Special-Needs students were taught the use of the software to remediate their course lessons. It was quickly learned that the color of text and images used could not be interpreted to the student; therefore, lesson objectives failed.

ACTIVITY 3 - SEX EQUITY

Comment: In all cases, we found the vendor materials had already been screened by their internal process designed to ensure sex equity. Materials and reports generated from this grant all received specific screening to ensure sex equity language was used.

ACTIVITY 4

Comment: Full report compliance has been in place as reports are created and generated for this grant.

TECHNOLOGY DEVICE LIST:

Three clusters of adaptive equipment used with this Project (but not funded by the Project):

1. Standard microcomputer with SoundBlaster audio card supplied by Computer Components Inc. of Milwaukee.

2. Standard microcomputer with Dectalk Speech Synthesizer and IBM's Screen Reader software - supplied by IBM Corporation.

3. Standard microcomputer configured to multimedia specifications of the vendors (i.e. Glencoe McGraw Hill, Plato, etc.) and a Dectalk with either BRIDGE or ASAP speech software.

GRANT

FOR EVALUATION OF

INTEGRATED LEARNING SYSTEMS

MILWAUKEE AREA TECHNICAL
COLLEGE

JANUARY - JUNE 1994

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PURPOSE

The purpose of this grant was to explore the various integrated learning systems ("ILS") on the market today regarding whether or not they can be considered as effective learning tools. Selected ILS systems would be evaluated by instructors and adult learners.

The emphasis was centered on reviewing "ILS" systems designed as learning tools for the adult learners in Milwaukee Area Technical College programs which included "College Transitions", "Business", "Technical & Industrial" and "Liberal Arts & Sciences" among others. Responses to the questionnaires and other feedback would form the basis of the conclusions and the recommendations that followed these conclusions.

ABSTRACT

The purpose of this grant was to introduce today's technologies to Milwaukee Area Technical College (MATC) faculty and adult learners. Three "integrated learning systems" (ILS) were evaluated by selected instructors and adult learners. Specifically, instructors from the Downtown and West Campuses evaluated two ILS systems (CSR and FFS) to judge both the perceived popularity among their adult learners and the effectiveness of each system as a learning tool. The "CSR" and "FFS" systems are designed to help adult learners in the areas of reading, writing, and math. MATC adult learners evaluated the *Microsoft Works* (MSW) tutorial. Evaluations by "Special Needs" adult learners were attempted, but were unsuccessful due, in large part, to either of the two ILS systems (CSR and FFS) to be easily adaptable to meet these adult learners' requirements.

Several conclusions were drawn from this study. Evaluation questionnaires were the primary source for these conclusions. The conclusions, in part, included:

- The West Campus instructors demonstrated strong support for the CSR system.
- The Downtown Campus instructors demonstrated strong support for the FFs system.
- The adult learners provided highly favorable responses for the MSW tutorial.
- ILS systems on the market today are not easily adaptable to meet the requirements for use by Special Needs populations – particularly the visually impaired.

INTEGRATED LEARNING SYSTEMS

What is an Integrated Learning System ("ILS")?

The characteristics that differentiate an Integrated Learning System (ILS) from traditional computer-assisted instruction are:

- A comprehensive curriculum including the subject areas of reading, math, language arts, and GED that span grade levels "K" through "17".
- Extensive instruction – generally hundreds of hours at each level.
- An overall management system presenting all material in a unified format and allowing the instructor to monitor the progress of the adult learner.
- Use of color, graphics, audio and other features to better hold the interest of the adult learner.
- A move to more sophisticated approaches than the traditional "drill and practice" methods found in most computer-assisted instruction software.
- Integration of optional software such as on-line encyclopedias, dictionaries and other writing aids.
- Use of computer "networking" to allow easier access to the software by the adult learner as well as easier distribution and management.
- Allowing adult learners to work at their own level of comfort which typically results in these adult learners progressing at a much faster pace along with a higher retention rate than found with traditional "drill and practice" methods.

Producers of Integrated Learning Systems contend that larger gains can be made through more intensive use of technology. Adult learners enrolled in "College Transition" (Basic Skills, GED, ESL, among others) and other programs offered at MATC are purported to increase their critical thinking skills at a more rapid rate while increasing their computer proficiencies when compared to either "computer-assisted" instruction or other more traditional methods of instruction.

ILS software systems place an emphasis on strengthening skills through its method of presentation and content in a format where the **main instructor is the computer technology** and the **teacher is the facilitator**. Educational skills are also supposedly taken to a higher level of mastery at a more rapid pace that will then allow the adult learners to enter other occupational and academic programs at MATC more quickly than other educational methods.

In summary, use of "Integrated Learning Systems" and other supplemental software along with emerging technologies to deliver instruction in an individualized manner is designed to allow for a much faster progression for adult learners through specific coursework in the areas of reading, writing, and math.

DEFINITION OF TERMS (for this report only)

Adult Learners – Includes MATC "students" primarily enrolled in the "College Transition" programs consisting of Adult High School, Avocational Programs, Basic Skills (English and Bilingual Programs), ESL, GED, HEP, and VESL. (See "College Transition" for a more detailed description of the separate programs.)

College Transition – A program offered at MATC consisting of the following individual programs.

Basic Skills – program designed to improve reading, writing and math skills either through an English, Bilingual, Spanish or Southeast Asian format.

Adult High School – program in which a high school diploma can be earned from the adult learners past high school.

GED – program designed to allow adult learners to earn the "General Education Diploma" equivalent of a high school diploma.

HEP – High school Equivalency Program

ESL – "English as a Second Language" program provides English skills necessary for study, employment, and independent living.

VESL – "Vocational English as a Second Language" one-year occupational program while improving English skills.

CSR – The initials of the "Computer Systems Resource" integrated learning system ("ILS"). One of the two ILS systems evaluated by the selected instructors.

FFS – The initials of the "Foundations for Success" integrated learning system ("ILS"). One of the two ILS systems evaluated by the selected instructors.

MSW – The initials for "Microsoft Works". The "tutorial" part of this "integrated" software package was evaluated by MATC adult learners.

Program – Includes any adult learner enrolled in "dedicated" coursework. "Dedicated" coursework is any coursework that results in the adult learner earning either a diploma, certificate, or associate degree upon completion.

Special Needs – Adult learners who require adaptive devices to enable them to learn. Includes the visually impaired, hearing impaired and other physically disabled adult learners.

SELECTION OF ILS SOFTWARE

The preliminary screening process to determine which integrated learning systems (ILS) would be selected for evaluation was based upon the following seven criteria.

1. Capability of the hardware to be compatible with the current technology at MATC.

2. Capability of the system software to cover and address a wide range of "remedial" coursework in the following areas.
   - Math
   - Reading
   - Writing

3. Capability of the system to present the subject material to an MATC adult learner enrolled in a "College Transition" program (Basic Skills, ESL, and Adult High School programs among others).

4. Capability of the system to provide a complete TABE (Test of Adult Basic Education) testing program.

5. Capability of the system to generate easy-to-read reports documenting adult-learner progress.

6. Capability of the system to provide multi-color graphics.

7. Capability of the system's representative to provide the system hardware and software at the required date, prompt setup of the system, and a brief training session for both the manager and the educational assistant.

Several ILS systems were then preliminarily screened in regards to meeting the above listed criteria. These systems included:

- Computer Systems Resource ("CSR")
- Foundations For Success ("FFS")
- The Integrator
- Tutorsystems
- PLATO

Three ILS systems were initially selected from the above list based upon their capability to meet the seven stated criteria. Two ILS systems have been evaluated by a group of selected instructors. These two systems are:

1. CSR
2. FFS

The third ILS system selected, PLATO, was not evaluated. The inability of MATC to meet some of PLATO's hardware demands and training requirements are the two reasons why PLATO has not been evaluated. The **software contents** for the two systems that have been evaluated are described in the "Systems Evaluated" section of this report. The areas of coursework included in the software are reading, writing, and math. The **hardware requirements** are described in the "Hardware Selection" section.

Tabulation of the **evaluation questionnaires** completed and returned by all of the 28 selected instructors provided the primary basis in formulating the "Conclusions" section. A **clear consensus** regarding what the "ideal" ILS software should include was expected to be obtained by analyzing the instructors' responses pertaining to each system. This was expected because of a few major differences in the two systems selected as described below.

- The CSR system is "menu-driven", keyboard operated, tightly structured regarding "course" accessibility by the adult learners, comparatively minimal audio and visual capabilities, but a comprehensive selection of "courses" offered for the adult learner.

- The FFS system is a multi-media "windows" system in which all areas are accessible to the adult learner, mouse operated, extensive audio and video features, plus a wide variety of "lesson" material as well.

The expectation was that a clear majority of the selected instructors would favor either the multi-media "presence" and broad accessibilty of the FFS system or the easily operated keyboard with tighter adult learner control found in the CSR system. A third possible expectation was that one or more features of each system would be demonstrated to be highly favorable to a large majority of the evaluating instructors. (See the "Conclusions" section for the actual outcomes.)

SYSTEMS EVALUATED

CSR INTEGRATED LEARNING SYSTEM

The CSR integrated learning system consists of 426 assorted lessons called "courses". These courses span five "levels" from beginning readers to adult learners who need a more advanced curriculum in reading, writing and math. The total curriculum spans the first grade through the first year of college. The breakdown of these courses are as follows:

Level I .....Grade 1 to Grade 4
Level II.....Grade 4 to Grade 7
Level III....Grade 7 to Grade 10
Level IV.....Grade 10 to Grade 12
Level V.....Grade 13

Adult learners are taught to develop critical-thinking and problem solving skills while improving basic literacy through tutorial lessons. Adult learners then learn to transfer these skills through a series of realistic examples and exercises.

Each course teaches a specific skill and contains a pretest, tutorial, practice exercises, and posttest. A comprehensive management system ensures that the adult learners only take courses that address their individual needs. "Diagnostic tests" are also included. A description of how the system operates follows.

THE TUTORIAL

Comprises the body of the course and is based on an instructional rather than "drill and practice" design. The content teaches directly to the course's objectives. The adult learner is guided through a highly-structured, step-by-step, interactive teaching sequence. Following the teaching sequence, the tutorial provides extensive practice exercises of the newly learned skill using a variety of question formats (fill-in the blank, multiple choice, matching and true or false).

THE PRETEST AND POSTTEST

The "pretest" contains questions designed to test the skills included in a particular "course". Adult learners who have achieved an 80% or higher score on the pretest continue on to the next pre-assigned course. This prevents adult learners from spending time studying areas they already understand. If adult learners score below 80%, the system identifies the specific skills the adult learners are displaying deficiencies in. It then provides appropriate examples to overcome these deficiencies during the "tutorial" stage. Up to five sets of "practice questions" are then provided for the adult learner after which a "posttest" is given.

This system is unique in the way it analyzes the adult learner's incorrect answers. CSR has individualized responses to anticipated wrong and correct answers. The system responds to the adult learner just as an instructor would with constructive feedback that helps the adult learner respond correctly. Another feature of this system is that while a adult learner is answering a question, the adult learner can obtain helpful hints to guide them through the question without providing an instant answer. This helps the adult learner increase his/her critical thinking skills and enhances the adult learner's problem-solving thought process.

THE MANAGEMENT COMPONENT

Provides many features that are time consuming for the instructors. The system administers a diagnostic test for the adult learner, registers the adult learner, prescribes a course or courses of study, tracks the adult learner's progress and prints out a variety of reports. These reports range from a simple listing of the adult learners involved to detailed reports documenting the correctness of answers, time spent, adult learner comments, and so on.

STANDARDIZED TESTING

CSR also provides the complete survey and battery of the TABE (Test Of Adult Basic Education).

(See Appendix "A" for more descriptive literature.)

FFS INTEGRATED LEARNING SYSTEM

Glencoe's Foundation for Success (FFS) is a fully integrated, multimedia program that uses live action video, graphics, audio narration, interactive workbooks and reviews.

It consists of three software programs:

- **MATH BASICS**

  An 18 videodisc program, containing 54 chapters and over 1200 practice and test problems. It has adult learners work through the "basic" math areas beginning with whole numbers, fractions, percents, ratios, estimation, and up through solid geometry and statistics. Adult learners begin to use and develop the problem-solving skills that will help them in the more advanced mathematics found in the "Beyond Words" program. It requires a reading level of fourth grade or higher.

- **ANOTHER PAGE**

  A 28 videodisc program with 84 chapters and over 2000 test and practice questions. The video segments focus on the lives of specific characters and the different ways they use reading in their daily lives. It is designed specifically for adult readers. Workbooks provide additional practice. This program, as well as the other two FFS programs, is designed as an open-ended and user-centered tutorial for the adult learner who is reading at the fifth grade or higher level. Its lessons progress up to the ninth-grade level.

- **BEYOND WORDS**

  Has comprehensive curricula in reading, writing, and mathematics. It is designed to begin where the other two programs end. Specifically, it targets the 8-12th grade level. It has a complete GED preparation program with 41 videodisc lessons covering a broad range of skills with chapter objectives, challenge exercises, and instructional tips. It consists of 160 chapters and over 3000 exercises including a pretest and posttest. It uses the core of The Kentucky Educational Television's Basic Skills curriculum series.

The math component has problem-solving strategies that put special emphasis on the adult learner. It is designed to strengthen an introductory knowledge of fractions, decimals, and ratios as well as to introduce other areas including exponents and equations.

The reading component has practical materials such as maps, charts, graphs and tables. It also has an area that concentrates on identifying cause-and-effect skills, understanding words in context, building vocabulary, and methods to increase comprehension.

The writing component has a variety of writing styles, writing processes, spelling, punctuation, grammar, noun and verb usage, and logic lessons.

TRACKING AND RECORDING

Records are kept for adult learners individually on one diskette for each adult learner. The instructor is provided the mastery level for each adult learner's pretest and posttest scores. Instructors are also provided a record report of the last date an adult learner studied each lesson and how long the adult learners studied these lessons. The record book provides a detailed format of adult learner's performances in all exercises, tests, and challenge problems. This allows the instructor to track the adult learner's progress through each chapter and lesson.

(See Appendix "B" for more descriptive literature.)

HARDWARE SELECTION

PROCESSOR TYPES

100% MS-DOS compatible computers will operate both of these systems. Any "386"-based computer is capable of running the "CSR" series and the "FFS" series. However, the "486" is recommended since it has adequate speed for almost any task and will continue to be supported for a good number of years. Processor speeds that work best for these systems are 25MHz, which provide reasonable performance in the 386 line and very good performance in the 486 line. A 33MHz processor offers the best performance in the 386 or 486 processor line.

Processor caching is a requirement for both systems. Processors with onboard cache are capable of buffering data moving between the hard disk and the CPU. This makes the disk read faster and improves overall system performance dramatically.

HARD DISK DRIVES

Hard drives should be no smaller than one hundred megabytes. Hard disk prices have dropped considerably over the past six months which should be taken into account during the purchasing process.

FLOPPY DISK DRIVES

The 3.5-inch, high density 1.4 MB floppy has now become the standard. It is far more durable and easier to handle than the 5.25-inch version. The 5.25-inch drives are no longer recommended since these diskettes hold less data and are far more prone to damage. There is no advantage to having this type of drive in the system unless the systems targeted for use already have them in place.

GRAPHICS ADAPTERS

VGA GRAPHIC ADAPTERS are required by both the CSR and the FFS systems. The VGA board must include a feature connector. Some computers have VGA built into the motherboard. If this type of computer is being used, it may have a VGA pass-through connector on the motherboard. If it does not, then a VGA board will need to be added and the computer must allow its internal VGA to be disabled. Both systems run on a standard 640 X 480 VGA resolution. They were also designed to run on a sixteen-color mode.

VGA monitors should have a dot pitch of 0.31mm or less to provide a good clean image. (0.45mm or more will produce a much fuzzier image). The standard screen size of 13 inches is adequate for running both ILS system software.

SERIAL PORTS

The FFS system requires two serial ports. One port is used for the mouse and the other is used for the videodisc - laserdisc player. Some computers have a dedicated mouse port. In this case, only one additional serial port is required. CSR requires only one serial port.

LASER DISC PLAYER

The FFS system requires a laser disc player. A Pioneer serial player's set at a 9600 baud rate is recommended for best operation or performance.

KEYBOARD and MOUSE

A standard keyboard or enhanced keyboard along with a Microsoft mouse is recommended by both systems since it requires no special drivers and has been found to be very durable. Other mice can be used, but an inexpensive mouse tends to become unreliable when under heavy use. A three button mouse is neither needed nor recommended for either system.

VIDEO ADAPTERS

The FFS system requires either a Super Videowindow board or M-Motion board.

SOUND REQUIREMENTS

Digispeech DS201-A to access Level 1 sound capabilities is needed for CSR.

OTHER REQUIREMENTS

The FFS system requires Microsoft Windows 3.1 to run the system. Speakers are also recommended since the audio coming from the videodisc player is only line level. Headphones are needed if the system is targeted for use in a classroom or other "quiet area".

A 14.14 Baud modem and standard telephone line Tape back-up system for data security is also recommended. The FFS software does not require, nor does it use, CD-ROM. If a CD-ROM is desired, it is recommended that one is provided which is capable of a 300KB sustained transfer rate such as the NEC Multispin.

EVALUATION SESSION PROCEDURE

As stated earlier, 28 instructors were selected to evaluate the "CSR" and "FFS" systems. (See Appendix "C" for a description of these instructors.) A proportionate number of instructors and support staff were selected using the following four criteria as guidelines.

- Size of campus
- Gender
- Number of instructors versus support staff
- Type of programs – College Transition Programs that include the instructional areas of Basic Skills (English and Bilingual), HEP, ESL, VESL, Adult High School, and GED. One instructor or support staff was also selected from each of the Business, Liberal Arts and Sciences, and Industrial and Technical programs.)

A "date and time" calendar was furnished to each instructor a week or more before the "evaluation sessions" were to begin. The instructors were asked to call in for an appointment by leaving a message via "phone mail". A two-week period was allowed for the evaluations of each system at each campus. The "evaluation session" procedure was identical for each of the two ILS systems.

The "**CSR**" system was evaluated first. This system was brought in and set up on February 15, 1994. Training was provided the same day. Evaluation by the selected instructors was accomplished over the following five weeks – 2/21/94 to 3/25/94. The first two weeks consisted of evaluation sessions by the **West Campus** instructors. One week was then allowed to physically move the system to the second site (Downtown Campus) and again be set up by the representative. The last two weeks of this five-week period consisted of the evaluation sessions by the **Downtown campus** instructors.

The "**FFS**" system was brought in immediately following the completion of the evaluation sessions for the first system ("CSR"). Again, a five-week period from 4/11/94 to 5/13/94 was allowed to complete the evaluation sessions at both campuses. Following this second set of evaluations, the instructors were asked to mail in their completed questionnaires. After receiving the last of the completed questionnaires, tabulation of the responses was begun. Graphic descriptions of the responses used to formulate the conclusions are provided in the "Conclusions" section.

Before the first evaluation sessions were conducted with the CSR system, each instructor received a handout of the "Basic Skills Course Titles" that cover the math, reading, and writing areas. Each instructor was asked to "check" a few "courses of interest" when responding to select a date and time for the evaluation of the system. This was done for the following three reasons.

1. Knowing the "courses of interest" for each instructor allowed us to intelligently "group" two instructors together with similar interests. This not only saved time, but put the instructors more "at ease" during the evaluation sessions.

2. We were able to "preview" the "courses of interest" in order to know what to expect and possibly discover any "gliches" in any selected "course" beforehand. (Some minor "gliches" did occur in both systems.)

3. Knowing the "courses of interest" allowed us to select instructional material from the second system ("FFS") that was similar to that seen in the first evaluation. (Most instructors asked to evaluate only one "area of interest" – math, reading, or writing only.)

A typical evaluation session consisted of:

1. One or two instructors seated with one or both trained presenters (the manager and/or the educational assistant).

2. A span of 40 minutes to 1-1/2 hours was needed to complete an evaluation session depending upon the number of instructors present, the range of subject matter the instructors wanted to view, and the time they had available to view the system.

3. A brief introduction describing the system and its capabilities was presented to each instructor. A brief lesson regarding use of the keyboard ("CSR") or the mouse ("FFS") was also provided.

4. The instructors, themselves, used the keyboard or mouse to "view", or partially complete, a particular area of instructional material. As few as two "courses" were previewed by each instructor. A maximum of six "courses" was previewed by any single instructor. A typical session lasted one hour.

A typical evaluation session was specifically structured in the following manner.

1. The one or two instructor(s) arrived at the assigned room at the designated date and time. Each instructor was provided a folder containing descriptive literature of the system along with the questionnaire to be completed for us.

2. A 10-minute introduction was presented describing the features of the system along with a brief lesson on how to move around in the system using either the keyboard ("CSR") or the mouse ("FFS"). Workbooks ("FFS" only) were also provided for inspection.

The remaining time was devoted to allowing the instructors the opportunity of working through two or more instructional "courses" ("CSR"), or "lessons" ("FFS").

3. The instructors used the keyboard or mouse to access a "course" or "lesson".

4. Each instructor was asked to move through each selected course or lesson as an adult learner might. They were asked to note both the ease or difficulty an adult learner might experience in operating the system and the "quality" of the subject matter as presented. Other notes regarding particular "likes" and "dislikes" of any part of the system were also encouraged to be written down at this time.

5. Each instructor was allowed to take as much time as necessary to adequately evaluate the features, operation, and quality of the system – 40 minutes to 1 1/2 hours. (Most instructors typically previewed two or three courses within their "area of interest".

6. During, and upon completion of the session, a number of questions were often asked by the instructors regarding the capability and/or features of the system. Some of these questions could be answered on the spot; others were answered after consulting with the system's representative.

7. At the end of each session, the instructors were thanked for their cooperation and apprised of the approximate dates when the next system would be ready for evaluation. The instructors were asked to keep the accompanying descriptive literature further detailing the system's capabilities and features to read at their earliest convenience. They were also asked to then complete the questionnaire* within a short period of time following their session in order that the system still be fresh in their minds.

Adult learners were not included as part of the evaluation process for the following four reasons.

1. One of the two systems was not "portable". It could not be carted to an available classroom. (It was decided that any system should not be left in a classroom for two weeks because of the possibility of theft or vandalism.)

2. The unavailability of a "secure" room other than rooms large enough to house the system for viewing by a group of up to five or six people only. This turned out to be a small concern since only a small monitor was available for each system.

3. The reluctance of many of the instructors to devote "class time" to this evaluation process was noted in the early stages of preparation for these evaluation sessions.

4. The sales representative for both systems needed the units provided for other potential buyers. It was considered to be asking too much to have the units "on loan" for more than the five weeks needed to evaluate the instructors.

For these four reasons, both systems were presented to the instructors in small conference rooms designed for a maximum of 5-6 people. These rooms provided the necessary security for both the hardware and "loose software" (separate laser disks for the FFS system).

* See Appendix "D" to view the questionnaire completed by the 28 instructors evaluating the two ILS systems. (Column "1" was used for evaluation of the "CSR" system. Column "2" was used for the "FFS" system evaluation.)

CONCLUSIONS

The conclusions that follow are primarily based upon the tabulated responses from the evaluation questionnaires completed by both the West Campus and Downtown Campus instructors. **Each of the two evaluated ILS systems (CSR and FFS) will be analyzed separately. No comparisons will be made between the two systems regarding which system is "better" than the other. Only "support" or "non-support" for either system will be noted as found.**

The tabulated responses will be presented in an order that hopefully leads the reader to the same conclusions that are stated following the presentation of this data. Frequent use of pie charts will be used in this section to more easily illustrate the responses obtained from the completed questionnaires. The instructors' responses to the questions will be grouped into the following four categories.

1. Those questions that demonstrated a highly significant difference in responses between the **West** Campus and **Downtown** Campus with one campus consistently providing a higher percent of "Yes" responses for **both systems**. (Questions "2", "5", "6", "10", and "18")

2. Those questions that demonstrated a highly significant difference in responses between the **West** and **Downtown** Campuses with one campus providing a much higher percent of "Yes" responses for **that system only**; and used with question "25" to measure support for that system. (Questions "7" and "8")

3. A presentation of the instructors' responses to two "**key**" questions inserted into the evaluation questionnaires to be used with question "25" to measure the amount of support for that system. (Questions "1" and "4")

4. A single question that is considered of primary importance concerning whether or not either system can be **recommended for purchase** at this time. (Question "25")

(It should be noted at this time that **all 26 questions** in the questionnaires are not being presented in this section. These questions not presented here **were not meant** to elicit the opinions of the selected instructors. These questions were intended only to provide the instructors with the characteristics of each system. In these questions, the responses

were already filled-in for them. For example, question "14" asked the instructors, "Does the adult learner have accessibility to assigned curriculum only, without ability to alter assignments or progress reports?" The CSR system does possess this characteristic and a "Y" was placed in the response column for each instructor to see. The FFS system does not possess this characteristic and had an "N" placed in the response column. The correct answers to this question and others were supplied in order to provide the instructors with as much information as practical describing each system so that they could make a more informed evaluation of each system.

Those already filled-in questions were in no way meant to favorably or unfavorably "shape" an instructor's opinion concerning either system. Regarding question "14", it was found, as expected, that some instructors preferred the "accessibility to assigned curriculum only" format while other instructors liked a system in which adult learners were allowed access to other areas of the system. Again, those questions were not meant to present one system in a more favorable light, but merely to provide additional information to the selected instructors describing the similarities and differences between the two systems being evaluated.)

Back to the four sets of questions used to form the final conclusions stated at the end of this section. First, the questions which showed a significant difference in "Yes" responses between the two campuses for **both systems** (category "1"). These first set of responses are provided to illustrate a general pattern of differences in opinion between the West Campus and Downtown Campus instructors' responses. The second, third, and fourth sets of responses that follow this first set will be used to lay the groundwork for the final conclusions and will be shown to be consistent with the final conclusions.

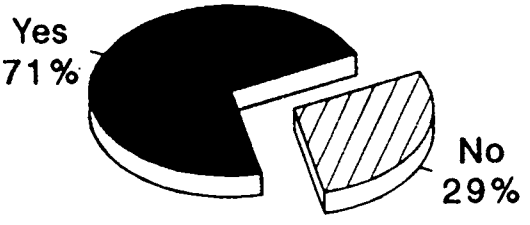
As stated earlier, neither system will be "compared" regarding which is a "better" system than the other. Each system will be analyzed separately and evaluated on its own merits. The instructors' responses for the **CSR** system will be analyzed first. Another complete section will be devoted to the **FFS** system. The analysis of this second system will immediately follow the analysis of the CSR system.

Below are the responses to questions "2", "5", "6", "10", and "18". Note the differences found between the campuses regarding **one campus** providing a much higher percent of "Yes" responses for **both systems**.

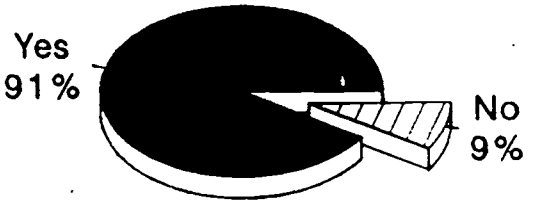
CSR Analysis

2. Does this software system complement the material you present in class?

West Campus

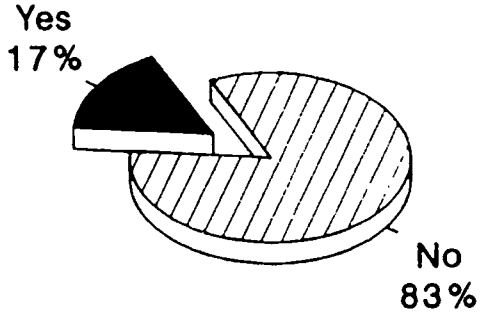


Downtown Campus

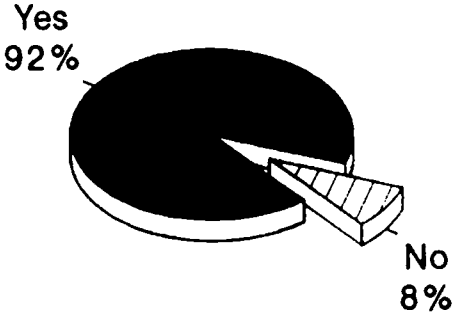


5. Was the courseware developed specifically for the adult learner?

West Campus

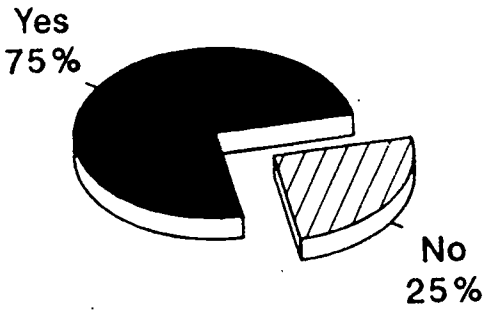


Downtown Campus

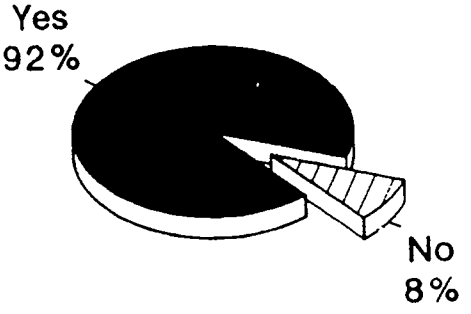


6. Are the length of the lessons appropriate for the audience?

West Campus

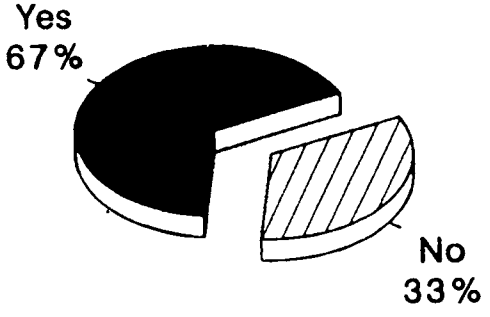


Downtown Campus

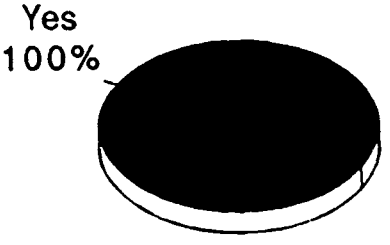


10. Does the system provide consistency in presentation?

West Campus

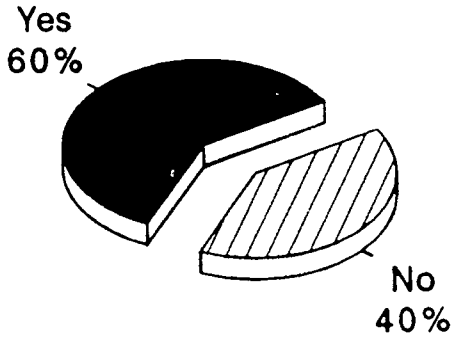


Downtown Campus

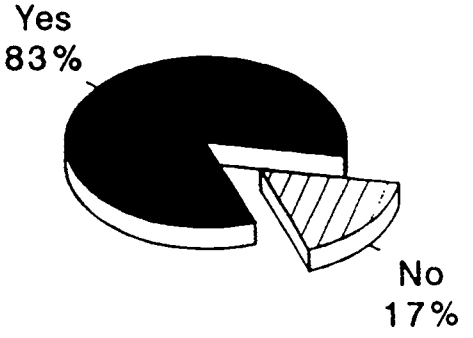


18. Does the system software provide full color scope and sequence for Basic Education?

West Campus



Downtown Campus



The responses to these first five questions appear to illustrate a difference in perception, or "scoring", of the two ILS systems between the West Campus and Downtown Campus instructors. After viewing the responses to the above five questions, it was easy to make three conclusions with regard to the five categories shown below and addressed in these questions.

Five Categories:

- The system complements the material presented in class?
- The courseware was developed specifically for the adult learner?
- The length of the lessons are appropriate for the audience?
- The system provides consistency in presentation?
- The system provides full color scope and sequence for Basic Education?

Conclusions:

The Downtown Campus instructors' responses showed a much higher percent of "Yes" responses in all five categories shown above when compared to the West Campus instructors' responses.

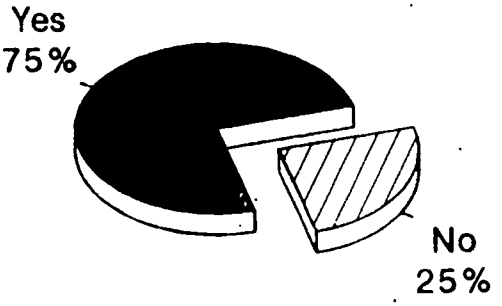
The Downtown Campus instructors' responses were unanimous, or nearly so, in their favorable evaluation of both systems regarding these five categories.

The West Campus instructors' responses demonstrated that none of the five categories shown above received unanimously, or nearly so, favorable responses for this system.

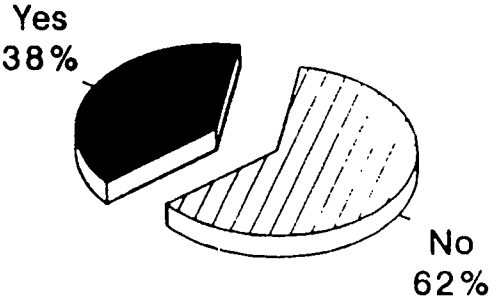
The second set of questions and the responses obtained are for questions "7" and "8" in the questionnaire. The responses to these two questions again illustrate the contrast in opinions found between the West Campus and Downtown Campus instructors. The difference between the responses found for these two questions and the first set of questions is that there is a **reversal of opinion** between the two campuses. As stated before, these two sets of responses will be shown to be consistent with the final conclusions as well as the responses obtained from the questions presented following this set. The responses to questions "7" and "8" are presented below.

7. Does the use of graphics enhance the interest level of the adult learner?

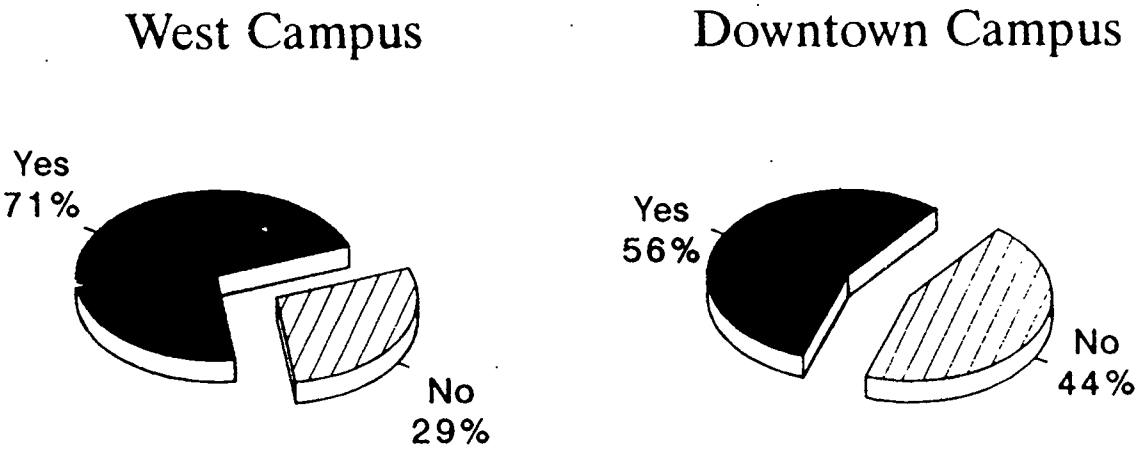
West Campus



Downtown Campus



8. Are the screen presentations clear and interesting to the adult learner?



Based upon the instructors' responses from these two questions, two statements can be made.

1. The West Campus instructors' responses demonstrated a high percent of "Yes" responses to both of these two questions.
2. The Downtown Campus instructors' responses demonstrated a much lower percent of "Yes" responses to both of these two questions.

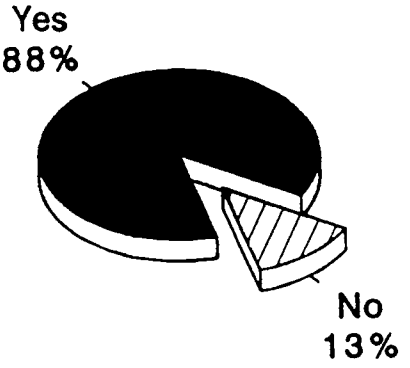
Conclusion:

The West Campus instructors expressed a much more favorable response to the "use of graphics" and "screen presentation" to "enhance the interest level of the adult learner" than did the Downtown Campus instructors. In other words, the West Campus instructors more strongly supported these two features of this system to benefit the adult learner than did the Downtown campus instructors.

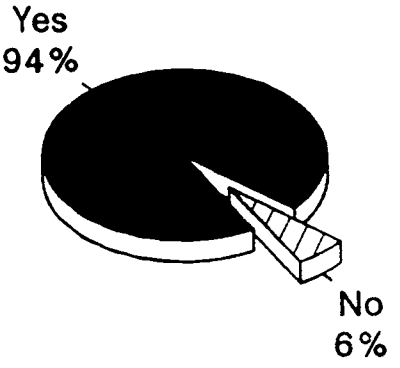
The third set of questions analyzed included questions "1" and "4". These two questions were specifically included as two "key" areas for measuring the amount of support for this system. The results obtained from these two questions are shown below.

1. Do you feel that this software system is easily operational for your adult learners?

West Campus

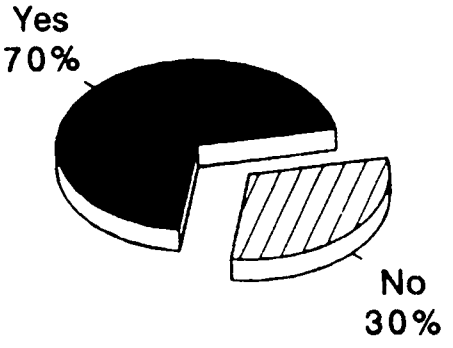


Downtown Campus

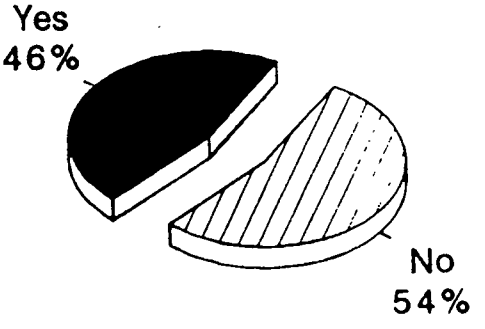


4. Can the "low-level" learner easily understand the material presented?

West Campus



Downtown Campus



Three statements can be made after interpreting these last two pie charts.

1. Both the West and Downtown Campuses showed a high percent of "Yes" responses regarding this system's ability to be "easily operational" for the adult learner.
2. The West Campus instructors' responses demonstrated a favorable response (70% "Yes" responses) regarding whether or not the "low-level" learner can "easily understand the material presented".
3. The Downtown Campus responses indicate a split opinion (46% "Yes" and 54% "No") regarding the ability of this system to be "easily understood".

Conclusions:

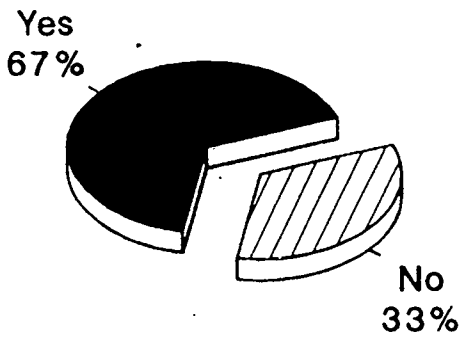
Both campuses' instructors believe this system to be "easily operational" for the adult learner.

Only the West Campus instructors believe this system to be "easily understood".

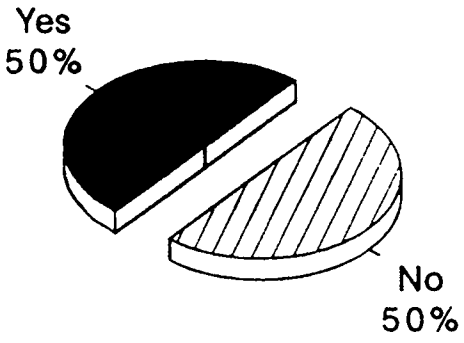
The final question to be analyzed is question "25". This question was placed into the evaluation questionnaire for the specific purpose of determining whether or not this system can be **recommended for purchase**. A clear consistency of favorable responses should also be found to exist in the previous two sets of responses (questions "7" and "8"; questions "3" and "4") in order for a recommendation of purchase to follow. The tabulated responses to question "25" are as follows.

25. Do you feel that the adult learner will be encouraged to continue to use this system in the future?

West Campus



Downtown Campus



The following two statements can be made regarding the interpretation of these two pie charts.

1. There is a 2:1 ratio (67% to 33%) of "Yes" responses to "No" responses by the West Campus instructors. (This can be considered a reasonably high ratio when remembering that the West Campus instructors typically provided a much lower percent of "Yes" responses to the first set of five questions when compared to those responses from the Downtown Campus instructors.)
2. The Downtown Campus instructors' responses are evenly split between "Yes" and "No".

Conclusions:

The West Campus instructors have expressed strong support for this system.

The Downtown Campus instructors do <u>not</u> show strong support for this system.

Final Conclusions – CSR

West Campus

- **This system obtained a reasonably high "Yes" response to question "25". Considering all other responses along with this response, it is believed to be strong support for a recommendation of purchase of this system on a small-scale basis.**

- The conclusion shown above is supported by a consistently high percent of "Yes" responses to the previous four questions also used to measure support for this system.

Question #	% of "Yes" Responses
1	88%
4	70%
7	75%
8	71%

- The conclusion stated above is also supported by a majority of the instructors obviously enthusiastic about and pleased with this system as they were viewing it during the evaluation sessions. Favorable comments subsequent to the evaluation sessions were also voluntarily offered by the instructors.

- The conclusion above is further supported by the evidence that the West Campus instructors typically provided a lower percent of "Yes" responses to all questions regarding both systems when compared to the Downtown Campus instructors. The 67% of "Yes" responses to question "25" was considered high for this group of instructors judging by their propensity to answer "No" to other questions not specifically included to measure support for the system.

Downtown Campus

- **There was <u>not</u> found to be a highly favorable percent of responses (50% "Yes") to question "25". This was judged to <u>not</u> be strong support for this system.**

- The above conclusion is supported by the following evidence. With the exception of question "1", a fairly low percent of "Yes" responses were obtained from the questions designed to measure support for this system.

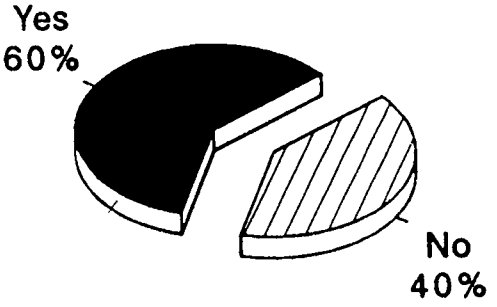
Question #	% of "Yes" Responses
1	94%
4	46%
7	38%
8	56%

FFS Analysis

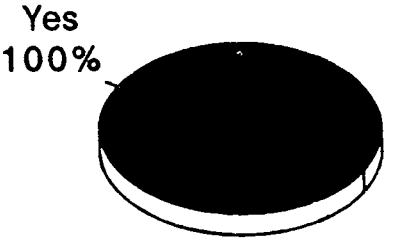
As with the CSR analysis, the FFS system was analyzed using the responses from the same four sets of questions. Again, the first set of responses presented will demonstrate a significant difference between the percent of "Yes" responses obtained from the West Campus instructors when compared to the percent of "Yes" responses received from the Downtown Campus instructors. Note that one campus provides a much higher percent of "Yes" responses for all five questions. Below are the responses to questions "2", "5", "6", "10", and "18".

2. Does this software system complement the material you present in class?

West Campus

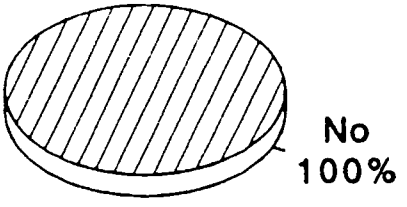


Downtown Campus

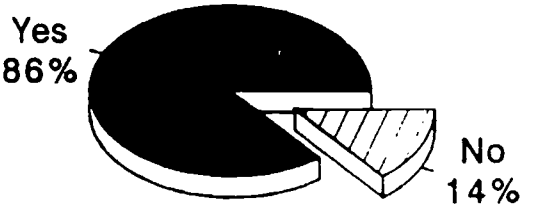


5. Was the courseware developed specifically for the adult learner?

West Campus

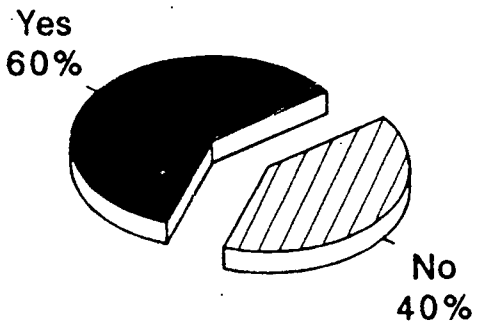


Downtown Campus

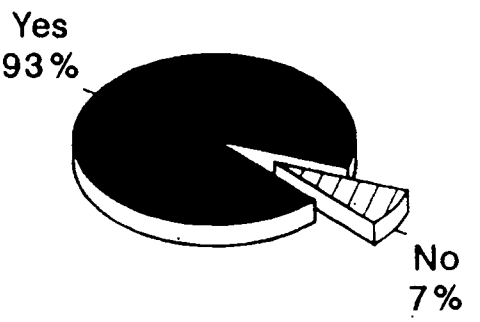


6. Are the length of the lessons appropriate for the audience?

West Campus

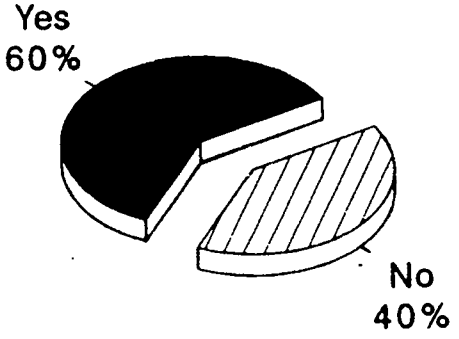


Downtown Campus

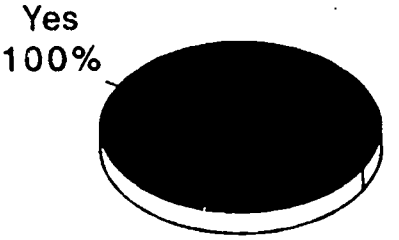


10. Does the system provide consistency in presentation?

West Campus

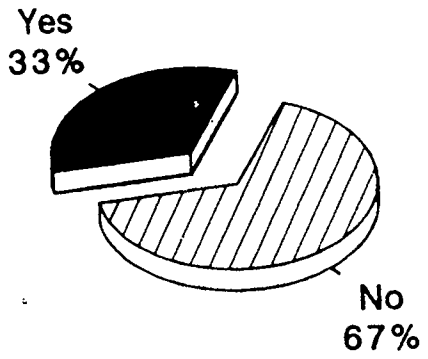


Downtown Campus

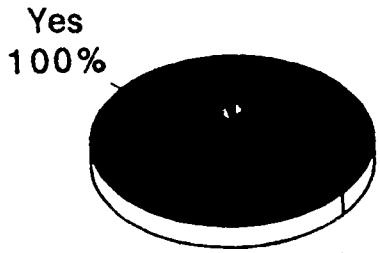


18. Does the system software provide full color scope and sequence for Basic Education?

West Campus



Downtown Campus



The responses to these first five questions appear to illustrate a difference in perception, or "scoring", of the two ILS systems between the West Campus and Downtown Campus instructors. After viewing the responses to the above five questions, it was easy to make three conclusions with regard to the five categories shown below and addressed in these questions.

Five Categories:

- The system complements the material presented in class?
- The courseware was developed specifically for the adult learner?
- The length of the lessons are appropriate for the audience?
- The system provides consistency in presentation?
- The system provides full color scope and sequence for Basic Education?

Conclusions:

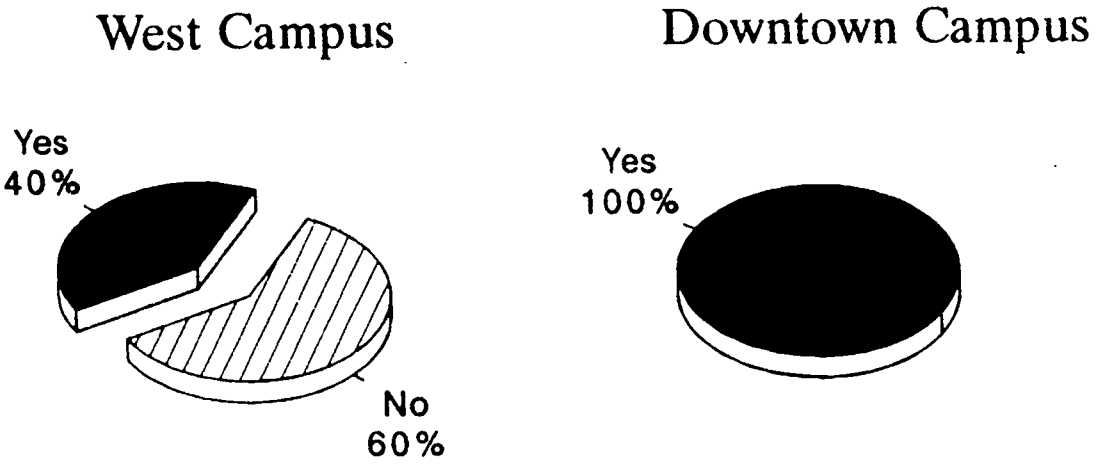
The Downtown Campus instructors' responses showed a much higher percent of "Yes" responses in all five categories shown above when compared to the West Campus instructors' responses.

The Downtown Campus instructors' responses were unanimous, or nearly so, in their favorable evaluation of both systems regarding these five categories.

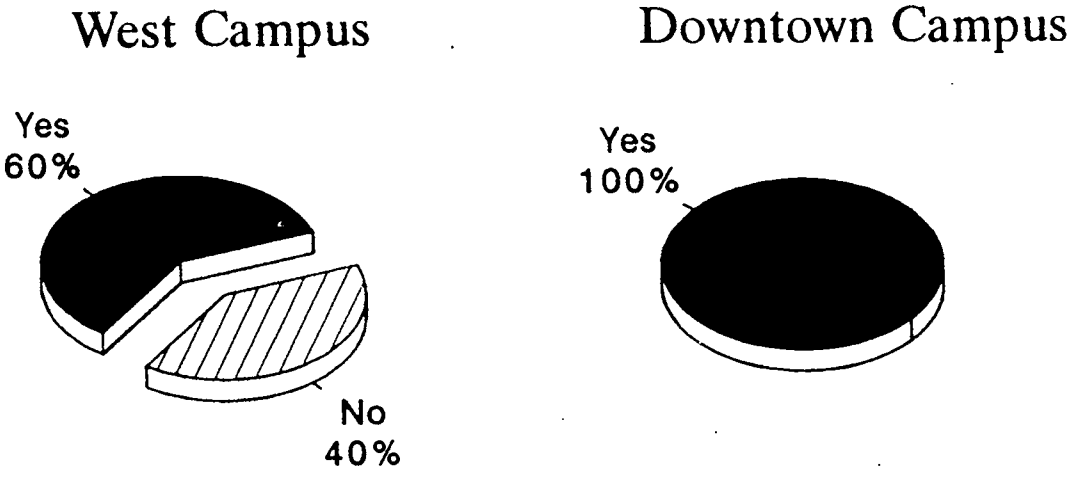
The West Campus instructors' responses demonstrated that none of the five categories shown above received unanimously, or nearly so, favorable responses for either system.

The second set of questions and the responses obtained are for questions "7" and "8" in the questionnaire. The responses to these two questions again illustrate the contrast in opinions found between the West Campus and Downtown Campus instructors. The difference between the responses found for these two questions and the first set of questions is the dramatic differences found in the percent of "Yes" responses obtained for each campus when comparing this system to the first system (CSR) evaluated. As stated before, these two sets of responses will be shown to be consistent with the final conclusions as well as the responses obtained from the questions presented following this set. The responses to questions "7" and "8" are presented below.

7. Does the use of graphics enhance the interest level of the adult learner?



8. Are the screen presentations clear and interesting to the adult learner?



Based upon the instructors' responses from these two questions, two statements can be made.

1. The West Campus instructors' percent of "Yes" and "No" responses was pretty evenly split for both of these two questions.
2. The Downtown Campus instructors' percent of "Yes" responses was 100% for both questions.

Conclusions:

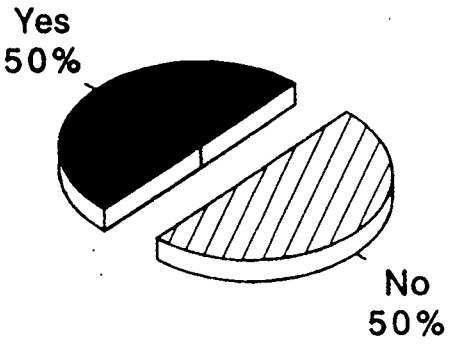
The Downtown Campus instructors unanimously supported the argument that the "use of graphics" and "screen presentations" in this system "enhance the interest level of the adult learner".

The West Campus instructors were clearly not as impressed as evidenced by the percent of "Yes" responses being "40%" and "60%".

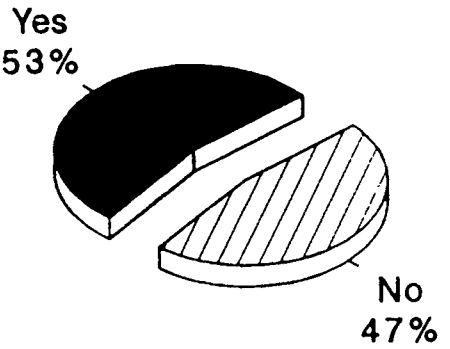
The third set of questions analyzed included questions "1" and "4". These two questions were specifically included as two "**key**" areas for measuring the amount of support for this system. The results obtained from these two questions are shown below.

1. Do you feel that this software system is easily operational for your adult learners?

West Campus

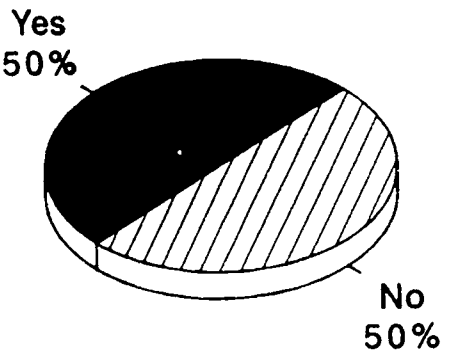


Downtown Campus

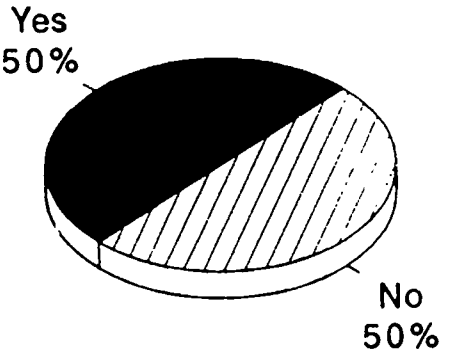


4. Can the "low-level" learner easily understand the material presented?

West Campus



Downtown Campus



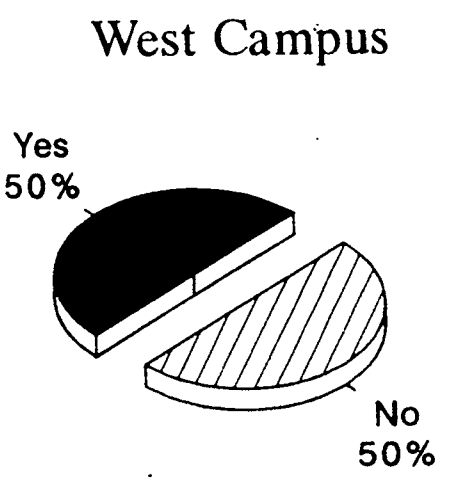
As can be seen in these last two pie charts, both campuses instructors' responses were almost evenly split between "Yes" and "No" for both questions.

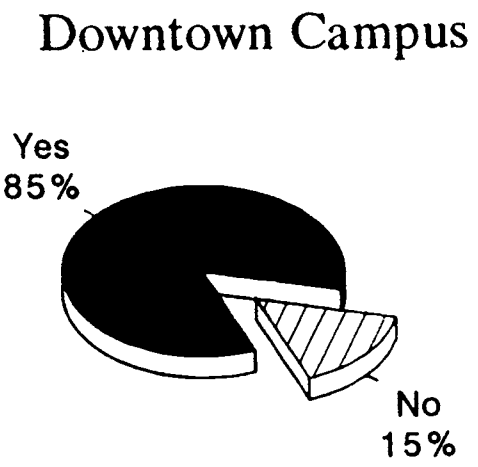
Conclusion:

There is not strong support on either campus for the argument that this system is "easily operational" or can be "easily understood" by the adult learner.

The final question to be analyzed is question "25". This question was placed into the evaluation questionnaire for the specific purpose of determining whether or not this system can be **recommended for purchase**. A clear consistency of favorable responses should also be found to exist in the previous two sets of responses (questions "7" and "8"; questions "1" and "4") in order for a recommendation of purchase to follow. The tabulated responses to question "25" are as follows.

25. Do you feel that the adult learner will be encouraged to continue to use this system in the future?





The following two statements can be made regarding the interpretation of these two pie charts.

1. The West Campus instructors are evenly split in their responses to this question.
2. The Downtown Campus instructors provide a very high percent of "Yes" responses regarding expected "continued use of this system in the future".

Conclusions:

The West Campus instructors' responses <u>do not</u> demonstrate strong support for "continued use" of this system by its adult learners.

The Downtown Campus instructors' responses <u>do</u> provide evidence of strong support that its adult learners would "continue to use this system in the future".

Final Conclusions – FFS

West Campus

- **The responses to question "25" were evenly split between "Yes" and "No". This was judged not to be a demonstration of strong support for this system.**

- The above conclusion is supported by the responses to the four questions presented before question "25".

Question #	% of "Yes" Responses
1	50%
4	50%
7	40%
8	60%

Downtown Campus

- **This system received a very high percent (85%) of "Yes" responses to question "25". This is judged to be strong support for the recommendation of purchase of this system on a small-scale basis.**

- The above conclusion is supported by a high percent of "Yes" responses to the following questions also used to measure support for this system.

Question #	% of "Yes" Responses
7	40%
8	60%

- The above conclusion is not supported by the responses obtained to the following two questions.

Question #	% of "Yes" Responses
1	53%
4	50%

- The above conclusion is also supported by a majority of the Downtown Campus instructors expressing positive statements during the evaluation sessions regarding the effectiveness of this particular system as a tool for learning.

- See the "Possible Reasons for ....." section below for further justification of a "strong recommendation of purchase" despite two "key" questions ("1" and "4") not demonstrating strong support fot this system.

Analysis of the Differences found between the two Campuses

- Strong support was evidenced by the West Campus instructors for the CSR system. Very limited support was found to exist for the FFS system.

- Strong support was evidenced by the Downtown Campus instructors for the FFS system. Very limited support was found to exist for the CSR system.

Possible Reasons for this Difference in System Preference

- The Downtown Campus adult-learner population, for these instructors, consists entirely of adult learners enrolled in "College Transition" programs that are believed to be structured to require a large part of each day spent in the classroom. Conflicts with child-care arrangements, part-time job commitments, as well as the long classroom hours were cited as possible deterrents to using any ILS system outside of the classroom.

- The West Campus adult-learner population, for these instructors, consists of a lower percent (40%) of "College Transition Program" adult learners whose classroom hours' structure is not as long. Child-care and work conflicts are also believed to be fewer for this population of adult learners.

- These Downtown Campus instructors are therefore believed to be more concerned with a system that can "enhance the interest level of the adult learner". In other words, it is believed that (for these instructors only) the typical adult learner utilizing a system of this type needs to be "entertained" due to more "outside obligations" along with more structured classroom hours.

- These West Campus instructors apparently believe that their adult learners do not need to be "entertained". These instructors are believed to place more value on a system's ability to be "easily operational" and "easily understood". This may be due to the belief that (for these instructors) the typical adult learner at this campus who will use this type of system has more flexible hours with less conflicts and therefore is possibly more easily motivated to utilize such a system.

SPECIAL NEEDS EVALUATIONS

Part of this grant called for evaluation of "integrated learning systems" ("ILS") by Special Needs adult learners. The two ILS systems (CSR and FFS) brought in for evaluation by instructors were also scheduled for evaluation by Special Needs adult learners at the Downtown Campus. The reasons why these evaluations were not completed are explained below.

The first of two attempts to have Special Needs adult learners evaluate both ILS systems (CSR and FFS) was scheduled for May, 1994. The sales representative for the FFS system brought in this system on the date requested. The sales representative for the CSR system sent us (the Manager and Educational Assistant) a "demo-pack" of diskettes to be loaded on the computer of our choice at MATC. This was perfectly acceptable. Both systems presented us with problems, however, at the first attempt at evaluation.

The FFS system was discovered to have a broken "door flap" for the disk drive to be used. Replacement of the disk drive was agreed upon as the only solution. The CSR set of diskettes provided were unable to be loaded onto either of two computers that were tried. The computers would not accept the second "installation" disk. The evaluation session scheduled for the following day was decided to be postponed. The "demo-pack" of diskettes was sent back to the sales representative. We were later informed that this set of diskettes was defective and another set would be sent immediately.

The replacement "demo-pack" of diskettes was promptly received. Loading of this second set of diskettes was easily accomplished. A second evaluation session was then scheduled for the summer session in June. As before, the sales representative for the FFS system set up the system the day prior to the evaluation session. The CSR diskettes were also successfully loaded that same day. A CIS adult learner accompanied us to install the following adaptive devices that were needed.

- A "DEC" (Digital Electronics Corporation) board was installed in each of the two systems that enables the "PC" to talk through a remote speaker.

- "ASAP" (Automatic Screen Access Program) software was installed in the computer holding the CSR system. This adaptive software is used with "DOS" text-based applications. It translates text-based material through the remote speaker.

- A Slimware Windows Bridge software package was installed on the "windows" driven FFS system. This adaptive software is used with a "windows" application to also translate text-based material through a remote speaker.

Both systems were now ready. On the second scheduled evaluation day, problems were again found with each system. The FFS system, which was working well the day before, was now able to produce sound at a barely audible level only. At full volume settings, the system material was barely able to be heard. A diskette not belonging to the system was found in the 5-1/4" drive not being used. Apparently, an unathorized person had "played around" with this system in between the installation day and the following day of the scheduled evalations. All attempts to regain a satisfactory volume level failed. Evaluations of this system ended at this point.

The CSR system, on the other hand, was successfully "reading" (producing sound for the text on the screen) the introductory screens to the first visually-impaired adult learner evaluating this system. When the "lesson" started, however, the "adapted" system was unable to "read" text in certain colors. The colors "red" and "yellow" were particularly "unreadable". Any text in these colors on the screen were simply not translated to sound.

Graphic displays were also not recognized by the adapted CSR system. This resulted in the visually-impaired adult learner's inability to understand what was being asked. There was also found to be a problem reading "decimals". A decimal figure of "2.3" was being read as "3", then a pause, then "2" – a reversal of the actual figure shown on the screen. After a few attempts made by the instructor of this summer-school class failed to resolve the problem, the evaluation of this system was also ended.

If these evaluation sessions had gone as planned, a modified version of the questionnaire provided the evaluating instructors would have been used. (See Appendix "D" for the questionnaire used by the instructors.) The three "key" questions would have been asked of the Special Needs adult learners evaluating the two systems. These are questions "1", "4", and "25". These three questions asked the evaluator to respond in the areas of:

- Whether or not the system was "easily operational";
- Whether or not the material presented in the courseware was "easily understood";
- Whether or not an adult learner would be encouraged to "continue to use this system again in the future".

Other "feedback" as noted from these evaluators would also be included in forming the conclusions regarding whether or not either of the systems should be recommended for purchase for this population of adult learners.

Conclusions:

The CSR and FFS systems are not easily adaptable to the requirements of the visually impaired. This is not a criticism of just these two systems. It is believed that possibly all ILS systems of this type are not designed, nor easily adaptable, to meet the requirements of Special Needs populations – particularly the visually impaired.

There may be adaptive devices available somewhere. MATC instructors in the Special Needs fields, however, are unaware of any devices other than the "DEC" boards and "bridges" used during these attempts at evaluation. More research regarding what is available today, if anything, would be needed to uncover such devices.

MICROSOFT WORKS TUTORIAL

Microsoft Works

Microsoft Works (MSW) is a software package that allows the user to create letters and reports, perform budget and accounting functions, create address lists and inventories, and add charts to any document. This multi-faceted software package allows the user to create or maintain any of the above business operations by including the following components in one software system.

- Word Processing
- Spreadsheets
- Databases
- Communications
- Graphics

These five components included in a windows-based format qualifies this software package to be called an "intergrated learning system" (ILS). This software system was chosen for evaluation by adult learners because it has a mouse-operated "windows" format yet can also be easily operated using DOS keystroke commands. Additionally, the menu formats and commands are very similar to those used in many other software packages. Ir other words, *Microsoft Works* (MSW) is not only a comprehensive software system, but it can also be considered representative of the many less comprehensive software packages on the market today.

Microsoft Works Tutorial

The *Microsoft Works* (MSW) tutorial included in this ILS system also meets the requirements of a true ILS system. The qualifying features of this tutorial include: (See "What is an Integrated Learning System ("ILS)?", page "1".)

- **Comprehensive curriculum** – a minimum of several areas of instruction for each of the five components of *Microsoft Works*.

- **Extensive instruction** – an average of approximately 45 minutes to one hour needed to complete each of the many "user-friendly" areas within each component.

- A **"management system"** feature that informs the user which areas of instruction have been fully completed.

- Extensive use of **color** and **graphics** to hold the interest of the user.

- A more **varied and sophisticated format of instruction** as compared to the traditional "drill and practice" format.

- A **"Help"** feature to better explain any questions an adult learner may have.

- Allows adult learners to move through each area of instruction **at their own pace.**

Evaluation Session Procedure

A class of fourteen "Office Update" adult learners were selected to evaluate the *Microsoft Works* (MSW) tutorial. These fourteen adult learners were selected, in part, because they were already familiar with the MSW **software**, but <u>not</u> the **tutorial** feature. It was believed this group of adult learners could objectively evaluate the MSW tutorial within a relatively short period of time due to their familarity with the software.

One hour was allowed for evaluation (as was allowed the instructors to evaluate the CSR and FFS systems). These adult-learner evaluators were allowed more time, however, if requested. Some did spend more than one hour. A short questionnaire consisting of ten questions was provided each evaluator along with a "guide" referring to which areas of each component should be used for evaluation. (See Appendix "E".)

The attached "guide" listed the three most popular components of MSW and a minimum of two areas within each component. The three components and the selected areas within each component were:

- Word Processing
  - Tour of the Word Processor
  - Entering Text

- Databases
  - Tour of the Database
  - Searching for Information
  - Creating a Database

- Spreadsheets
  - Tour of the Spreadsheet
  - Spreadsheet Charting

Because each of the seven areas listed above typically requires 45 minutes to one hour to complete, the adult-learner evaluators were told to spend only as much time as needed in each area to get enough of a "feel for the instruction being provided" to be able to answer the ten questions asked. Most of the fourteen evaluators reported viewing all, or almost all, areas.

The ten questions selected for these evaluators were based upon the following two criteria.

- Questions that would allow for an objective and well-informed evaluation of this ILS system.

- Questions that were either identical or similar to the questions asked of the instructors evaluating the CSR and FFS systems. The "key" questions in the CSR and FFS questionnaire (questions "1", "4", "7", "8", and "25") were made sure to be included. A question similar to question "26" was also included. These six questions addressed the following areas.

  - Software easily operational?
  - Material presented easily understood?
  - Graphics enhance interest?
  - Screen presentations clear and interesting?
  - Adult learners encouraged to continue to use the system in the future?
  - Where could system be best placed?

See Appendix "D" for the **instructors'** questionnaire. See Appendix "E" for the "guide" and questionnaire used with the fourteen adult-learner evaluators. A third page in Appendix "E" documents the responses of the evaluators.

The page in Appendix "E" documenting the responses of the fourteen adult-learner evaluators to the ten questions can be easily summarized here. **The evaluators responded unanimously, or nearly so, with "Yes" responses to all nine questions asking for either a "Yes" or "No" response.**

(Question "10" required a preference to "where the system could be best placed". The description of the responses to this question are described in the "Recommendations" section.)

Conclusions:

The adult learners were very impressed with the MSW tutorial. Even though they were familiar with each component of *Microsoft Works*, they believed the tutorial to be an effective learning tool that would "encourage the unfamiliar adult learner to continue to use the tutorial after the first session". (100% "Yes" response to question "9".)

The responses obtained from the adult learners evaluating the MSW tutorial raise three questions regarding the responses obtained from the instructors evaluating the CSR and FFS systems.

- **Are adult learners possibly more favorably inclined to use an integrated learning system than is believed to exist in the minds of instructors?** There appears to the possibility that adult learners may favor such a system more than instructors believe due to possible inhibitions or embarrassment when asking instructors or other adult learners for help in any sprecific area of coursework. On the other hand, do adult learners typically respond with a higher percent of "Yes" responses to any questions asked? If so, this may be due to either of the following two possibilities.

  - A feeling of more "pressure" to evaluate a system favorably than instructors feel.

  - Adult learners are not necessarily able to evaluate a system's effectiveness as a learning tool within one hour as compared to instructors' abilty to effectively evaluate a system.

- **Is the MSW tutorial actually a "better" ILS system for its purpose than are either the CSR or FFS systems?**

- **Are we comparing "apples" with "orange"** Perhaps no comparison should be made between the instructors' evaluations of the CSR/FFS systems and the adult learners' evaluations of the MSW tutorial. Perhaps these two types of ILS systems are too different in their scope and purpose.

RECOMMENDATIONS

The following recommendations are based upon the three areas covered in this project. These three areas included:

1. Instructor evaluations of two ILS systems (CSR and FFS) designed to build skills for the adult learner in the fields of reading, writing, and math.

2. Special Needs adult learners evaluating the same two ILS systems as described in part "1" above.

3. Adult learners' evaluation of the MSW tutorial.

Recommendation ONE

Purchase the CSR system for use at the West Campus. A small-scale installation of this system is recommended for the Academic Support Center. A combination of instructor support and available monies should determine the exact number of units to be purchased.

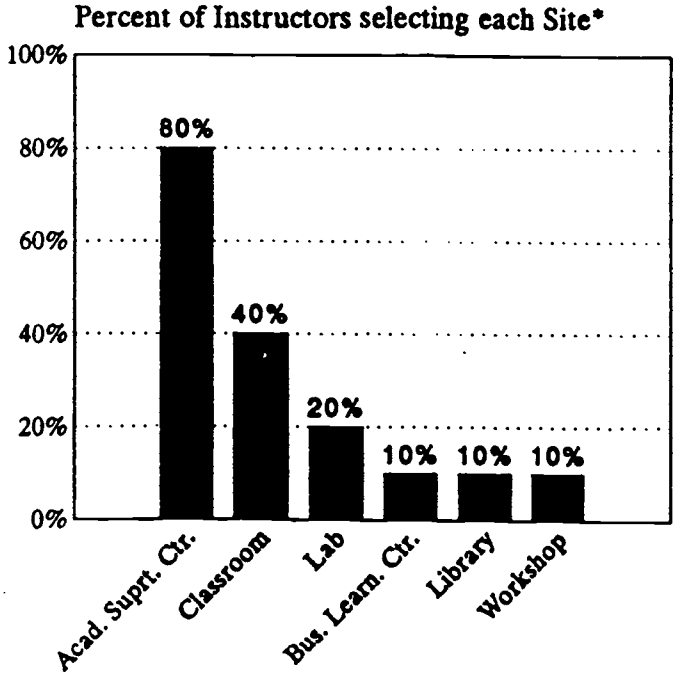
This recommendation is based upon the following evidence.

- The tabulated results obtained from the evaluation questionnaires completed by a selected group of instructors from both the West and Downtown Campuses. (See the "Conclusions" section, pages 20-29, 39-40.)

- Statements made by West Campus instructors to the effect that, "This is the first system we have seen that includes coursework at a low enough level to help our students who have a poor command of the English language."

- The Academic Support Center was selected based upon the instructors' responses to question "26" in the questionnaire. A bar chart illustrating these responses follows.

West Campus



* Instructors were allowed more than one choice

Recommendation TWO

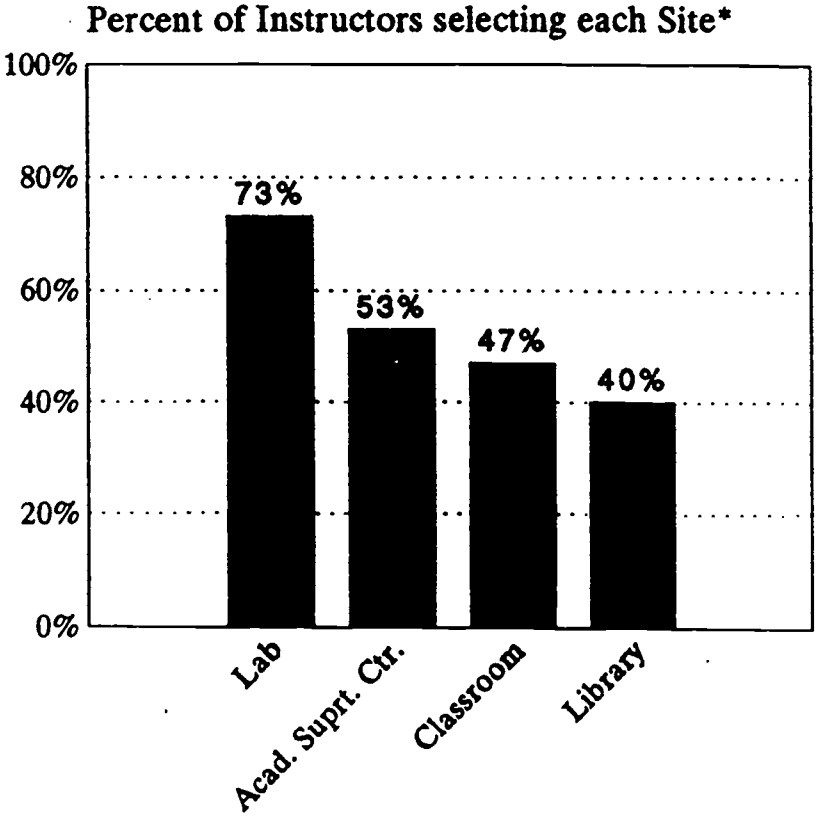
Purchase the FFS system for use at the Downtown Campus. A small-scale installation of this system is recommended for either a "lab" setting, the classroom, or both.

This recommendation is based upon the following evidence.

- The tabulated responses from the evaluation questionnaires completed by both the West and Downtown Campus instructors. (See the "Conclusions" section, pages 30-40.)
- Statements made by the instructors during the evaluation sessions that expressed the need for this type of learning tool and their favorable impressions of this particular system.

- A lab and/or classroom(s) setting is recommended based, in part, upon the instructors' responses to question "26". A bar chart illustrating these responses is shown below. Although the "Lab" setting was the most popular choice according to the chart, the classroom setting is also strongly recommended. A number of instructors stated during the evaluation sessions that they would like to see this system placed in more than one setting, but that the classroom was their first preference. These instructors believed that many of their adult learners needing this type of system would not utilize it during their time away from the classroom.

Downtown Campus



* Instructors were allowed more than one choice

Recommendation THREE

Continue to evaluate the CSR and FFS systems with adult learners in a lab setting. Time constraints and "secured space" availability made it impossible to use adult learners in this capacity during this grant. These problems could be resolved with advance notice to administrators of specific space requirements. (See page "17" for a mor detailed explanation of why adult learners were not used to evaluate these two ILS systems.)

This recommendation is proposed for the following reasons.

- Adult learners were supposed to be included as part of the process in this grant. Highly favorable responses from adult learners evaluating the MSW tutorial possibly suggests that instructors may have a different viewpoint than adult learners regarding the support for and utilization of ILS systems in general. Adult learners may possibly be more inclined to use ILS systems than is reported in this study using instructors' responses only.

- A lab setting would be an ideal location for bringing in adult learners referred by the same instructors selected for the previous evaluations. These adult learners needing help outside the classroom would then have the opportunity to either work by themselves or with supervision. These adult learners, working in the areas of reading, writing, and/or math could be used as "evaluators" in one of two ways, or both.

    1. The adult learners could complete a similar questionnaire stating their support or non-support for each system used. A one-month to one-semester time period would be recommended for this type of evaluation.

    2. A group of adult learners could be "tracked" noting their progress made over a longer period of time. One semester to two years would be the recommended time frame for this type of evaluation.

Recommendation FOUR

Evaluate the "PLATO" ILS system. If and when this company's requirements can be met, an evaluation of this system by instructors and adult learners (including the Special Needs populations) is recommended. The same evaluation procedures, questionnaire, and instructors could again be utilized to evaluate this system.

This recommendation is proposed for the following reasons.

- "PLATO" has a reputation of being a very comprehensive and effective learning tool. This ILS system is possibly the only system on the market today that is not somewhat similar to either the CSR or FFS systems.

- Evaluating this system with the same procedures, questionnaire, and instructors as used for the CSR and FFS evaluations may also provide more insight into the instructors' perspective on ILS systems, in general. A wide range of adult learners would also be valuable in obtaining a valid and reliable evaluation.

Recommendation FIVE

Explore the ILS market to determine what, if any, equipment is available today to help adapt these systems to meet the unique requirements of the Special Needs populations of adult learners. Additionally, explore the various agencies, organizations, and schools that serve the visually impaired and other Special Needs populations.

This recommendation is proposed for the following reasons.

- The evaluations attempted during this grant were not successful due, in large part, to the inability of the two ILS systems to be easily adaptable to the needs of a visually-impaired population.

- The need to let the designers of these ILS systems know that there are populations of adult learners that have "special needs" with respect to utilizing even the most progressive learning tools. Additionally, to let the sales representatives of these systems know that any system that is easily adaptable becomes much more attractive to schools such as MATC. ILS design people, engineers, or technical support staff may then be more willing to create adaptive devices to help promote their product.

Recommendation SIX

Interview staff members from other schools that have already implemented an ILS system of this type.

These schools could be contacted and asked to provide their experiences with the selected systems. Data could then be compiled on categories such as:

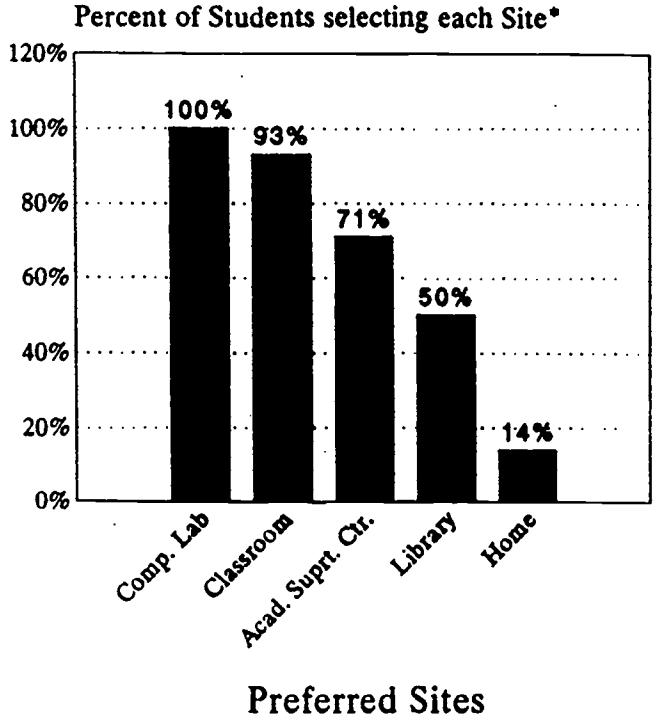
- What systems are most popular today?
- What types of schools purchased which systems and why?
- What shortcomings are found with each system after a period of time in use?
- What systems appear to work best with what populations of adult learners?
- Documentation of the rate of progress being made by adult learners that are "tracked" during their utilization of particular systems.
- What new ILS systems may be appearing on the market in the near future?

Recommendation SEVEN

Support the use of the *Microsoft Works* (MSW) tutorial as a popular and effective learning tool for adult learners wishing to learn any part of the *Microsoft Works* software. If additional units are equipped with particular software, a recommendation can be made regarding where these units might be situated in order to "best meet the needs of adult learners". The responses to question "10" shown below provide some insight into the "best placement" of additional units loaded with this software. A bar chart is used to beter illustrate the responses.

10. Where could *Microsoft Works* be best placed to suit your needs? (See Appendix "E" for the complete wording.)

Microsoft Works Tutorial
Student Evaluation
West Campus



* Students were allowed more than one choice.

A Computer Lab, classroom(s), and/or an Academic Support Center are the three recommended sites based upon the reponses.

ASSUMPTIONS and LIMITATIONS

Assumptions

- The sample of instructors and adult learners selected to evaluate the ILS systems were a "representative" sample. (See Appendix "C".) That is, those selected to complete the evaluation questionnaires provided responses that can be considered a pretty good indication of the responses expected from other instructors and adult learners not evaluated.

- The instructors and adult learners evaluating the ILS systems provided objective and "well-informed" responses to all questions.

- The selected instructors can be concluded to be a valid and reliable source to judge the popularity and effectiveness of each of the two ILS systems (CSR and FFS) regarding the utilization and progress made by their adult learners.

- The two questionnaires were designed in such a manner that the responses obtained presented a valid and reliable description of the instructors' and adult learners' opinions regarding each ILS system evaluated. (See Appendices "D" and "E".)

Limitations (Those limiting factors beyond our control)

- The expectation that the responses obtained from the instructors and adult learners were completely objective responses.

- The expectation of obtaining "well-informed" responses from instructors evaluating a comprehensive ILS system in a session typically lasting only one hour. (Most instructors stated that one hour was the maximum amount of time they had to evaluate a system on any given day.)

- The evaluation of only two ILS systems (CSR and FFS) by the instructors. (A third ILS system, "PLATO", was not evaluated due to problems meeting certain requirements of this system.)

- The ability of the two selected ILS systems (CSR and FFS) to be easily adaptable so as to be properly evaluated by Special Needs adult learners.

- The two ILS systems (CSR and FFS) not being evaluated by a representative group of adult learners due to time and space constraints. (See page "17" for the reasons why adult learners were not used in the evaluation of these two systems.)

Delimitations (Those limiting factors that we imposed)

- The selection of twenty-eight instructors to evaluate the two selected ILS systems (CSR and FFS) as opposed to more or all of the instructors in the various programs offered at MATC. (See Appendix "C" for a list of the selected instructors.)

- The validity and reliability of primarily drawing conclusions from responses to questions requiring only a "Yes" or "No" answer. Can these responses provide a realistic interpretation of the evaluating instructors' opinions regarding the effectiveness of each system to benefit their adult learners? (See Appendices "D" and "E".)

- The selection of the two ILS systems (CSR and FFS) that were actually evaluated. Would other available ILS systems on the market have been judged even more favorably than the two systems selected?

- The interpretation of the responses and subsequent conclusions drawn from these interpretations by us (the manager and educational assistant for this grant) to be an accurate reflection of the actual beliefs of the evaluating instructors.

CSR

Macmillan/McGraw-Hill

Basic Skills Course Titles

424 Courses Teach Essential Reading, Writing, and Math Skills

Introductory Courseware

S0301	Taking a Course in the Basic Skills Curriculum I	S0501	Taking a Course in the Basic Skills Curriculum II

Language Arts/Reading

Level I

R0301A	Knowing Sight Words - Part A
R0301B	Knowing Sight Words - Part B
R0302	Knowing the Meaning of Common Words
R0303	Knowing Plural Nouns
R0307	Knowing the Meaning of Compound Words
R0309	Knowing Contractions
R0311	Finding Negative Words
R0312	Finding the Main Idea
R0313	Answering Questions
R0316	Following Written Directions
R0322	Knowing What is Real and Unreal in a Paragraph
R0330	Finding a Literally Stated Fact or Detail
R0331	Finding a Restated Fact or Detail
R0332	Combining Facts or Details
R0333	Finding an Implied Fact or Detail
R0334	Identifying a Conclusion
R0335	Choosing the Best Title
R0336	Identifying the Main Idea
R0337	Choosing Synonymous Words or Phrases

Level II

R0502	Knowing the Meaning of Common Words
R0507	Knowing the Meanings of Compound Words
R0508A	Knowing the Meanings of Words with Suffixes
R0508B	Knowing the Meanings of Words with Prefixes
R0509	Knowing the Meanings of Contractions
R0510A	Recognizing Abbreviations - Part A
R0510B	Recognizing Abbreviations - Part B
R0511	Knowing Negative Words
R0512	Finding the Main Idea in a Paragraph
R0513	Finding Details in a Paragraph
R0514	Determining the Order of Events in a Paragraph
R0515	Identifying Literal Cause and Effect in a Paragraph
R0516	Following Written Directions
R0518	Identifying Pronoun Referents
R0523	Understanding the Difference Between Facts and Opinions in a Paragraph
R0525	Understanding Signs
R0526	Reading Tables, Schedules, and Bar Graphs
R0528	Using Dictionary Guide Words
R0530	Finding a Literally Stated Fact or Detail
R0531	Finding a Restated Fact or Detail
R0532	Combining Facts or Details
R0533	Finding an Implied Fact or Detail
R0534	Identifying a Conclusion
R0535	Choosing the Best Title
R0536	Using Critical Thinking Skills
R0537	Using Context Clues
R0538	Choosing Synonymous Words or Phrases

6/11/92

Level III

R0802	Knowing the Meaning of Common Words
R0808A	Knowing the Meanings of Words with Suffixes
R0808B	Knowing the Meanings of Words with Prefixes
R0809	Determining the Meanings of Contractions from Context
R0810A	Recognizing Abbreviations - Part A
R0810B	Recognizing Abbreviations - Part B
R0811	Knowing Negative Words
R0812	Identifying a Literal Main Idea in a Paragraph
R0813	Finding Details in a Paragraph
R0814	Determining the Order of Events in a Paragraph
R0815	Identifying Literal Cause and Effect in a Paragraph
R0816	Following Written Directions
R0817	Identifying the Meaning of Words in Context
R0818	Identifying Pronoun Referents
R0819	Determining the Implied Main Idea in a Paragraph
R0820	Identifying Implied Cause and Effect in Paragraphs
R0821	Identifying Conclusions and Generalizations for Paragraphs
R0823	Identifying Opinions in a Paragraph
R0824	Alphabetizing Words and Names
R0825	Obtaining Information from Maps
R0826	Reading Tables, Schedules, and Bar Graphs
R0827	Reading Tables of Contents and Indexes
R0828	Interpreting Dictionary Entries
R0829	Using Sources of Information
R0830	Recognizing Rhetorical Devices in a Reading Selection
R0831	Recognizing Structural Elements in a Reading Selection

Level IV

R1102	Knowing the Meaning of Common Words
R1108	Knowing the Meanings of Words with Prefixes
R1112	Recognizing a Literal Main Idea in a Paragraph
R1113	Finding Details in a Paragraph
R1114	Determining the Order of Events in a Paragraph
R1115	Using Context to Identify the Meaning of a Multiple-Meaning Word
R1116	Using Context to Identify the Meaning of Specialized or Technical Terms
R1117	Identifying the Meaning of Words in Context
R1118	Identifying Pronoun Referents
R1119	Determining the Implied Main Idea in a Paragraph
R1120	Identifying Implied Cause and Effect in Paragraphs
R1121	Drawing Conclusions from Paragraphs
R1122	Predicting Probable Future Actions and Outcomes
R1123	Distinguishing Fact from Nonfact and Opinion
R1127	Reading Tables of Contents and Indexes
R1129	Using Sources of Information
R1130	Recognizing Rhetorical Devices in a Reading Selection
R1131	Recognizing Structural Elements in a Reading Selection
R1132	Analyzing Structural Elements in a Reading Selection Critically
R1133	Recognizing Comparison and Contrast
R1151	Identifying Author's Purpose
R1161	Recognizing Forms of Propaganda

Level V

R1311	Determining the Meaning of Words Using Roots and Prefixes
R1313	Determining the Meaning of Words Using Context Clues
R1323	Organizing Information
R1325	Following Written Directions
R1331	Identifying the Stated and Implied Main Idea
R1333	Identifying Supporting Details
R1341	Analyzing Organizational Relationships I
R1342	Analyzing Organizational Relationships II
R1343	Analyzing Organizational Relationship III
R1351	Identifying Author's Purpose I
R1352	Identifying Author's Purpose II
R1361	Using Critical Thinking Skills I
R1362	Using Critical Thinking Skills II
R1363	Using Critical Thinking Skills III

Language Arts/Writing

Level I

W0313	Classifying Pictures
W0314	Arranging Pictures in Sequence
W0321	Describing a Picture Clearly
W0334	Identifying Parts of a Friendly Letter
W0342	Completing Forms
W0348A	Spelling Words - Part A
W0348B	Spelling Words - Part B
W0348C	Spelling Words - Part C
W0348D	Spelling Words - Part D
W0350	Writing the Alphabet
W0362	Ending Sentences
W0370	Capitalizing Words

Level II

W0502	Writing the Plural Form of Nouns
W0503	Completing Sentences with the Singular or Plural Form of Nouns
W0504	Using Correct Forms of Regular Verbs
W0505	Writing Declarative Sentences

W0506 Writing Questions
W0515 Grouping Words
W0516 Ordering Events
W0522 Organizing Sentences in a Paragraph
W0523 Adding Information to a Topic
W0537 Addressing an Envelope
W0543 Completing Forms
W0551 Spelling Words Ending With "-ed" and "-ing"
W0553A Spelling Homophones - Part A
W0553B Spelling Homophones - Part B
W0554A Spelling Difficult Words - Part A
W0554B Spelling Difficult Words - Part B
W0562 Using Periods and Question Marks
W0564A Using the Comma in Dates and Places
W0564B Using the Comma to Separate Items in a Series
W0565 Using the Comma in the Greeting and Closing of a Friendly Letter
W0570 Capitalizing Names and the Pronoun "I"
W0571 Capitalizing Words in a Letter
W0572 Capitalizing Days of the Week and Months of the Year
W0573 Capitalizing Common Social Titles

Level III

W0803 Completing Sentences with Singular and Plural Nouns
W0807 Writing Plural Forms of Nouns
W0808 Writing Common Regular Verbs
W0809 Finding Compound Subjects and Compound Verbs
W0810 Making Subjects and Verbs Agree
W0811 Using Irregular Verbs Correctly
W0812 Writing Compound Sentences
W0816 Putting Events in Sequential Order
W0817 Grouping Objects
W0818 Choosing Headings
W0820 Choosing Topics and Details
W0824 Choosing Sentences About a Topic
W0829 Writing a Telephone Message
W0831 Recognizing Complete Invitations and Announcements
W0839 Writing a Business Letter
W0840 Addressing a Business Envelope
W0844 Completing Order Forms
W0853A Spelling Homophones - Part A
W0853B Spelling Homophones - Part B
W0854A Spelling Difficult Words - Part A
W0854B Spelling Difficult Words - Part B
W0856 Spelling Words with Adjoining Vowels
W0864A Using the Comma with Direct Addresses
W0864B Using Commas with Appositives
W0873 Capitalizing Official Titles
W0874 Capitalizing Geographical Areas
W0875 Capitalizing Proper Nouns

Level IV

W1107 Writing the Plural Form of Nouns Correctly
W1109 Finding Compound Subjects and Compound Verbs
W1110 Making Subjects and Verbs Agree
W1110B Making Subjects and Verbs Agree II
W1111 Using Irregular Verbs Correctly
W1112 Identifying Compound Sentences
W1116 Correcting Double Negatives
W1118 Choosing Headings
W1120 Organizing Information
W1132 Communicating Important Information
W1139 Writing a Business Letter
W1141 Expressing Yourself Clearly in a Letter
W1147 Completing Checks and Money Orders
W1151 Using Adjectives and Adverbs Correctly
W1153A Spelling Frequently Misused Words - Part A
W1153B Spelling Frequently Misused Words - Part B
W1153C Spelling Frequently Misused Words - Part C
W1154A Spelling Difficult Words - Part A
W1154B Spelling Difficult Words - Part B
W1155 Spelling Words with Double Letters
W1164 Using a Comma with Phrases or Clauses in a Series
W1166 Using Commas with Sentence Interrupters
W1174 Capitalizing Geographical Areas
W1175 Capitalizing Proper Nouns and Adjectives
W1177 Using Colons
W1178 Using Capital Letters in the Titles of Works
W1179 Punctuating a Direct Quotation
W1180 Using Apostrophes to Indicate Possession
W1181 Forming Contractions

Level V

W1311 Recognizing Clauses and Sentence Types
W1313 Identifying and Correcting Sentence Fragments
W1315 Identifying and Correcting Run-On Sentences
W1317 Identifying and Correcting Problems with Parallel Structure
W1319 Identifying and Correcting Wordiness
W1321 Identifying and Correcting Inappropriate Word Choice I
W1322 Identifying and Correcting Inappropriate Word Choice II
W1323 Identifying and Correcting Inappropriate Word Choice III
W1331 Using Pronouns I
W1332 Using Pronouns II
W1333 Using Pronouns III
W1341 Using Verb Tenses I
W1342 Using Verb Tenses II
W1345 Identifying and Correcting Problems with Subject-Verb Agreement I
W1346 Identifying and Correcting Problems with Subject-Verb Agreement II

W1347	Identifying and Correcting Problems with Subject-Verb Agreement III
W1351	Using Modifiers I
W1352	Using Modifiers II
W1353	Using Modifiers III
W1354	Identifying and Correcting Misplaced Modifiers and Dangling Modifiers I
W1355	Identifying and Correcting Misplaced Modifiers and Dangling Modifiers II
W1371	Using Commas I
W1372	Using Commas II
W1373	Using Commas III
W1376	Using Semicolons
W1378	Using Colons
W1379	Using Quotation Marks
W1381	Recognizing Appropriate Purpose and Audience
W1391	Recognizing Effective Development

Math

Level I

M0301	Counting Less Than 100 Objects
M0302	Knowing Word Names for Numbers Less Than 100
M0303	Knowing Word Names for Numbers Less Than Ten
M0318	Knowing Larger and Smaller Numbers Less Than 20
M0319	Identifying the Number That Comes Before, After, and Between Numbers Less Than 100
M0320	Identifying Ordinal Position in a Set of Ten or Fewer Objects
M0325	Identifying 1/2, 1/3, or 1/4 of a Region
M0335	Adding One-Digit Numbers
M0335S	Addition with the Basic Facts (Drill & Practice)
M0336	Adding Three One-Digit Numbers
M0337	Adding Two Two-Digit Numbers With No Regrouping
M0338	Adding a One-Digit Number to a Two-Digit Number With No Regrouping
M03XA	Adding One-Digit and Two-Digit Numbers With Regrouping
M03XB	Adding Two Two-Digit Numbers Resulting in Two-Digit Sums With Regrouping
M03XC	Adding Two Two-Digit Numbers Resulting in Three-Digit Sums With Regrouping
M0344	Subtracting with the Basic Facts
M0344S	Subtracting with the Basic Facts (Drill & Practice)
M0345	Subtracting a One-Digit Number from a Two-Digit Number Without Regrouping
M0346	Subtracting Two Two-Digit Numbers Without Regrouping
M0352	Determining the Total Number of Objects in Equal Sets
M0357	Grouping Twelve or Fewer Objects into Sets of Equal Amounts
M0382	Knowing the Days of the Week in Consecutive Order
M0383	Telling Time on the Hour and Half-Hour
M0384	Measuring Objects in Whole Units
M0398	Identifying a Circle, Square, Rectangle, and Triangle
M03108	Solving Real-World Problems Involving Addition of Two One-Digit or Two Two-Digit Numbers Without Regrouping
M03109	Solving Real-World Problems Involving Subtraction of Two One-Digit or Two Two-Digit Numbers Without Regrouping
M03122	Identifying a Set of Coins with a Value Less Than Twenty-Five Cents
M03123	Solving Real-World Addition Problems Involving Two Purchases Totaling No More Than Fifty Cents Without Regrouping
M03124	Solving Real-World Subtraction Problems Involving Purchases with Money Amounts No Greater Than Fifty Cents Without Regrouping

Level II

M0504	Counting Objects in Sets of Less Than 1,000
M0513	Rounding Whole Numbers to the Nearest Ten
M0521	Ordering Numbers Less Than 1,000
M0526	Identifying Equivalent Regions
M0527	Identifying Fractional Portions of Shapes and Groups
M0539	Adding Three Two-Digit Numbers With Regrouping
M0540	Adding Three-Digit Numbers With Regrouping
M0541	Adding Four Digit Numbers With Regrouping
M0542	Adding One-, Two-, or Three-Digit Numbers With Regrouping
M0543	Adding One-, Two-, or Three- or, Four-Digit Numbers With Regrouping
M0547	Subtracting Three- or Four-Digit Numbers Without Regrouping
M0548	Subtracting Two Digit Numbers With Regrouping
M0549A	Subtracting Three-Digit Numbers With Regrouping
M0549B	Subtracting Three-Digit Numbers With Regrouping Across a Middle Zero

M0550 Subtracting Four-Digit Numbers With Regrouping

M0553A Learning the Multiplication Tables from 0 to 3

M0553B Learning the Multiplication Tables from 4 to 6

M0553C Learning the Multiplication Tables from 7 to 9

M0553S Using the Basic Multiplication Facts (Drill & Practice)

M0554A Multiplying by a One-Digit Number Without Regrouping - Part A

M0554B Multiplying by a One-Digit Number With Regrouping - Part B

M0554C Multiplying by a One-Digit Number With Regrouping - Part C

M0558A Learning the Basic Division Facts With Divisors From 2 to 5

M0558B Learning the Basic Division Facts With Divisors From 6 to 9 and 1

M0558S Division With the Basic Facts (Drill & Practice)

M0559 Using the Basic Division Facts to Solve Division Problems with Remainders

M0560 Dividing a Two-Digit Number by a One-Digit Number with Remainders

M0561 Dividing a Three-Digit Number by a One-Digit Number with Remainders

M0563 Adding Proper Fractions With Like Denominators

M0564 Subtracting Proper Fractions With Like Denominators

M0585 Naming the Months of the Year in Consecutive Order

M0586 Using a Calendar to State the Date

M0587 Telling the Time in Minutes After and Minutes Before the Hour

M0588 Measuring Objects in Centimeters and Inches

M05110 Solving Word Problems Involving Addition and Subtraction

M05112 Solving Word Problems Involving Multiplication and Division

M05125 Counting Coins

M05126 Counting Coins and Bills

M05145 Interpreting Bar Graphs and Pictographs

Level III

M0809 Reading and Writing Fractions

M0810 Reading and Writing Decimals

M0811 Understanding Percents

M0812 Reading and Writing Money Values

M0814 Rounding Whole Numbers to the Nearest Ten, Hundred, and Thousand

M0815 Rounding Decimals to the Nearest Whole Number

M0823 Ordering Numbers Less Than 10,000

M0828A Finding Equivalent Forms of Fractions

M0828B Finding Lowest-Term Equivalent Fractions

M0851 Subtracting Five-Digit Numbers With Regrouping

M0855 Multiplying by a Two-Digit Number With Regrouping

M0862 Dividing a Three- or Four-Digit Number by a Two-Digit Number with Remainders

M0865 Adding Proper Fractions With Unlike Denominators

M0866 Subtracting Proper Fractions With Unlike Denominators

M0867A Multiplying Proper Fractions

M0867B Multiplying Proper Fractions By Whole Numbers

M0868 Dividing Proper Fractions

M0873 Adding Decimals

M0874 Subtracting Decimals

M0875 Multiplying a Whole Number By a Decimal

M0876 Multiplying a Decimal by a Decimal

M0877 Dividing a Decimal Number By a Whole Number

M0891 Reading Fahrenheit and Celsius Thermometers

M0893 Converting Units of Length Within the Metric System

M08101 Evaluating Numerical Information in a One-Step Word Problem

M08103 Estimating Solutions to Word Problems Using Addition and Subtraction

M08104 Estimating Solutions to Word Problems Using Multiplication and Division

M08113 Solving Word Problems Involving Addition and Subtraction

M08114 Solving Word Problems Involving Multiplication and Division

M08115 Matching Word Problems with Number Sentences

M08116 Solving Two-Step Word Problems

M08127 Making Change from Five Dollars or Less

M08128 Making Change from Twenty-Dollars or Less

M08129 Comparing Unit Prices

M08135 Determining Elapsed Time

M08136 Finding the Perimeters of Rectangles, Squares, and Triangles

M08137 Solving Linear Measurement Problems

M08138 Solving Measurement Problems Involving Capacity

M08139 Solving Measurement Problems Involving Weight

M08146 Interpreting Bar Graphs and Pictographs

M08147 Locating Position on a Map

M08150 Constructing and Using a Frequency Distribution

Level IV

M1116	Rounding Decimals to the Nearest Tenth
M1117	Rounding Decimals to the Nearest Hundredth and Thousandth
M1124	Ordering Numbers Less Than 10,000,000
M1125	Comparing and Ordering Fractions and Mixed Numbers
M1126	Comparing and Ordering Decimals
M1127	Comparing and Ordering on the Real Number Line
M1129A	Changing Mixed Numbers to Improper Fractions
M1129B	Changing Improper Fractions to Mixed Numbers
M1130A	Finding Equivalent Forms of Fractions and Decimals
M1130B	Finding Equivalent Forms of Decimals and Percents
M1130C	Finding Equivalent Forms of Fractions and Percents
M1131	Comparing Fractions, Decimals, and Percents
M1156	Multiplying by a Three-Digit Number With Regrouping
M1169	Adding Mixed Numbers
M1170	Subtracting Mixed Numbers
M1171	Multiplying Mixed Numbers
M1172	Dividing Mixed Numbers
M1178	Dividing a Decimal by a Decimal
M1179	Rounding the Quotient in Decimal Division
M1180	Finding the Percentage of a Number
M1197	Identifying Common Temperatures in Fahrenheit and Celsius
M11102	Evaluating Numerical Information in a Two- or More Step Word Problem
M11105	Estimating Solutions to Word Problems Using Addition and Subtraction
M11106	Estimating Solutions to Word Problems Using Multiplication and Division
M1118	Solving Word Problems Involving Fractions
M1119	Solving Word Problems Involving Decimals
M1120	Solving Word Problems Involving Percentages
M11149	Solving Problems Using Graphs
M11151	Recognizing Common Square Roots
M11152	Solving Complex Word Problems
M11153	Determining the Better Buy
M11154	Finding the Area of Geometric Figures
M11155	Finding the Circumference of a Circle
M11156	Finding the Volume of a Rectangular Prism

Level V

M1311	Working with Signed Numbers
M1313	Introduction to Exponents and Square Roots
M1315	Understanding Order of Operations
M1317	Writing Algebraic Expressions
M1321	Solving One-Operation Equations
M1322	Solving Multi-Operation Equations I
M1323	Solving Multi-Operation Equations II
M1324	Solving Multi-Operation Equations III
M1325	Solving Multi-Operation Equations IV
M1326	Solving Equations Containing Fractions
M1331	Translating Simple Word Problems into Equations
M1333	Setting Up and Solving More Complex Word Problems
M1335	Solving Word Problems Involving Ratios and Proportions
M1337	Solving Equations Involving Substitution
M1339	Using Formulas to Solve Word Problems
M1341	Graphing Ordered Pairs on the Coordinate Plane
M1342	Graphing Lines on a Coordinate Plane
M1343	Finding X- and Y-Intercepts of Linear Equations
M1345	Finding the Slope of a Line
M1351	Solving Inequalities
M1353	Graphing Linear Inequalities on the Coordinate Plane
M1361	Performing Operations with Exponents I
M1362	Performing Operations with Exponents II –
M1363	Using Scientific Notation
M1371	Simplifying Polynomial Expressions
M1373	Multiplying Binomial Expressions I
M1374	Multiplying Binomial Expressions II
M1376	Factoring Expressions I
M1377	Factoring Expressions II
M1379	Simplifying Rational Expressions
M1381	Solving Linear Equations in Two Variables
M1383	Solving A System of Simultaneous Equations
M1384	Finding What Percent One Number Is of Another
M1385	Finding a Number When the Percent Is Known
M1391	Solving Quadratic Equations Using Factoring
M1392	Solving Quadratic Equations Using Square Roots
M1393	Solving Quadratic Equations Using the Quadratic Formula
M1395	Graphing Quadratic Equations
M1397	Solving Word Problems Using Quadratic Equations
M13101	Understanding Basic Geometric Terms I
M13102	Understanding Basic Geometric Terms II
M13105	Solving Problems with Intersecting and Parallel Lines
M13111	Solving Problems with Congruent Triangles
M13113	Solving Problems with Similar Triangles
M13115	Solving Problems Using the Pythagorean Theorem
M13121	Area and Perimeter of Irregular Shapes
M13127	Finding the Volume of Geometric Solids
M13130	Finding the Missing Number in a Sequence
M13131	Using Inductive Reasoning
M13133	Using Deductive Reasoning

Macmillan/McGraw-Hill

Powerful Tools for Tracking Employee Progress

1. ROSTER REPORT
2. MULTIPLE STUDENT REPORT
3. COURSE SUMMARY REPORT
4. COURSE DETAIL REPORT
5. MULTIPLE COURSE REPORT
6. STUDENT ACTIVITY REPORT
7. STUDENT COMMENT REPORT
8. INDIVIDUAL EDUCATION PLAN

PISR - 1/25/92

ROSTER REPORT

The ROSTER REPORT is a listing of all students with information about the status of courses for which the students are registered.

Column Heading	Indicates Courses
CRS	Registered
PSD	Passed
FLD	Failed
STD	Started and not completed
NST	Not started

Optional Title Line to Appear on Report

Roster Report (01/01/80-12/31/99)

Date : 04-18-1991 School Code : JJD1 Page : 1

#	Student Name	Student Id	CRS	PSD	FLD	STD	NST
1	John E. Jones	55852	3	0	0	1	2
2	John Lacy	63952	0	0	0	0	0
3	William Boyce	95687	2	1	0	1	0
4	Mary Worthington	75421	3	2	0	1	0
5	James Hayes	79635	10	9	0	0	1
6	Okado Sieko	25462	3	2	0	0	1
7	Emil Liebschner	55566	2	1	0	1	0
33	Marilyn Hosken	12345	1	1	0	0	0
34	Carol O'Shay	48963	1	0	0	0	1
144	Irma Smith	61523	1	0	0	1	0
222	Omar Daabas	78453	16	1	0	0	15
229	Christopher Goodwin	74525	1	0	0	1	0
333	Jock Wagner	13131	1	0	0	1	0
654	Helen Pino	78787	1	0	0	1	0
666	Ilse Loob	65431	16	1	0	0	15
775	Walter Emerson	43965	1	1	0	0	0
777	Roger Cooper	11129	3	2	0	0	1
876	Leon Dobson	46589	1	0	0	1	0
887	Mary Sue Wilson	33847	1	0	0	0	1
888	Lotte Gallo	54447	1	0	0	1	0
999	Jack Morton	82648	1	1	0	0	0

Optional Title Line to Appear on Report

Multiple Student Report (01/01/80-12/31/99) Page: 1

Course : M0554B Date: 04-18-1991

MULTIPLYING BY A ONE-DIGIT NUMBER WITH REGROUPING - PART 1

Student	#	Comp	Tot Time	... Pretest ... Cor	Inc	Score	.. Posttest .. Cor	Inc	Score
John E. Jones	001	N	00:43:33	4	6	40.0	9	1	90.0
Mary Worthington	004	Y	00:10:25	10	0	100.0	0	0	0.0
James Hayes	007			5	5	50.0	6	4	60.0
				0	0	0.0	7	3	70.0
		Y	01:09:13	0	0	0.0	10	0	100.0
Roger Cooper	777			2	8	20.0	4	6	40.0
		Y	00:45:22	0	0	0.0	10	0	100.0
Course Summary	Total / Crs		2:48:33						
	Average/Crs		0:42:08			52.5			76.7

MULTIPLE STUDENT REPORT

The MULTIPLE STUDENT REPORT shows the performance of a selected group of students for a course. It indicates time on task, pretest score, and posttest score for each student and an average for the group. A trainer can also obtain group performance statistics between any two dates.

COURSE SUMMARY REPORT

The COURSE SUMMARY REPORT provides a one page summary for each student. Information includes pretest score, posttest score, number of hints requested, total computer time, and course completion.

Optional Title Line to Appear on the Report

Course Summary Report (01/01/80-12/31/99)

Student: John E. Jones
Id : 55852 Student #: 001
Date : 04-18-1991
Course: M0554B / 1

MULTIPLYING BY A ONE-DIGIT NUMBER WITH REGROUPING - PART 1

Initial Reg Date	: 02-13-90	Initial Reg Time	: 11:31:50
Initial Signon Date	: 02-13-90	Initial Signon Time	: 12:14:33
Last Signoff Date	: 02-13-90	Last Signoff Time	: 11:35:23
Course Completed	: YES	CSR Course Time	: 00:43:33
Last Active Label	: 99W00	Other Course Time	: 00:00:00
Last Rel Ques #	: 1	Total Course Time	: 00:43:33
Pretest - Cor Ans	: 4	Posttest - Cor Ans	: 9
Pretest - Inc Ans	: 6	Posttest - Inc Ans	: 1
Pretest - Score (%)	: 40.00	Posttest Score (%)	: 90.00
Requests for HINT	: 5	Requests for GOTO	: 0

Optional Title Line to Appear on Report

Course Detail Report (01/01/80-12/31/99) Page: 1

Student: John E. Jones
Id : 55852 Student #: 001
Date : 04-18-1991
Course: M0554B / 1

MULTIPLYING BY A ONE-DIGIT NUMBER WITH REGROUPING - PART 1

Label	Ques	Date	Response Time	Code	Inc/Cor	Student Response
m0554b	1	02-13-90	11:32:05	QC	COR	
	2		11:32:07	QC	COR	
01a00	1		11:32:09	QC	COR	
01g01	1		11:32:11	QC	COR	c
01g02	1		11:32:12	QC	COR	a
01g03	1		11:32:13	QI	INC	c
01g04	1		11:32:14	QI	INC	c
01g05	1		11:32:15	QC	COR	43
01g06	1		11:32:17	QI	INC	b
01g07	1		11:32:18	QC	COR	b
01g08	1		11:32:20	QI	INC	a
01g09	1		11:32:21	QI	INC	c
01g10	1		11:32:23	QI	INC	d
01t0b	1		11:32:24	QC	COR	3
02e01	1		11:32:27	QC	COR	34
02e02	1		11:33:46	QC	COR	four
02e03	1		11:33:52	QC	COR	
02e04	1		11:33:58	QC	COR	c
02e05	1		11:34:00	QC	COR	c
02e06	1		11:34:04	QC	COR	a
02e07	1		11:34:11	QC	COR	a
02e08	1		11:34:17	QC	COR	c
02e09	1		11:34:23	QC	COR	b
02e10	1		11:34:26	QC	COR	a
04e01	1		11:34:28	QC	COR	d
04e02	1		11:34:31	QC	COR	
04e03	1		11:34:36	QC	COR	
04e04	1		11:34:46	QC	COR	24
	2		11:34:47	QC	COR	
04e05	1		11:34:56	QC	COR	
04e06	1		11:35:02	QC	COR	
04e07	1		11:35:06	QC	COR	
04e08	1		11:35:12	QC	COR	
04e09	1		11:35:19	SC		signoff

COURSE DETAIL REPORT

The COURSE DETAIL REPORT lists the time and date of each student response on any given course. This allows the trainer to see how long a student spends on each question and precisely where a student is having difficulty.

MULTIPLE COURSE REPORT

The MULTIPLE COURSE REPORT is an historical report that lists by title all courses that a student has taken. It shows the date of completion, time on task, pretest score, and posttest score. It also averages time on task, pretest scores, and posttest scores. If desired, a trainer can select a range of dates to show all courses taken within a particular time period.

Optional Title Line to Appear on Report

Multiple Course Report (01/01/80-12/31/99) Page: 1

Date: 04-18-1991

Student: John E. Jones
Id : 55852
Student #: 001

Course	Pass	Comp Date	Total Time	... Pretest ... Cor	Inc	Score	.. Posttest .. Cor	Inc	Score
MULTIPLYING BY A ONE-DIGIT NUMBER WITH REGROUPING - PART 1									
M0554B	1	06-03-90	00:43:33	4	6	40.0	9	1	90.0
WRITING A BUSINESS LETTER									
W0839	1		00:00:00	2	8	20.0	3	7	30.0
	2		00:00:00	0	0	0.0	7	3	70.0
	3		01:16:53	0	0	0.0	9	1	90.0
KNOWING THE MEANINGS OF WORDS WITH PREFIXES									
R1108	1		00:00:00	5	5	50.0	7	3	70.0
	2		00:45:41	0	0	00.0	10	0	100.0
CAPITALIZING OFFICIAL TITLES									
W0873	1		00:00:00	4	6	40.0	4	6	40.0
	2		01:05:23	0	0	0.0	10	0	100.0
Student Summary	Total		3:51:30						
	Average/Crs		0:57:33			95.0			

Optional Title Line to Appear on Report

Activity Report (01/01/80-12/31/99)

Page : 1
Date : 04-18-1991
School Code : JJD1

Student : John E. Jones
Id : 55852
Student# : 1

Course #	Course Name	Activity Date	Started	Passed	1 Fail	2 Fail	3 Fail
1	M0554B	02-13-90		X			
2	W0839	02-14-90		X	X	X	
3	R1108	02-16-90		X	X		
4	W087J	03-02-90		X	X		

• • • Summary • • •

Total # Crs :	4	Total Passed:	4	Total Failed:	0
Completed :	4	First Try :	1	First Try :	0
Incomplete :	0	Second Try :	2	Second Try :	0
Not started :	0	Third Try :	1	Third Try :	0

STUDENT ACTIVITY REPORT

The STUDENT ACTIVITY REPORT provides an overview of a student's activity. It shows whether a student passed a course on the first, second, or third attempt. Student interaction is summarized at the bottom of the report.

STUDENT COMMENT REPORT

The STUDENT COMMENT REPORT shows the messages a student typed to the trainer/ teacher while taking a course. The report includes the date and time of the comment and a reference to the exact screen (label) the student was viewing when the message was typed.

Optional Title Line to Appear on Report

Student Comment Report (01/01/80-12/31/99) Page : 1

Student: William Boyce Date : 04-18-1991
Id : 678976 Student #: 95687 Course: R0303

Knowing Plural Nouns

Label	Rel Macro	Date	Time	Student Comment
02e03	1	08-03-90	11:23:08	Can I do this later?

IEP Report for Student 33 - Marilyn Hosken

Individual Education Plan

Date : 04-18-91
Student: Marilyn Hosken
Id : 12345
Number : 033

Page : 1
Test Date: 02-11-91
Test Time: 11:02:12
Course : M13A

****
INDIVIDUAL EDUCATION PLAN
****
MATH LEVEL V: M13A
****

THE FOLLOWING IS A LIST OF THE COURSES SELECTED BY THE ADMINISTRATOR TO GENERATE A TEST FOR THE STUDENT:

1. M1311
WORKING WITH SIGNED NUMBERS

2. M1313
INTRODUCTION TO EXPONENTS AND SQUARE ROOTS

3. M1315
UNDERSTANDING ORDER OF OPERATIONS

4. M1317
WRITING ALGEBRAIC EXPRESSIONS

5. M1321
SOLVING ONE-OPERATION EQUATIONS

6. M1322
SOLVING MULTI-OPERATION EQUATIONS I

IF NECESSARY, THIS TEST WILL PRESCRIBE A REMEDIAL CURRICULUM FOR THE STUDENT.
****

****

INDIVIDUAL EDUCATION PLAN

An INDIVIDUAL EDUCATION PLAN may be developed for a student based on his/her performance on a Diagnostic test. Three pages of this report are shown here. The first page (left) indicates the courses selected by the administrator for a specific diagnostic test. The second page (facing page - top) details the student's performance on the test and includes the response to each question. The third page (facing page - bottom) lists the courses automatically prescribed for the student.

(Please see facing page for description.)

IEP Report for Student 33 - Marilyn Hosken

Individual Education Plan

Date : 04-18-91
Student: Marilyn Hosken
Id : 12345
Number : 033

Page : 3
Test Date: 02-11-91
Test Time: 11:02:12
Course : M13A

QUESTIONS FROM M1311

a	Correct
b	Correct
c	Correct

1. M1311 > PASS

==========

QUESTIONS FROM M1313

d	Incorrect
a	Correct
b	Incorrect

2. M1313 > FAIL

==========

QUESTIONS FROM M1315

c	Correct
d	Incorrect
a	Incorrect

3. M1315 > FAIL

==========

QUESTIONS FROM M1317

b	Correct
c	Correct
d	Correct

4. M1317 > PASS

==========

TOTAL COURSES = 6
COURSES PASSED = 4
COURSES FAILED = 2
PASSING CRITERIA = 100 %
****

IEP Report for Student 33 -

Individual Educatio

Date : 04-18-91
Student: Marilyn Hosken
Id : 12345
Number : 033

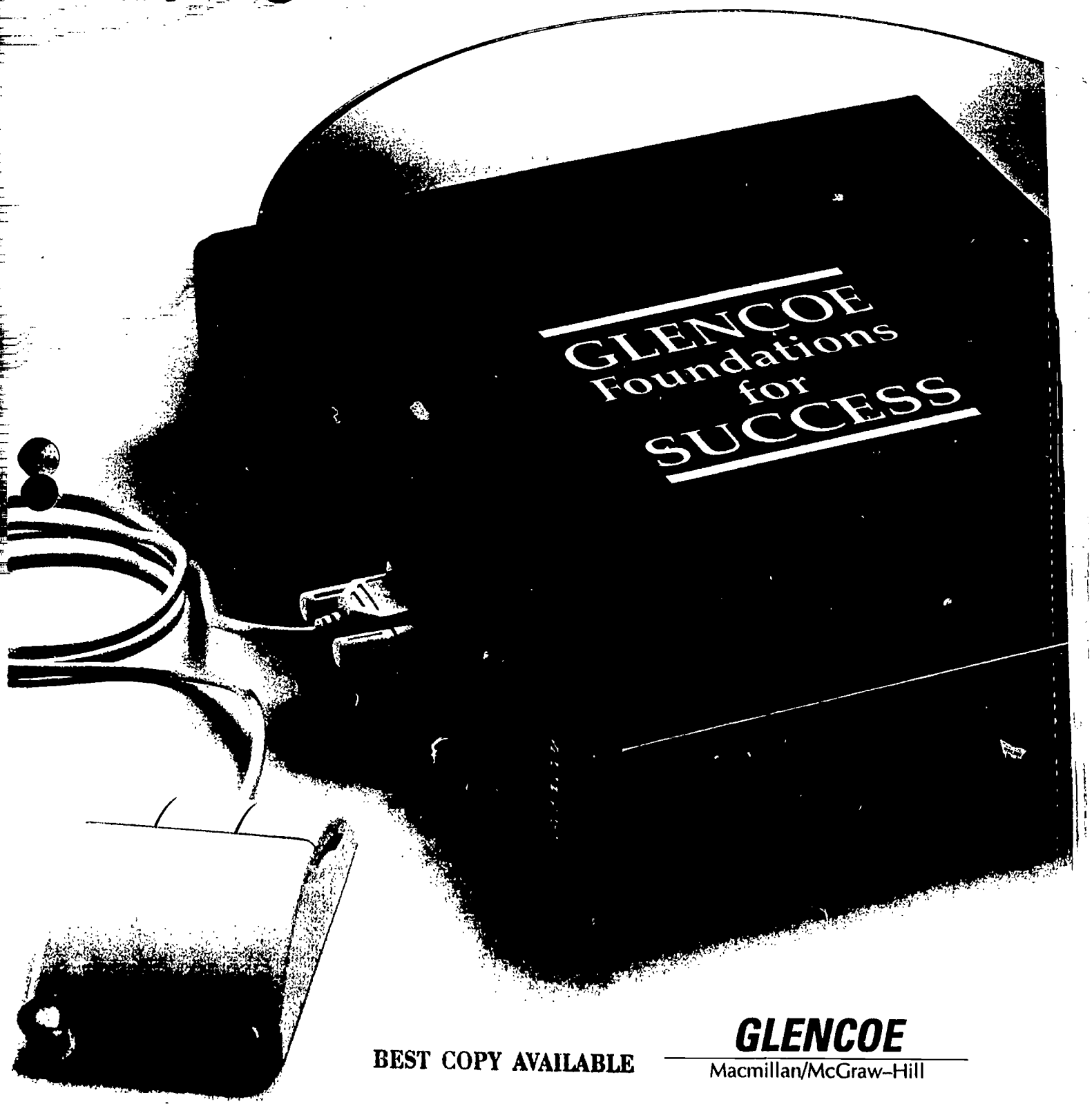
==========
: PRESCRIBED CURRICULUM :
==========

THE STUDENT SHOULD TAKE
THE FOLLOWING COURSES:

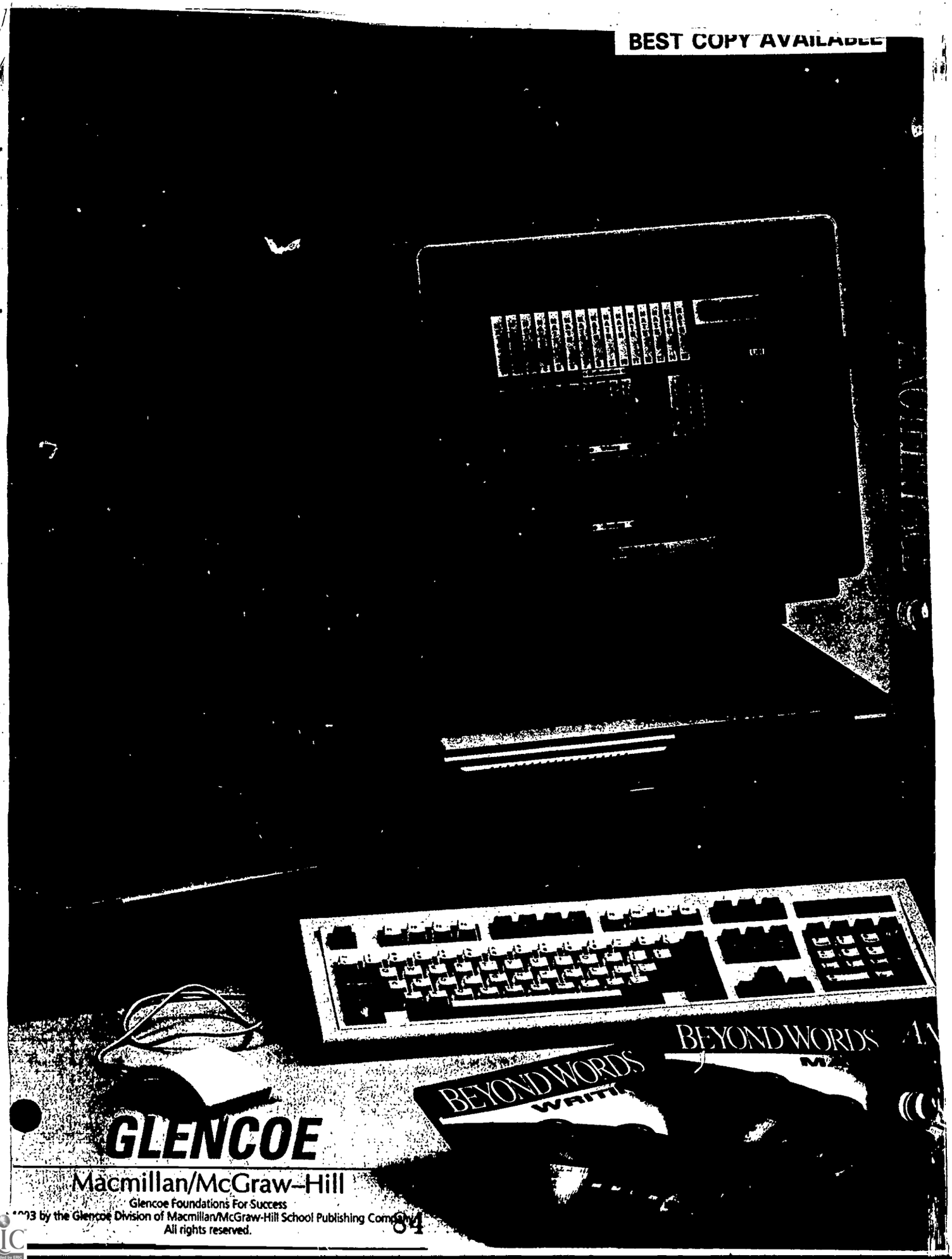
1. M1313
INTRODUCTION TO EXPONENTS AND SQUARE ROOTS

2. M1315
UNDERSTANDING ORDER OF OPERATIONS

The perfect basic skills program has never existed...



GLENCOE
Macmillan/McGraw-Hill



GLENCOE

Macmillan/McGraw-Hill

Glencoe Foundations For Success

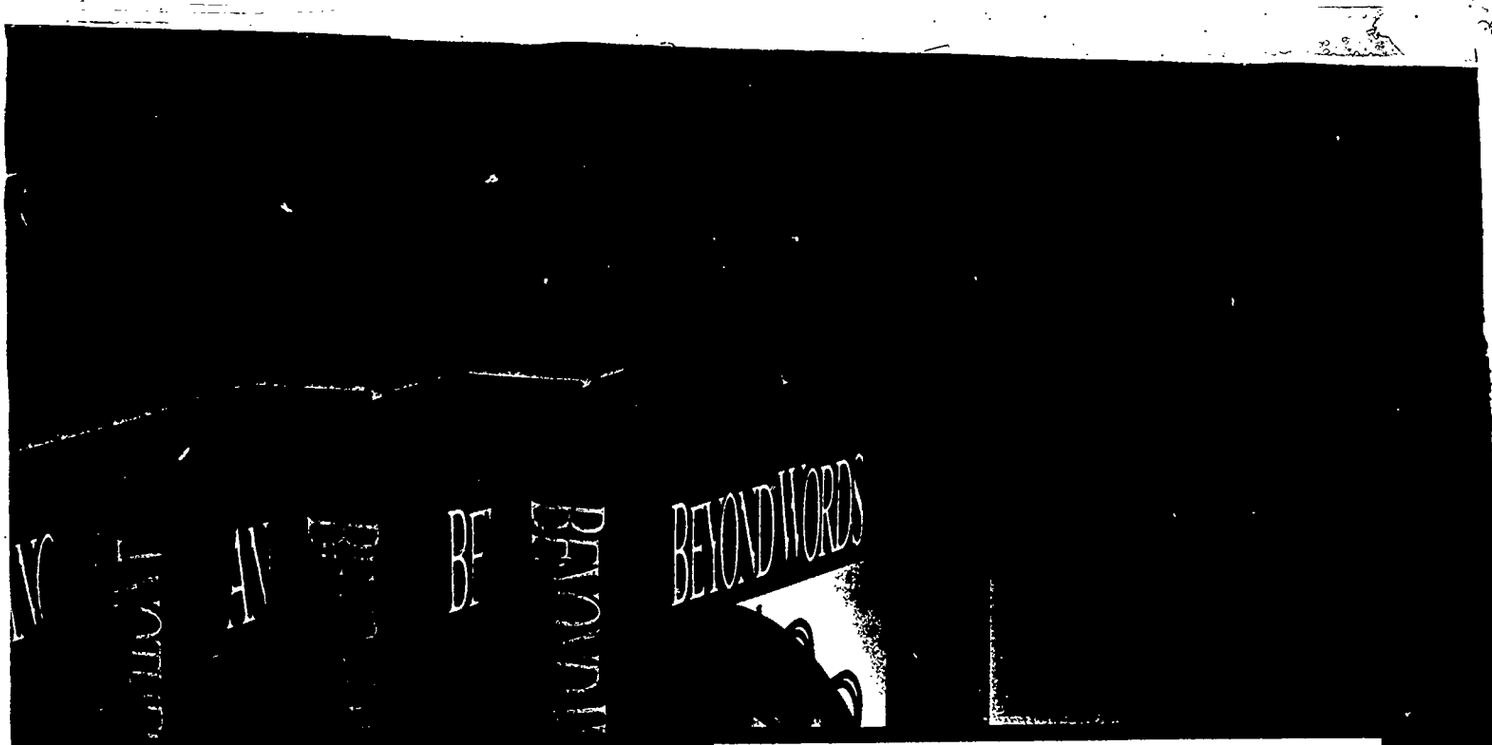
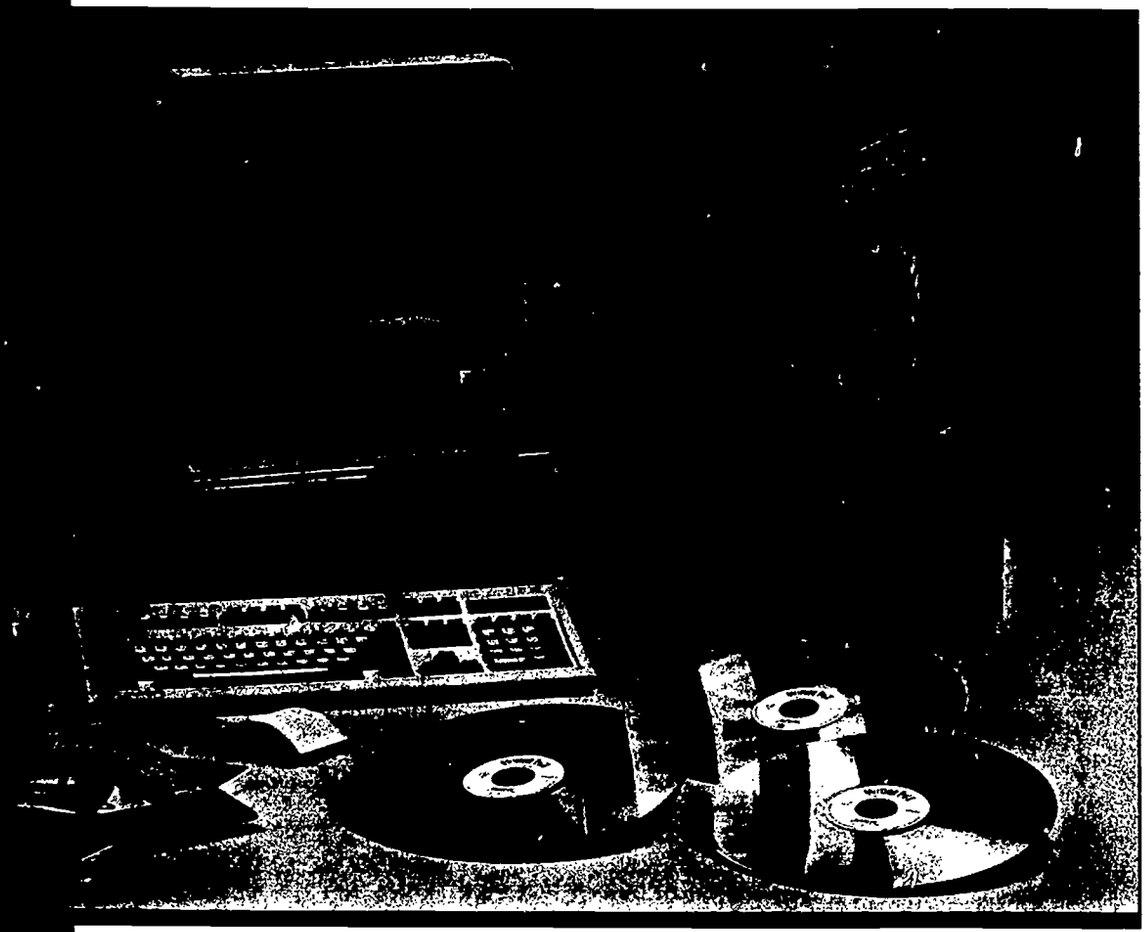


Table of Contents

INTRODUCTION



Introducing a revolution in adult basic skills education.

Glencoe Foundations For Success is a rich, comprehensive learning system in which adult learners are engaged in exploration and discovery of basic concepts. It is a unique, state-of-the-art multimedia educational program that uses interactive videodisc technology to motivate and teach adult learners.

The program creates a dynamic learning environment by linking traditional classroom technology with the power of video.

It has already proved successful. The core of the program, produced by Kentucky Educational television, has helped more than a million people develop reading, writing, and math skills.

It guides. It motivates. It inspires. It entertains. Get ready. This program will amaze you.

It gives adult learners the ability to achieve as never before.

People today have a strong visual orientation. This presents a challenge to instructors—especially those working with adult learners who have been unsuccessful with traditional teaching methods.

The solution to teaching these students involves the ability to make a breakthrough presentation—a presentation that holds their attention, supports visual lessons with verbal instructions, and triggers associations that lead to understanding.

Consider the impact of a multimedia workstation that effectively combines the power of the computer with the impact of video.

This outstanding new program helps adult learners believe in themselves and their abilities as never before. It encourages and empowers them.

With Glencoe Foundations For Success, you can put adult learners in control of their own education. They'll strengthen their ability to reason, collect information, solve problems, and draw conclusions. And they'll *enjoy* it.

It is the most effective program ever developed for teaching basic skills to:

- ★ *Workers who need retraining*
- ★ *Military personnel*
- ★ *Inmates*
- ★ *ESL students*
- ★ *At-risk students*
- ★ *Anyone* taking the GED exam

It gives instructors a powerful advantage.

As the instructor, you'll administer the program, guide adult learners, assign discs, and review performance. Yet the program frees you from time-consuming tasks such as grading papers. Your availability for one-on-one counseling greatly increases.

At last, you have the time and resources to be more effective—helping adult learners upgrade their skills. Powerful assessment features are provided in Glencoe Foundations For Success, to give you the information you need to assess student progress.

So this is what it's like to succeed. Learners master basic skills through individually paced, self-directed interaction.

THE MULTIMEDIA DIMENSION

Announcing a new link between the computer and our senses.

Education for the video generation.

Today, we are undergoing a dramatic change in the way education is delivered and knowledge is acquired.

Video, television, and computers have changed the rules. Interactive technology has created a lively and exciting medium for classroom instruction.

See, hear, and feel the difference.

A variety of visual, graphic, and sound options makes this teaching and learning experience one of true discovery.

The program succeeds—because it involves the learner in a striking visual, aural, and kinesthetic experience. It achieves breakthrough performance —through the powerful alliance of computer and video.

Building confidence through self-controlled learning.

This is like no other learning experience.

Here, adult learners themselves control the learning process. A flexible format gives them the option of following a preset sequence, or tailoring lessons to meet their own learning style and needs.

With the click of a mouse, chapter objectives appear on-screen, pretests appear, and a video lesson brings ideas to full-color life. Learners decide when and how to approach lessons or additional instruction, and when to move on. Other clicks allow them to review material or bring summaries, tests, practice excercises, a dictionary, or a calculator to the screen.

KET's award-winning Basic Skills series.

The core curriculum in Glencoe Foundations For Success is taken from Kentucky Educational Television's GED/Basic Skills Series, an instructional video series widely used across the country.

KET is a recognized leader in high-quality instructional television for adults. Its programs have received the Wilbur Schramm Award of Excellence—the national award for educational television producers—for their solid instructional core, high production values, and upbeat, adult approach.

These award-winning videos reflect the belief that knowledge gives people both the means to resolve problems and the confidence to achieve.

The KET series is used in all fifty states. In Kentucky alone, nearly 6,000 adults watched the series in their homes and passed the GED exam.

KET's scenarios depict real-life situations in which characters solve problems by applying newly learned skills.

PROGRAM PHILOSOPHY

The freedom to learn. The chance to succeed.

The Need. The number of adults needing basic skills training is growing.

Workforce Literacy. American business today faces its greatest challenge: a basic skills deficit among American workers. Employers find that workers are not prepared for today's jobs. The search is on for ways to raise employees' basic skills.

High School Dropouts. Adults without high school diplomas show a higher percentage of unemployment, incarceration, and poverty than other adults. When employed, they earn considerably less.

Remediation. Recent high school graduates often need remediation before they enroll in postsecondary institutions. Secondary education providers are looking for innovative methods to keep high-risk students in school. Adults returning to school after long absences often need to brush up on basic skills.

Unless we find effective ways to train adults, we risk losing much of our nation's potential.

Giving adult learners what they need.

A presentation that fits adult learners, performs better.

Adults appreciate the mature approach and thoughtful presentation found in Glencoe Foundations For Success. The programs are infinitely patient and completely confidential. The content is relevant, current, and useful. The convenience of one-to-one training and review respects the needs of adults who lead full and busy lives.

Glencoe Foundations For Success helps the adult learner:

Succeed in the real world. Reading, writing, and mathematics lessons deal with relevant everyday situations.

Take learning-control. Adults move through the programs as they choose.

Develop critical thinking. The programs are designed to promote step-by-step problem-solving skills.

See progress. Learners demonstrate mastery of concepts through tests and other assessment features.

PROGRAM OVERVIEW

Glencoe Foundations for Success offers three powerful programs:

The complete series includes:

Beyond Words
—teaches adults reading, writing, and math for grade levels 8-12 and also serves as GED preparation.

Math Basics
—teaches whole number mathematics, fractions, decimal skills, and more.

Another Page
—teaches document and prose literacy for grade levels 5-9.

PROGRAM OVERVIEW

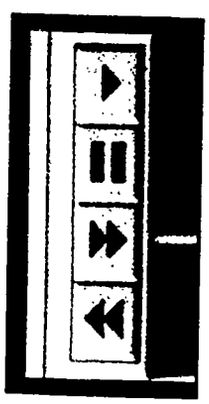
Can a basic skills program be clear, comprehensive, and exciting? Glencoe Foundations For Success state-of-the-art programs seem custom-made to inspire the adult learner. The interactive learner-centered instruction incorporates video lessons, text, audio narration, and on-line testing into a program that is easy to use and understand.

Learning comes to life with intelligent and purposeful video lessons. Real-life dramas hold the students' attention firmly in place. Controls are easy for most learners to master in a single session. And self-guided lessons allow each person to work at his or her own pace.

Audio narration offers assistance that is particularly valuable to nonnative and ESL learners. Students hear how words are pronounced—not in tones generated by a computer chip, but in a clear, natural human voice.

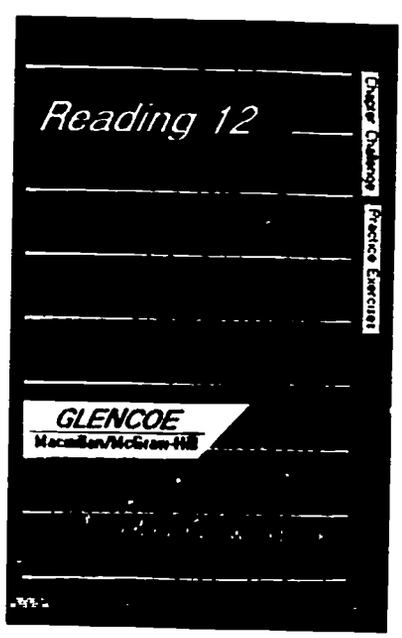
Glencoe Foundations for Success is a source of accomplishment and inspiration—giving students a positive learning experience supported by immediate feedback and reinforcement.

Full Motion video and text with narration bring each lesson to full-color life. Video lessons can be enlarged to full-screen size for easier viewing.



Motion controls *Easy-to-use* video controls bring video to full screen size, control volume, dark/light, fast forward, pause and rewind.

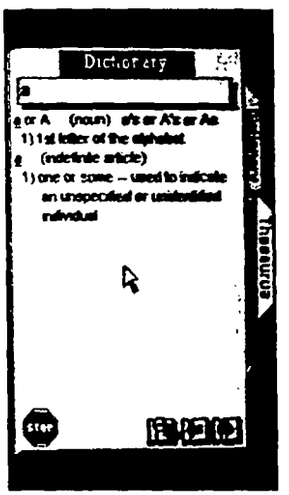
Interactive workbook content is organized into short chapters just like a book. It guides adult learners through a wide variety of challenge and practice exercises. Chapters can be selected for study in any order.

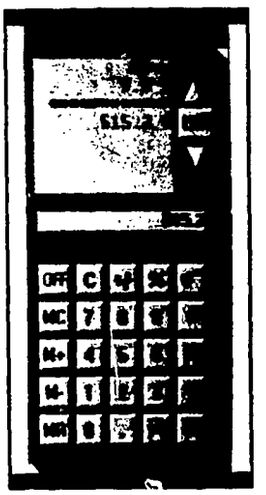


Point and click mouse to show the video, hear the narration, or select multiple-choice answers, options, and choices.

Icons make it easy to navigate. Most learners master the user-friendly icon controls in one session. Adult learners choose the order of their lessons, access a calculator or dictionary, and review if they need to.

On-line tools. Adult learners may pause in the midst of a textual presentation and pull down a window with a dictionary to define words, a calculator, a help! screen, and a bookmark that lets them move through the lesson without losing their place.

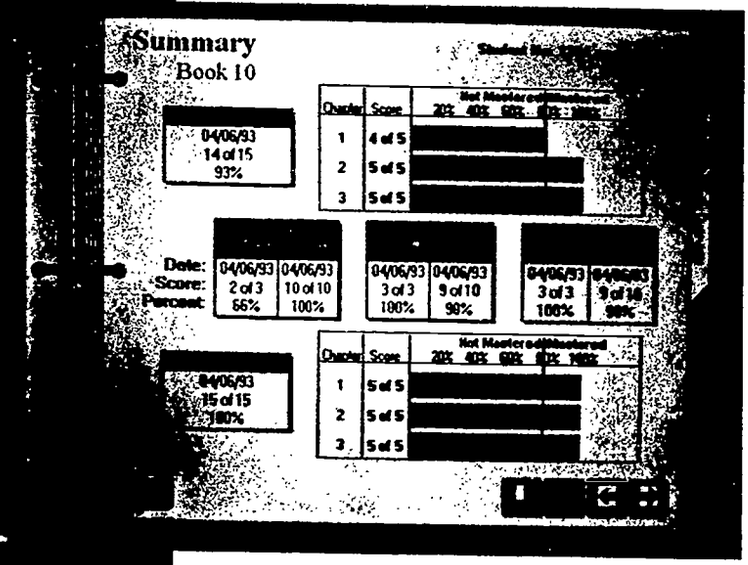


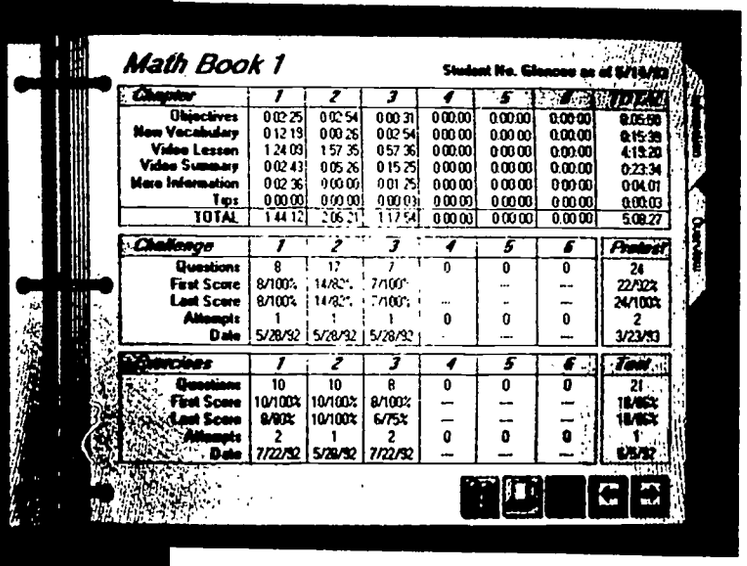


PROGRAM OVERVIEW

A Trip of Discovery.

Glencoe Foundations For Success takes learners on a trip of discovery. It's their trip, and they drive the vehicle. Your students can decide where to begin and chart their own course of study, or travel a predetermined route with structured layout of information. They can always return to their starting position, and can exit at any time.





En route, they'll pick up cues from their environment. They'll see where they're headed. They'll hear signals that help them make connections. They'll get a feel for the road as they decide where they're going and why.

Of course, the point of any trip is to get somewhere. No matter which route they choose, no matter how fast or slow they go, no matter where they take a break, they will arrive at their destination—an understanding of the basic concepts of reading, writing, and mathematics.

And they'll leave a record of their progress for your review.

Powerful Assessment Features.

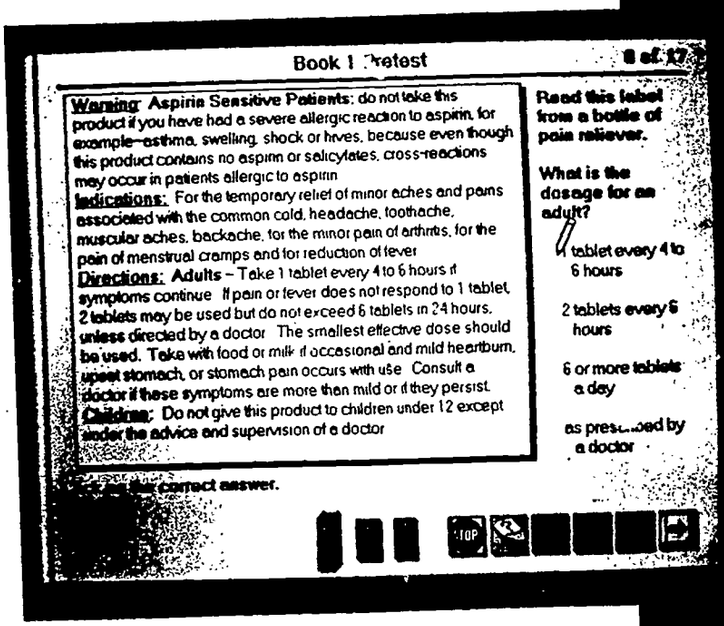
Foundations for Success is based on sound educational principles. Adult learners take responsibility for learning. They are held accountable for their work.

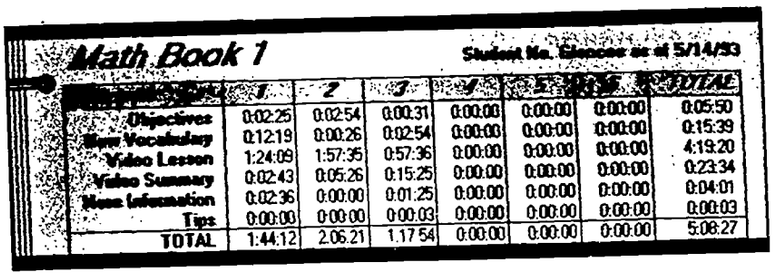
Powerful assessment tools built into the program show you exactly what lessons your students have begun and the time they've spent there. These tools provide information on student performance in any lesson, and a snapshot of their overall skills development progress.

TABE CORRELATIONS are available for all programs

Pretests let adult learners measure their understanding before they begin prescribed chapters.

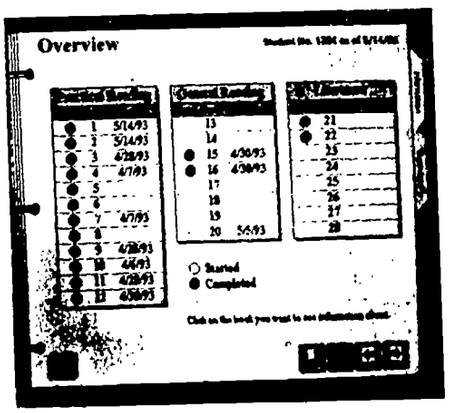
Posttests help adult learners gauge their comprehension and determine whether they should review the chapter or move on to the next topic.





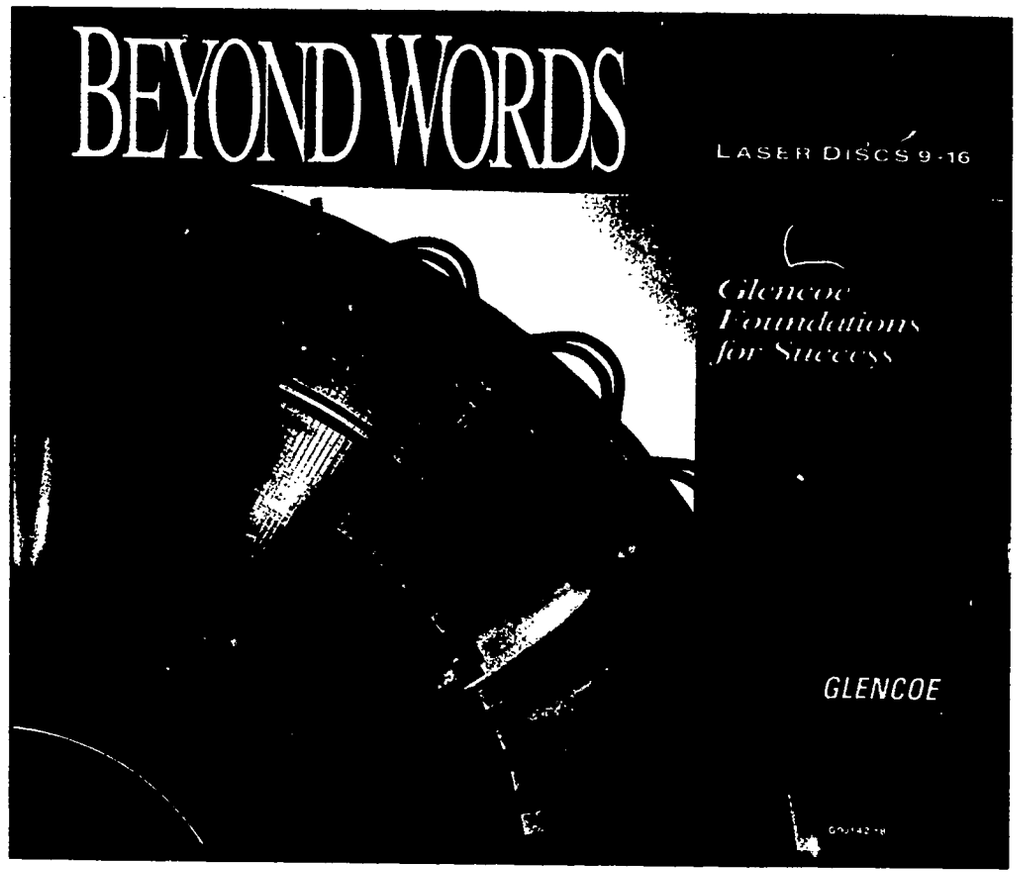
Automatic record-keeping features give instructors the ability to track adult learners' progress as they move through the program. The record book measures the time each learner has spent on each task, and how well he or she has performed.

Reports can be printed for permanent records. In seconds, an instructor receives an accurate analysis of student progress—*without the time commitment of grading papers.*



The Overview shows which lessons have been completed

BEYOND WORDS



Going beyond the basics.

★ All curriculums at 8-12th grade level

★ Complete preparation for the GED exam

★ Promotes critical thinking skills

The 41-videodisc program provides substantial learner-centered instruction in reading, writing, and mathematics.

The 41 lessons contain 160 instructional chapters with the following on-line features: challenge exercises, chapter objectives, vocabulary, instructional video segments, information to supplement the video content, instructional tips for learning, audio narration of text, practice exercises, instructional "hints" for practice exercises, and more than 3,000 challenge and practice questions.

Instructor's Resource Guide and a print tutorial come with Beyond Words to help facilitate learning.

Three Student Workbooks provide additional practice.

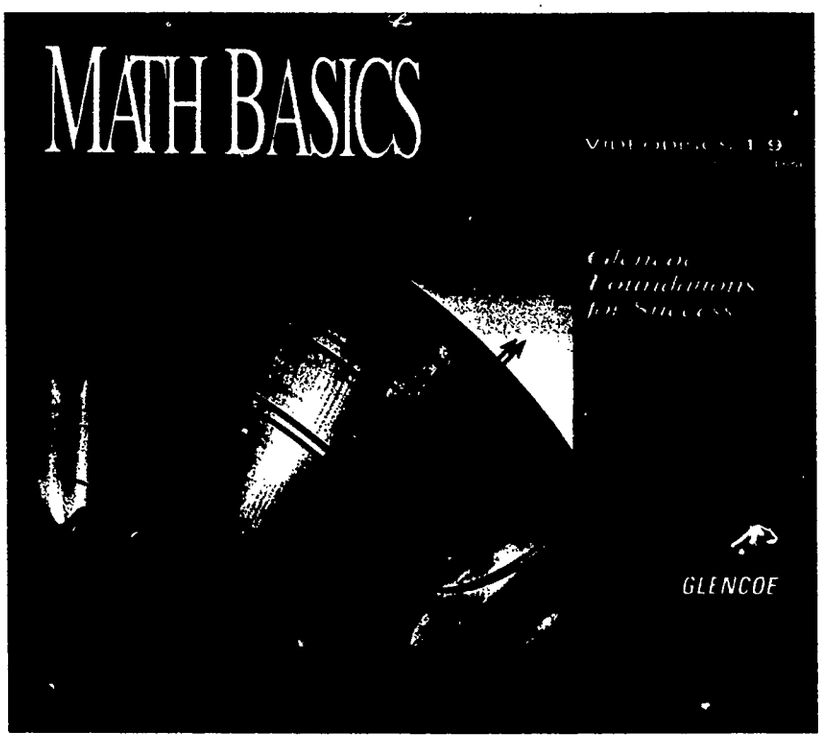
Tutorial Videodiscs offer a visual guided tour of the program.

Program Skills

Beyond Words develops skills in these content areas:

Identify main idea
Identify detail
Use content clues
Interpret figurative language
Distinguish abstract and concrete
Draw inference/conclusion
Identify emphasis
Summarize meaning
Analyze writer's motive
Analyze use of humor
Analyze fact/opinion
Analyze cause /effect
Analyze compare/contrast
Analyze writer's purpose
Analyze use of characterization
Analyze style and tone
Identify literary devices
Identify rhythm and rhyme
Identify alliteration, repetition
Interpret globes
Interpret maps
Interpret graphs
Interpret charts
Interpret tables
Interpret visual materials
Interpret the number line
Interpret fractions
Identify rational numbers
Add fractions
Find common denominator
Cross multiply
Identify missing elements
Set up general case statement
Reduce fractions
Find largest factor
Estimate
Express improper fractions as mixed numbers
Add mixed numbers
Subtract mixed numbers
Interpret Pi
Multiply fractions
Perform inverse operations
Divide fractions
Divide mixed numbers
Multiply mixed numbers
Cancel numbers
Interpret compound fractions
Create reciprocals
Identify decimal fractions
Add decimals
Subtract decimals
Express percents
Multiply decimals
Divide decimals
Identify ratios
Identify proportions
Set up general case formula for percent
Identify types of percentage problems
Interpret tax rates
Interpret interest
Apply percents in business
Interpret signed numbers
Perform operations with signed numbers
Identify exponents
Calculate square roots
Perform inverse operations
Solve literal equations
Use substitutions to check equations
Identify angles and arcs
Determine line length and polygon area
Use the Pythagorean theorem
Convert measures with proportion
Determine unit value
Find common measures
Calculate perimeter, area, and volume
Use conversion ratios
Utilize the "James Plan"
Write plural word forms
Add suffixes
Add prefixes
Use the dictionary for spelling
Capitalize nouns
Capitalize sentences and passages
Capitalize relationship words, days, and months
Capitalize books, films, plays, and art
Capitalize special places, events, and objects
Punctuate sentences
Place commas in dates and addresses
Place commas after greetings and introductions
Place commas to separate independent and compound sentences
Identify the roles of nouns and verbs
Recognize proper collective and compound nouns
Select verbs appropriate for past, present, and future events
Use helpers with verbs
Avoid misuses of words mistaken for verbs
Use irregular verbs appropriately
Use helper verbs
Use correct verb agreement
Identify subjects in sentences with special words
Use correct subject-verb agreement
Use subject and object pronouns correctly
Use *who*, *which*, and *that* correctly
Use singular and plural pronouns correctly
Use pronouns and contractions correctly
Use modifiers correctly
Use adverbs and adjectives correctly
Use confusing modifiers correctly
Use comparative modifiers correctly
Use possessives correctly
Avoid run-on sentences
Correct sentence fragments
Avoid common sentence construction problems
Create logical sentences
Write topic sentences
Organize sentences
Avoid wordiness and irrelevance
Link sentences in a paragraph
Reduce redundancy
Select correct homonyms
Write forceful sentences
Avoid common word errors
Use helper verbs

MATH BASICS



Connects math concepts to real-world applications

★ Teaches whole numbers, fractions, decimals, and more

★ Promotes problem solving skills

★ Fosters understanding of key concepts

This 18-videodisc program focuses on the use of numbers with emphasis on problem solving and practical applications. It helps adult learners work with whole numbers, ratios, percents, fractions, and estimation through presentations by award-winning math teachers. Math Basics prepares learners to continue on into the more advanced mathematical functions covered in Beyond Words.

Instructor's Resource Guide and print tutorial come with Math Basics to help facilitate learning.

Student Workbook provides additional practice.

Tutorial Videodiscs offer a visual guided tour of the program.

Program Skills

Math Basics develops skills in these content areas:

Problem Solving
Addition
Independent Operations
Combined Operations
Fractions
Decimals
Estimation
Calculator
Percent
Monetary Estimation
Measurement
Time and Temperature
Plane Geometry
Solid Geometry
Consumer Math
Patterns

Data and Sampling
Probability and Statistics
Connections
Number Sense
Whole Number Computation
Fraction Reasoning
Decimal Reasoning Estimation
Estimation
Calculation
Measurement
Special Sense
Patterns
Data and Sampling
Probability and Statistics
Communication

Designed to meet the general goals of NCTM.

Designed in consultation with a national task force of recognized experts in the math and adult education fields, the series follows the Curriculum and Evaluation Standards for School Mathematics published by the National Council of Teachers of Mathematics. These standards have established the following goals:

★ that students learn to value mathematics

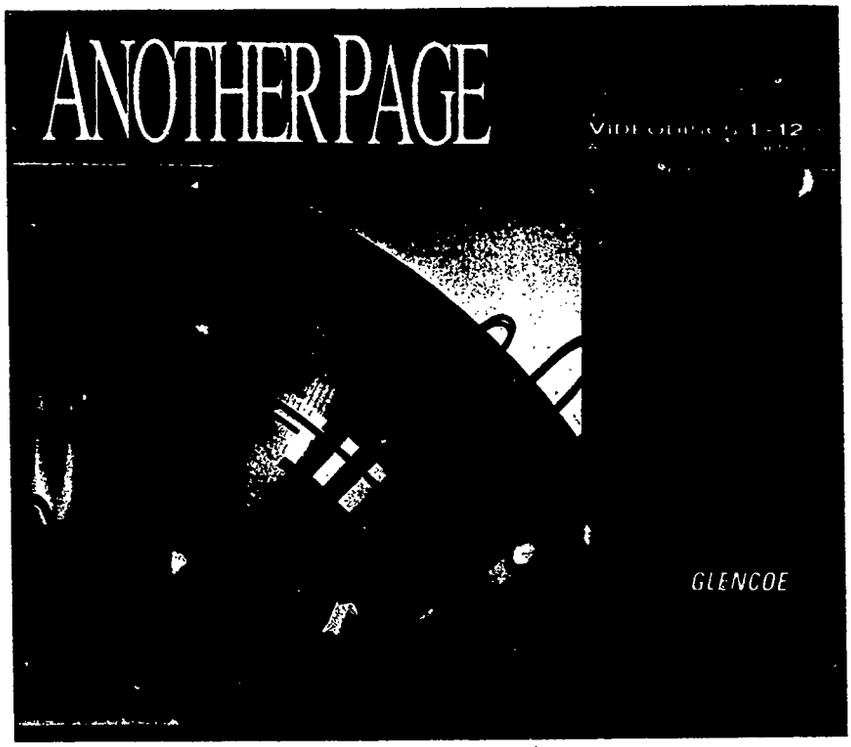
★ that they become confident in their ability to do mathematics

★ that they become mathematical problem solvers

★ that they learn to communicate mathematically

★ that they learn to reason mathematically

ANOTHER PAGE



Real-world reading.

★ Targeted for readers at 5-9th grade level

★ Utilizes a prose and document literacy approach

★ Encourages critical thinking

★ Promotes reading as a life skill

This 28-videodisc program is excellent preparation for basic life skills. It encourages adults to read everyday items—the news and weather, street signs, mail, bills, tax and credit forms, warranties, safety information, and other important materials. It demonstrates that knowing *how to read* means knowing *what to look for.*

Another Page features video dramas that portray how problems are resolved by using basic reading skills. Darrell and Rhonda, the two main characters, make reading their ally as they turn another page in their lives. What they read is important, supportive, and helpful. It is never far removed from the context of the everyday business of living.

Instructor's Resource Guide and a print tutorial come with Another Page to facilitate learning.

Student Workbook provides additional practice.

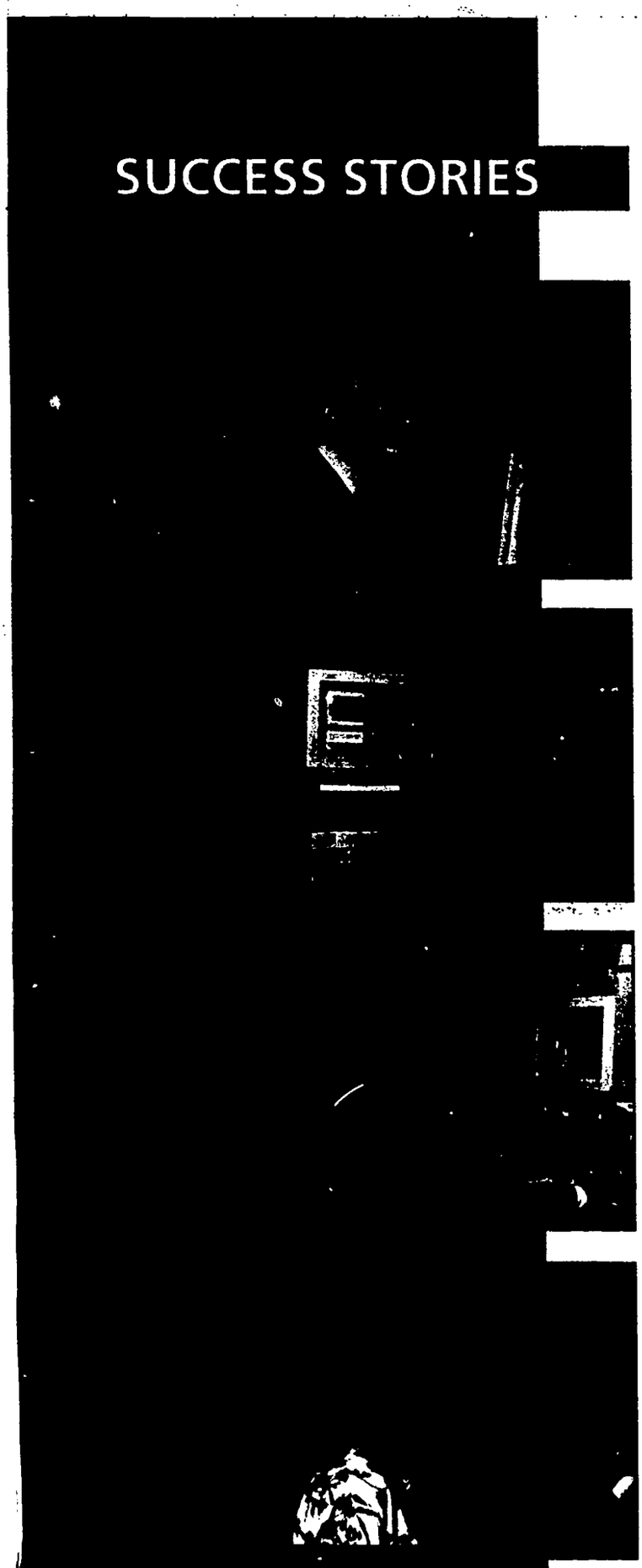
Tutorial Videodiscs offer a visual guided tour of the program.

Program Skills

Another Page develops skills in these content areas:

Locate Information
Find Information
Identify Information
Recognize Meaning
Interpret Words
Interpret Statements
Interpret Information
Enter Information
Draw Inferences
Determine Main Point
Recognize Relationships
Apply Information
Define Unfamiliar Words
Interpret Statements
Interpret Information
Compare Information
Draw Inferences
Recognize the Main Idea
Recognize Points of Comparison and Contrast
Recognize Point of View
Rephrase Main Points
Restate Support for the Main Idea
Restate Information
Apply Information
Interpret Cause and Effect Relationships
Interpret Relevant or Supporting Details
Identify Details that Support Interpretation
Distinguish Facts from Emotional Statements
Define Difficult Words, Terms, or Symbols
Identify Details About Characters
Identify Details About Setting
Identify Details About Plot
Identify Basic Characteristics of the Narrator
Identify Point of View
Recognize Supporting Details
Recognize Metaphor, Simile, and Literal Comparisons
Recognize Repetition of Words, Sounds, and Rhyme
Distinguish Between Literal and Figurative Language
Restate Figurative Comparisons
State the Main Idea of a Statement Containing Figurative Language
Draw Inferences from Details
Draw Inferences from Tone and Style
Infer Information About Characters
Infer Information About Situations
Infer Meaning from Figurative Comparisons
Infer Relationships Among Characters
Infer Relationships Among Situations
Identify Tone, Style, and Voice
Compare and Contrast Characters
Compare and Contrast Scenes
Restate Ideas in a Scene
Restate a Story

SUCCESS STORIES



Here's what the experts say about Glencoe Foundations For Success.

Scott Wallner
LIFE LINES Adult Learning Consortium, Program Supervisor, Mankato, Minnesot.

Beyond Words is so easy to use, many learn it the first day—even ESL students and those who have never used a computer before.

Our mission is to give people a learning environment in which they're comfortable—and one in which they can succeed. Foundations for Success addresses the different needs of the people in our program. I see adult learners succeed with this program who don't like to read books.

It's been very successful. We use Foundations for Success every day.

Rhonda Magill
Anoka Hennepin Alternative High School, Teacher, Anoka, Minnesota

The success rate is very good. Learners say to me after a few months, "You didn't notice, but I never used to do any work." I especially like the pre and post test feature. Beyond Words and Another Page provide the challenges and skills my students need.

Kay Jones Despard
Anoka Hennepin Alternative High School, Teacher, Anoka, Minnesota

For a teacher, the manual and support training are very important. Monitoring and checking records are important. I feel good about both. I find Foundations for Success does motivate my adult learners. They try hard to get a higher score These students are competitive—but they like competing against the computer—not against each other.

Marilyn Solberg
LIFE LINES Adult Learning Consortium, Mankato, Minnesota
Adult Basic Education Teacher and Coordinator of Volunteer Tutor Program

Volunteers love this system. It's difficult for our adult learners to get here. They have transportation problems and our dropout rate has been high They can use this system at the library after-hours. I think Foundations For Success is wonderful. I see it as the way of the future

Clayton Schwanke
Lincoln Community Center, GED Student, age 70
Mankato, Minnesota

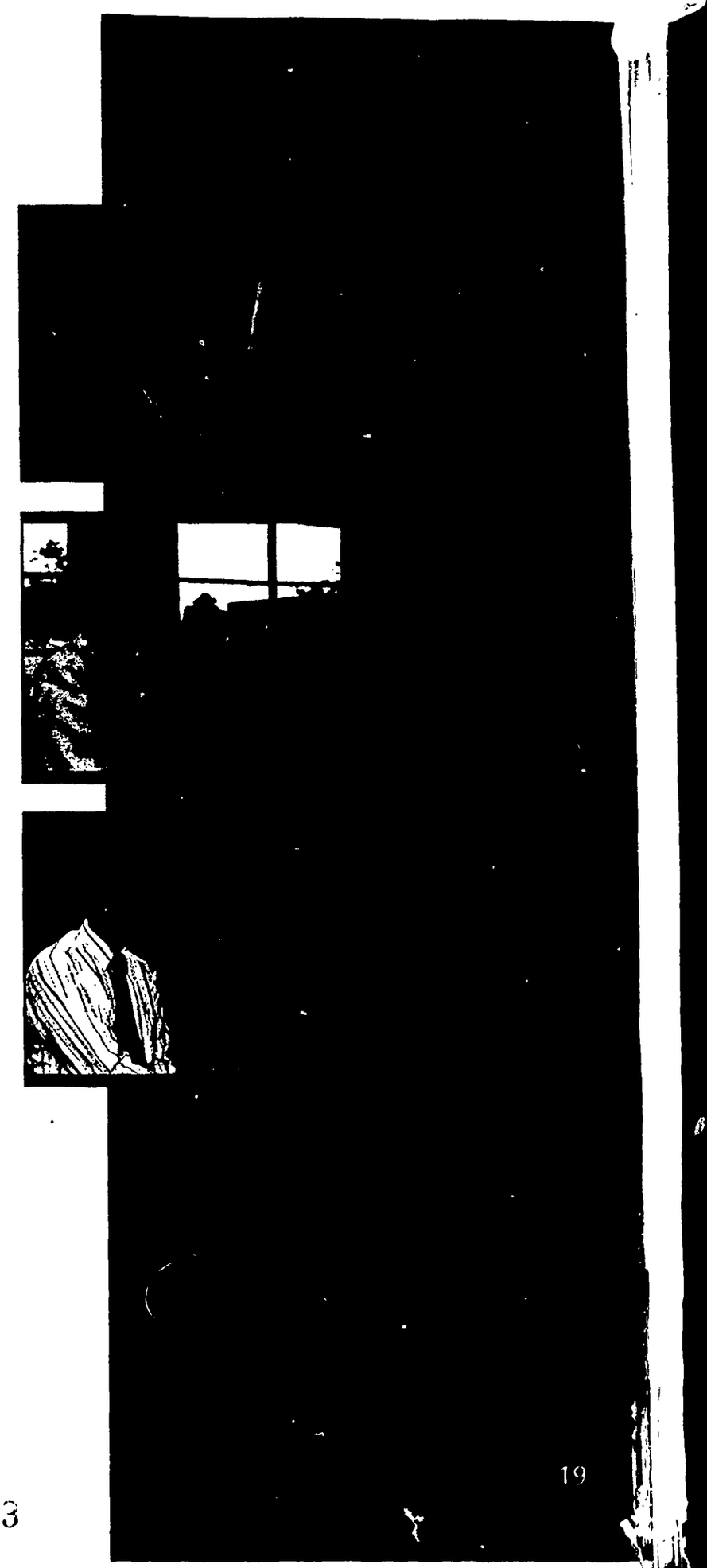
It's more interesting because it explains things more than a book does. I like the video lessons, the objectives help me, and I can always check my answer.

Dawn Lulko
Davenport Business College, Holland, Michigan
Director of Learning Services

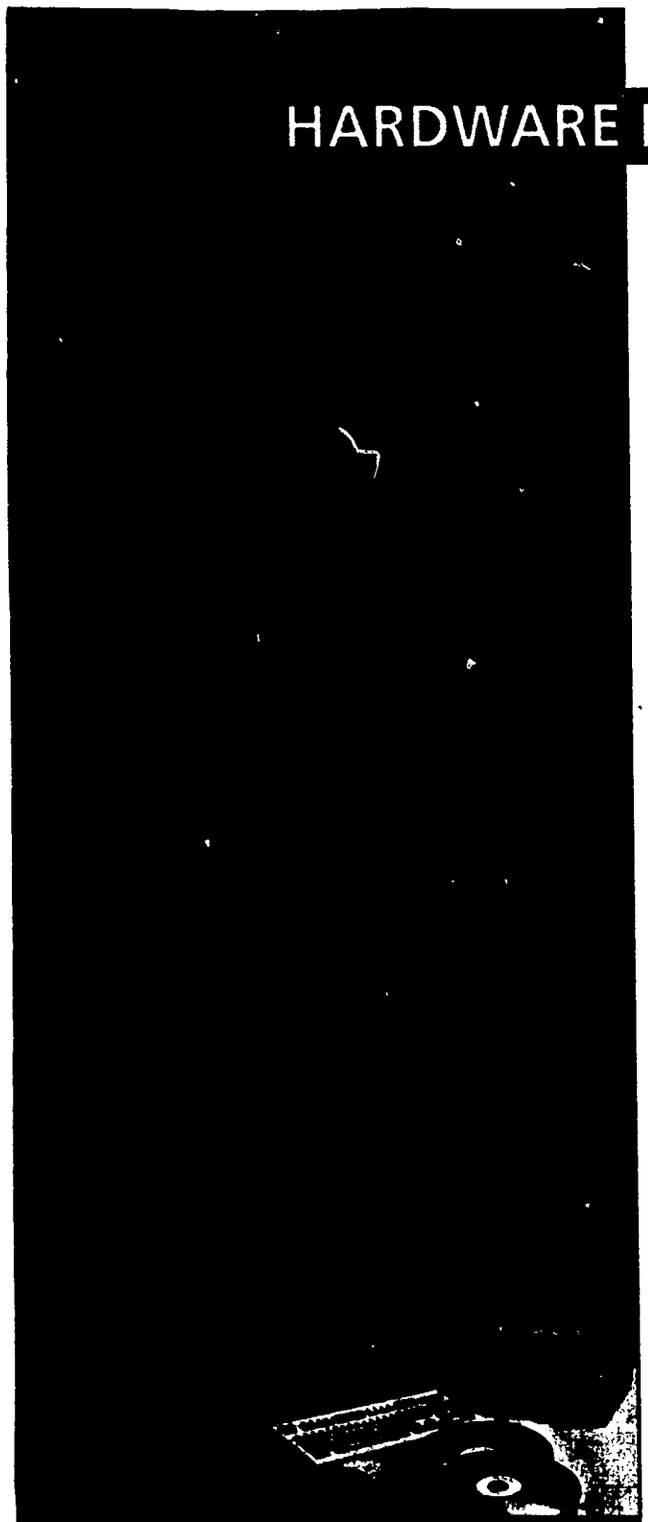
The students really look forward to their time with Beyond Words. They get completely immersed in their learning. The more senses they involve in the learning process, the greater their retention of the material.

Bob Bylik
St. Paul Technical College, St. Paul, Minnesota

As manager of St. Paul Technical College's Instructional Center, I needed a mathematics, reading and writing program that would win student's acceptance and contribute to the successful remediation of their skills. One year and more than two hundred students later, I'm confident that I selected the right program for the Center. Students have demonstrated a keen interest in Beyond Words and have improved appreciably through their interaction with the program.



HARDWARE REQUIREMENTS



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The program runs under Microsoft Windows 3.1 and requires a 25 or 33 mHz. 386 or 486 MS-DOS compatible computer. Other requirements include:

4 MB of RAM minimum—8 MB recommended

One 1.44 MB floppy drive

Each program occupies 25 MB of hard disk space

VGA graphics adaptor

VGA color monitor

Keyboard and mouse

Headphones

Sony or Pioneer serial laserdisc player and appropriate cable (inquire about other players)

One of the following motion boards:
DVA-4000 (Videologic);
Super Videowindows (New Media Graphics);
M-Motion (IBM)

One serial port (for laserdisc player)

One serial port (for the mouse)

One parallel port (if printing feature is desired)

In-Service and Product Support

Installation and training are included with the purchase of Glencoe Foundations For Success. Additionally, a toll-free number is provided for service and support: call 1-800-437-3715 between 8:30 am and 4:30 pm EST.

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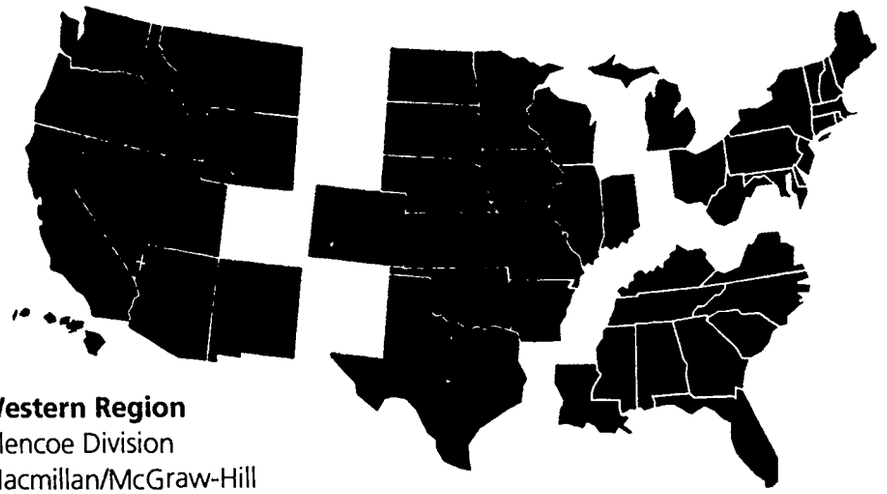
For a free video demonstration of Glencoe Foundations For Success, contact the regional office in your area.



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Juan Camacho	Instructor	College Transition, Basic Skills
Jean Collins	Instructor	College Transition, Basic Skills
Julia Flemming	Instructor	College Transition, HEP Program
Eunice Frieseke	Instructor	College Transition, Basic Skills
Anne Goins Shaw	Instructor	College Transition, Basic Skills
Charles Herr	Instructor	College Transition, Basic Skills
Aide Ibarra	Support Staff	College Transition, Bilingual Programs
Nancy Karnowski	Support Staff	College Transition, Basic Skills
Lucy Kirksey	Instructor	College Transition, Basic Skills
Michelle Mirhoseine	Instructor	College Transition, Basic Skills
Richard Potter	Instructor	College Transition, Adult High School
Jesus Salas	Instructor	College Transition, Bilingual Programs
Mary Lou Stebbins	Instructor	College Transition, Basic Skills
Alexandra Topping	Instructor	College Transition, HEP Programs
Geraldine Weber	Instructor	College Transition, Adult High School
Francisco Urbina	Instructor	College Transition, Instructional Chair
Ernesto Zavala	Support Staff	College Transition, Bilingual Programs

EVALUATING INSTRUCTORS

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NAME	POSITION	DIVISION
Lois Jacobson	Instructor	Business
Gary Krukar	Instructor	College Transition, VESL Program
Anne Lehman	Instructor	Liberal Arts & Sciences
Sue Martel	Instructor	Liberal Arts & Sciences
Richard Muirhead	Associate Dean	Liberal Arts & Sciences
Joyce Nicolazzi	Instructor	College Transition, ESL Program
Thomas Pscheid	Instructor	Technical and Industrial
Alkatrine Iyasele	Instructor	College Transition, Basic Skills
Claudia Rucinski	Instructor	College Transition, ESL Program
Lucy Szmanda	Instructor	Technical and Industrial

Integrated Learning Systems Evaluation Questionnaire

When answering the following questions, please place a "Y" for a "Yes" answer and an "N" for "No" in the appropriate columns. Use column "1" for answers pertaining to the first integrated learning system you viewed ("CSR"). Use column "2" for evaluating the second system ("FFS"). Note that some of the questions have already been filled-in for you. These "filled-in" answers are provided merely to inform you of additional characteristics pertaining to each system that may not be evident during your evaluation session or easily found in the accompanying literature. Thank you for your time and cooperation.

Software Evaluations

	SOFTWARE SYSTEM			
	1	2	3	4
1. Do you feel that this software system is easily operational for your students?				
2. Does this software system complement the material you present in class?				
3. Do you believe supplemental workbooks (if available) would be an added feature of this software system?	N/A			
4. Can the "low-level" learner easily understand the material presented?				
5. Was the courseware developed specifically for the adult learner?				
6. Are the length of the lessons appropriate for the audience?				
7. Does the use of graphics enhance the interest level of the adult learner.				
8. Are the screen presentations clear, and interesting to the adult learner?				
9. Does the the curriculum include social and daily living skills examples?	N	Y		
10. Does the system provide consistency in presentation?				
11. Does the system have the availability of English as a Second Language (ESL) courseware?	N	N		
12. Does the system have Mastery-based curriculum containing:				
- Tutorials	Y			
- Drill and Practice	Y			
- Applications	Y			
- Problem solving lessons	Y			
- Mastery Tests (post-test)	Y			
13. Does the system allow for open entry and open exit at any point in the curriculum?	N	Y		

Software Evaluations				
	SOFTWARE SYSTEM			
	1	2	3	4
14. Does the student have accessibility to assigned curriculum only, without ability to alter assignments or progress reports?	Y	N		
15. Does the system software have the ability for the instructor to resequence learning objectives to match individual student requirements?	Y	Y		
16. Does the system software a set of strict sequence of lessons plus an open menu for learner control?	Y	N		
17. Are individualized learning paths automatically built based on test results?	Y	N		
18. Does the system software provide full color scope and sequence for Basic Education: - Reading - Language Arts - Mathematics				
19. Does the software system provide the sequence meeting the 1988 GED requirements in the following areas: - Reading - Writing - Mathematics - Science - Social Studies - Computer awareness	(Y) Y Y Y Y Y Y	(Y) Y Y Y Y Y Y		
20. Does the system have the capability to track the necessary information required to fulfill the competency requirements?	Y	N		

Software Evaluations				
	SOFTWARE SYSTEM			
	1	2	3	4
21. Does the software system have the availability of courseware to address interpersonal and pre-employment needs:				
- Job Preparation	N	Y		
- Job Search	N	Y		
- Life Coping Skills	N	Y		
- Communication Skills	N	Y		
- Pre-Employment Attitudes	N	Y		
- Substance Abuse	N	Y		
22. Does the system software have easy to read, flexible relevant reporting requirements?	Y	Y		
23. Does the system software have the ability to export student performance data to another location?	Y	?		
24. Does the system software provide on-going upgrades and enhancements based on pro-active market research and instructor feedback?	Y	Y		
25. Do you feel that the students will be encouraged to continue to use this system in the future?				
26. Where could this system be best used to suit your needs and the needs of your students? (check as many as appropriate)				
- Classroom				
- Lab				
- Library				
- Academic Support Center				
- Other: _____				
_____				

Microsoft Works Tutorial

Use the following as a guide for which areas to view in the tutorial:

Word Processor

- Tour of the Word Processor
- Entering Text

Databases

- Tour of the Database
- Searching for Information
- Creating a Database

Spreadsheets

- Tour of the Spreadsheet
- Spreadsheet Charting

(Use the "CTRL" + "M" keys to return to the Menu)

Microsoft Works Tutorial

"Yes" or "No"

1. Do you feel that this tutorial is easily operational? (Easy to follow the instructions as you move through the tutorial?)

2. Would this tutorial complement (help you better understand) the assignments given to you in class?

3. Was this tutorial developed for the adult learner?

4. Are the length of the lessons appropriate?

5. Does the use of graphics enhance the interest level of the adult learner?

6. Are the screen presentations clear and interesting to the adult learner?

7. Does this tutorial allow for open entry and open exit at any point?

8. Does this tutorial tell you which parts you have previously completed?

9. Do you feel, as students, that you would be encouraged to continue to use this tutorial after your first session?

10. Where could *Microsoft Works* be best placed to suit your needs? (Check as many as appropriate.)

    _____ Classroom
    _____ Computer Lab
    _____ Academic Support Center
    _____ Library
    _____ Other: _____

Microsoft Works Tutorial

		"Yes"	"No"
1.	Do you feel that this tutorial is easily operational? (Easy to follow the instructions as you move through the tutorial?)	14	0
2.	Would this tutorial complement (help you better understand) the assignments given to you in class?	14	0
3.	Was this tutorial developed for the adult learner?	13	1
4.	Are the length of the lessons appropriate?	13	1
5.	Does the use of graphics enhance the interest level of the adult learner?	13	1
6.	Are the screen presentations clear and interesting to the adult learner?	13	1
7.	Does this tutorial allow for open entry and open exit at any point?	13	1
8.	Does this tutorial tell you which parts you have previously completed?	13	1
9.	Do you feel, as students, that you would be encouraged to continue to use this tutorial after your first session?	14	0

10. Where could *Microsoft Works* be best placed to suit your needs? (Check as many as appropriate.)

13 Classroom
14 Computer Lab
10 Academic Support Center
7 Library
2 Other: HOME