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A Computer Assisted Instructional Program to Facilitate Eleventh Grade Remediation in Skill H68, Direct Address

Audrey P. Dunn Nova Southeastern University

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A COMPUTER ASSISTED INSTRUCTIONAL PROGRAM TO FACILITATE ELEVENTH GRADE REMEDIATION IN SKILL H68, DIRECT ADDRESS

bу

AUDREY P. DUNN

A Practicum Report submitted to the Faculty of the Center for the Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Educational Specialist.

The abstract of this report may be placed in the School Practices Information Files for reference.

May/1986

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field in the hope that my own work, presented here, will earn similar respect.

ABSTRACT

A Computer Assisted Instructional Program to Facilitate Eleventh Grade Remediation in Skill H68, Direct Address.

Dunn, Audrey P., 1986: Practicum Report, Nova University, Center for the Advancement of Education Descriptors: Microcomputers/Computer Assisted Instruction/Computer Programs/Secondary Education/Language Arts/Compensatory Education/Basic Skills/Skill Development/Minimum Competency Testing/Minimum Competencies/Individualized Instruction/Remedial Instruction/Teacher Developed Materials/Motivation

The author created and implemented a computer assisted instruction (CAI) program to remediate juniors in skill H68, dealing with direct address. This skill is found on the State Student Assessment Test, Part I. The program's aims were to increase student achievement, alleviate the problems of management, improve student attitude, and teach basic computer literacy to below average students.

The program consisted of two lessons, each dealing with one component of the skill of using the comma to set off proper names in direct address. The study group included all eleventh grade students who failed to master this skill. 100% achieved mastery after using the CAI lesson. Through a survey, it was determined that students overwhelmingly preferred this method, and those who had no computer experience were able to successfully manipulate the machine. This CAI program is being implemented for all future remediation, and programs are now being created for all skills which will replace the conventional methods. (Appendices include a graph of student achievement, student attitude survey results, and a hard copy printout of the program. Also included is a copy of the actual program disk.)

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I PURPOSE

For the past fifteen years, major national concern has slowly grown over the inferior quality of education that has produced a nation of citizens who cannot read or write. In the past three years, as a matter of fact, both the federal and various state governments have been publicizing the need for a "raising" of the standards of education throughout the country. With the publication by the government of A NATION AT RISK: THE IMPERATIVE FOR EDUCATIONAL REFORM, a warning concerning the rising tide of mediocrity in the public schools, the president has appointed the National Commission on Excellence in Education to study the educational issues so heatedly debated recently ("A Course in Politics: Reagan and the Democrats Try for High Marks on Education" 14).

It was in the mid 1970's that the "back to basics" philosophy gained momentum, displacing the liberal ideas and open curricula so popular in the 1960's (Weiner xi). In 1979, the state of Florida initiated a minimum basic skills test, named the State Student Assessment Test (SSAT), which had to be passed by all high school students as a requirement for receiving a diploma. Failure resulted in acquiring a certificate of attendance in lieu of a diploma. This criteria was mandated after three years of administering the test, studying the results, perfecting the format, and enabling school districts to adequately prepare students to succeed. It was upheld in a landmark court case and has been in effect since that time. It has changed once, in 1984, when it was made more difficult, as can be

seen in Appendix A by the plummeting scores registered throughout the county.

The facility involved in this study is a high school of 2300 students where the socio-economic level of the population is upper middle class. Parental influence, naturally, is therefore directed not only toward a high school diploma for the children, but also higher education after graduation. There is a great deal of pressure upon the students, even those in special classes, to succeed on standardized tests and to achieve, at the very least, the minimum requirements necessary to complete high school. Appendix B is a copy of the school report which details various components of the school setting.

Every student, as a tenth grader, is mandated by the Florida legislature to pass a two part skills test, the SSAT, as a contingency for receiving a regular high school diploma. Part I consists of minimum basic skills, and there is a possibility of thiry-five. Each year approximately fifteen of those are examined. As a rule, there are four questions for each skill, and three must be answered correctly for the skill to be mastered. According to Florida statute 212.23, any skills missed must be remediated in an appropriate manner, and verification of competency in the form of a test must be documented and placed in the students' permanent cumulative folders located in the guidance office.

Each school in the county attempts to construct a suitable environment for remediation when these students are in eleventh grade. At the school in question, a spacious computer laboratory with more than adequate tables and chairs was made available for this study. This ideal room is located in the media center which is situated near the language arts' classrooms. This author was hired one hour a day to handle all eleventh grade remediation for 110 students who failed to achieve one or more skills on the SSAT I. As an English teacher with three classes during a seven period day, flexible remedial scheduling was possible. Since the skills related to reading and writing, English classes were the first choice for periodic pull-out. If conflicts prevented this, students were called out of those classes which least disrupted their academic progress, such as physical education, home economics, music, art, or other electives.

There are many problems associated with the recommended county method of remediating students on a pull-out basis. Although the county provides guidelines and suggestions in the form of a handbook, Appendix C, each school is free to develop and monitor its own remedial program, as long as documentation is included. Because school budgets have become increasingly tight, compensatory money has been stretched to the limit to cover teacher salaries and the supplies necessary to run the program. This year, one teacher was paid for one hour per day to remediate students on Part I of the SSAT, whereas last year there were two. This placed an undue burden on the teacher to suitably operate the program in the time frame allotted, especially when 110 students were involved.

Of all the Part I skills tested, those failed most often were the two H writing skills, one of which is using commas correctly with proper nouns of direct address. Thirty-two percent of the students in the study school

who took the test lacked mastery in this skill, while twenty-eight percent of the district's students showed deficiency. These statistics can be found in Appendix D, the listing of achievement for the 1984-1985 school year.

Time management is the most formidable obstacle for teachers of remediation. Students are called out of their regularly scheduled classes, and it was imperative to facilitate the remedial process quickly and effectively so students missed as little of their class time as possible. There is a tendency for the faculty to resent having their pupils excused from classes since they have to deal with interruptions, make-up work, and extra paperwork. The students, on the other hand, must contend with missing pertinent academic material, lectures, or somtimes tests. To maintain good will, there was a need to expedite the procedure smoothly so students completed their skills without unnecessary delay.

Organization was also a considerable element for concern. Since students arrive for remediation at various times during the period needing diverse skills, the teacher is beseiged with a myriad of tasks which need to be managed simultaneously. From checking in each student, locating the worksheets for each particular skill, grading the exercises, administering the final test, and further tutoring if an eighty percent mastery is not attained, to finally signing him out and sending him back to class, the logistics of keeping each student's individual records straight is staggering. This is not even taking into consideration the tremendous

amount of paperwork required for each student, such as verification tests, required signatures, and updated folders.

A more subtle enigma revolved around the nature of the typical remedial students who are usually below average and the least likely candidates to have their regular schedules interrupted. Until this study, remediation was carried out almost exclusively with written worksheets and tests, Appendices E, F, and G, but, unfortunately, this calibre of student responds negatively to this type of rigid drill. Since they perceive being pulled out of class as a punishment and are threatened as well as embarrassed for being singled out, they often arrive with a belligerent attitude. Not only does the remediation teacher have to deal with the skills, but she must also psychologically reassure each child that he is not alone and that missing one or more skills does not label him a failure.

Average and below average students who do not usually successfully perform academically in conventional settings are motivated to learn in a multi-sensory environment. The use of the computer, with its hands-on individual discovery approach, insures student scholastic success (Allen 58). The primary goal of this study was dealing with student achievement. Over a period of ten weeks, one hundred percent of the thirty-one students in the target group who failed the skill dealing with direct address on the SSAT I would demonstrate at least an eighty percent mastery. This would be measured by a posttest constructed for documentation and required by state law which would be administered after all students completed a series of

computer assisted instructional lessons (CAI) related 1.0 skill H68 and specifically designed to meet their needs.

A major objective of the study was to alleviate the problems of classroom management inherent in the nature of pull-out remediation. The computer program would allow each student to learn at his own pace and would automatically correct the student's work. Since students come to remediation at different times during any given period, it would not be necessary for the teacher to have to continually repeat instructions. In fact, the computer would direct the students to consult the teacher only when the lesson proved too difficult or when their final test results were displayed on the screen. Excess paperwork would be eliminated because the computer would store the information and react after each section of the lesson.

Another important outcome centered around the improvement of student attitude. Using CAI would interest students and promote a positive reaction and, in turn, a faster success rate in the mastery of the skill. Because the computer is patient, user friendly, and non-critical, the pupils would experience a non-threatening alternative to remediation that is often thought of as drudgery. Along with this idea, they would feel more in control and, consequently, more likely to take the total process of attaining mastery more seriously.

A final benefit was to teach besic computer literacy to those students who are most apt to need the instruction. Lower level students tend to be

uncomfortable with what they are unfamiliar, and, hopefully, interaction with the computer during CAI would put them at ease and help them adjust to this increasingly technological age.

II RESEARCH

Whatever one's educational preference may be, the pendulum has definitely oscillated to the side of strict accountability of students' achievement. Gone is the philosophy of the liberals who espoused a free curriculum with courses based upon student interest. Each year, more of the states are requiring students to pass basic skills tests in order to graduate with regular diplomas.

Florida's Educational Accountability Act of 1976 mandated minimum high school standards for the 1978-1979 graduates. Requirements included mastery of basic skills, completion of minimum course credits, and satisfactory performance on functional literacy tests. The literacy test was the primary criterion for graduation. On its first administration in the fall of 1977, ninety-two percent of Florida's eleventh graders passed the communications skills tests and sixty-four percent passed the mathematics test; in 1978, these figures were ninety-seven percent and seventy-four percent. In August, 1978, the State Board of Education changed the scoring procedure and renamed the tests. The Basic Skills Tests became the State Student Assessment Test, Part I (SSAT I), and the Functional Literacy Test became the SSAT Part II. Because the SSAT II appeared to violate the equal protection and due process clauses of the Fourteenth Amendment, a district court in July 1979, ordered suspension of the test as a graduation requirement until the 1982-1983 school year. There were charges that the test was racially and culturally biased, and

that pretest copies of the questions had been made available to students (Tesilowski 67-75).

Many such cases have been brought to court, and Florida's litagation is known as the case of Debra P v. Turlington. In the second round of trials, the federal courts had to consider the question whether the Flordia statute which requires public high school graduates to demonstrate the "ability to successfully apply basic skills to every day life situations" as measured by the SSAT II operated to deprive some students of diplomas in a manner so fundamentally unfair as to offend the due process clause. Judge Carr's opinion upheld the legality of the test, as did various other court cases around the country, in particular that in Tattnall County, Georgia (Dorsey 16-18).

It is plain to see, therefore, that the test is here to stay, at least in the immediate future. To monitor its effectiveness, The Florida Statewide Assessment Program has been commissioned to collect and disseminate information on the effectiveness of its school systems to help its students achieve minimum performance standards in mathematics, reading, and writing tasks. The 1980-1981 regular assessment involved approximately 460,000 public school students in grades three, five, eight, eleven, and twelve. Students were tested on SSAT I in October 1980. The SSAT II was administered to tenth grade students in April 1981. SSAT I is a test of basic skills, while SSAT II is a test of the application of the basic skills to practical solutions. The tests were judged to have high internal consistency reliabilities and high dependability indices. Mastery of the

minimum performance standards was fairly uniform across grade levels and subject areas (FLORIDA STATEWIDE ASSESSMENT PROGRAM-TECHNICAL REPORT, 1980-1981 83-112).

There has been a great deal of controversy lately suggesting the need for research concerning the continued use of inappropriate approaches to teaching language arts skills ("Facets: Research You Wish Someone Would Do, Part II" 22). More frequently in the 1980's, there is an increasing number of proponents arguing favorably that computers should be used as a teaching tool in the English classroom if the system is to be most effective (Aiken 40). There is widespread belief that a relationship exists between computer science and English teaching, and teachers should be encouraged to make use of computers (Thompson 99).

There is no doubt about the power and potential of the computer, and the promises of computer technology in the practical implications of an English program are just beginning to be realized. There is a need for a districtwide planning approach to computer use or else faculty disillusionment concerning its advantages is sure to follow (Chew 63). Focusing on literacy, schools need to formulate strategies on how to enhance the art and science of English teaching. Literate high school graduates must be well practiced in the use of computers (Boomer 161). Studies have decried the terribly narrow applications of computers in teaching English, and especially the poor preparation of teachers in media literacy (Suhor 4). This is an upsetting dilemma because with the revolution brought about by the video display terminal as the medium for

television and the computer, it will be imperative for all educators, including those in English, to expand their roles to incorporate computer programming (Anderson 26).

By 1992, most teachers and students will have, and will be writing on, microcomputers. Although the availability, economy, and independence of these machines have helped renew interest in computer assisted instruction (CAI) in English, at present there are six things hindering the use of CAI. These factors are lack of money, educational conservatism, current hardware deficiencies, English teachers' lack of interest in and knowledge of computers, insufficient expertise of how people learn, and especially, the scarcity of CAI software (Nicholl 9-13). There are many good word processing programs, and they are being utilized in the classroom. To find computer aided review lessons in English grammar and spelling, however, is very difficult. It is almost certain that the best source of materials are the classroom teachers who devise programs to meet the specific needs of their pupils (Lansing 17-18).

Classroom applications of CAI go beyond computer managed instruction, testing, recordkeeping, and teaching games. The ramifications of curricula use in language arts, as well as mathematics, science, and social studies, is exhibited not only in student learning, but in attitude and motivation, as well (Tolman 23-25). Even though many people in education are intimidated by the use of computer-based instruction, others are committed to exploiting the opportunities it provides. Three areas comprise computer instruction: instruction about computers (computer literacy), instruction

by computers (CAI), and instruction using computers. Although the most successful type of instruction by computers thus far has been drill and practice, the goal of using computerized tutorials and tutorial dialogs to increase individualized learning deserves continued consideration, as should the machine's potential for testing. The biggest drawback is the dearth of quality software, necessitating the teacher's skill at individual programming (Fletcher 1-7).

There have been so many studies conducted comparing traditional teaching methods to CAI that it would be impossible to cite them all. It should be noted, however, that the vast majority of cases resoundingly credited the use of CAI to favorable posttest scores. One such CAI project, from the Merrimack Education Center, was an alternative, supplementary approach to providing reading, language arts, and mathematic instruction in local schools. Beginning in 1979, a three year study was instituted to find whether the addition of a CAI system to courses would result in superior student achievement gains compared with those who had not been exposed to CAI. Standardized battery tests were used in all analyses, and results showed a clear and usually significant effect attributable to the CAI treatment for all disciplines throughout the three year period, especially notable in the last year of the experiment (LONGITUDINAL EVALUATION OF CAI PROJECT, 1979-1982 118-141).

Research seems to support the benefits of CAI in all grades, from elementary school through upper college levels. An enlightening example is the CAI program implemented in eight elementary and four middle schools in

the Fort Worth, Texas, Independent School District. The drill and practice program concentrated on language arts and mathematics skills using a computerized curricula developed by the Computer Curriculum Corporation. In grades three through seven, students were provided with ten minutes of practice daily. The weight of the data supportd CAI, since students made at least a month gain per month of instruction using the computer. Middle school CAI students made significantly higher standarize test gains than did non-CAI pupils. Elementary teacher responses to questionaires indicated that they perceive CAI as beneficial to student accomplishment; middle school instructors were less positive but still moderately supportive. The students, moreover, indicated that they viewed CAI drill and practice as personally advantageous as well as an enjoyable activity (Lysiak 42-73). This optimistic tribute was echoed even more positively in the New Orleans schools' computer-managed instruction in language arts and mathematics in the junior and senior high schools. Teachers, students, and parents alike resoundingly accorded high marks to CAI on all levels (Levin 24-25).

One Michigan study's purpose was to investigate the results of using computer assisted instruction to teach basic English grammar material in senior high school English classes. Two experimental groups (one male and one female) consisted of fifty-one students receiving CAI instruction, while the control groups (one male and one female) comprised sixty-three students not utilizing CAI. The design of the study involved giving pretests before the units were presented and before the experimental

classes began to use the computers and posttests after five units were completed. The results of the analysis showed a clear gain of the CAI group, and it was recommended that further research be conducted concerning the use of CAI in the teaching of English (Antista 37-42). Another high school study was conducted in three schools in Bristol, Connecticut. Special remediation laboratories were created in the subjects of reading, language arts, and mathematics utilizing computer instruction technology. It was ascertained that CAI works best in a remedial situation because lower level students react so favorably to this type instruction (Gerzanick 50-54).

CAI, as a viable alternative to the traditional mode of teaching, has salutary outcomes even on the college level. A study was conceived to discover how community college students enrolled in algebra and English grammar courses used the available learner-control features of the Time-Shared Interactive Computer-Controlled Information Television, a computer assisted instructional system. The conclusions indicated that learner-control options were overwhelmingly exercised and caused a greater material (Saccer 28-33). At Tennessee understanding of the University, a CAI program has been in effect since 1972. In cooperation with the Institute for Mathematical Studies in the Social Sciences at Stanford University, this method is used in four courses, Basic English, Algebra, Computer Programming, and Symbolic Logic. The amount of usage and student attitudes toward the classes point to the advantage of CAI (Searle 37-40).

Recent field test findings of a project funded by the Minnesota Educational Computing Consortium and the Rockerfeller Family Fund in 1984 demonstrated that microcomputers and home videodisc players can deliver remedial instruction to students (Glenn 30-32). The methodology for designing and delivering computer assisted diagnostic tests is available for teachers of basic skills literate enough to attempt simple programming. There are two natural applications for this methodology: for testing purposes and for implementing adaptive computer assisted learning sequences based on previous test results (Ferraris 407-414). A proctorial system of instruction requires the administration of frequent quizzes that measure the student's readiness to proceed to the next unit. With the support of various projects, computer programs have been written which permit students to take tests using on-line conversational commands, or to answer the questions at another location and return to the computer terminal at a later time. This system allows the proctor to accommodate twice as many quiz takers, and it grants more release time for tutoring others. Students have been very receptive to the use of this type of system (Wagner 64-70).

From all the research, it is clear that educators must anticipate and re-ponsibly direct the course of educational change, much of which will occur due to the increasing accessibility of microcomputers. The traditional classroom will, of necessity, give way to more flexible, individualized instructional environments (Farrell 6-10). It is also plain that basic skills tests as a prerequisite for high school graduation is a legal and viable consideration in this age of accountability. Furthermore,

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III METHOD

To achieve success with average and below average high school juniors aspiring for a regular high school diploma, a structured sequential approach using CAI was taken. What made this solution so unique was the fact that slower students, who do not necessarily perform well academically in conventional settings, were motivated to learn in a multi-sensory environment. The study of basic skills through computer assisted instruction, a hands on discovery method, served as an "academic catalyst, integrating learning that was previously fragmented, compartmentalized, and departmentalized" (Allen 58). Because media and the computer are so relevant and easily understood by below average students, they worked as springboards for basic skills study, while motivating and contributing to the self-confidence of the underachiever (Burbank 26).

The CAI program was designed to eliminate, or at least minimize, the various problems inherent in the remediation process, such as time management, organization, and pupil attitude. The created CAI lesson for Skill H68, Using Commas Correctly With Proper Nouns of Direct Address, consisted of two lessons. It began with a clever graphic along with music, "Home, Home, On the Range," which attracted the attention of the student and made him want to continue. Each lesson presented the material, offered several examples, and required feedback in the form of a response to a given question, thus making the program interactive. If a correct answer was furnished, an appropriate response was projected praising his

performance, and the computer instructed him to continue. If an incorrect answer was typed in the first time, the computer replied appropriately, in a positive manner, and the question was repeated. The computer was programmed to automatically review the lesson if an incorrect response was made by the student on the second attempt. After the third try, if he again answered incorrectly, a message to consult the teacher was viewed, and the program ended. This guaranteed that no pupil would continue without a clear understanding of the lesson components and that he would be given personal, individual tutoring by the remediator.

At the termination of all instruction, after the student correcty answered all the lesson questions, an overall summation of the lessons was presented, after which the student was granted the choice of reviewing the material, taking the final test, or ending the program. When opting for the test, the student was directed as to how to respond and when to call for the teacher. Since it was mandatory that a printed record of the test result be filed, he was required to take the test on the computer and on an answer sheet (Appendix H). The computer automatically scored the outcome, accorded a suitable message depending upon the level of mastery, and commanded that the remediator be notified before the student proceeded to another task. All of this transpired before the teacher needed to be interrupted from other duties or tutoring. At this point, verification was noted on the answer sheet. If an eighty percent or better grade was attained, the student was either sent back to class or else commenced with another skill. This tutorial program was written in PILOT, a computer

language, and a printout is provided in Appendix I, detailing all the major elements.

Computerized record keeping was facilitated through the use of PFS, which allowed a random access file of all thirty-one students incorporated in the study group. A form was developed which included the student's name, the skill being mastered, (H68), the number of attempts at the test, and the percentage of mastery. The ultimate utilization of this powerful, yet easy-to-use computer program will be to store all the students needing remediation in all the various skills. For the purposes of this study, however, only the study group and the single skill were manipulated and filed in PFS. After the student completed the skill, his name was entered and the results recorded. In this way, it was easy to discover the percentages of those passing the test with one, two, or three tries. Also noted were the numbers of students who attained 100%, 90%, or 80% mastery. Operating instructions for this system can be found in Appendix J.

Bacause the created CAI program was made to be used as a tool for utilization by all high school grade levels, an informal training workshop was conducted for the Reading Resource Specialist at this school. Since part of her duties is to disseminate skills materials throughout the English department, she is responsible for working with teachers involved with basic skills in the classroom. Appendix K delineates the basic instructions for manipulating the CAI PILOT program on direct address and serves as a guideline for anyone using this program.

mastery in the skill relating to direct address within a practical time frame. The administrators of this school assigned this facilitator the responsibility of remediating all students in SSAT I skills for one hour per day. They were very interested in the results of this project, for favorable results would cause a change in the nature of periodic pull-out and in the long run save them compensatory money. They realized that if funds could be saved in teacher salaries, money would be rendered for materials and supplies. For this reason, a complete computer laboratory situated in the Media Center was made available on a flexible daily schedule. A private conference room located in a wing of this lab was also handy for convenient one-on-one tutoring. One of four periods per day was targeted for basic skills with thirty-one students comprising the study group.

Ten weeks were devoted to implementation, in addition to the time necessary to develop the CAI program. The programming itself took between fifty and sixty hours. The first undertaking was to identify the students who failed skill H68, and this was accomplished by scrutinizing the master printout of the school's SSAT I results. These scores, naturally, were recorded as the pretest. It was then ascertained from the students' schedules which periods they would be pulled out of classes. An adaptable and tentative timeline was then created, taking into consideration such variables as absences and special events. As students went through the program, various data was collected, for instance, how many achieved

minimum competency the first time without any review or assistance, how many required a review of the lesson, and how many needed individual tutoring.

Student attitude was an integral segment of this study because one objective was to make this experience a positive one for all involved. Since all the students in the group had more than one skill to accomplish, teacher observation established their reactions to the two diametrical modes of remediation. They mastered the H68 skill with the use of the CAI program and any other skills by conventional means of written worksheets and tests. After each student was finished with all basic skills remediation, he was asked to complete an attitudinal survey, Appendix L, as a culminating activity which served to analyze the subtle ramifications of CAI.

One of the problems that was foreseen definitely became a minor enigma throughout this study. Many of the students were computer illiterates and demanded special guidance and instruction. One of the goals, therefore, was to provide a modicum of computer literacy to lower level students who had not been exposed to this tremendous teaching tool. Although time consuming, this training was certainly beneficial and hopefully will be assimilated into other learning activities. This turned out to be a beneficial side effect, even though it was not directly related to the outcome of the study.

A second minor difficulty occurred because of carelessness on the part of the students, but this, in the long run, provided a positive learning

experience in another area. Often they were given negative responses by the computer because they spelled a word incorrectly, left too many spaces, or mistyped a word or letter. They became discouraged if they were marked wrong when they really did have the right answer, even though it was misspelled. They learned to be careful using the keyboard and monitor because they had to proofread the answer. Another technical problem was evident because many had to be shown the location of the return key and the spacebar. Many had to be instructed in how to turn the machine on and off. These minute nuisances became a lesson in computer literacy and turned out to be one of the advantages of using the program.

The most serious dilemma arising during these weeks was in the difficulty encountered in adhering to a schedule. Not enough flexibily was provided for absences and other unforseeable circumstances. Provisions for making mid-course corrections were easily fulfilled by eliminating many of the additional students not in the study group who were scheduled for remediation at the same time. Because they were using the old method of worksheets and written tests, they demanded too much attention. The scheduling of these pupils was then delayed until this practicum was terminated, generating an instensified program revolving around the original thirty-one.

Each week throughout this practicum, a meeting was held with the administrator in charge of guidance. During this time, everything relating to this study that had transpired was discussed. The support was total and

any problems were dealt with in favor of the remediator. An example of this can be demonstrated through the following. One teacher refused to release one of the students for remediation. After several attempts and many excuses from this teacher, unfortunately it became necessary to devulge this information to the administrator, and the person in question was reprimanded. Soon a memo was issued schoolwide stressing the importance of the remedial program and reminding everyone to release students when they are scheduled in the lab. This approval of the administrators has filtered down to the faculty, and plans are now being formulated to implement computer remediation on a wide scale basis next year.

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IV RESULTS

Evaluation of this study was both statistical and attitudinal. The most vital measurement was the number of students attaining a minimum score of eighty percent on the posttest, a state requirement for complete mastery. The results are based on the thiry-one students who failed the skill dealing with direct address on the 1985 SSAT I test.

All students who were remediated using the created CAI program achieved mastery of the skill. Through careful tabulations, it was noted that twenty-two of the students, which represented seventy-one percent, accomplished the two lessons on the first attempt, while seven of them, or twenty-three percent, required a second try on at least one of the lessons before completion. Two of the students, who happen to be from the special education department, needed extra help from the remediator. These represented six percent of the study group. This help was minimal and with a little verbal encouragement and explanation, they returned to the program and mastered both lessons.

TABLE 1 STUDENT ACHIEVEMENT ON CAI LESSONS

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31		A	22	ţ.	×	7	,	Ħ		2		
- **		A	200 100		A			*				
							23%			62		

After students completed the CAI lessons and review, they were required to pass the posttest with at least an eighty percent. Of the thirty one in the group, twenty-five, or eighty-one percent, attained a one hundred percent. Five of them, sixteen percent, achieved a ninty percent, and only one, three percent, scored an eighty. No one failed or needed an alternate test to master this skill.

TABLE 2 POSTTEST RESULTS USING CAI PROGRAM

	*		*		*	
IN STUDY GROUP	*	100%	: .	90%	*	80%
	*		*		*	
	*		*		*	
31	*	25	*	5	*	1
	*		*	5	*	1
31 100%		25 81%		5 16%	* * *	1 3%

The best indication of the overwhelming success of this practicum was evident when a comparison study was made between last year's remediation of skill H68 and this year's. This skill was tested in both 1984 and 1985, and this facilitator was involved with addressing the skills during both years. After checking the records, it was noted that forty-three students required remediation on this skill in 1985. Of these, only ninteen, or forty-four percent achieved a one hundred percent. Twenty-one, which was forty-nine percent, received a ninty percent, while three, or seven

26

Beside facilitating the remedial procedure, this study attempted to measure student attitude in relation to the computer experience. All thirty-one students willingly filled out a survey as a culminating activity. Since all had more than one skill to master, they were subjected to both CAI and conventional modes of remediation during the ten weeks, and, therefore, their responses would reflect their total impressions. Thirty-nine percent (twelve students) had never been exposed to the computer before the study, and all responded that because of their short instruction, they would be more apt to attempt other computer lessons and games. Ninty percent of the study group, reflecting twenty-eight students, preferred doing the skill on computer rather than on worksheets as they were required to do with the other skills. Three of them, or ten percent, expressed that either method suited them, however, not one revealed a preference for the conventional method over CAI. In fact, in response to the last question asking for personal opinions of the computer experience, every one of the group replied with favorable comments. Bighty-eight percent noted that they enjoyed working on the computer, uinty-six percent felt that comprehension of the skill was made more complete, seventy-two percent decided that the computer was easier than other means of remediation.

Because of the positive results of this study, the administration of this school has committed the computer laboratory for remediation next year. Even though three students required extra help with the lessons, they were most impressed with the fact that not one student failed to master the skill after completing the CAI program. Because of the usual low success rate with special education students, they are considering an option of formulating CAI programs geared to this level. They are also giving permission for advanced computer math students to work on programming other skills for project grades in their classes. In this way, more CAI programs will be operational for the 1986-1987 school year and will further facilitate SSAT I remediation.

V RECOMMENDATIONS

As an English department chairperson at one of the twenty-two high schools in the county, this author had been made aware, through monthly meetings of English chairmen, the disparity that exists regarding basic skills instruction countywide. It had been noted that those schools which endeavored to organize basic skills as part of the curriculum scored the highest on standardized tests. Because this study proved the outstanding success of CAI instruction, it is recommended that remediation for mastering the skills on the SSAT I utilize this method on a large scale for next year. As programs are completed for all these skills, it is further advised that this concept be expanded to further include the skills tested on the SSAT II.

The administration of this study center has agreed to schedule all remediation in the computer laboratory for next year so complete implementation will be possible. They have insured that adequate materials and hardware will be supplied and have guaranteed support of this endeavor. It is suggested that the mathematics department be elicited to aid in developing software both in communications and mathematics skills. Enlisting competent programming students to help in the creation of CAI should serve as a learning experience for them as well as a boon for the two departments.

Follow-on activities should be county wide. The first goal is to disseminate the information gleaned from this practicum to all English

chairmen at a monthly meeting. Along with the statistical findings, a hardcopy printout of the actual CAI program on skill H68 will be distributed. Any school wishing a copy of the computer disk need only to furnish a blank disk and full permission for usage of the program will be granted.

Inservice workshops are conducted constantly on the county level in language arts. For the past year, requests have been made for one relating to the SSAT I and SSAT II skills. This facilitator has already been targeted as an organizer for such a workshop. Enlisting the participation of all remediation teachers from all the high schools, widespread dissemination is possible. Again, findings will be presented about the benefits of CAI, the computer program will be demonstrated, and copies of the actual program will be distributed. A second workshop will be solicited for those with programming experience to convert all the remaining skills into CAI programs.

A major recommendation is that all English teachers be inserviced in basic computer literacy and the computer's role as a valuable teaching tool. For those with intermediate and advanced knowledge of computers, an alternative workshop should be offered which teaches programming in either PILOT or BASIC. These courses should be run in conjuction with the math department and should be ongoing throughout the school year, possibly after school or on workdays. Ideally, those educators proficient in computer languages should be given temporary duty assignments in order to devote school time to create and perfect additional programs.

The most far reaching recommendation is certainly the most practical as well as exciting. Next spring, before the SSAT exams, all sophomores will be scheduled during their English classes into the computer lab. Here either the remediation teacher or the reading resource specialist will supervise skills instruction using the newly developed CAI programs. Those skills missed most often, such as the H skill, will be written first, so it is a certainty that they will be ready at this time. It is assumed that if all tenth graders run these programs, reinforcement will be optimal and, hopefully, they will master the skills on the test. This, in turn, will decrease the need for remediation when they are juniors. In the long run, this could save the school a great deal of money thay could be used for other educational materials.

For next year it is advocated that PFS FILE be employed in the remedial process. All students needing remediation should be listed with a record of the skills to be mastered. When each student has completed all needed skills, it should be noted in the file program. A duplicate disk should be stored in the guidance office and updated weekly. When verifying that students are finished, it would be easier to check this information through use of the computer rather than manually going to numerous file cabinets and searching through records.

All of these viable recommendations, if followed, could revolutionize remediation in this district. In this age of accountability, test results are of paramount concern. The computer and its advantages as a remedial device has been demonstrated throughout this practicum. The computer has great potential in this field, and as long as testing seems to be an

integral part of education, preparation for these tests should be as efficient, precise, and enjoyable as is technically possible. This can all dynamically be achieved through CAI.

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PERCENT OF 10th GRADERS MASTERING STATE ASSESSMENT PART II

COMPOSITE SCORES
BASIC SKILLS

								•	
HIGH SCHOOLS	MATH 1983	EMATIC 1984	<u>1985</u>	COMM 1983	. SKII 1984	LS 1985	Reading	Writing	<u>Math</u>
	72	81	89	95	88 .	88	92	94	90
	80	88	80	97	92	88	93	96	87
	85	93	91	.98	94	97	96	97	92
	84	92	95	98	95	98	98	98	92
	71	74	89	90	83	85	87	94	88
	69	83	89	91	86	88	85	90	85
	62	74	88	96	87	87	87	91.	83
	68	82	84	94	9 0 .	86	90	93	85
	71	78	87	93	85	81	85	89	80
	70	86	91	93	90	91	95	96	91
	67	86	84	96	92	92	93	95	84
	76	85	83	97	92	91	93	95	87
	68	90	. 84	95	93	89 [:]	91	94	86
	82	90	90	96	93	· 95	96	98	91
	72	82	91	96	93	91	93	97-	91
•	73	8,8	92	96	92.	95	94	96	91
	67	74	81	90	78	87	93	95	81
	83	89	84	97	91	90	93	95	88
	78	89	84	95	92	87	92	95	88
	63	79	90	87	88	86	88	92	92
	91	97	94	96	98	97	98	98	92
	88	92	94	97	95	97	97	97	94
	75	86	88	95	91	91	93	95 .	89
	78	87	NA	95	91	МА	NV	NA	NA

William R. Myoro O. P. Muse

ASSESSMENT RESULTS

VFORNIA LEMENT

MARCH TESTING ·

liow to interpret the test

averages: Since the students are tested on the California hievement Test during the month of the school year onal average is always e phis 0.6 for the sixth Compare the octual grade equivalent to the l average equivalent ned by the ability levels ipils). All positive differlicate that the achievesucher than predicted: gative differences indiachievement is lower dicted.

> "SULTS — Part I .or Standards

FESTING

JEADE 10

44	1985	% Change
92	96	+4
94	97	+3
89	92	+3

, a means the difference between the percent of as scoring currect in 1984 vs. 1986.

PERCENTAGE OF 10th GRADE STUDENTS PASSING THE FUNCTIONAL LITERACY TEST

MARCH TESTING Part II.

	Mathe	matics	Commu Sk	
	84	85	84	85
State Average	87%	84%	91%	88%
School Average	93%	91%	94%	97%
County Average	86%	88%	91%	91%

How to interpret the Test Average:

Compare the school average with the state and county average. It is desirable for the school average to be equal to or above these averages. Was the school average for 85 higher than 84?

FISCAL AND COST ACCOUNTING DATA

I-Expenditures for:	Amount	Percent	Cost/Pupil
Salaries	\$3,512,575	70.3	\$1,609.06
Fringe Benefits	814,730	16.3	373.22
Purchased Services	384,646	7.7	176.20
Materials & Supplies	185,510	3.7	84,98
Total Current Expense	\$4,897,461	98.0	\$2,243,45
Capital Outlay	100,477	2.0	46.03
Total Expenditures	\$4,997,938	100,0	\$2,289.48
II-Expenditures for:	Amount	Percent	Cost/Pupil
Teaching	\$3,560,367	00.0	\$1,630.95
In-Service .	4,911	0.0	2.25
Guidance	206,194	0.0	94.45
Library Services	159,122	0.0	72.89
licalth	68	0.0	0.03
Administration	469,025	. 00.0	214.85
Operation & Maint.	206,417	0.0	94.56
Utilities	344,252	0.0	157.70
Minor Capital Outlay	47,582	0.0	21.80
Total Expenditures	\$4,997,938	100.0	\$2,289.48

FOR FURTHER INFORMATION

The school's telephone number and address are listed on the front of this folder. We invite you to call or write if you have any questions about the school. We also invite your suggestions and comments about the school. Please inquire about the School Advisory Committee and Parent-Teacher Association.

FOR THE YEAR ENDING JUNE, 1985



THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ents, randomly selected by computer, were asked to

Teacher responses indicated that 94% feel Cooper City High is a good school. Sixty-four percent of them feel that parental support of Cooper City is satisfactory, and E8% feel that we are doing a good job in teaching basic skills.

Parents

Parent responses to the survey indicated 95% feel Cooper City High is a good school. Eighty-two percent feel the school is doing a good job in teaching citizenship skills. Fifty percent feel that parental support of this school is satisfactory.

Students

Students overall registered very positive and favorable responses to the survey. Ninety-four percent indicated they were proud of their school, and 100% felt that their teachers were knowledgeable of the subjects they teach. Ninety-two percent responded that their courses improved their knowledge and skills.

DISCIPLINE

Cooper City High School continually strives to maintain and encourage good student behavior. The Student Conduct and Discipline Code is enforced constantly. However, we realize that there will be times when it is necessary to remove a student from class in order to maintain a learning situation in the classroom. Anyone who is disruptive to the educational process or infringes upon the right of another student may receive detention, corporal punishment, internal or external suspensions. Conferences with parents and guidance counselors are often used as an effective way to prevent punitive measures.

"1

we strived to update the students and the staff. We ry typewriters for each of the well as the main office. These be used by themselves or in I computer or network of

al 100 computers into student uter laiss, as well as individual we labs in the business nath department, and one lab nent. We are in the process of is once the library reference railable to all students and 'resently, we have 198 compu-

it has been installed in the for-This equipment allows stuid to tapes while the teacher a entire group.

carnt

naintains a community school in the is. Classes range from academic to vocac offerings such as aerobics are also

sety is frequently utilized by community members, soy an open relationship with Cooper City. A somer swimming program is offered by the city at our

We have hosted the Broward County Special Olympics

SCHOOL IMPROVEMENTS AND NEEDS

Curriculum

Teachers and administrators meet regularly to review the curriculum in order to meet the diverse needs of the stu-

Plant

The plant has been significantly upgraded during the past senester. We recently completed the renovation of the electronics lab, the graphics lab, the child care classroom and lab, and the health service occupations classroom and lab. This renovation has made these facilities up to date and equitable with any in the county.

A new, high pole, lighting system has been installed in the parking area. These new lights will greatly improve the safety of the parking areas for both the community school and for other night events.

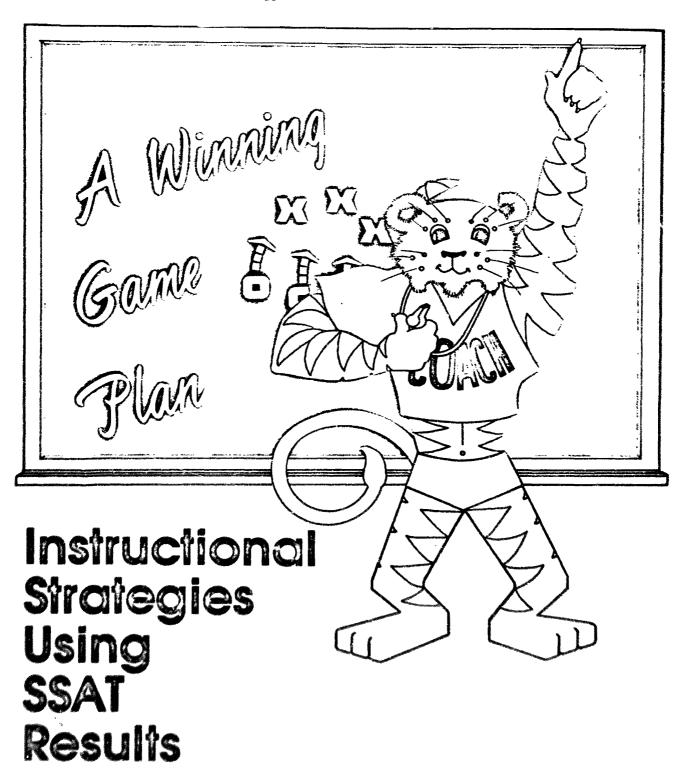
The baseball field had a new look for the spring. A new backstop has been erected and fencing put into place around the field, which improves the looks of the field, as well as adds safety for playors and spectators. The bleacher seats have been reworked as well. The old wooden seats have been replaced with aluminum.

The general maintenance of the building continues daily. Since the end of the last school year, the outside of the building has been almost completely repainted. The new color scheme is white with blue trim. Much of the interior of the building has also been painted or otherwise refurbished. All of the public restrooms have now been remodeled and opened for use. The new restrooms are larger than the old ones and have floor to ceiling tile which is easier to maintain than the painted walls. New gates, designed with the cowboy theme, have replaced the old ones at each of the Stirling Road entrances.

Needs

There are several needs which must be addressed. The air conditioning system in the building is inadequate for the facility. A new chilled water system, which should be more efficient and effective, is in the hands of the design engineers and should become a reality within the next year.

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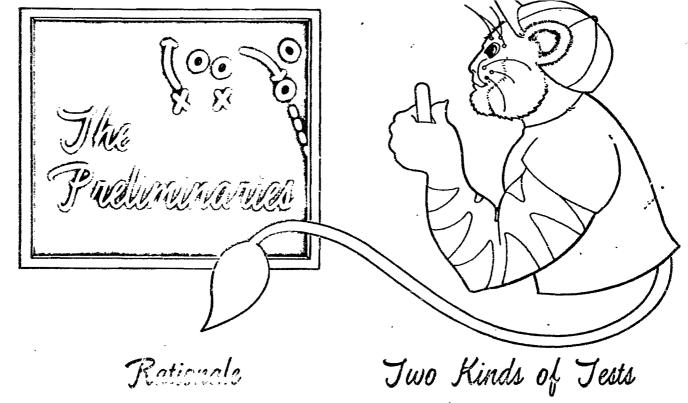




Assessment, Testing, and Evaluation Section Florida Department of Education Knott Building Taliahassee, Florida J2301



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the tive planning and instruction are the keys to winning in the arena of academic achievement. Just as a coach develops a "game plan" to provide systematic direction in scoring goals, a teacher must also develop strategies that will maximize learning and help students reach academic goals. To be a winning coach in this game, a teacher must:

- Identify student needs
- Develop appropriate teaching strategies
- Conduct practice sessions
- Keep score on student progress

This guide was developed to help teachers use Florida's Statewide Assessment Test results as a basic tool for instructional planning. However, the information presented here may also be used in conjunction with any standardized achievement test results.

Keep in mind that this plan is only one way to play the instructional game; many teachers already approach their tasks using a plan of their own. Although you may be one of these teachers, the materials here should help simplify the use of test data as a springboard for planning. In short, this guide is designed as one way to give direction to effective planning and instruction.

efore you map out a game plan for instruction, it is important to have a basic understanding of the test which is providing a data base for your strategies. Achievement tests are the source of data this plan will use.

There are two major types of achievement tests: 1) criterion-referenced and 2) norm-referenced. A normreferenced test is a standardized test in which a student's results are compared to scores obtained by a broad sampling of students in the same grade or age group. This type of test is helpful if you want to know how students compare to their peers, often on a national basis. Criterionreferenced tests are essentially competency tests in which the student must perform at a certain predetermined level in order to pass the test or be considered as a master of a skill. The Florida Statewide Assessment Program uses a series of criterion-referenced tests that are designed to measure how well students have mastered the Minimum Student Performance Standards. Although this curricular "garne plan" is developed with the State Student Assessment Tests (SSAT) accres in mind, student results from most standarized achievement tests, whether nam-referenced or criterionreferenced, can be used in a similar manner when developing instructional strategies.

Now that you are aware of the purpose of this booklet and have a basic understanding of two different types of achievement tests, try to follow this game plan step by step. Your final goal should be the rewarding one of instructional

offectiveness.





4. Saleding A Coach — The Eligible Forcennel

ny teacher involved in helping students learn is a coach. Often teachers inquire, "I teach a grade level that is not tested on the SSAT. Do I have to be concerned with these tests?" The answer is yes. There are two ways the test score's can be helpful to you. First, you can obtain the scores of the students you had lost year. If you teach 2nd, 4th, 7th or 9th grades, these scores will tell you how your former students performed and their problems as a group. The scores will also provide information on individual student weaknesses. Examirication information and test scores should help you make instructional adjustments this year, thereby preparing your present students for their upcoming test next year.

Second, you can examine the scores of the students coming into your class if you are a 4th, 6th, 9th, or 11th grade teacher. These scores can help you identify major problem areas and, thus, make planning and instruction more

tailored to each class's particular needs.

The question also arises at the secondary level, "Do teachers of subjects other than math and language arts need to be concerned about assessment tests?" Yes, you can use your particular subject area to reinforce the idea to the students that the basic skills can be used in a wide variety of situations. Remember, every teacher is a coach when it comes to teaching and reinforcing basic skills.

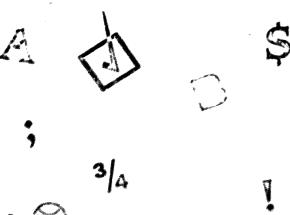
2. Soculing Team Needs - Studen's Deficiencies

ust as a coach must know his/her team and determine what kind of training each team member needs, a teacher also must determine each student's academic deficiencies before planning instruction.

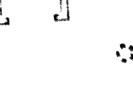
The SSAT Student Report is one feedback source which provides the necessary data to identify deficiencies. The following data from the student report should be considered when forming an instructional plan:

- a. Description of skills tested.
- b. Standards and skills not achieved.
- c. Item numbers and responses.
- d. Criteria for mastery.
- e. Number answered correctly.

These data are provided following the scoring of the SSAT-I which is given in October of each school year at 3rd, 5th, and 8th grades and the SSAT-I & II which are both given in March at grade 10. If you need further help concerning the SSAT and its interpretation, a good source of information is A Gulde to Statewide Assessment Results which accompanies the scores. Workout Sheets A and B in the back of this bookiet were designed to help teachers figure out the academic condition of each of their student players. REMEMBER, knowing the shape of each of your athletes prior to the competition is vital for victory.



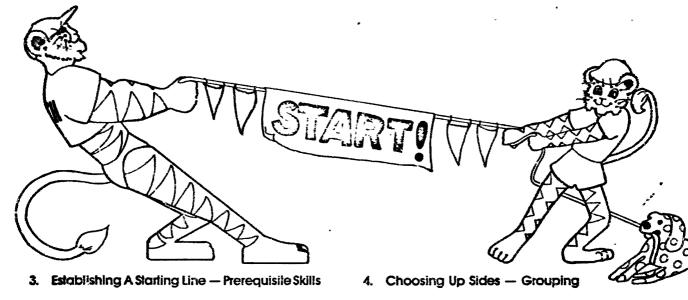












hen you look at a student's test results and all items in a specific skill were missed, you might suspect that the student lacks the prerequisite skills necessary to achieve that skill. On the other hand, if a student missed achieving the skill area by only a narrow margin, it may be that this student needs a minor brush-up to help perfect the missed skill. By reviewing the student report and the responses given in those skill areas not achieved, the teacher can begin to investigate and determine the instructional level where a student can function successfully and establish a starting line for instruction. Keep in mind that students build their new skill bank on skills they have almody learned if they have not mastered the skills prerequisite to the one being remediated, it will be extremely difficult, if not impossible, to acquire the newer skill. Therefore, finding the appropriate instructional level for each student is crucial!

The prerequisite skills for the items tested on the SSAT can be found in Teaching the Minimum Student Performance Standards. If you do not have a copy of this publication, you should obtain one through your school or district testing coordinator or curticulum specialist. This material is also available from the Educational Products Distribution Section of the Florida Department of Education, Tallahassee, Florida 32301. After identifying the prerequisites, you should develop a quiz that will assess a student's performance and establish an instructional level for that student.

This procedure is important in pinpointing the starting line for instruction. If this step is skipped, and the student is asked to perform above or below his/her skill level, he/she may become frustrated or bared and give up. As a coach, you want to keep this student in the game and striving for improvement by checking his/her prerequisites before you fire the starting gun.

finding the starting point

- a Review the SSAT-I Student Report.
- to List prevacuoste skills
- c Develop a quit

n order to train and drill team members, coaches often divide players into groups. Classroom coaches often use this same technique. For example, as you analyze the data from the Student Reports, pay close attention to the "Item Numbers and Responses" section. By doing this, you may find that you have several students with similar needs. Grouping such students will do two things: it will help them to know that their needs are shared ones; and it will help you target your instruction to their specific problems.

Another way to develop groups is by the student's learning preference. Each student has a preferred learning style that works best for him or her. Some students like working alone. Others need teacher supervision or the interaction of other students, or both. Elementary teachers will need to observe their students to discern each student's learning preference. In the secondary grades, the students themselves usually know and can tell you what works best for them.

You may find that for one skill you have students with widely different cognitive learning styles. This is to say that they absorb and process information in a variety of ways depending on which sensory channels to the brain are the most developed. For example, some students may learn a certain skill faster through auditory means (i.e., listening and repeating orally certain information), while other students may need more visual or concrete materials to help in the mostery of the same skill. In cases like these, you could break the larger group into smaller subgroups and use strategies that are best geared to the different cognitive styles of each subgroup. This will help the students learn faster and retain information longer.

All students learn at their own pace, so you will need to adjust instructional time to keep up with individual student needs. Grouping can help cluster students together who tend to work at a similar pace. However, if you have individuals who work at vastly different rates (either fast or slaw), it would perhaps be better to have them interact individually with you, will a peer tutor or, when useful, with a

computer modula.

5. Using The Right Equipment — Media Selection

ust as equipment is important on the athletic field during a game, it is even more important in the instructional game plan. How you actually deliver the instruction to the students is a task of material and media selection. The possibilities are many. In order to have a variety of appropriate materials, you may want to consider the following four categories when choosing materials.

PRINTED MATERIALS:

Books, worksheets, workbooks, periodicals, etc.

VISUAL MATERIALS:

Charts, chalkboards, overhead projection, displays, videotapes, films, filmstrips, tape/slide presenta-

tions, microcomputers, etc.

TACTILE MATERIALS:

Games, puzzles, manipulatives, etc. AUDITORY MATERIALS: Tapes, records, lectures, discussion,

microcomputers, etc.

Whether you are selecting materials that have already been developed or you are creating your own, there are six important factors to consider when deciding what to use.

- a. NATURE OF SKILL OR OBJECTIVE BEING TAUGHT: Some skills such as developing correct punctuation naturally require printed and visual matter for instructional material. Other skills such as identifying the main idea in a paragraph or learning a foreign language may best be approached by auditory material or a combination of printed and auditory material.
- b. CHARACTERISTICS OF THE STUDENTS BEING (AUGHT: You must identify each student's most effective learning style and select materials that complement that style.
- c AVAILABILITY OF VARIOUS MEDIA: You should find out what's on hand or easily obtained.
- d. ABILITY TO PRODUCE MATERIALS: Evaluating your expertise in producing materials quickly and easily can help you. You can also get help from other instructional support people, particularly your media specialists.
- e FLEXIBILITY, DURABILITY, AND CONVENIENCE OF MATERIALS: You need to determine if the materials are easy for a wide range of students to use and if they will hold up until the objective is achieved
- I LONG TERM COST EFFECTIVENESS. Ask yourself "If I compare my choices to other materials, am I usina the cheapest and most effective materials available? How durable are they?" As mentioned earlier the Fionda Department of Education has developed materials specifically failured to the instruction of the Minimum Student Performance Standards to obtain these and other materials. contact the Educational Products Distribution Section: Florida Department of Education, Knott Building Tallichassee Florida 32301



6. Developing A Winning Spirit - Motivation

otivation is that internal force that can make an athlete want to perform and strive for greater achievement. Motivating students to learn is often the greatest single challenge a teacher must face as an academic coach. Since promotion through the grades is dependent in part upon mastery of these basic skills, for many students the State Student Assessment Test results thernselves can be motivating. However, other students may appear not to care about their performance on tests. The first step in helping to motivate these reluctant "athletes" is to work with them on an appropriate instructional level If you have determined the prerequisites and assessed the student's performance level as described in Step 3 of this booklet, then you have already laid the initial aroundwork.

A teacher next should build upon a student's successes. and treat each student with respect and encouragement. Students usually live up to your expectations, so aim high, it is also helpful to plan instruction and practice that are interesting and reinforcing. This is best accomplished by selecting a wide range of materials and methods appropriate for the student's individual learning sixte. The discussion in the Media Selection and Grouping sections found in this quide will elaborate on these points.

To win at this dame, it is important never to give up an any student Remember students have a right to a much instruction as is needed to master a basic skill if the student appears to be "turned-off" or apathetic, to his/her assignments it might be helpful to consult your school countellor or psychologist for advice Above all be positive etimestmate much officer



Coaching And Drills — Instruction And Practice

ere it is! What you have all been waiting for! It is time to actually teach! This is the phase of a game plan that should be most enjoyable to you, the educator. If you have successfully completed all the steps prior to this, the time of instruction and practice should run smoothly. However, if you do encounter some rough spots, here are some tips that can help.

A winning coach often spells out the team's goal before each game. Likewise, before you tounch into instruction itself, you need to tell your students what they are going to learn. To you, the teacher, the purpose of instruction is very obvious. However, objectives are not always initially obvious to students. Communicating the purpose of instruction takes very little time, and it prevents students from getting off track.

You can use any one of the following methods or create your awn way of telling students the goal of instruction. But do not overlook this important detail of the game plan.

- Simply tell the students before each instructional session what the session will cover.
- Write the instructional goal on the chalkboard, chart, or instructional display.
- Print the goal on the first page of a module or handout.
- d. Program the instructional goal as an introductory part of a computer lesson.

When you begin actual training, be sure practice sessions follow adequate instruction. Even though skills seem easy to you, they may be confusing to the student encountering them. Just as a coach cannot ask non-swimmers to do laps in the pool, you should not expect your students to perform a certain skill until adequate instruction has occurred. A worksheet with practice test items is a good tool, but it should be used to gain proficiency after instruction and never to replace instruction.

Getting your students' attention and keeping their minds on task is essential to instructional effectiveness. Varying your methods and presenting material using several media approaches can make instruction interesting and more meaningful to the students. Replacing some pencil-and paper activities with appropriate games, puzzles, manipulatives, or computer programs can help maintain a high level of interest. For example, if you have four students who need practice in a particular skill, they can compete as two teams in a game that requires them to demonstrate the skill. Each practice session should be on target and relatively brief. It tends to be more helpful to assign a student several short and varied practice experiences than to overload him/her with endiess worksheets. Remember, setting is not always fun, but it need not be drudgery either.

Just because students are practicing does not mean you can sit on the bench and watch. Whatever practice experience you use remember to provide frequent feedback as well. This allows students to monitor their own progress, and correct mistakes hefore they become



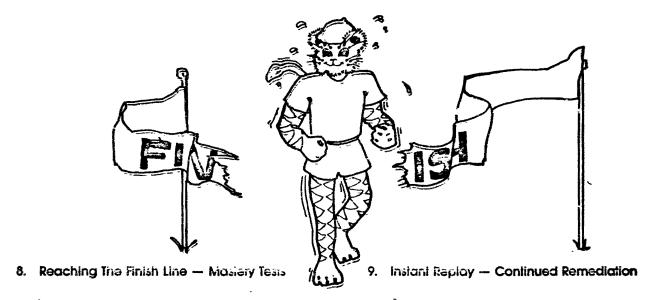
obstacles to further learning. You should circulate when possible and be available for questions or further on-the-spot instruction. As you give corrective feedback, remember to be positive and encouraging. Focus on what the student can do. One good way to do this is to check papers by marking only the correct items, thus providing encouragement each time the student hits the target with more and more correct answers. Your attitude can instill confidence which is vital to student success. So keep your comments positive and your attitude encouraging.

This period of training and drilling is the heart of the instructional process. Keep your students "working out" until you feel confident they can handle the main event-mastery of the skills. The successful student athlete is one who has received intensive conditioning prior to the competition.









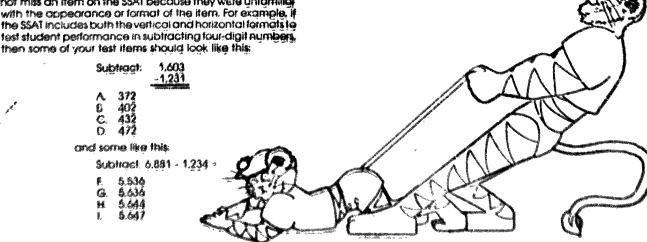
he mastery test of quiz is the rool by which your students will score a gool. Here are some tips to helip you compose such tests. Remember the purpose of such tests is accurate measurement of a student's mastery of a specific skill or skills.

Many teachers test student performance on each skill as it is learned. They find that it gids in the student's retention of the skill. Other teachers test after a cluster of related skills has been presented and practiced. For example, the eighth grade SEAT-I includes six math skills in the area of fractions. It is helpful if the test is easily divided into single skills so that they can be individually tested when necessary. This type of test can also be used as a pretest to identify a student's entry level with regard to the broad area of fractions. It may be helpful and time saving to develop a file of test items that you can draw on from year to year in developing your mostery tests. Be aware, though, that such a file needs periodic review and updating.

As you write items for your mastery test, pay close attention to format. Be sure to format the items on your practice test in the same manner as the ones the students will see on a more rigorous or formal test. Students should not miss an item on the SSAT because they were unfamiliar with the appearance or format of the item. For example, if the SSAT includes both the vertical and horizontal formats test student performance in subtracting four-digit numbers.

thietes and coaches do not give up if they fail to achieve their goal on the first try: norshould students or teachers. If a student, following instruction and practice, does not achieve mastery of a skill being taught, it is necessary to try, try again! Some students need more time to understand and master a given skill. Go back to Step 7 on your "game plan" and don't give up.

Occasionally you will encounter students who appear to have learning problems. In many cases these students need to be referred for evaluation and possible identification for placement in Exceptional Student Educational programs. Talk to your school counselor or other appropriate school personnel about the procedures for referring such students. Early detection of such learning problems is the key to helping these students get in the game!









10. Keeping Score — Record-Keeping

ou cannot tell if you are winning unless you keep score. Keeping track of each student's progress following instruction and testing is necessary, but it need not be complicated or time consuming. Any management system you choose or invent should have two important features. First, it should provide a way to verify each skill that has been achieved or remediated for each individual. Second, it should enable you to plan effective sequencing of instruction for individuals and groups of students.

Some teachers have charts like the one found in this booklet. The chart could list math and communication skills together as they are introduced into the instruction, or the chart could also be separated into various subjects. The skills the student achieves can be checked off immediately. The remainder can be coded by symbols or colors to designate whether the student will work on the skill alone, with a small group, or with the entire class. Other teachers like to use notebooks, with one page per student, to record progress. On these notebook pages, the skills are checked off when achieved or remediated. This is a more private system that your students may prefer.

The kind of system that you use is not as important as the fact that you should have one. Your system does not have to be elaborate or computerized. It can be very simple and still do the job very well. You will also find it a source of motivation as students begin to check off their achievements. Workout Sheets B and C found in back of this manual may be helpful when plotting students' progress

Going For The Gold — Systematic Improvement in General Teaching

ust as coaches examine films and statistics of previous games to help identify areas in their game plan that need strengthening. Teacher can improve his/her instruction in a systematic manner by gathering certain data from their students. As your teaching strategies are implemented, you can also collect "process" and "outcome" data.

"Process data" refer to information which tells how well the students are doing while they were learning, e.g., how many times they needed to repeat an objective or lesson

"Outcome data" refer to Indications of how well students were able to handle the Information or perform skills after completing your instructional plan Process data are best collected through during and after instruction, by observation during instruction and practice, and by a student questionnaire following an instructional unit. This will help you determine how students perceive the linstruction and what specific problems they had with it.

In order to collect outcome data, it is necessary to use a pretest and a posttest. The pretest will-establish baseline data that can be compared to the posttest results and help indicate the effectiveness of instruction.

A teacher's system for analyzing his/her effectiveness could go something like this. Prior to instruction, students are asked to take the pretest. Then the teaching begins. If instructional materials are being used, the students may be asked to mark areas which are difficult or words they do not understand. Following a presentation by you, a discussion can be held and you can take notes on the concepts which have not been well understood. In addition, students may be asked to work on practice sheets which can later be analyzed for errors. When the instruction is completed, which may be as short as one hour or as long as two weeks of classwork, the posttest should be administered, followed by the student questionnaire. It is often helpful to use the results of the questionnaire as the basis of an open discursion with the students about instruction.

After a teacher gathers such data, it is necessary to summarize in a meaningful and simple manner. Usually a table or chart which compares pretest and posttest scores is the best way to determine areas of concern in the outcome data. Although these data can indicate problems, they cannot tell us why these problems exist. Now is the time to refer to the other information you have collected. As you review your notes and observations, consider the student questionnaire results. Answers to how well the instruction was received and how easily learned may soon come into focus. This information can be used to revise your instructional plan if it is necessary.

Workout Sheet D in the back of this bookiet is a student questionnaire that could be administered to collect student input as early as third grade. Workout Sheets E and F are designed to help collect and chart prefest and posttest scares.

A Winning System

- Data Collection
- Prefest
- Positiest
- Summary





Playing In The Bigger Leagues — School And District Improvement

oving from a single classroom analysis to school or district analyses can be a tremendous step toward meeting overall carricular needs. School districts, individual schools and often certain grade levels within a given school use test data to determine strengths and weaknesses, of these larger groupings. Much can be determined by finding out how the entire district aid on a certain skill.

As a teacher you may find you self working in these bigger leagues. You may serve an accommittee or task to be which is an affizing test data to determine curricular aleas of need and make recommendations for improvement. The following is a basic puttine that may help simplify this task. This outline was designed for use with the Florida SSALT results but could be easily adopted for use with other achievement test results as well.

a. Inspect all test data to see if the data are complete

b. Review the school summary to determine areas of

High need - 0 to 50% mostary Medium need - 57 to 79% mostary Low need - 80 to 99% mostary

Workout Sheet G is provided for this task.

c. Compare this year's performance on standards, determined above in step b, to last year's performance. This comparison can belo you determine if you are making gains from year to year. Workells Sheet it is provided for this task."

d. Determine which high need of medium need standards will be the focus of attention for instruction in the coming year in the grades where the SSAF's administered.

 Select standards for which grades instruction is needed in the grades prior to those where the SSAF is outdinistered.

f Meet with district accountability or testing, coordinator to examine them analyses.

g Review Item analyses data for the school in two steps:

- (1) Inspect the analyses for any items for which, less than 40% of the students answered, correctly.
- (2) Inspect the analyses for all performances standards which are high need at medium, read at medium.

- -h. -For-each-high; and medium med item, inspect the test-copy and test specifications available from the district accountability coordinator. Inspect the school foil analysis and summarize the student deficiencies. This secondary need analysis should give an indication as to "why" a skill is ranked as a high or medium med skill. By examining students achievement on the items that measure a skill, you can tell whether the skill was or was not mastered. Workout Sheet I in the booklet will help with this task.
 - i. Inspect current math/reading/writing texts, district objectives, and other instructional materials.
 Determine what text pages need to be emphasized or what other materials need to be used to improve remediation.

i. Take action:

(1) Review findings.

- (2) Establish improvement goals and response billity for instruction/remediation.
- (3) Meet with total school or district stark

(4) Review all findings and discuss.

- (5) Reach consensus and make assignments for a plan of action.
- k. Summarize assignments on the final Workout Sheet J gngl distribute to all staff as appropriate.

13. A Final Pep Talk — The Coach's Challenge

he "game plan" for instruction described in this booklet will hopefully be helpful in pinpointing instructional problems. This is necessary in our quest for excellence. A winning coach is always analyzing his/her game plan and making needed adjustments in order to assure success. In the classroom, it is the teacher's choilenge to analyze test results and make needed changes that will help to assure student success—thus scoring a victory in the instructional arenal.



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CONTENT	AREA	
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Use this Form to pinpoint deficiencies or record mastery of standards or skills.

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STUDENT PROGRESS SHEET

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STUDENT QUESTIONNAIRE

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Lesson or unit title:					
Teacher					
This awastionnaire is designed to help your teacher. The answers you give here should be Indicated at the top of this page. By answering these few questions honestly, you can provhelp your tracher when planning. You need not write your name on this form.	/ide in	d to th forma	ne les ation	son c that c	runii could
CIRCLE THE NUMBER YOU FEEL BEST ANSWERS EACH QUESTION FOR	YOU.				
	not at	very little	some- tlmes	very	always
I feel I understood why this lesson or unit was taught.	1	2	3	4	5
2. I got help when I needed it.	1	2	3	4	5
3. f.fly questions were answered.	q	2	3	4	5
4. The practice work for this lesson or unit was helpful.	1	2	3	4	5_
5. The homework was helpful.	1	2	3	4	5
 The books, films, tapes, games, charts, and other materials that were used in this unit or lesson were helpful. 	Ä	2	3	4	5
7. There was enough time for me to do the required work.	1	2	3	A	5
8. If I made mistakes the teacher helped me understand why.	1	2	3	4	5
9. When I was tested on this material, I felt the test was fair.	11	2	3	4	5
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GOING FOR THE GOLD

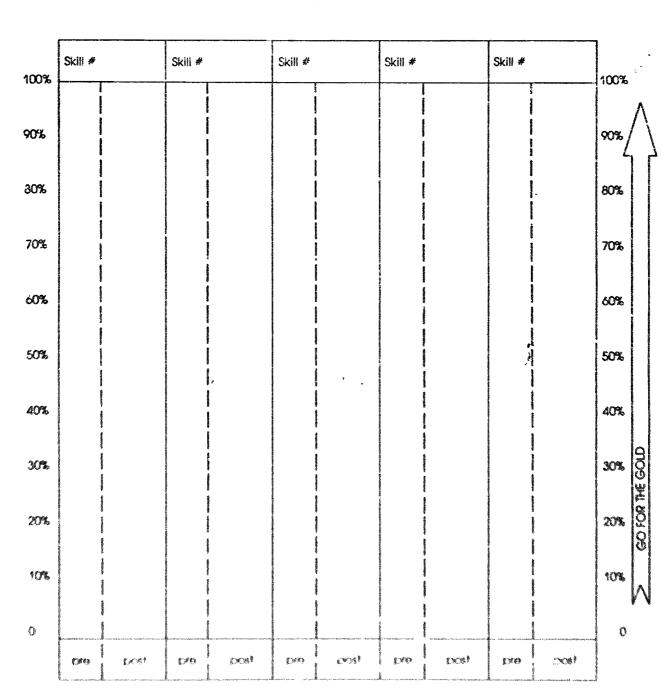
PRE AND POSTTEST ANALYSIS

On this worksheet list each student. Indicate skills or objectives being taught. Record pre and posttest results for each student in each skill or objective. At the bottom you can total pre and posttest results and determine a "mean" or average for each skill or objective.

Skill c Objective	#	Control of the Contro							
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GOING FOR THE GOLD

On this worksheet you can use your means from Worksheet E and develop bar graphs for the pre and post results. This should help you see at a glance the effect of your instruction.



RANKING NEED AREAS BASED ON TEST RESULTS

SCHOOL _____

GRADE	
SUBJECT A	AREA
DATE OF I	DATA USED
three areas of need. Use the percentages indicate are in each area. Use one worksheet for each gro	•
Ust of performance standards of high need (0 to	50% mastery)
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COMPARISON OF NEED AREAS

ITES OF DATA BEI	NG COMPARED/		
standard letter	etermine the direction which your SSAT scores are currently taking and the content area as indicated. In the columns numbered such events that standard during the years indicated.	g. In column 1 and co d 3 and 4 you should	lumn 2 wr I record ti
1	2	3	4
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CLOSE-UP ANALYSIS: Reviewing the test items

Use this form to help collect data on standards, skills, and test items that indicate there is a need for improvement.

"High Need" Pe	rformance Star	ndards	
Standard	Skill	item	Comments
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		<u> </u>	
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		l i	
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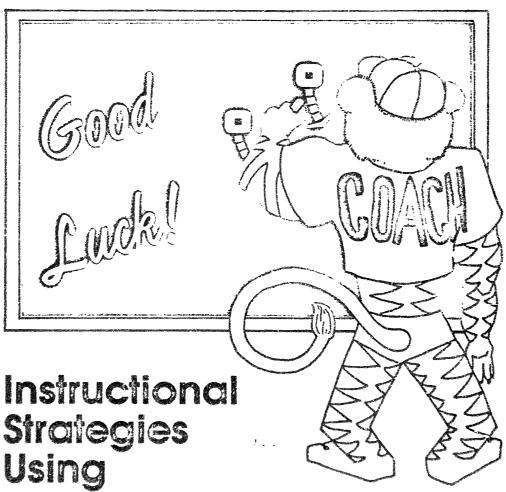
GAME PLAN FOR ACTION

	IMPROVEMENT GOALS
School/District	
FOR	
	Year

This form is designed to help outline your action plan improvement. In column 1, list the letter of the high need standard. In column 2, state your improvement goal. Be sure this statement gives the current percentile and the percentile you hope to achieve and the date by which this goal should be reached. In column 3, list grade level(s) or subject areas responsible for carrying out this plan. In column 4, speil out the specific actions that should be implemented in this plan.

1	2	3	4
HIGH NEED SIDS.	IMPROVEMENT GOAL	ORADE(S) OR PERSON(S) RESPONSIBLE	REQ! IIRED ACTIONS: by grade and/or instructional area.
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SSAT Results



State of Rorida Department of Education Tallahassee, Florida Raiph D. Turlington, Commissioner Affirmative action/equal opportunity employer

FLORIDA A STATE OF EDUCATIONAL DISTINCTION. On a statewide avarage educational achieversent in the State of Fiorida will equal that of the upper quartile of states within tive years as indicated by commonly accepted cateria of attainment

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APPENDIX E

WRITING H-68 USE THE COMMA TO SET OFF PROPER NAMES IN DIRECT ADDRESS

Use commas to set off nouns of direct address. The name of someone directly spoken to is a noun of direct address.

Did you call him, Carrie?
Mark, are you listening to me?
I think, Debra, that you have a good chance.

- 1. Simon is this your birthday?
- 2. I realize Mimi that you don't know Barb very well.
- 3. Joanne this is my friend Mel.
- 4. I'm sure Sandra that you would be welcome.
- 5. Are you trying out for the swimming team Billie?
- 6. Anthony will you take the minutes of the meeting?
- 7. Have you spoken to your parents Cheryl?
- 8. Let me take your coat Brenda and have a seat.
- 9. Passengers please have your boarding passes ready.
- 10. Do you think Professor Jennings that the experiment will prove your theory?
- 11. Keith have you heard from Caroline since she moved?
- 12. Would you answer the phone Carol?
- 13. Let me say class that I agree with you.
- 14. Cindy do you wear contact lenses?
- 15. Do you think Senator Hawkins that the bill has a chance?
- 16. Have you ever been to a carnival Bonnie?
- 17. Don't you see Jake that leaving will only make matters worse?
- 16. My fellow citizens I stand before you as your elected official.
- 19. Hank wants to speak with you Melissa.
- 20. Kegan have you met Ginger my cousin from New York?

USE COMMAS CORRECTLY. On your own paper, write the word before where the comma or commas belong.

The Comma

Use commas to set off nouns of direct address. The name of someone directly spoken to is a noun of direct address.

Please, Casey, try to calm down.

Step right in ladies and gentlemen.

- 1. Cindy do you wear contact lenses?
- 2. Do you think Senator Hawkins that the bill has a chance?
- 3. Have you ever been to a carnival Bonnie?
- 4. Don't you see Jake that leaving will only make matters worse?
- 5. My fellow citizens I stand before you as your elected official.
- 6. Bank wants to speak with you Melissa.
- 7. Megan have you met Ginger my cousin from New York?
- 8. Anthony will you take the minutes of the meeting?
- 9. Have you spoken to your parents Cheryl?
- 10. Let me take your coat Brenda and have a seat.
- 11. Passengers please have your boarding passes ready.
- 12. Keith have you heard from Caroline since she moved?
- 13. Would you answer the phone Carol?
- 14. Let me say class that I agree with you.

STANDARD H - SKILL 68

FORM F

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA Division of Instructional Services

Curriculum K-12

BASIC SKILLS VERIFICATION TEST: WRITING

Standard H - PUNCTUATE CORRECTLY.

Directions: In sentences 1-4, one comma is needed. Read the sentence and decide after which word the comma should be added.

- 1. Will you help us move the sofa George?
 - A. Will
 - B. help
 - C. move
 - D. sofa
- Sarah your speech on the planning of a convention was well done.
 - A. Sarah
 - B. speech
 - C. planning
 - D. convention

- 3. Where did you want to go on vacation this year Clara?
 - A. want
 - B. year
 - C. vacation
 - D. on
- 4. Morris do you still want to attend college in another state?
 - A. Morris
 - B. do
 - C. college
 - D. another

APPENDIX H '

State Student Assessment Skills

Name	Date
Grade	
Skill	Score
Т	eacher signature
Test answers:	
1.	
2.	
3.	
4.	
5 . .	•
6.	
7.	
8.	
9.	
··	
10.	

APPENDIX I

PILOT PROGRAM PRINTOUT AND DISK

DIRECT ADDRESS

PAGES 67-81 (LOCATED IN ENVELOPE AT FND OF REPORT)

APPENDIX J

PFS:FILE PROGRAM DOCUMENTATION

INSTRUCTIONS FOR USING PFS:FILE FOR KEEPING STUDENT RECORDS OF H68

Personal Filing System (PFS:FILE) is a computer program that works as a filing system. It provides a means of storing and retrieving information. It allows the programmer to design as original form, save it in a file on a diskette, and then use it to store information. It organizes and stores data efficiently and provides easy access to any information desired. It can be used on any Apple IIe. The following instructions should be read before the program is utilized.

- Place the PFS:FILE disk in drive 1 and turn on the machine. The toggle switch is located on the back left side of the computer. The program will automatically begin.
- 2. A program menu with six choices will appear.
 - 1. Design a File
 - 2. Add
 - **3.** Copy
 - 4. Search/Update
 - 5. rrint
 - 6. Remov
- 3. Option 1 allows one to design the form. For this practicum the file includes the student's name, whether or not he attained mastery, the number of attempts at the lesson, the number of attempts at the test.

- and the percentage of achievement.
- 4. Since the file has already been designed specifically for remediation of skill H68, the user will only be concerned with choices 2 and 4.
- 5. Choice 2 allows the user to add additional student names and records.

 To do this, press CTRL C and the designed file will appear on the screen. Use the Tab key after entering each additional item in the file. Press CTRL C after each file is completed and ESC when the last form is completed. The main menu will now be on the screen.
- 6. Choice 4 is used to correct errors and update files. Use the CTRL C command until the appropriate file is found. Follow the same commands as choice 2.
- 7. If a hardcopy of the file is needed, the user must locate and follow instructions found on PFS:REPORT.

APPENDIX K

PILOT PROGRAM DOCUMENTATION

OPERATING INSTRUCTIONS FOR PILOT PROGRAM-USING COMMAS CORRECTLY WITH PROPER NOUNS IN DIRECT ADDRESS

The CAI program was written in PILOT, a computer language. It can be used on any Apple II+ or Apple IIe computer with a memory of 64K. The following instructions should be read carefully before the program is utilized.

- 1. When initiating the program, insert the diskette into drive 1 and turn on the machine. The toggle switch is located on the back left side of the computer. The program will automatically begin.
- Pressing the space bar as instructed will continue the program from one screen to the next.
- 3. The return key is used whenever an answer (input) is required.
- 4. As students proceed through the program, they will be asked two lesson questions. If they answer correctly, they will be given a right answer response. If they make a wrong answer, the computer will respond accordingly and repeat the question. A second incorrect response will automatically result in a review of the lesson and another chance at the question. If the students answer incorrectly after the third attempt, the computer will instruct them that help is needed from the teacher and the program will end. It is then necessary for the teacher to investigate the problem and give individual assistance.

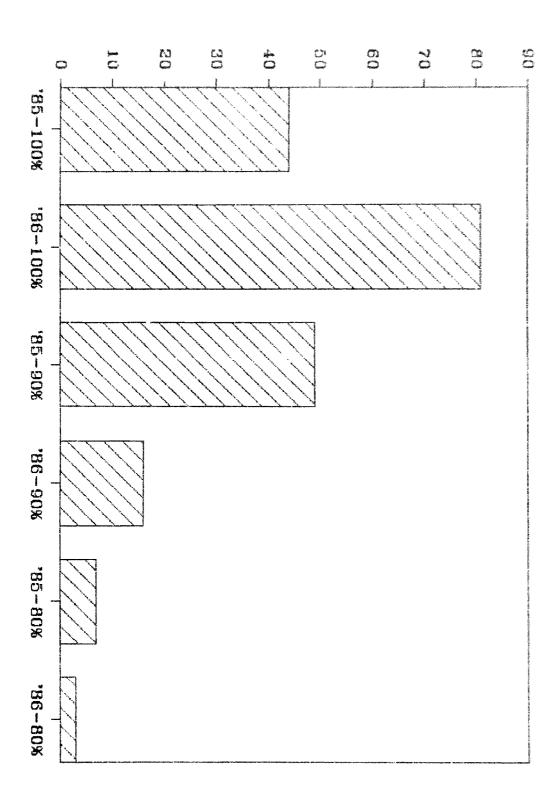
- 5. After the students complete the lesson portion of the program, they will be given three choices: review, proceed with the final test, or end the program.
- 6. In the test mode, students are instructed to press the letter of their choice and press return. They are further told to write this letter on their answer sheets.
- 7. At the termination of the test, the computer will automatically display the students' scores and level of achievement. A message attesting to their passing or failing will be given along with a directive to notify the teacher.
- 8. Regardless of student achievement, the program will return to the menu.
 Those who mastered the skill can exit the program, while those who did not can review the lessons.

AFPENDEX L

STUDENT SURVEY

- 1. Have you ever used a computer before?
- 2. Was it necessary to ask for any assistance while using the computer?
 If yes, please explain.
- 3. Would you have preferred working on the skill using worksheets?
 Explain your answer.
- 4. Please make some comments as to how you feel about working with on the computer.

APPENDIX M 87



POSTTEST RESULTS