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ABSTRACT

The Austin Independent School District developed a proposal for Chapter 2-Discretionary funds to be used to offer enrichment and supplemental instruction at 12 schools experiencing significant losses of students resulting in low enrollment, racial balances with lower than expected Anglo percentages, and under-utilized building space. Eight schools were selected as Computer Literacy Program sites, and four schools were chosen as Spanish as a Foreign Language Program. This evaluation report consists of two parts, one for the Computer Literacy Program and one for the Spanish as a Foreign Language Program. Each program went through a planning phase in which plans were developed which differed somewhat from those of the proposal. Each part of the report briefly discusses the changes made during the planning stage and then provides the major evaluation findings. Problems of externally-funded programs and their impact on school districts are discussed. (PN)

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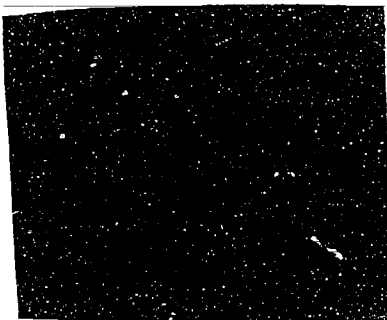
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FINAL TECHNICAL REPORT

Chapter 2--Discretionary

June 30, 1983

Approved:



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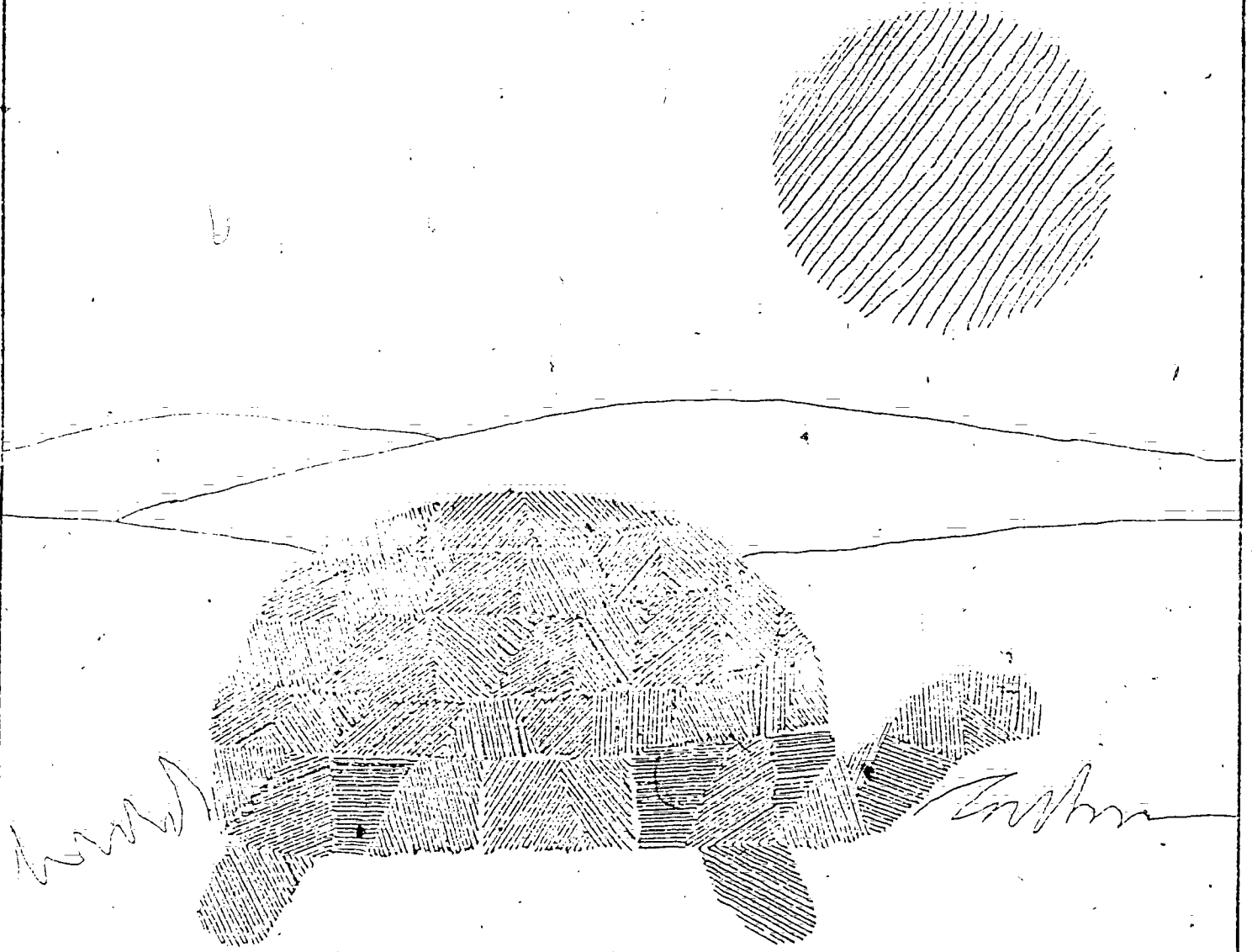
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# CHAPTER 2

# DISCRETIONARY



Regina T. ...  
Saskatoon ... High

1982~83



### WHAT IS CHAPTER 2--DISCRETIONARY?

In 1981 the Congress consolidated several education laws into one act, the Education Consolidation and Improvement Act (ECIA). The bulk of the consolidation was contained in Chapter 2 of ECIA. The purpose of Chapter 2 is to supplement local district funds in three areas--basic skills development, educational improvement and support services, and special programs. A state receives Chapter 2 funds based on its population of school-aged children and in turn allocates at least 80% of these funds to local school districts. These funds are allocated by formula. The remaining 20% are termed discretionary funds and may be spent, within certain guidelines, in whatever way the state education agency decides. Texas' Chapter 2--Discretionary funds were set aside for aid to school districts which had received funds in 1981-82 through the Emergency School Aid Act (ESAA) to aid in the implementation of desegregation plans. ESAA was one of the major programs consolidated into Chapter 2. Because AISD received one of the largest ESAA grants in the state in 1981-82 (over two million dollars), the District was able to apply for a substantial Chapter 2--Discretionary grant for 1982-83.

## FINAL REPORT

Project Title: Chapter 2—Discretionary

Contact Person: Lauren Hall Moede, David Doss

Major Positive Findings:

1. On the average, students involved in the Spanish as a Foreign Language Program received about 70 minutes per week of Spanish instruction.
2. Students receiving instruction in computer literacy made significant gains in their knowledge of computers.
3. Students in schools with no previous computer literacy programs made gains at least as large as those of students in schools with established programs.
4. Teachers appeared to be highly interested and excited about learning about computers.

Major Findings Requiring Action:

1. Only 55% of the students in the four Spanish as a Foreign Language (SFL) schools received SFL instruction.
2. Complete computer awareness instructional units were developed for grades 3 and 6 only.
3. Future programs of this sort should have clearer lines of authority so that important decisions can be made promptly and so that school personnel have one person to whom they can turn for information or for help in getting desired actions taken.

Evaluation Summary:

As part of the desegregation plan implemented in the Austin Independent School District in 1980-81, many elementary schools were paired, with extensive cross-town busing used to provide the desired racial balance at these schools. However, significant losses of students at several schools resulted in low enrollment, racial balances with lower than expected Anglo percentages, and under-utilized building space.

In an attempt to reverse the loss of students to other schools, the District developed a proposal for \$421,056 in Chapter 2--Discretionary funds to be used to offer enrichment and supplemental instruction at 12 highly impacted sites. Eight schools were selected as Computer Literacy Program sites, and four schools were chosen for a Spanish as a Foreign Language Program. The schools are listed in Figure 1.

PROGRAM	SCHOOL	GRADE SPAN
Computer Literacy	Brooks	K, 4-6
	Campbell	K, 4-6
	Govallie	K-3
	Julliett	K, 4-6
	Highland Park	K-3
	Ortega	K, 4-6
	Peac	5-6
	Sims	K-3
Spanish as a Foreign Language	Blackshear	K, 4-6
	Dak Springs	4-6
	Rosedale	K, 4-6
	Sandrez	K-3

Figure 1. SCHOOLS RECEIVING CHAPTER 2--DISCRETIONARY FUNDS.

Hardware and software were purchased to implement the Computer Literacy Program; instructional materials in language teaching were obtained for use in the Spanish as a Foreign Language Program. Staff development was an integral part of both programs. No instructional personnel were hired with Chapter 2 funds. Rather, consultant services were utilized to train existing staff.

The evaluation of the 1982-83 Chapter 2--Discretionary Program included the following areas:

- Information on the implementation of the programs based on interviews and questionnaires.
- An assessment of the learning resulting from the computer literacy instruction.

The following report summarizes the findings of the evaluation. The report consists of two parts, one for the Computer Literacy Program and one for the Spanish as a Foreign Language Program. Each program went through a planning phase in which plans were developed which differed somewhat from those of the proposal. Each part of the report briefly discusses the changes made during the planning stage and then provides the major evaluation findings.

## THE SPANISH AS A FOREIGN LANGUAGE PROGRAM

### Program Changes Made During Planning

The Spanish as a Foreign Language (SFL) Program as proposed had the characteristics described in Figure 2:

- 
- a. Language instruction for students new to the Spanish language in order to:
    - a. Provide exposure to the language.
    - b. Introduce aspects of the culture along with language.

Students at this level were to have received instruction for 15 minutes each day, gradually increasing to a 30 minute block.
  - b. Language instruction for more advanced students at diverse grade levels to:
    - a. Introduce them to the basics of the language, with emphasis on oral language acquisition.
    - b. Develop higher level communication skills in the reading and writing of Spanish.
    - c. Make students more aware of the cultural aspects of the language.

Students at this level were to have received instruction for 30 minutes each day.
  - c. Initial training of 18 hours to take place over four days with six days of additional training throughout the year.
  - d. Training for bilingually certified teachers in methods of teaching Spanish to monolingual, English-speaking students.
  - e. Initial training and direct instruction in the Spanish language and culture throughout the year for monolingual English-speaking teachers.
  - f. Planning sessions at the local campus level which included parent input.
- 

Figure 2. CHARACTERISTICS OF THE SPANISH AS A FOREIGN LANGUAGE PROGRAM AS PROPOSED.

A series of meetings was held during the fall of 1982 to plan the program in greater detail. Principals and staff persons from both the Departments of Elementary Education and Applications and Compliance were in attendance. The following plans were made:

- Language instruction for advanced speakers of Spanish was dropped.
- The Asher Method (the total physical response method) of second language learning was adopted for use in the program.
- Differentiated inservice for bilingual and monolingual teachers was tentatively planned.
- Initial staff development was limited to two days.
- A bilingual/special education inservice session was planned to meet both special education and program needs.
- Although the application suggested involving parents in campus planning sessions, no specific plans were made for their involvement.

#### The Program as Implemented

Staff Development: Staff development sessions were held at the Learning Resources Center on January 14-15, 1983, prior to the initiation of instruction. The number and type of teachers attending this training varied by campus. The percentage of teachers attending ranged from a high of 93% for Blackshear to a low of 10% for Oak Springs. The difference in attendance rates was due in part to a difference in understanding of which teachers should participate. At three schools, principals requested that all teachers, bilingual and monolingual, attend the training session. At Oak Springs, however, only bilingual teachers were asked to attend because the principal believed that monolingual teachers would not benefit from the training.

Both classroom teachers and special area teachers (music, physical education, special education, and Chapter 1) were trained.

The training was not uniformly well received. Bilingual and monolingual teachers did not differ greatly in their reactions to the staff development sessions although it had been anticipated by some that they would. About 40% of each group thought the pace was slow and about 50% thought the sessions were interesting. The area in which the groups differed the most was in their assessment of how beneficial the program

was to them. About 60% of the bilingual teachers thought the session was beneficial; but only about 40% of the monolingual teachers thought they benefited. However, the difference was not statistically significant. The written comments from both groups were generally negative.

Although the application called for an initial training of 18 hours to take place over four days plus six days of additional training throughout the year, these two days in January were the only ones provided by Chapter 2. A half-day workshop on the history of Tejano music was offered but this was an optional activity which was sponsored by the District.

Who was Served? Instruction began following the January 14-15 staff development activities. Teachers reported that only about 55% of the students in the four schools received SFL instruction. The percentage served ranged from a high of 96% at Blackshear to a low of 13% at Oak Springs. There were two primary reasons that students were not served. Many were bilingual and were therefore excluded from the instruction; and at one school there was a shortage of bilingual teachers. At one school instruction was limited to 20 students per grade who were selected from those expressing an interest in the program. At another school because many students were already involved in enrichment or remedial instruction when the program began, participation was limited to those not already involved in a special activity.

Activities: Each bilingual teacher had one to six groups which averaged about 21 students each. They met with the groups from two to five times a week for 15 to 30 minutes per period. The students received about 20 minutes of instruction each week. In some cases, monolingual teachers taught other subjects such as science or social studies to the students of bilingual teachers while their students were receiving SFL instruction.

The teachers reported modifying the Asher technique, generally by adding activities, by modifying vocabulary words to reflect local usage, or by altering the pace of instruction. About 90% reported reinforcing the SFL activities throughout the day. About three quarters also reported that the monolingual teachers reinforced the SFL instruction with activities in their classes. A popular way of reinforcing the activities was to add Spanish songs, games, or dances. Others taught such things as the days of the week, colors, and shapes. Many reported cultural activities in conjunction with Cinco de Mayo.

## THE COMPUTER LITERACY PROGRAM

### Program Changes Made During Planning

The Computer Literacy Program as proposed had the characteristics in Figure 3:

- 
- b. Teacher Training—All classroom teachers at the eight campuses were to have been trained to:
    - a. Operate computers.
    - b. Use computer applications and integrate them into the curriculum.
    - c. Evaluate applications.
    - d. Design new applications.
    - e. Program computers.

The staff development was to consist of a 48-hour training program with follow-up consultative services with teachers as needed throughout the year.
  - b. All students in grades K-2 were to have been provided a computer awareness program that explained the following:
    - a. The function of a computer.
    - b. How computers are used in our world.
    - c. The history of the computer.
  - b. All students in grades 3-6 were to have been provided a computer orientation program that explained the following:
    - a. How a computer works.
    - b. How to enter input and receive output from a computer.
    - c. How to use a flowchart.
    - d. How to write simple programs.
  - b. All students were to have been provided two or more time-blocks per week at a computer.
  - b. To meet the needs of students of diverse abilities, computer assisted instruction was to have been provided as follows:
    - a. Remedial instruction in basic skills for low achievers.
    - b. Reinforcement for special education students.
    - c. Enrichment activities for students achieving on grade level or above.
- 

Figure 3. CHARACTERISTICS OF THE COMPUTER LITERACY PROGRAM AS PROPOSED.

The grant provided AISD with the resources to place enough hardware and software in eight schools to serve all students on those campuses. It also included funds to train teachers in the awareness and orientation units, as well as to initiate programs in computer assisted instruction (drill and practice, tutorial, simulation, and problem solving.)

A major development in the planning of the Computer Literacy Program occurred when it was decided to coordinate the implementation of the program with the "AISD Computer Initiative," the District's plan for providing coordinated computer instruction in all 31 schools. This decision considerably delayed the implementation of the program. It was originally anticipated that the selection of hardware would be completed in early November. As it turned out, bids were not accepted until the February 14, 1983 meeting of the Board of Trustees. Computers for Chapter 2 schools were ordered the next day. Care was taken that the Computer Literacy Program did not supplant local funds going to Chapter 2 schools for the Computer Initiative.

Further delays in the delivery of the computers occurred after a defect was discovered in the model to be used in elementary schools, the Texas-Instruments Model 99/4A. The problem was corrected, and the computers were delivered in mid-March.

Apart from timeline changes, the only change in program plans that resulted from coordination with the AISD Computer Initiative was a change in the grades to receive computer awareness instruction (from K-2 to K-3) and computer orientation instruction (from 3-6 to 4-6).

### The Program as Implemented

Hardware and Software Allocation: Each school within a grade span (K-3 vs. K,4-6) received the same basic allocation of hardware and software. Each primary school (K-3) received 17 large systems (48K). Each intermediate school (K,4-6) received 14 small systems (16K) and 11 large systems. The components of large and small systems are described in Figure 4. The small systems are capable of using BASIC, the programming language taught at grades 4-6. A large system is needed to use LOGO, the K-3 programming language. The schools received the software allocations indicated in Figure 5.



SYSTEM SIZE	COMPONENTS
Small System	TI 99/4A Console 10" Monitor
Large System	TI 99/4A Console 10" Monitor Disk Drive Disk Controller Card Peripheral Expansion Box Memory Expansion Card

Figure 4. COMPONENTS OF SMALL AND LARGE SYSTEMS.

K-3 SOFTWARE ALLOCATION		K, 4-6 SOFTWARE ALLOCATION	
Module	Grade Level	Module	Grade Level
Early Reading	1	*Early Reading	1
Reading Fun	2	Reading Roundup	4
Reading On	3	Reading Rally	5
Early Reading Fun	K-1	Reading Flight	5
Beginning Grammar	2-5	*Early Learning Fun	K-1
Addition/Subtraction I	1-3	*Number Magic	1-6
Addition/Subtraction II	1-2	*Multiplication I	3-4
Multiplication I	3-4	Division I	3-5
Division I	3-5	Addition	1-6
Numeration I	1-2	Subtraction	1-6
Addition	1-6	Multiplication	3-6
Subtraction	1-6	Division	3-6
Multiplication	3-6	Fractions	3-6
Number Magic	1-6	Decimals	5-6
Computer Match Games I	2-6	Percent	5-6
Video Graphs	K-6	Computer Match Games II	2-6
Touch Typing Tutor	3-6	Hangman	1-6
		Video Graphs	K-6
		Touch Typing Tutor	3-6

\* Intermediate schools without kindergarten did not receive starred modules.

Figure 5. SOFTWARE ALLOCATION RECEIVED BY PRIMARY (K-3) AND INTERMEDIATE (K, 4-6) SCHOOLS.

After the purchase of hardware and software, each school had approximately \$2,200 for buying additional software, supplies, or periodicals.

Staff Development: Two types of staff development were offered to staff members in Chapter 2 Computer Literacy Program schools. The first type was a six hour training course entitled "Introduction to Computers." The second was a programming course. Teachers in grades K-3 and special education teachers were offered training in LOGO. Teachers at grades 4-6 were offered training in BASIC. These courses were 15 hours in length, one three-hour session a week for five weeks.

Teachers and other staff members attending the introductory staff development gave the training high ratings, as demonstrated in Figures 6 and 7. At the end of the training they reported feeling comfortable performing most simple activities associated with the computer, such as turning it on and loading and using software. These results and the written comments submitted by teachers suggest that as a group they are very excited about learning more about using computers in the classroom.

Responses to the LOGO and BASIC training were less positive (see Figures 6 and 7). However, fewer than a fifth of the participants felt uncomfortable about the prospect of teaching LOGO or BASIC.

SESSION	N	PERCENT WHO SAID THE ORGANIZATION WAS...		
		Good	Adequate	Poor
Introduction to Computers	114	79.3%	18.2%	1.9%
LOGO Training	51	45.9%	38.1%	13.0%
BASIC Training	122	77.1%	19.0%	4.9%

Figure 6. RATING OF ORGANIZATION OF STAFF DEVELOPMENT BY PARTICIPANTS.

SESSION	N	PERCENT WHO SAID THE SUBJECT MATTER WAS...		
		Interesting	Neutral	Bull
Introduction to Computers	113	91.1%	7.5%	1.4%
LOGO Training	51	77.1%	18.0%	4.9%
BASIC Training	122	77.1%	18.0%	4.9%

Figure 7. RATING OF INTEREST IN STAFF DEVELOPMENT SUBJECT MATTER BY PARTICIPANTS.

Program Activities: Schools began using computers as soon as they arrived. In those schools which already had one or more computers, computer literacy instruction had occurred to some extent throughout the year. All principals set up a computer lab to house the computers, although some made arrangements for moving some of the computers from room to room on carts. In many cases, the wiring modifications and the installation of the security devices necessary for the labs had not been done by the first principal interview in March; however, all necessary equipment was in place by early May.

In most cases the principals reported providing computer awareness and computer orientation instruction as described above. However, at one school no instruction was provided at grades K, 4, and 5, and sixth graders received school-developed instruction prior to the time the computer awareness unit was ready. Computer literacy instruction was scheduled in a variety of ways, for example, during the math block, during homeroom, or at the teacher's discretion. Teachers spent from three to ten days teaching the units. Altogether, students received from about two to seven hours of instruction in the units. Teacher questionnaire responses indicated that even though they did not receive complete computer awareness units, teachers at grades other than 3 and 6 also provided computer literacy instruction to their students.

Achievement Results: In order to get some information about the outcome of the computer literacy instruction, computer literacy tests were developed to cover the objectives of the computer awareness units. The tests were given before and after instruction with the units except at one school where the unit was not taught.

The results showed that the students already knew something about computers prior to receiving instruction in the units. Third graders answered about 12 of 22 items correctly on the pretest, and sixth graders got about 13 of 25 items correct prior to the unit.

In both grades, the students showed significant gains after studying the unit. The gains were statistically significant at each school where both the pre- and posttest were given. Figures 8 and 9 graphically display the gains by school. The findings are especially encouraging because some schools did not provide any computer-related instruction to students prior to this year.

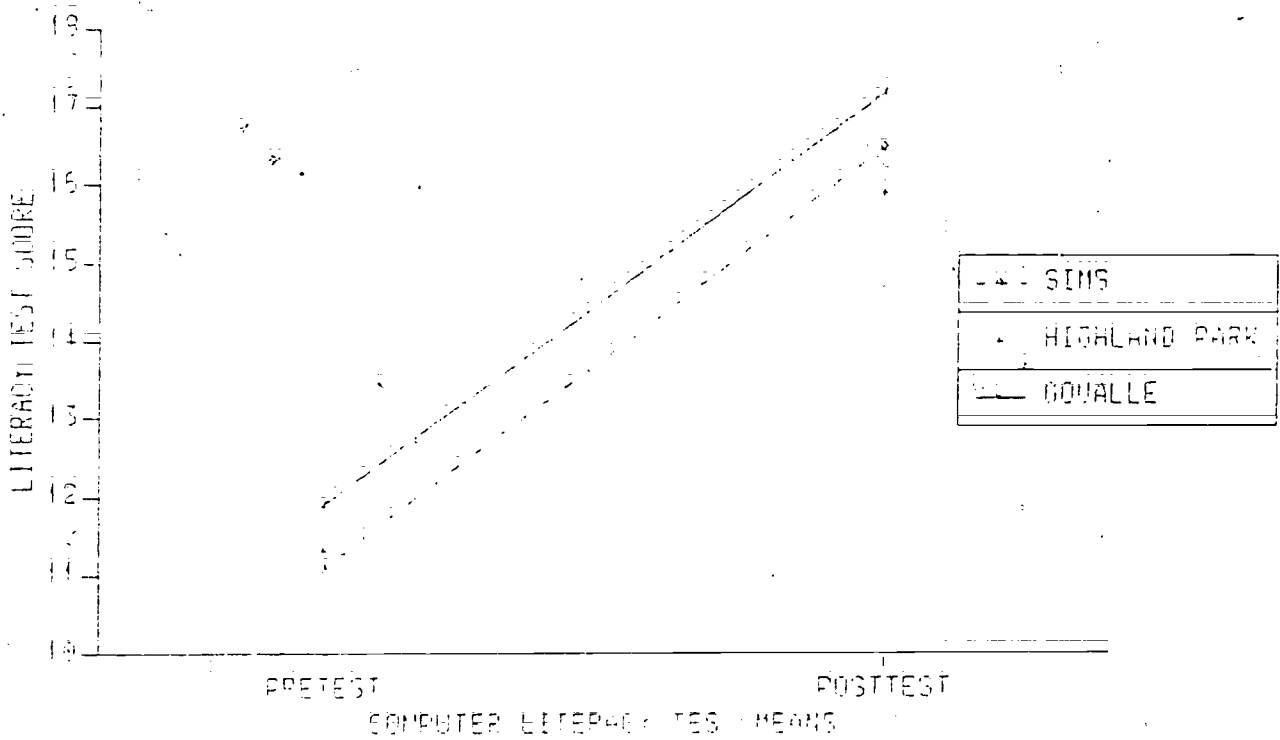


Figure 8. MEAN COMPUTER AWARENESS SCORES BY SCHOOL--GRADE 3.

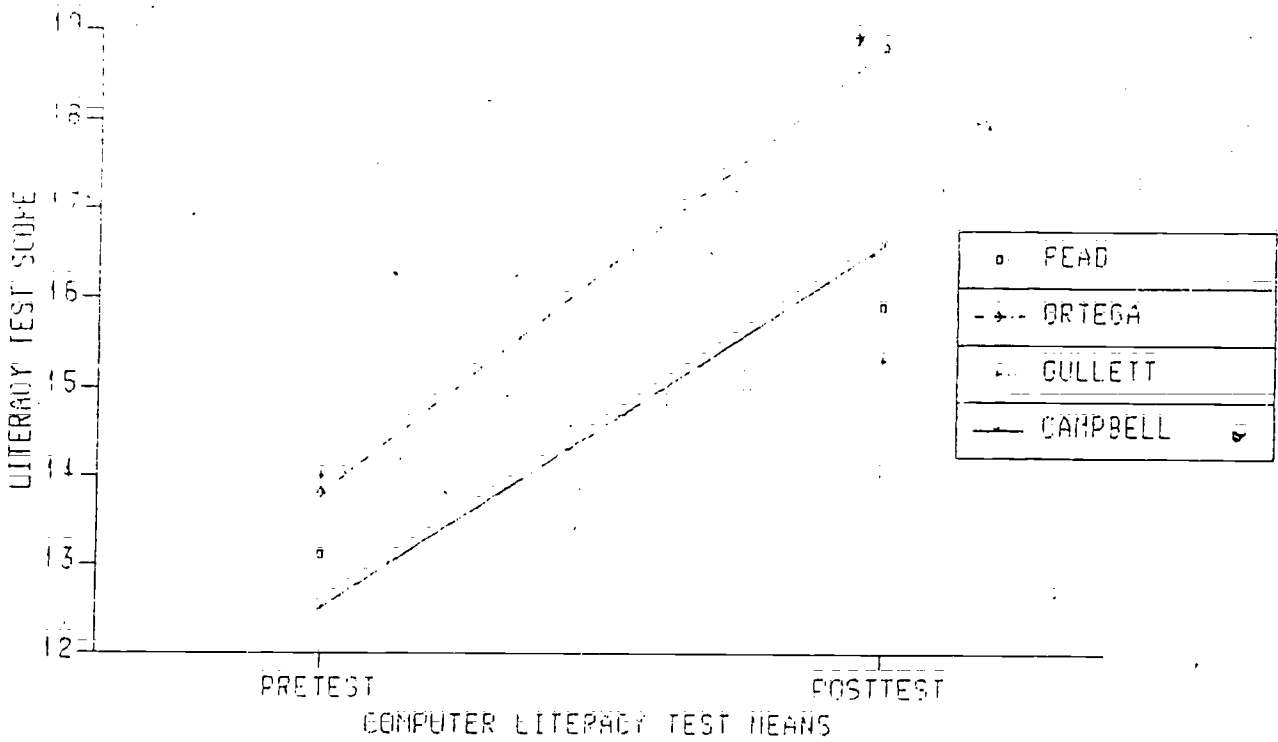


Figure 9. MEAN COMPUTER AWARENESS SCORES BY SCHOOL--GRADE 6.

## ONE FINAL COMMENT

It has been a general rule in the past that new programs supported by external funds are poorly implemented during their first year. These two programs were not exceptions to the rule. One purpose of the reorganization of the AISD administration that occurred in 1981-82 was to improve the administration of externally funded programs by putting more responsibility for their administration under the Department of Elementary Education. That change has not yet solved the problem. Externally funded programs, especially programs such as these for which the continuation of funding is in doubt, are impositions on the District. As a result, their administration does not fit well within the District's administrative structure. They do not seem to have anyone at the helm who can devote the time and attention necessary to keep their development on course. No one among those most intimately involved with the day-to-day implementation of the programs seems to have sufficient authority to make important decisions and see that necessary actions are taken in a timely manner. The lines of authority which connect the schools to the central administration seem to bypass such programs. As a result, program implementation is inconsistent across campuses as this report demonstrates.

This problem was apparent for the Spanish as a Foreign Language Program, and the Computer Literacy Program had the the additional problem of being merged with the Computer Initiative which further diffused the responsibility and authority for program implementation. That is not to say that the merger was not an essential action, but it did confuse and delay the program's implementation.

How important is it to AISD that the consistency of implementation across schools be improved? If it is not important, then no problem exists. If having consistently implemented programs is important, then what changes must be made? Will changes in program management be sufficient? For example, should the application approval process require that a detailed specification be prepared showing the duties and responsibilities assigned to each position associated with the project (e.g., principal, teacher, instructional coordinator, director, assistant superintendent, etc.)?

Or must the changes be made in the organization of the District? For example, should a number of coordinators be placed on permanent or temporary assignment to program management positions and report directly to the assistant superintendent? These and similar questions must be addressed if consistent program implementation is to be improved.

### Bibliography

EVALUATION DESIGN: Chapter 2—Discretionary. Austin, TX.: Office of Research and Evaluation (Pub. No. 82.20), Austin Independent School District, December, 1982.

The evaluation design describes the evaluation plan for Chapter 2—Discretionary Evaluation. It includes project and evaluation summaries, major decision and evaluation questions to be addressed, dissemination plans, information sources to be used, data to be collected in the schools, and evaluation resources.

TECHNICAL REPORT: Chapter 2—Discretionary. Austin, TX.: Office of Research and Evaluation (Pub. No. 82.45), Austin Independent School District, June 1983.

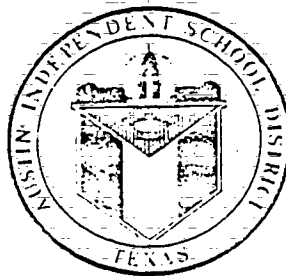
This technical report includes procedures and results for a variety of information sources used by Chapter 2—Discretionary Evaluation staff. This report consists of two parts, one for Computer Literacy Program, and one for the Spanish as a Foreign Language Program.

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Chapter 2--Discretionary

Appendix A

COMPUTER LITERACY PRINCIPAL INTERVIEW



**INSTRUMENT DESCRIPTION: Computer Literacy Principal Interview**

**Brief Description of the Instrument:**

The Computer Literacy Principal Interview was used to gather information about how the Computer Literacy program had been set up at each school and what difficulties were encountered in implementing such a program.

**To whom was the instrument administered?**

Principals in the eight Chapter 2 Computer Literacy schools (Brooke, Campbell, Govaile, Guillett, Highland Park, Ortega, Read, Sims).

**How many times was the instrument administered?**

Twice.

**When was the instrument administered?**

March 1-10, 1983 and May 16-23, 1983.

**Where was the instrument administered?**

In the principals' offices.

**Who administered the instrument?**

The Chapter 2 evaluation assistant.

**What training did the administrators have?**

General interview training.

**Was the instrument administered under standardized conditions?**

No.

**Were there problems with the instrument or the administration that might affect the validity of the data?**

None were identified.

**Who developed the instrument?**

The Office of Research and Evaluation.

**What reliability and validity data are available on the instrument?**

None.

**Are there norm data available for interpreting the results?**

No.

## COMPUTER LITERACY PRINCIPAL INTERVIEW

## Purpose

Information from the Computer Literacy Principal Interview was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded, or revised?

Evaluation Question D1-1: How did the Computer Literacy Component differ from campus to campus with regard to the following:

- a. Instructional emphasis (Computer Literacy vs. Computer Assisted Instruction).
- b. Instructional objectives by grade.
- c. Subject areas emphasized in Computer Assisted Instruction.
- d. Location of computers.
- e. Scheduling of computer use.
- h. Hardware and software selection.
- m. Parental involvement.

## Procedure

Interviews were conducted with Chapter 2 Computer Literacy principals in order to find out how the program was being implemented at each campus. The Chapter 2 Computer Literacy schools were Brooke, Campbell, Govalle, Gullett, Highland Park, Ortega, Read, and Sims.

Principals were sent a memo (see Attachment A-1) explaining the purpose of the interviews. The first set of interviews was conducted February 28, 1983 to March 11, 1983, prior to the arrival of the computers. Principals were interviewed individually in their offices by an evaluation assistant. Interview questions are included in Attachment A-2.

A second set of interviews was conducted May 16-23, 1983. These interviews occurred after the computers had been installed, teachers had received staff development (Introduction to Computers and LOGO or BASIC Training), and students were receiving instruction in Computer Literacy. A memo to the principals was sent explaining the object of this follow-up interview (Attachment A-3). Interview questions are included in Attachment A-4.

## Results

The questions raised in the first Computer Literacy Principal Interview are discussed below. The notes on which the answers to questions are based can be found in Attachment A-5.

*Where will the computer be located (lab/classroom)?*

Each principal planned to have a computer lab. Four principals planned to place some computers on carts for use in the classroom.

*If you will be using a lab set-up, what arrangements had to be made in order to free a room for the lab? Did this create any problems?*

The labs were located in a variety of rooms (art room, enrichment center, SCE lab, classroom, Chapter 1 reading lab, music room, A/V storage room, and band room). Although some inconvenience was reported, the principals did not feel any major problems occurred when the room changes were made.

*What special equipment (wiring, fire extinguishers, extra locks) was needed in order to install the computers? Have there been any problems in installing this equipment?*

Principals reported the need for additional wiring, additional locks, steel screens, alarm systems, and fire extinguishers. Only one school had had any of the special equipment installed. This campus was the site of the computer lab that had been furnished with different brands of computers being considered in the bidding process.

*When do you plan to start the awareness unit? How will the awareness unit be scheduled into the school day? How much time/day will be spent in computer awareness instruction? How long will the unit take to complete?*

Principals at six schools felt that it was too early to make plans. One principal planned to teach the unit during Math. The remaining principal reported that the unit had already been taught; however, at this time the unit activities and objectives had not been finalized. The principal said that a teacher from the community school had taught the awareness unit to sixth graders, although he probably used drafts of the unit objectives to teach the students.

*How will computer instruction in grades K-2 and 4-5 be scheduled into the school day? How much time/day will be spent in computer literacy instruction? When do you plan to start this instruction?*

Again, one principal planned to use the math class for computer literacy instruction. The remaining seven principals had not made any plans concerning these grade levels.

*Have you encountered any problems in implementing this program because of "computerphobia"?*

Six principals reported that they had not encountered any problems. Two principals reported some uneasiness about computers from some members of their staffs.

*Do you plan to augment the standard software purchase with additional copies of the same software?*

All eight principals said that they were waiting to look at the software before they made any decisions.

*In what areas do you plan to purchase additional software not included in the standard software purchase?*

Again, five principals said that they were waiting to look at the software before they made any plans to purchase additional software. The other three principals mentioned plans to purchase Creative Learning Kits, software for office management, and word processing materials.

*What training have you received so far in computer use?*

Only one principal reported having received no training. The remaining seven principals mentioned several types of informal training they participated in, including Radio Shack training, a workshop in San Antonio, and a workshop with a consultant from Region XIII. One principal said that his training had been self-taught, and two principals reported receiving a smattering of training, although they did not specify what type of training this was.

*Do you feel adequately prepared to participate in the Introduction to Computers you and your staff will be receiving after spring break?*

Each principal felt adequately prepared.

*Have you felt a need for additional training prior to the Introduction to Computers in order to assist your teachers during the staff development?*

Five principals said they did not think additional training was needed, while two principals felt the need for some training prior to the Introduction to Computers. The other principal had somewhat felt a need, but did not think there was enough time for any additional training.

*Do you feel you had adequate input in the hardware and software selection?*

Each principal agreed that he/she had had adequate input.

*Has there been any parental involvement with this program?*

Parental involvement with the Chapter 2 Computer Literacy program was limited at this time. At one school, parents had talked to students about computer use. From another, a parent served on the Hardware Review Committee. Parents groups from three schools donated software or hardware. Principals from the three remaining schools said that there was

no significant parental involvement yet, but planned to involve parents at a later date.

*Are there any general comments you would like to make concerning the implementation of this program?*

See Attachment A-5, page four for principals' comments.

The questions asked in the second Computer Literacy Principal Interview are discussed below. The notes on which the answers to questions are based can be found in Attachment A-6. The first five items in this interview were discussed in the first interview; they were reviewed with the principals to see if any changes had occurred after the arrival of the computers.

*Lab/Classroom setting:*

All TI computers were kept in the lab of each school because the carts on which to use the computers in classrooms had not arrived.

*Special equipment installation:*

Each principal reported that all the equipment requested was installed. In addition to the equipment requested previously, one school purchased additional tables, one school had some extra security features installed, and another purchased additional fire extinguishers.

*Schedule (Awareness Unit/Computer Literacy):*

The schedule for instruction in computers varied by campus. At two schools, students received instruction during their Math class. Computer literacy and the Computer Awareness Unit were taught during homeroom at two other schools. At one school the schedule was up to the individual teacher, and at another classes worked in the lab on a sign-up basis. The principal at one school reported that students received instruction almost every day, while at the remaining school 6th graders received instruction one hour per week (no instruction for students in grades K, 4-5).

*Computerphobia:*

At two schools principals reported that some apprehension about computers remained. At the remaining six schools, principals said that their teachers had no problems in this area.

*Parental involvement:*

Again, parental involvement was limited. At three schools parents had visited the lab to observe but had not participated. Principals at three other schools said that they had plans to involve parents in the lab in the fall. At one school, parent volunteers called Computer Angels had

helped in the lab this year. At this school, MAGPAC (magnet parental group) had met to discuss the computer program. At the remaining school, the principal said that there had been no significant involvement this year.

*What additional software did your school purchase?*

Two principals ordered duplicates from the software allocation. One school ordered an extra terminal emulator, and another purchased several Touch Typing modules. The principal at another school ordered some Scholastic Spelling modules and BASIC filmstrips and cassettes. The principals at the three remaining schools did not order any additional software.

*Would any of this software be valuable to other schools?*

One principal recommended the word processing module, the TI Writer, and the TI Pilot. Two principals who ordered additional software would not recommend anything they had purchased because they had not used it yet. The five remaining principals said that this question was not applicable to their situation.

*Did your teachers have an opportunity to evaluate new software at the Baker Instructional Computer Resource Lab?*

Teachers from three schools had an opportunity to evaluate new software while teachers from two other schools did not. Teachers from three additional schools looked at software in local computer stores before the Baker Lab was opened. The principal from the remaining Chapter 2 school did not have his teachers evaluate software at Baker because the software available there was available at their school.

*Did you have any mechanical problems with your computers?*

Principals from each Chapter 2 school reported some type of mechanical problem. The type of problems varied by campus. See Attachment A-6, page 4 for a listing of the mechanical problems experienced.

*Did any problems occur from using the computers on carts?*

Since the schools did not receive the carts before the end of the school year, this question was not applicable.

*Have you modified the instructional objectives or activities for use in your school?*

Three principals reported that no modifications had been made. Another three principals said that their schools had gone beyond these objectives and activities. At one school the principal said that teachers worked up their own activities, and at the remaining school the principal did not know if any modifications had been made.

*What subject areas have you emphasized in CAI?*

Math was emphasized in CAI at three schools. Language arts was also emphasized at one of these schools. At another school the principal planned to emphasize math in CAI next year. At the remaining four schools, no subject areas had been emphasized in CAI.

*What surprised you most about the implementation of this program in your school?*

Principals gave a wide variety of answers to this question. Responses ranged from surprise at the enthusiasm of the teachers to the lack of communication with administration. See Attachment A-6, page 5 for a list of principals' comments.

*What would you do differently if you were to set up this program again?*

Again, principals gave a variety of answers to this question. A common response concerned the lateness of the arrival of the computers. See Attachment A-6, page 5 for a list of principals' comments.

February 28, 1983

TO:

FROM: David Doss

SUBJECT: Computer Literacy Principal Interview

The purpose of the evaluation of the Chapter 2--Discretionary Computer Literacy Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. Part of the evaluation is to conduct a series of interviews with principals to discuss what is happening in their schools.

Lauren Moede, the Chapter 2 evaluation assistant, will call you to arrange a time for an interview during the weeks of February 28 to March 11, 1983.

Thank you for your cooperation.

DAD:ihm

Approved: *Frank H. Hines*

Director, Office of Research and Evaluation

Approved: *Ruth Mac Allister*

Assistant Superintendent, Elementary Education



## PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Computer Literacy Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Computer Literacy program.

How will the Computer Literacy program be set up at your school?

- Where will the computer be located (lab/ classroom)?
  
- If you will be using a lab set-up, what arrangements had to be made in order to free a room for the lab? Did this create any problems?
  
- What special equipment (wiring, fire extinguishers, extra locks) was needed in order to install the computers? Have there been any problems in installing this equipment?
  
- When do you plan to start the awareness unit? How will the awareness unit be scheduled into the school day? How much time/day will be spent in computer awareness instruction? How long will the unit take to complete?
  
- How will computer instruction in grades K-2 and 4-5 be scheduled into the school day? How much time/day will be spent in computer literacy instruction? When do you plan to start this instruction?
  
- Have you encountered any problems in implementing this program because of "computerphobia"?

- Do you plan to augment the standard software purchase with additional copies of the same software?
- In what areas do you plan to purchase additional software not included in the standard software purchase?

What preparation will you and your staff have for the Computer Literacy program?

- What training have you received so far in computer use?
- Do you feel adequately prepared to participate in the Introduction to Computers you and your staff will be receiving after spring break?
- Have you felt a need for additional training prior to the Introduction to Computers in order to assist your teachers during the staff development?

Do you feel you had adequate input in the hardware and software selection?

Has there been any parental involvement with this program?

Are there any general comments you would like to make concerning the implementation of this program?

May 9, 1983

TO: Chapter 2 Computer Literacy Principals  
FROM: David Doss  
SUBJECT: Computer Literacy Principal Interviews

Earlier this year, you were interviewed to find out how the Chapter 2 Computer Literacy program would be set up in your school. A second interview is being scheduled to discuss how the program is operating on your campus. Information gathered from these interviews can assist principals in non-Chapter 2 schools as they plan to fully implement the Computer Initiative during the 1983-84 school year.

Lauren Moede will call you to arrange a time for an interview during the week of May 16-20, 1983. We usually do not conduct interviews this late in the school year; however, the unusually late start of this program has made it necessary this year.

Thank you for your cooperation.

Approved: *David Doss*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Yolanda Leo  
Leslie Cohen

DAD:LHM:1hm

The purpose of the evaluation of the Chapter 2--Discretionary Computer Literacy component is to find out how the program has been implemented at each campus. Information gathered from interviews with Chapter 2 principals can assist principals in non-Chapter 2 schools as they plan to fully implement the Computer Initiative during the 1983-84 school year.

During my interview with you prior to the arrival of the computers, we discussed how the Computer Literacy program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

Areas to review:

Lab/Classroom setting:

Special equipment installation:

Schedule (Awareness Unit/Computer Literacy):

Computerphobia:

Parental involvement:

What additional software did your school purchase?

Would any of this software be valuable to other schools?

Did your teachers have an opportunity to evaluate new software at the Baker Instructional Computer Resource Lab?

Did you have any mechanical problems with your computers?

Did any problems occur from using the computers on carts?

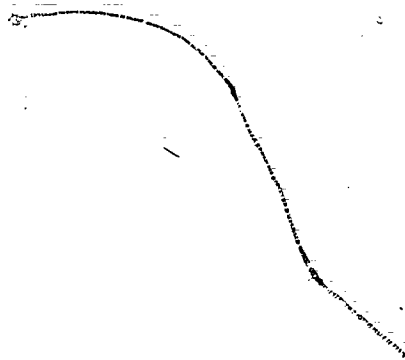
Have you modified the instructional objectives or activities for use in your school?

What subject areas have you emphasized in CAI?

What surprised you most about the implementation of this program in your school?

What would you do differently if you were to set up this program again?

SUMMARY OF RESPONSES FROM FIRST  
COMPUTER LITERACY PRINCIPAL INTERVIEW



## PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Computer Literacy Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Computer Literacy program.

How will the Computer Literacy program be set up at your school?

- Where will the computer be located (lab/ classroom)?

*In a lab (4).*

*In a lab with some on carts (4).*

- If you will be using a lab set-up, what arrangements had to be made in order to free a room for the lab? Did this create any problems?

*The labs were located in the former art room, enrichment center, SCE lab, classroom, Chapter 1 reading lab, music room, A/V storage room, and band room.*

- What special equipment (wiring, fire extinguishers, extra locks) was needed in order to install the computers? Have there been any problems in installing this equipment?

*Steel screens (1), alarm systems (1), fire extinguishers (1), locks (2), and wiring (5) were needed. One school had everything set up, and the others (7) had not had anything installed.*

- When do you plan to start the awareness unit? How will the awareness unit be scheduled into the school day? How much time/day will be spent in computer awareness instruction? How long will the unit take to complete?

*No plans yet (6).*

*Will be taught in math class (1).*

*Unit has already been taught (1).*

- How will computer instruction in grades K-2 and 4-5 be scheduled into the school day? How much time/day will be spent in computer literacy instruction? When do you plan to start this instruction?

*No plans yet (7).*

*Will be taught in math class (1).*

- Have you encountered any problems in implementing this program because of "computerphobia"?

*No problems (6).*

*Some uneasiness (2).*



- Do you plan to augment the standard software purchase with additional copies of the same software?

*Waiting to look at software (8).*

- In what areas do you plan to purchase additional software not included in the standard software purchase?

*Waiting to look at software (5).*

*Plan to purchase enough Creative Learning Kits for a classroom set (1).*

*Plan to purchase software for office management (1).*

*Plan to purchase some software from the K-6 allocation and some word-processing material (1).*

What preparation will you and your staff have for the Computer Literacy program?

- What training have you received so far in computer use?

*Radio Shack training (1), self-taught (1), consultant from Region XIII (1), workshop in San Antonio (2), a smattering of training (2), none (1).*

- Do you feel adequately prepared to participate in the Introduction to Computers you and your staff will be receiving after spring break?

*Yes (3).*

- Have you felt a need for additional training prior to the Introduction to Computers in order to assist your teachers during the staff development?

*No (5).*

*Yes (2).*

*Somewhat (1).*

Do you feel you had adequate input in the hardware and software selection?

*Yes (3).*

Has there been any parental involvement with this program?

*Parent groups donated software or hardware (3).*

*Parents talked to students about computer use (1).*

*A parent from our school was on the Hardware Review Committee (1).*

*Plan to involve parents at a later date (3).*

Are there any general comments you would like to make concerning the implementation of this program?

*See next page for responses.*

Overall, it has been very good. The selection process was very good. Any problems we've had are common to any new program.

It has been hard to plan a schedule without the materials. Even though everything in their power has been done to get the computers, we are at a standstill. I believe a beautiful job was done in the selection of materials, and the committee has done an excellent job planning this program.

Everything is at a standstill! By the time the computers are in the schools, it will be too close to ITBS testing to do as much as could be done. If things had happened sooner, we could have got more out of it this year.

The committee did an excellent job. The breakdown was at the school plant level. They were aware that a large number of computers would be installed, but were waiting to do anything until the exact number were known. Even if we get the computers tomorrow, it will be a month before they are installed because bids for wiring have not even been requested. Central administration has known about this project since September, and staff development could have been done before the computers arrived. The biggest fallacy in this project is the amount of down time because people did not follow through.

I told our PTA about the program this fall, and got everyone excited. Then I told them the computers would be here in January, then February...parents and students were disappointed. I think we should have just plunged into the computers, perhaps making mistakes along the way, but at least doing it.

Because of the delays and the amount of time left this year, students in K and grades 4 and 5 will receive only an introduction. I hope to make the computers available to the community through Brooke's community school. The lab could be opened up to the community and to AISD personnel after school and in the evenings. The possibilities for adults are exciting, and I feel this is a tremendous opportunity for our school.

We are delighted to be a Chapter 2 school and are excited about the number of machines we will have. We hope the Baker Lab gets going for a resource center and a service center. I have some concern for teachers new to the district next year and for new students. There needs to be some method to catch them up. The programming objectives are not strong enough. I have a concern that the money has to be spent by April 15th, because by that time we will have not had enough time to become familiar enough with the equipment to see what else we need. Can there be an extension? What kind of holdover funds will there be?

SUMMARY OF RESPONSES FROM SECOND  
COMPUTER LITERACY PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Computer Literacy component is to find out how the program has been implemented at each campus. Information gathered from interviews with Chapter 2 principals can assist principals in non-Chapter 2 schools as they plan to fully implement the Computer Initiative during the 1983-84 school year.

During my interview with you prior to the arrival of the computers, we discussed how the Computer Literacy program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

Areas to review:

Lab/Classroom setting:

*All TI computers were kept in the lab because the carts did not arrive (8).*

Special equipment installation:

*All the equipment requested was installed (8).*

*In addition to the equipment requested, one school purchased additional tables, one school had some extra security features installed, and another purchased fire extinguishers.*

Schedule (Awareness Unit/Computer Literacy):

*Taught during Math class (2); taught during homeroom (2); work in lab on sign-up basis (1); meet almost every day (1); up to individual teacher (1); one hour per week for 6th graders--no instruction for K, 4-5 (1).*

Computerphobia:

*Some apprehension remains (2).*

*No problem (6).*

Parental involvement:

*Parents have visited the lab (3).*

*Parents will help in the lab in the fall (3).*

*MAGPAC (magnet parental group) met to discuss the computer program (1).*

*Parent volunteers called Computer Angels have helped in the lab (1).*

*No significant involvement this year (1).*

What additional software did your school purchase?

*Some duplicates of the software allocation (2).  
An extra terminal emulator (1).  
Several Touch Typing modules (1).  
Scholastic Spelling modules and BASIC filmstrips and cassettes (1).  
None (3).*

Would any of this software be valuable to other schools?

*The word processing module, the TI Writer, the TI Pilot (1).  
Have not used the software ordered (2).  
Not applicable (5).*

Did your teachers have an opportunity to evaluate new software at the Baker Instructional Computer Resource Lab?

*No (2).  
Yes (3).  
Teachers looked at software in local computer stores (3).  
We have all they have there in our lab (1).*

Did you have any mechanical problems with your computers?

*See next page for responses.*

Did any problems occur from using the computers on carts?

*N/A (schools did not receive carts before the end of the school year).*

Have you modified the instructional objectives or activities for use in your school?

*We have gone way beyond these (3).  
No (3).  
Don't know (1).  
Some teachers worked up their own activities (1).*

What subject areas have you emphasized in CAI?

*None (4).  
Math (3).  
Language Arts (1).  
Plan to emphasize Math next year (1).*

Did you have any mechanical problems with your computers?

Two p-boxes are not working.

Not really--machines are not always consistent--programs do not always come up.

Broken machines have been replaced. There was some trouble with the plugs because the tables were too close together.

One machine malfunctioned and was replaced.

One p-box was not working and was sent to Baker.

Three machines malfunctioned. A TI representative fixed two of them and took parts of the third in to be fixed.

The TI representative fixed any problems.

The principal has had to fix some plugs, bend a few connections, and retest some disk drives.



What surprised you most about the implementation of this program in your school?

*How long it took! But the enthusiasm and patience of the teachers was encouraging.*

*Getting nineteen computers--enough for each student in our class--and a computer for my own office.*

*No surprises. We knew what would happen. Leslie and Yole helped out when it was needed.*

*Nothing.*

*I was so involved--I knew what was going on.*

*So much participation was surprising. Things have gone smoothly mainly because so many teachers were excited about the program.*

*The lack of communication! Too many times we found out things after the fact. The deadlines were ridiculous--all of our budget will have to be carry-over. The lateness of implementation was ridiculous.*

*The frustration--who is in charge? Also the lack of quality instruction from TI. They were oriented to a person going into computer work, not to teaching students. The instructors were too theoretical and did not relate to the actual situation.*

What would you do differently if you were to set up this program again?

*Start much earlier in the year.*

*Nothing could have been done differently.*

*Get computers here sooner!*

*Set up the lab better.*

*Inservice in the summer would have been better. Teachers would have more energy and would get staff development credit for next year.*

*Computers came in late. Planning has been haphazard and rushed. Teachers received no time equivalency in May. They would have preferred the sessions in the summer to get their time, but needed the information to teach their students this year.*

*Shorten the planning process and get the computers in classrooms by October 15th, in order to realistically train staff, evaluate materials, etc.*

*Organization! Try to have one person the principals could call to get things done. Again, who is in charge? This project has been an additional duty for coordinators who have other things to do. There was no coordination between the Service Center (security department) and the people in charge of having the computers delivered. We had our computers two weeks before our security equipment was installed.*

Chapter 2--Discretionary

Appendix B

COMPUTER LITERACY TEACHER QUESTIONNAIRE



**INSTRUMENT DESCRIPTION: Computer Literacy Teacher Questionnaire****Brief Description of the instrument:**

The Computer Literacy Teacher Questionnaire was sent to classroom teachers in the Chapter 2 Computer Literacy schools. Third and sixth grade teachers teaching the Computer Awareness units received the Computer Awareness Teacher Questionnaire. The remaining teachers received the Computer Literacy Teacher Questionnaire. Both versions of the questionnaire included questions concerning computer literacy instruction, staff development, and software.

**To whom was the instrument administered?**

All teachers in Chapter 2 Computer Literacy schools.

**How many times was the instrument administered?**

Once.

**When was the instrument administered?**

The questionnaires were sent to teachers May 23, 1983.

**Where was the instrument administered?**

To teachers in their schools.

**Who administered the instrument?**

Self-administered.

**What training did the administrators have?**

Instructions for completing the questionnaire were included.

**Was the instrument administered under standardized conditions?**

No.

**Were there problems with the instrument or the administration that might affect the validity of the data?**

None were identified.

**Who developed the instrument?**

The Office of Research and Evaluation.

**What reliability and validity data are available on the instrument?**

None.

**Are there norm data available for interpreting the results?**

No.

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

### Purpose

Information from the Computer Literacy Teacher Questionnaire was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded, or revised?

Evaluation Question D1-1: How did the Computer Literacy Component differ from campus to campus with regard to the following:

- b. Instructional objectives by grade,
- c. Subject areas emphasized in Computer Assisted Instruction,
- e. Scheduling of computer use,
- i. Amount of computer instruction students received:

Evaluation Question D1-4: How do the teachers evaluate the training they received?

### Procedure

The Computer Literacy Teacher Questionnaires were developed to collect information from teachers in Chapter 2 Computer Literacy Schools about computer literacy instruction, staff development, and software.

Two versions of the questionnaire were developed:

- Chapter 2 Computer Awareness Teacher Questionnaire: to be completed by teachers teaching the 3rd or 6th grade Computer Awareness Unit.
- Chapter 2 Computer Literacy Teacher Questionnaire: to be completed by the remaining classroom teachers in each school.

Because each of these versions included questions concerning the software allotment, and the allotment was different for primary (K-3) and intermediate (K, 4-6) schools, two versions of the Computer Awareness Teacher Questionnaire and the Computer Literacy Teacher Questionnaire were produced, a third grade version and a sixth grade version. Altogether there were four different questionnaires. Attachments B-1 and B-2 are the Computer Awareness Teacher Questionnaire and Computer Literacy Teacher Questionnaire distributed to primary (K-3) schools. Attachments B-3 and

B-4 are the Computer Awareness Teacher Questionnaire and Computer Literacy Teacher Questionnaire distributed to intermediate (K, 4-6) schools.

The questionnaires were sent on May 23, 1983 to each school to be distributed by each principal. A memo was enclosed with the questionnaires explaining which questionnaire each teacher should receive (see Attachment B-5). A memo was attached to each teacher questionnaire defining several terms used and explaining how it was to be completed and returned (see Attachment B-6).

Of the 13 Computer Awareness Teacher Questionnaires distributed to third grade teachers, 10 were returned, for a return rate of 77%. Of the 24 Computer Awareness Teacher Questionnaires distributed to sixth grade teachers, 10 were returned, for a return rate of 42%. This return rate is the lower, because one teacher from Brooke sent in a questionnaire for all Brooke sixth grade teachers explaining they did not teach the unit, and therefore did not think the questionnaire was applicable.

Of the 41 Computer Literacy Teacher Questionnaires distributed in K-3 schools, 32 were returned, for a return rate of 78%. Of the 49 Computer Literacy Teacher Questionnaires distributed in K, 4-6 schools, 33 were returned, for a return rate of 67%.

Overall, of the 127 questionnaires distributed to Chapter 2 Computer Literacy and Computer Awareness teachers, 85 were returned, for a return rate of 67%.

Any written comments included by the teachers were copied verbatim from the questionnaires. The comments are included in Attachments B-7 to B-10.

The questionnaire results are presented below first for the Computer Awareness Teacher questionnaires and then for the Computer Literacy Teacher Questionnaire.

## Results

### Computer Awareness Teacher Questionnaire

Results of the Computer Awareness Teacher Questionnaire can be found in Figure B-1 (for primary, K-3 schools) and in Figure B-2 (for intermediate, K, 4-6 schools). Responses are shown on copies of the questionnaires. Comments to open-ended questions are listed in Attachments B-7 and B-8.

Teachers were asked how many hours it took to teach all of the lessons of the Computer Awareness Unit. At the third grade level, teachers reported that it took two to seven hours to complete the unit. An average of 4.2 hours was spent teaching the unit. At the sixth grade level, teachers responding to this item reported that it took 2.75 to 6 hours to complete the unit. An average of 4.5 hours was spent teaching the unit.

When asked how many days it took to complete the Computer Awareness Unit, third grade teachers reported that it took from three to seven days to teach the unit. It took an average of 4.9 days to teach the unit to third grade students. Sixth grade teachers reported spending five to ten days teaching the unit. At the sixth grade level, it took an average of 6.4 days to complete the unit.

Sixth grade teachers spent an average of 18 minutes more than third grade teachers per day teaching the unit, and took an average of 1.5 days longer to complete the unit.

Teachers were given a list of five objectives of the Computer Awareness Unit and were asked to check those needing more activities. Third and sixth grade teachers responding to this item most frequently checked the objective dealing with the steps that a computer goes through in handling data. These teachers also checked the objectives dealing with the ways computing devices have been used historically and the ability to load and run software. The majority of sixth grade teachers responding to this item also indicated that the two remaining objectives (dealing with defining and using general computer technology and naming the basic components of computer hardware) needed more activities.

When asked if any materials or activities not provided by the instructional coordinators had been used to teach the unit, 50% of the third grade teachers and 75% of the sixth grade teachers responding said they had. When asked to describe those materials or activities that were good, the third grade teachers gave examples of techniques they used and mentioned the name of one periodical "Turtle News" (see Attachment B-7). Sixth grade teachers mentioned some activities they thought were good, as well as some materials, such as A Kid's Guide to BASIC Programming: BASIC Fun. Attachment B-8 lists the responses from sixth grade teachers.

Teachers surveyed were asked what subject areas had been emphasized in Computer Assisted Instruction (CAI). Teachers in both grade levels reported emphasizing reading, math, and spelling in CAI. Third grade teachers also mentioned English, grammar, social studies, science, Spanish, and art.

Third and sixth grade teachers surveyed were asked how much of the average day during the last month was spent in CAI or computer literacy activities not included in the Computer Awareness Unit. Half of the third grade teachers responding reported that they had spent 30 minutes or more during an average day in these activities. The remaining teachers reported spending 10-30 minutes during an average day. The average time reported by third grade teachers was 21.5 minutes. The majority (62.5%) of the sixth grade teachers answering this question reported spending 10-20 minutes during an average day in CAI or computer literacy activities. The remaining teachers reported spending 20-30 minutes or more during an average day. The average time reported by sixth grade teachers was 19.4 minutes. However, the times reported by third and sixth grade teachers may be inaccurate because of the ambiguous wording of this item.

The teachers surveyed were asked, on the average, how many days per week students received CAI or computer literacy activities not included in the Computer Awareness Unit. Third grade teachers reported that students received one to three days per week of instruction in this area. On the average third grade students received instruction in this subject 2.1 days per week. Sixth grade teachers reported that students received one to five days per week of instruction in this area. On the average, sixth grade students received instruction in the subject 3.1 days per week. Again, the number of days reported by the teachers may be inaccurate because of the ambiguous wording of this item.

Teachers surveyed were also asked two questions concerning staff development. The majority of third grade teachers (100%) and sixth grade teachers (89%) agreed that there was enough staff development during the Introduction to Computers sessions. The comments from third grade teachers about these sessions can be found in Attachment B-7. The comments from sixth grade teachers can be found in Attachment B-8. The second question concerning staff development dealt with the LOGO or BASIC training. Again, the majority of third grade teachers (70%) and sixth grade teachers (89%) agreed that there was enough staff development in this area. Comments from third grade teachers cited the need for a printed guide, more instruction in diskette saving procedures, and more instruction in BASIC (see Attachment B-7 for comments). Comments from sixth grade teachers mentioned ineffective leaders, lack of practice time, scheduling difficulties, and lack of application time (see Attachment B-8 for comments).

Teachers surveyed were asked their opinions of the software modules provided to their campuses. When asked to check the modules appropriate for their students, third grade teachers most frequently checked math modules and a grammar module (see page 4 of Figure B-1 for complete results). Sixth grade teachers also checked math modules more frequently than the other modules listed (see page 4 of Figure B-2 for complete results).

Teachers were also asked to check the five software modules they would give the highest ranking. The five modules most frequently checked by third grade teachers were the following:

Multiplication  
Beginning Grammar  
Division I  
Addition  
Subtraction

The five modules most frequently checked by sixth grade teachers were the following:

Reading Rally  
Reading Flight  
Reading Roundup  
Video Graphs  
Multiplication I  
Multiplication  
Touch Typing Tutor } chosen an equal number of times

Figures B-1 and B-2 summarize the results of the software items.

Computer Awareness teachers surveyed were asked if software was lacking in specific curriculum areas. Third grade teachers mentioned spelling, reading, grammar, social studies, science, math, and bilingual education. Sixth grade teachers reported that software was lacking in spelling, reading, grammar, social studies, and math. These teachers also mentioned the lack of software in the areas of logical thinking and manners.

Teachers were also asked if other needs in reading and math should be addressed. In the area of reading, third grade teachers mentioned the need for software on finding the main idea, topic sentence, details, sequencing, punctuation, capitalization, comprehension, usage, and grammar. They also commented on the need for reading management systems correlated to texts. In the area of math, third grade teachers reported the need for software on math management systems, graphs, money, and fractions, as well as the need for fun math games. A third grade teacher also mentioned the need for software capable of reading Spanish and ESL material with the voice synthesizer. At the sixth grade level, teachers responding reported the need for math software in the area of word problems (problem solving), as well as software for skills at all levels. One sixth grade teacher raised the question of "What about science?", perhaps pointing out the need for science software.

When asked if any or all of their students had used the Touch Typing Tutor software module, 100% of the third grade teachers reported that it had not been used. Over half (62.5%) of the sixth grade teachers reported that it had been used. These sixth grade teachers were divided in their opinion of this software module. Half of the teachers responding commented that the module was very good and easy to understand. The others felt their students used it as a game or became bored with it unless they received individual help with it.

Teachers were asked how important learning to type is to computer use. Half (50%) of the third grade teachers agreed that learning to type was important, while 30% of the teachers reported that it was very important, and the remaining 20% said that it was unimportant. At the sixth grade level, over half (57.1%) of the teachers agreed that learning to type was important, while 28.6% of the teachers reported that it was very unimportant, and 14.3% said it was unimportant. In general, the third grade teachers reported that learning to type was more important than sixth grade teachers did.

#### Computer Literacy Teacher Questionnaire

Results of the Computer Literacy Teacher Questionnaire can be found in Figure B-3 (for primary, K-3 schools) and Figure B-4 (for intermediate, K, 4-6 schools). Responses are shown on copies of the questionnaire. Comments to open-ended questions are listed in Attachments B-9 and B-10.

The Computer Literacy teachers surveyed were asked to estimate the average amount of time per day spent in Computer Literacy Instruction



and/or CAI during the last month. At the primary grade levels, time reported varied from 0 to 30 minutes or more per day, with half of the teachers reporting spending 0-10 minutes per day. An average of 12 minutes per day was reported by primary teachers. At the intermediate grade levels, time reported varied from 0 to 30 minutes or more per day. An average of 20 minutes per day was reported by primary teachers. Therefore, intermediate teachers spent an average of eight minutes more per day on Computer Literacy Instruction and CAI than primary teachers did.

Teachers were also asked how many days per week during the last month students received this instruction, on the average. At the primary grade levels, teachers reported from one to four days per week, with the majority (61.5%) reporting only one day per week spent in this activity. On the average, students at the primary grade levels received instruction in this area an average of 1.7 days per week. At the intermediate grade levels, teachers said students received from one to five days per week of instruction during the last month. On the average, students at the intermediate grade levels received 2.6 days per week of instruction in this area. Therefore, intermediate students received an average of .9 days more per week of instruction than did primary students.

Teachers surveyed were asked two questions concerning the staff development activities in which they participated. When asked if there had been enough staff development during the Introduction to Computers session, the majority of primary (90.6%) and intermediate (97.0%) teachers agreed that there had been enough. Those disagreeing cited a lack of plans for teaching children, time to become familiar with the materials, and clear instruction (see Attachment B-9 and B-10).

When asked if there had been enough LOGO or BASIC training, 83.8% of the primary teachers and 81.3% of the intermediate teachers agreed that there had been sufficient staff development. Those disagreeing mentioned that there was not enough time or training offered, that the training was not applicable to teaching, and that the instruction was not well organized. A complete listing of comments can be found in Attachments B-9 and B-10.

Teachers surveyed were asked their opinions of the software modules provided to their campuses. When asked to check the modules appropriate for their students, primary teachers most frequently checked several math modules, as well as the Early Reading, Reading Fun, and Early Learning Fun modules. The five modules most frequently checked by intermediate teachers were math modules (see Figures B-3 and B-4 for complete results).

Teachers were also asked to check the five software modules they would give the highest ranking. The five modules most frequently chosen by primary teachers were the following:

- Early Learning Fun
- Early Reading
- Addition/Subtraction I
- Reading Fun
- Subtraction

The five modules most frequently chosen by intermediate teachers were the following:

Reading Rally	} chosen an equal number of times
Number Magic	
Early Learning Fun	
Early Reading	
Multiplication	
Video Graphs	

Figures B-3 and B-4 summarize the results of the software items:

When asked if software was lacking in specific curriculum areas, teachers in the primary grade levels reported that software was needed for reading, vocabulary, language arts, math, logic, social studies and science. In addition, primary teachers reported a need for kindergarten software in all areas. Intermediate teachers also reported the curriculum areas mentioned by the primary teachers, and added the need for Special Education modules and software for the advanced student.

Teachers surveyed were asked if there were any other needs in reading and math that need to be addressed. Primary teachers mentioned the need for software for grammar, reading, comprehension, rhyming words, vowels, and word analysis skills in the area of reading. Decoding skills, problem solving, telling time, fractions, sequencing, money, and measurement were the needs mentioned in the area of math. Intermediate teachers cited the need for software for language art skills, reading comprehension, study skills, word problems, and averaging.

The final two questions on the survey dealt with typing and computer use. When asked if any or all of their students used the Touch Typing Tutor software module, only 5% of the primary teachers and 25% of the intermediate teachers reported that their students had used this module. The intermediate teachers that did use this module were divided in their opinion of it; several found it useful and helpful, while others found it was confusing and did not teach typing (see Attachment B-9 and B-10).

When asked how important learning to type is to computer use, approximately equal percentages of primary teachers reported it was important (40%) or very important (36%). While 20% of the primary teachers said learning to type was unimportant to computer use, only 4% reported that it was very unimportant. At the intermediate level, the majority (80%) of the teachers reported learning to type was important (65%) or very important (15%). While 15% of these teachers said learning to type was unimportant to computer use, only 5% reported that it was very unimportant.



Figure B-1

RESPONSES FROM THIRD GRADE TEACHERS TO ITEMS  
OF COMPUTER AWARENESS TEACHER QUESTIONNAIRE

(Page 1 of 4)

## CHAPTER 2 COMPUTER AWARENESS TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

How many hours did it take to teach all of the lessons of the Computer Awareness unit? 2 hours (N=2), 3 hours (N=2), 3.5 hours (N=1), 5 hours (N=3), 6.5 hours (N=1), 7 hours (N=1).

How many days did it take to teach the Computer Awareness unit? 3 days (N=1), 4 days (N=2), 5 days (N=5), 6 days (N=1), 7 days (N=1).

Did the lessons provide enough activities for the objectives of the Computer Awareness unit? (Check the objectives needing more activities.)

N=1 The student will define and use general computer technology.

N=3 The student will describe the various ways computing devices have been used historically.

N=1 The student can name the basic components of computer hardware.

N=4 The student will be able to explain the steps that a computer goes through in handling data (input, processing, memory, and output).

N=3 The student will be able to load and run software appropriate to his level of ability.

Did you use any other materials or activities not provided by the instructional coordinators to teach the Computer Awareness unit? N=5 Yes N=5 No  
If YES, please describe those that you think were good.

See Attachment B-7.

What subject areas have you emphasized in Computer Assisted Instruction?

See Attachment B-7.

During the last month, how much of the average day was spent in Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

N=2 0-10 minutes N=2 10-20 minutes N=1 20-30 minutes N=5 30 minutes or more

On the average, how many days per week did students receive Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

N=3 1 day N=3 2 days N=4 3 days N=0 4 days N=0 5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated:

Was there enough staff development in the following areas?

Introduction to Computer (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes N=10                      No N=0                      Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-7.

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14.)

Yes N=7                      No N=3                      Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-7.

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

- Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students; In the column to the right of the list please check the five software modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	NAME OF MODULES	GRADE LEVEL	COMPANY	HIGHEST-RANKED SOFTWARE MODULES
<input type="checkbox"/> N=2	Early Reading	1	Scott Foresman/TI	<input type="checkbox"/> N=0
<input type="checkbox"/> N=1	Reading Fun	2	Scott Foresman/TI	<input type="checkbox"/> N=0
<input type="checkbox"/> N=3	Reading On	3	Scott Foresman/TI	<input type="checkbox"/> N=2
<input type="checkbox"/> N=3	Early Learning Fun	K-1	Texas Instruments	<input type="checkbox"/> N=1
<input type="checkbox"/> N=9	Beginning Grammar	2-5	Texas Instruments	<input type="checkbox"/> N=6
<input type="checkbox"/> N=7	Addition/Subtraction I	1-2	Scott Foresman/TI	<input type="checkbox"/> N=0
<input type="checkbox"/> N=8	Addition/Subtraction II	1-2	Scott Foresman/TI	<input type="checkbox"/> N=4
<input type="checkbox"/> N=9	Multiplication I	3-4	Scott Foresman/TI	<input type="checkbox"/> N=2
<input type="checkbox"/> N=10	Division I	3-5	Scott Foresman/TI	<input type="checkbox"/> N=5
<input type="checkbox"/> N=3	Numeration I	1-2	Scott Foresman/TI	<input type="checkbox"/> N=0
<input type="checkbox"/> N=10	Addition	1-6	Milliken/TI	<input type="checkbox"/> N=5
<input type="checkbox"/> N=10	Subtraction	1-6	Milliken/TI	<input type="checkbox"/> N=5
<input type="checkbox"/> N=10	Multiplication	3-6	Milliken/TI	<input type="checkbox"/> N=8
<input type="checkbox"/> N=6	Number Magic	1-6	Texas Instruments	<input type="checkbox"/> N=0
<input type="checkbox"/> N=2	Computer Math Games II	2-6	Addison-Wesley/TI	<input type="checkbox"/> N=2
<input type="checkbox"/> N=2	Video Graphs	K-6	Texas Instruments	<input type="checkbox"/> N=0
<input type="checkbox"/> N=2	Touch Typing Tutor	3-6	Texas Instruments	<input type="checkbox"/> N=2

In what specific curriculum areas is software lacking?

See Attachment B-7.

What other needs in reading and math should be addressed?

See Attachment B-7.

What subjects areas have you emphasized in CAI, if any?

See Attachment B-7.

Did any or all of your students use the Touch Typing Tutor software?  Yes  No  
If YES, what is your opinion of it?

See Attachment B-7.

How important to computer use is learning to type?

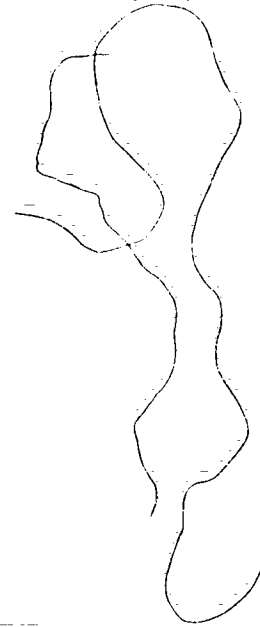


Figure B-2

RESPONSES FROM SIXTH GRADE TEACHERS TO ITEMS  
ON COMPUTER AWARENESS TEACHER QUESTIONNAIRE

(Page 1 of 4)

## CHAPTER 2 COMPUTER AWARENESS TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

How many hours did it take to teach all of the lessons of the Computer Awareness unit? 2.75 hours (N=1), 3.75 hours (N=1), 4 hours (N=2), 5 hours (N=1), 6 hours (N=2).

How many days did it take to teach the Computer Awareness unit? 5 days (N=3), 6 days (N=3), 7 days (N=1), 8 days (N=1), 10 days (N=1).

Did the lessons provide enough activities for the objectives of the Computer Awareness unit? (Check the objectives needing more activities.)

N=4 The student will define and use general computer technology,

N=3 The student will describe the various ways computing devices have been used historically.

N=4 The student can name the basic components of computer hardware.

N=5 The student will be able to explain the steps that a computer goes through in handling data (input, processing, memory, and output).

N=4 The student will be able to load and run software appropriate to his level of ability.

Did you use any other materials or activities not provided by the instructional coordinators to teach the Computer Awareness unit? N=5 Yes N=2 No  
If YES, please describe those that you think were good,

See Attachment 3-3.

What subject areas have you emphasized in Computer Assisted Instruction?

See Attachment 3-3.

During the last month, how much of the average day was spent in Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

N=0 0-10 minutes N=5 10-20 minutes N=2 20-30 minutes N=1 30 minutes or more

On the average, how many days per week did students receive Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

N=2 1 day N=2 2 days N=0 3 days N=1 4 days N=3 5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computer (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes N=8

No N=1

Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-8.

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14.)

Yes N=8

No N=1

Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-8.

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list, please check the five modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	ALLOCATION OF SOFTWARE			HIGHEST-RANKED SOFTWARE MODULES
	NAME OF MODULE	GRADE LEVEL	COMPANY	
N=2	*Early Reading	1	Scott Foresman/TI	N=1
N=4	Reading Roundup	4	Scott Foresman/TI	N=3
N=6	Reading Rally	5	Scott Foresman/TI	N=5
N=5	Reading Flight	6	Scott Foresman/TI	N=4
N=2	*Early Learning Fun	K-1	Texas Instruments	N=0
N=1	*Number Magic	1-6	Texas Instruments	N=0
N=7	Multiplication I	3-4	Scott Foresman/TI	N=2
N=6	Division I	3-5	Scott Foresman/TI	N=1
N=5	Addition	1-6	Milliken/TI	N=1
N=5	Subtraction	1-6	Milliken/TI	N=1
N=7	Multiplication	3-6	Milliken/TI	N=2
N=7	Division	3-6	Milliken/TI	N=1
N=6	Fractions	3-6	Milliken/TI	N=1
N=6	Decimals	5-6	Milliken/TI	N=0
N=7	Percents	5-6	Milliken/TI	N=1
N=2	Computer Math Games II	2-6	Addison-Wesley/TI	N=1
N=2	Hangman	1-6	Texas Instruments	N=1
N=4	Video Graphs	K-6	Texas Instruments	N=3
N=4	Touch Typing Tutor	3-6	Texas Instruments	N=2

\*K-6 schools without kindergarten will not receive the starred modules.

In what specific curriculum areas is software lacking?

See Attachment B-3.

What other needs in reading and math should be addressed?

See Attachment B-3.

Did any or all of your students use the Touch Typing Tutor software module?

N=5 Yes N=3 No

If YES, what is your opinion of it?

See Attachment B-8.

How important to computer use is learning to type?

Very Unimportant	Unimportant	Important	Very Important
N=2	N=1	N=4	N=0



Figure B-3

RESPONSES FROM THIRD GRADE TEACHERS TO ITEMS  
ON COMPUTER LITERACY TEACHER QUESTIONNAIRE

(Page 1 of 3)

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

## CHAPTER 2 COMPUTER LITERACY TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

During the last month, what is the average amount of time per day that was spent in Computer Literacy Instruction and/or Computer Assisted Instruction?

N=14 0-10 minutes    N=8 10-20 minutes    N=5 20-30 minutes    N=1 30 minutes or more

During the last month, how many days per week did students receive Computer Literacy Instruction and/or Computer Assisted Instruction on the average?

N=16 1 day    N=4 2 days    N=3 3 days    N=3 4 days    N=0 5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computers (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes N=29    No N=2    Did Not Attend N=1

If NO, please describe what was lacking.

See Attachment B-9.

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14 in your school.)

Yes N=26    No N=5    Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-9.

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

63

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list please check the five software modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	NAME OF MODULES	GRADE LEVEL	COMPANY	HIGHEST-RANKED SOFTWARE MODULES
N=13	Early Reading	1	Scott Foresman/TI	N=8
N=12	Reading Fun	2	Scott Foresman/TI	N=6
N=3	Reading On	3	Scott Foresman/TI	N=0
N=14	Early Learning Fun	K-1	Texas Instruments	N=9
N=6	Beginning Grammar	2-5	Texas Instruments	N=4
N=18	Addition/Subtraction I	1-2	Scott Foresman/TI	N=7
N=12	Addition/Subtraction II	1-2	Scott Foresman/TI	N=1
N=7	Multiplication I	3-4	Scott Foresman/TI	N=1
N=5	Division I	3-5	Scott Foresman/TI	N=0
N=10	Numeration I	1-2	Scott Foresman/TI	N=4
N=11	Addition	1-6	Milliken/TI	N=4
N=10	Subtraction	1-6	Milliken/TI	N=5
N=3	Multiplication	3-6	Milliken/TI	N=1
N=9	Number Magic	1-6	Texas Instruments	N=4
N=4	Computer Math Games II	2-6	Addison-Wesley/TI	N=1
N=3	Video Graphs	K-6	Texas Instruments	N=2
N=1	Touch Typing Tutor	3-6	Texas Instruments	N=1

In what specific curriculum areas is software lacking?

See Attachment B-9.

What other needs in reading and math should be addressed?

See Attachment B-9.

What subjects areas have you emphasized in CAI, if any?

See Attachment B-9.

Did any or all of your students use the Touch Typing Tutor software module? N=1 Yes N= No  
If YES, what is your opinion of it? 21

No responses received to this item.

64

How important to computer use is learning to type?

Very Unimportant N=1 (4%)      Unimportant N=5 (20%)      Important N=10 (40%)      Very Important N=9 (36%)  
R=21

Figure B-4

RESPONSES FROM SIXTH GRADE TEACHERS TO ITEMS  
ON COMPUTER LITERACY TEACHER QUESTIONNAIRE

(Page 1 of 3)

## CHAPTER 2 COMPUTER LITERACY TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

During the last month, what is the average amount of time per day that was spent in Computer Literacy Instruction and/or Computer Assisted Instruction?

N=7 0-10 minutes    N=7 10-20 minutes    N=9 20-30 minutes    N=10 30 minutes or more

During the last month, how many days per week did students receive Computer Literacy Instruction and/or Computer Assisted Instruction on the average?

N=7 1 day    N=12 2 days    N=3 3 days    N=3 4 days    N=6 5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computers (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes N=32

No N=1

Did Not Attend N=0

If NO, please describe what was lacking.

See Attachment B-10.

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 18 in your school.)

Yes N=25

No N=0

Did Not Attend N=1

If NO, please describe what was lacking.

See Attachment B-10.

Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list, please check the five modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	ALLOCATION OF SOFTWARE			HIGHEST-RANKED SOFTWARE MODULES
	NAME OF MODULE	GRADE LEVEL	COMPANY	
N=4	*Early Reading	1	Scott Foresman/TI	N=4
N=5	Reading Roundup	4	Scott Foresman/TI	N=3
N=6	Reading Rally	5	Scott Foresman/TI	N=6
N=6	Reading Flight	6	Scott Foresman/TI	N=3
N=5	*Early Learning Fun	K-1	Texas Instruments	N=5
N=8	*Number Magic	1-6	Texas Instruments	N=6
N=6	Multiplication I	3-4	Scott Foresman/TI	N=3
N=6	Division I	3-5	Scott Foresman/TI	N=2
N=11	Addition	1-6	Milliken/TI	N=2
N=9	Subtraction	1-6	Milliken/TI	N=3
N=9	Multiplication	3-6	Milliken/TI	N=4
N=8	Division	3-6	Milliken/TI	N=1
N=6	Fractions	3-6	Milliken/TI	N=2
N=5	Decimals	5-6	Milliken/TI	N=1
N=2	Percents	5-6	Milliken/TI	N=1
N=4	Computer Math Games II	2-6	Addison-Wesley/TI	N=2
N=2	Hangman	1-6	Texas Instruments	N=0
N=5	Video Graphs	K-6	Texas Instruments	N=4
N=6	Touch Typing Tutor	3-6	Texas Instruments	N=2

\*1-6 schools without kindergarten will not receive the starred modules.

In what specific curriculum areas is software lacking?

See Attachment B-10.

What other needs in reading and math should be addressed?

See Attachment B-10

Did any or all of your students use the Touch Typing Tutor software module?

N=5 Yes N=15 No

If YES, what is your opinion of it?

See Attachment B-10.

How important to computer use is learning to type?

Very Unimportant	Unimportant	Important	Very Important
N=1 (5%)	N=3 (15%)	N=13 (65%)	N=3 (15%)

Attachment B-1

COMPUTER AWARENESS TEACHER QUESTIONNAIRE  
DISTRIBUTED TO K-3 SCHOOLS

(Page 1 of 4)

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AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

## CHAPTER 2 COMPUTER AWARENESS TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

How many hours did it take to teach all of the lessons of the Computer Awareness unit? \_\_\_\_\_

How many days did it take to teach the Computer Awareness unit? \_\_\_\_\_

Did the lessons provide enough activities for the objectives of the Computer Awareness unit? (Check the objectives needing more activities.)

\_\_\_\_\_ The student will define and use general computer technology;

\_\_\_\_\_ The student will describe the various ways computing devices have been used historically.

\_\_\_\_\_ The student can name the basic components of computer hardware.

\_\_\_\_\_ The student will be able to explain the steps that a computer goes through in handling data (input, processing, memory, and output).

\_\_\_\_\_ The student will be able to load and run software appropriate to his level of ability.

Did you use any other materials or activities not provided by the instructional coordinators to teach the Computer Awareness unit? Yes No

If YES, please describe those that you think were good.

What subject areas have you emphasized in Computer Assisted Instruction?

During the last month, how much of the average day was spent in Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

\_\_\_\_\_ 0-10 minutes \_\_\_\_\_ 10-20 minutes \_\_\_\_\_ 20-30 minutes \_\_\_\_\_ 30 minutes or more

On the average, how many days per week did students receive Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

\_\_\_\_\_ 1 day \_\_\_\_\_ 2 days \_\_\_\_\_ 3 days \_\_\_\_\_ 4 days \_\_\_\_\_ 5 days



Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computer (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes \_\_\_\_\_ No \_\_\_\_\_ Did Not Attend \_\_\_\_\_  
If NO, please describe what was lacking.

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14.)

Yes \_\_\_\_\_ No \_\_\_\_\_ Did Not Attend \_\_\_\_\_  
If NO, please describe what was lacking.

\*\*\*\*\*  
Please fill in your school name and your position (1st grade teacher, SCE teacher, etc.)

SCHOOL: \_\_\_\_\_

POSITION: \_\_\_\_\_ 70

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list please check the five software modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	NAME OF MODULES	GRADE LEVEL	COMPANY	HIGHEST-RANKED SOFTWARE MODULES
_____	Early Reading	1	Scott Foresman/TI	_____
_____	Reading Fun	2	Scott Foresman/TI	_____
_____	Reading On	3	Scott Foresman/TI	_____
_____	Early Learning Fun	K-1	Texas Instruments	_____
_____	Beginning Grammar	2-5	Texas Instruments	_____
_____	Addition/Subtraction I	1-2	Scott Foresman/TI	_____
_____	Addition/Subtraction II	1-2	Scott Foresman/TI	_____
_____	Multiplication I	3-4	Scott Foresman/TI	_____
_____	Division I	3-5	Scott Foresman/TI	_____
_____	Numeration I	1-2	Scott Foresman/TI	_____
_____	Addition	1-6	Milliken/TI	_____
_____	Subtraction	1-6	Milliken/TI	_____
_____	Multiplication	3-6	Milliken/TI	_____
_____	Number Magic	1-6	Texas Instruments	_____
_____	Computer Math Games II	2-6	Addison-Wesley/TI	_____
_____	Video Graphs	K-6	Texas Instruments	_____
_____	Touch Typing Tutor	3-6	Texas Instruments	_____

In what specific curriculum areas is software lacking?

What other needs in reading and math should be addressed?

Did any or all of your students use the Touch Typing Tutor software module?  Yes  No  
If YES, what is your opinion of it?

How important to computer use is learning to type?

Very  
Unimportant

Unimportant

Important

Very  
Important

Attachment B-2

COMPUTER LITERACY TEACHER QUESTIONNAIRE  
DISTRIBUTED TO K-3 SCHOOLS

(Page 1 of 3)

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

CHAPTER 2 COMPUTER LITERACY TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE

During the last month, what is the average amount of time per day that was spent in Computer Literacy Instruction and/or Computer Assisted Instruction?

0-10 minutes     10-20 minutes     20-30 minutes     30 minutes or more

During the last month, how many days per week did students receive Computer Literacy Instruction and/or Computer Assisted Instruction on the average?

1 day     2 days     3 days     4 days     5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computers (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes     No     Did Not Attend

If NO, please describe what was lacking.

EQGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14 in your school.)

Yes     No     Did Not Attend

If NO, please describe what was lacking.

-----  
Please fill in your school name and your position (4th grade teacher, SPS teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

7.3

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list please check the five software modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	NAME OF MODULES	GRADE LEVEL	COMPANY	HIGHEST-RANKED SOFTWARE MODULES
<input type="checkbox"/>	Early Reading	1	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Fun	2	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading On	3	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Early Learning Fun	K-1	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Beginning Grammar	2-5	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Addition/Subtraction I	1-2	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Addition/Subtraction II	1-2	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication I	3-4	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Division I	3-5	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Numeration I	1-2	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Addition	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Subtraction	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Number Magic	1-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Computer Math Games II	2-6	Addison-Wesley/TI	<input type="checkbox"/>
<input type="checkbox"/>	Video Games	K-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Touch Typing Tutor	3-6	Texas Instruments	<input type="checkbox"/>

In what specific curriculum areas is software lacking?

What other needs in reading and math should be addressed?

What subjects areas have you emphasized in CAI, if any?

Did any or all of your students use the Touch Typing Tutor software module?  Yes  No  
If YES, what is your opinion of it?

How important to computer use is learning to type?

7.1

Very Unimportant                      Unimportant                      Important                      Very Important

82.45

Attachment B-3

COMPUTER AWARENESS TEACHER QUESTIONNAIRE  
DISTRIBUTED TO K, 4-6 SCHOOLS

(Page 1 of 4)

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B-35

## CHAPTER 2 COMPUTER AWARENESS TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

How many hours did it take to teach all of the lessons of the Computer Awareness unit? \_\_\_\_\_

How many days did it take to teach the Computer Awareness unit? \_\_\_\_\_

Did the lessons provide enough activities for the objectives of the Computer Awareness unit? (Check the objectives needing more activities.)

\_\_\_\_\_ The student will define and use general computer technology.

\_\_\_\_\_ The student will describe the various ways computing devices have been used historically.

\_\_\_\_\_ The student can name the basic components of computer hardware.

\_\_\_\_\_ The student will be able to explain the steps that a computer goes through in handling data (input, processing, memory, and output).

\_\_\_\_\_ The student will be able to load and run software appropriate to his level of ability.

Did you use any other materials or activities not provided by the instructional coordinators to teach the Computer Awareness unit? \_\_\_\_\_ Yes \_\_\_\_\_ No

If YES, please describe those that you think were good.

What subject areas have you emphasized in Computer Assisted Instruction?

During the last month, how much of the average day was spent in Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

\_\_\_\_\_ 0-10 minutes \_\_\_\_\_ 10-20 minutes \_\_\_\_\_ 20-30 minutes \_\_\_\_\_ 30 minutes or more

On the average, how many days per week did students receive Computer Assisted Instruction or Computer Literacy activities not included in the Computer Awareness unit?

\_\_\_\_\_ 1 day \_\_\_\_\_ 2 days \_\_\_\_\_ 3 days \_\_\_\_\_ 4 days \_\_\_\_\_ 5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computer (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes  No  Did Not Attend

If NO, please describe what was lacking.

Y

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14.)

Yes  No  Did Not Attend

If NO, please describe what was lacking.

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_ 77



Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list, please check the five modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	ALLOCATION OF SOFTWARE			HIGHEST-RANKED SOFTWARE MODULES
	NAME OF MODULE	GRADE LEVEL	COMPANY	
<input type="checkbox"/>	*Early Reading	1	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Roundup	4	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Rally	5	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Flight	6	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	*Early Learning Fun	K-1	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	*Number Magic	1-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication I	3-4	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Division I	3-5	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Addition	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Subtraction	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Division	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Fractions	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Decimals	5-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Percents	5-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Computer Math Games II	2-6	Addison-Wesley/TI	<input type="checkbox"/>
<input type="checkbox"/>	Hangman	1-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Video Graphs	K-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Touch Typing Tutor	3-6	Texas Instruments	<input type="checkbox"/>

\*4-6 schools without kindergarten will not receive the starred modules.

In what specific curriculum areas is software lacking?

What other needs in reading and math should be addressed?

Did any or all of your students use the Touch Typing Tutor software module?

Yes  No

If YES, what is your opinion of it?

How important to computer use is learning to type?

Very Unimportant                      Important                      Very Important

Attachment B-4

COMPUTER LITERACY TEACHER QUESTIONNAIRE  
DISTRIBUTED TO K, 4-6 SCHOOLS

(Page 1 of 3)

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AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

CHAPTER 2 COMPUTER LITERACY TEACHER QUESTIONNAIRE

PLEASE READ EACH STATEMENT BELOW AND CHECK OR CIRCLE THE RESPONSE THAT IS MOST APPROPRIATE.

During the last month, what is the average amount of time per day that was spent in Computer Literacy Instruction and/or Computer Assisted Instruction?

0-10 minutes     10-20 minutes     20-30 minutes     30 minutes or more

During the last month, how many days per week did students receive Computer Literacy Instruction and/or Computer Assisted Instruction on the average?

1 day     2 days     3 days     4 days     5 days

Earlier we asked for your evaluation of the staff development activities in which you participated. Now that you have had an opportunity to teach your students using the computers, we would like a follow-up evaluation. Please respond only to the sessions in which you participated.

Was there enough staff development in the following areas?

Introduction to Computers (Two 3-hour sessions offered March 21 - March 31 in your school.)

Yes     No     Did Not Attend

If NO, please describe what was lacking:

LOGO or BASIC Training (Five optional 3-hour sessions in a programming language offered April 11 - May 14 in your school.)

Yes     No     Did Not Attend

If NO, please describe what was lacking:

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, 5th teacher, etc.)

SCHOOL \_\_\_\_\_

POSITION \_\_\_\_\_

Below is a list of the software modules your school received. In the column to the left of the list please check the software modules you thought were appropriate for your students. In the column to the right of the list, please check the five modules you would give the highest ranking.

APPROPRIATE FOR STUDENTS	ALLOCATION OF SOFTWARE			HIGHEST-RANKED SOFTWARE MODULES
	NAME OF MODULE	GRADE LEVEL	COMPANY	
<input type="checkbox"/>	*Early Reading	1	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Roundup	4	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Rally	5	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Reading Flight	6	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	*Early Learning Fun	K-1	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	*Number Magic	1-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication I	3-4	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Division I	3-5	Scott Foresman/TI	<input type="checkbox"/>
<input type="checkbox"/>	Addition	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Subtraction	1-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Multiplication	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Division	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Fractions	3-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Decimals	5-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Percents	5-6	Milliken/TI	<input type="checkbox"/>
<input type="checkbox"/>	Computer Math Games II	2-6	Addison-Wesley/TI	<input type="checkbox"/>
<input type="checkbox"/>	Hangman	1-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Video Graphs	K-6	Texas Instruments	<input type="checkbox"/>
<input type="checkbox"/>	Touch Typing Tutor	3-6	Texas Instruments	<input type="checkbox"/>

\*K-6 schools without kindergarten will not receive the starred modules.

In what specific curriculum areas is software lacking?

What other needs in reading and math should be addressed?

Did any or all of your students use the Touch Typing Tutor software module?

Yes  No

If YES, what is your opinion of it?

How important to computer use is learning to type?

Very Unimportant      Unimportant      Important      Very Important

May 23, 1983

TO: Chapter 2 Computer Literacy Principals  
FROM: David Doss  
SUBJECT: Computer Literacy Teacher Questionnaire

Part of the evaluation of the Chapter 2—Discretionary Computer Literacy program is to survey teachers in Chapter 2 schools about how the program was implemented in their classrooms. The enclosed questionnaires include items concerning computer literacy instruction, staff development, and software. There are two versions of the questionnaire to be distributed as follows:

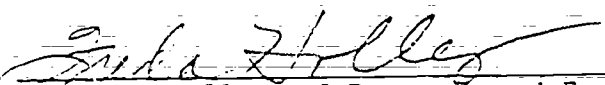
Chapter 2 Computer Awareness Teacher Questionnaire: to be completed by teachers teaching the 3rd or 6th grade Computer Awareness Unit.

Chapter 2 Computer Literacy Teacher Questionnaire: to be completed by the remaining classroom teachers.

Please pass these out to your teachers and have them return the completed questionnaire through the school mail by May 27, 1983 to:

Lauren Moede, ORE  
Adm. Bldg.; Box 79

If you have any questions about this questionnaire, call me at 458-1227.

Approved:   
Director, Office of Research and Evaluation

Approved:   
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Yolanda Leo  
Leslie Cohen

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

May 23, 1983

TO: Teachers Addressed  
FROM: David Doss  
SUBJECT: Computer Literacy Teacher Questionnaire

Part of the evaluation of the Chapter 2--Discretionary Computer Literacy component is to survey teachers in Chapter 2 schools about how the program was implemented in their classrooms. The attached questionnaire includes items concerning computer literacy instruction, staff development, and software. The following definitions explain terms used in this questionnaire:

Computer Awareness Unit: instruction in computer use offered to 3rd and 6th grade students in Chapter 2 schools during the 1982-83 school year.

Computer Literacy Instruction: instruction in computer use offered to students not receiving instruction in the Computer Awareness Unit during the 1982-83 school year.

Computer Assisted Instruction: Provides remedial, reinforcement, or enrichment activities through the use of computer programs (Drill and Practice, Tutorial, Simulation, and Problem Solving).

Please complete the questionnaire and return it through the school mail by May 27, 1983 to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

LM:rrf  
Attachment

Approved: Lauren M. Moede  
Director, Office of Research and Evaluation

Approved: [Signature]  
Assis Intendent, Elementary Education

cc: Ann Cunningham  
Leslie Cohen  
Yolanda Leo  
Chapter 2 Computer Literacy Principals



Attachment B-7

RESPONSES FROM THIRD GRADE TEACHERS TO OPEN-ENDED QUESTIONS  
ON COMPUTER AWARENESS TEACHER QUESTIONNAIRE

(Page 1 of 8)

B-7

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

Did you use any materials or activities not provided by the instructional coordinators to teach the Computer Awareness Unit?

If YES, please describe those that you think were good.

Response	Number Responding
ACTIVITIES SUGGESTED	3
1. We practiced giving detailed step-by-step instructions for simple tasks so the children could understand that computers can't think but must be carefully instructed in order for a program to work.	1
2. I had the students "echo" back responses concerning the computer. Example: Students echoed back the procedure to turn off and turn on the computer.	1
3. Techniques using LOGO.	1
UNIT RECEIVED LATE	2
1. I would have done other things with this unit but we received the unit late and we were pressed for time.	1
2. However, this was due to the lateness in which we received our units. We were barely able to squeeze in the unit! The unit deserves much longer than 3 days--probably more like two weeks.	1
MATERIALS SUGGESTED	1
1. "Turtle News" from YPLA LOGO Association.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	4



## COMPUTER AWARENESS TEACHER QUES AIRE

*What subject areas have you emphasized in Computer Assisted Instruction?*

Response	Number Responding
SUBJECT AREAS EMPHASIZED	5
1. English and math.	1
2. Math/reading. Would like more social studies and science.	1
3. Spelling.	1
4. Math, geometric reasoning; Spanish, art, reading directions.	1
5. Math and grammar. We really need some good social studies and science software that are correlated to our district units and essential comp. ncies	1
MISCELLANEOUS	1
1. That it is necessary to give specific instructions to a computer.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	4

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*Was there enough staff development in the following areas?*

*Introduction to Computers*

*If NO, please describe what was lacking.*

Response	Number Responding
MORE PROGRAMMING	1
1: More LOGO programming "BASIC":	1
TOTAL RESPONSES	1
SURVEYS WITH NO RESPONSE	9

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

LOGO or BASIC Training

If NO, please describe what was lacking.

Response	Number Responding
SUGGESTIONS	3
1. The sessions needed a <u>printed</u> guide.	1
2. More diskette saving procedure.	1
3. Would prefer more time on BASIC.	1
TOTAL RESPONSES	3
SURVEYS WITH NO RESPONSE	7

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*In what specific curriculum areas is software lacking?*

Response	Number Responding
CURRICULUM AREAS	9
1. Spelling--drill and practice to coincide with spelling units would be very beneficial.	2
2. Reading and grammar.	1
3. Reading and spelling.	1
4. Language and science.	1
5. Social studies, science, reading.	1
6. Social studies and science.	1
7. Fractions, stated problems.	1
8. Bilingual education, ESL, science simulations, social studies.	1
TOTAL RESPONSES	9
SURVEYS WITH NO RESPONSE	1

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*What other needs in reading and math should be addressed?*

Response	Number Responding
NEEDS IN READING	3
1. Reading--finding the main idea, topic sentence, details; sequencing.	1
Grammar--punctuation, capitalization, usage.	1
2. Comprehension and usage.	1
3. Reading comprehension and grammar.	1
MISCELLANEOUS NEEDS	3
1. We could use really good reading and math management systems correlated to our basals and adopted texts. Systems that pre- and post-test; signal problem areas; and provide correlated activities. We could use much more software designed to drill the students in language usage; punctuation and capitalization, and reading vocabulary and comprehension tested in TABS and ITBS.	1
2. Spanish reading with voice synthesizer, ESL with synthesizer, math fun games instead of just drills.	1
3. Graphs, money, fractions, vocabulary.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	4

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*Did any or all of your students use the Touch Typing Tutor software module?*

*If YES, what is your opinion of it?*

Response	Number Responding
MISCELLANEOUS	1
1. Didn't find the time because we only received it a week or two ago.	1
TOTAL RESPONSES	1
SURVEYS WITH NO RESPONSE	0

Attachment B-8

RESPONSES FROM SIXTH GRADE TEACHERS TO OPEN-ENDED QUESTIONS  
ON COMPUTER AWARENESS TEACHER QUESTIONNAIRE

(Page 1 of 9)

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*Did you use any other materials or activities not provided by the instructional coordinator to teach the Computer Awareness Unit?*

*If YES, please describe those that you think were good.*

Response	Number Responding
<b>MATERIALS SUGGESTED</b>	<b>4</b>
1. I used programs in a paperback book by Susan Lipscomb and Margaret Zuenich called <u>A Kid's Guide to BASIC Programming: BASIC Fun</u> . Cost \$2.25--an Avon Camelot book.	1
2. Computer booklet that was given to teachers of Chapter 1 schools.	1
3. TI software.	1
4. Everything that I have accumulated over the last two years.	1
<b>ACTIVITIES SUGGESTED</b>	<b>2</b>
1. Had to supplement and provide enrichment activities.	1
2. Because of levels of ability in my math class (from absolutely zero to 4 magnet classes), my approach was somewhat different than the exact lessons. They were <u>compressed</u> and I used the new TI 99/4 BASICS book to teach some BASIC programs that the magnet students <u>had not</u> done in order to cover objectives.	1
<b>MISCELLANEOUS</b>	<b>1</b>
1. Our approach to computers was somewhat different from what this form would indicate that we should have studied. We had a special computer teacher who led the students in a "hands on" work period with computers. I feel that students really gained a lot of understanding about computers through working with computers for 1½ hours once each week for about 5 weeks. This unit--along with the pre-test--came too late for us to work it into our planning. We did use the post-test; since the unit	



as designed here was not taught, student scores  
may not have much meaning.

1

---

TOTAL RESPONSES	7
-----------------	---

---

SURVEYS WITH NO RESPONSE	3
--------------------------	---

---

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*What subject areas have you emphasized in Computer Assisted Instruction?*

Response	Number Responding
SUBJECT AREAS EMPHASIZED	3
1. Reading and math.	1
2. Reading/math/spelling.	1
3. Math.	1
MISCELLANEOUS	3
1. What the computer <u>could</u> do, i.e., color, sound graphics in BASIC.	1
2. Purpose and use of computers in today's business.	1
3. Only received first two lessons in teaching this unit.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	4

9.3

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

*Introduction to Computers*

If NO, please describe what was lacking.

Response	Number Responding
POSITIVE COMMENTS	1
1. I felt these two sessions were the best ones. The other sessions I attended were boring and not effectively prepared or taught by instructors.	1
NEGATIVE COMMENTS	1
1. For the average teacher with no background, it was unrealistic to expect them to teach after so little instruction. Most did not even feel comfortable themselves. If by "enough" you mean <u>just</u> to be acquainted, then it was probably okay.	1
TOTAL RESPONSES	2
SURVEYS WITH NO RESPONSE	8

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

LOGO or BASIC Training

If NO, please describe what was lacking.

Response	Number Responding
NEGATIVE COMMENTS	2
1. Ineffective leaders, not prepared, inability to share knowledge, inability to control or hold group's attention.	1
2. It was difficult to find time for the teacher to practice during the school week, given the particular time frame and schedules in effect at Gullett; i.e., after school magnet. Also, when the classroom teacher was only allowed <u>one</u> time slot, for <u>one</u> week in which to take a class (math) and no other time was <u>available</u> in the schedule to take either a classroom (homeroom) or a math class then the lessons assigned could not be covered as written. A great deal depended on particular teacher's schedule.	1
SUGGESTIONS	1
1. Yes, but could have used more application time with computers.	1
TOTAL RESPONSES	3
SURVEYS WITH NO RESPONSE	7

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*In what specific curriculum areas is software lacking?*

Response	Number Responding
CURRICULUM AREA	7
1. Reading, language arts.	1
2. In language arts, grammar, spelling and logical thinking!	1
3. Spelling, English, social studies, manners.	1
4. Higher level math and reading.	1
5. Social studies.	1
6. Science for TI.	1
7. Social studies and science--need for actual modules to go with AISD curriculum.	1
TOTAL RESPONSES	7
SURVEYS WITH NO RESPONSE	3

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*What other needs in reading and math should be addressed?*

Response	Number Responding
MISCELLANEOUS	6
1. Word problems (problem solving).	1
2. All skills at all levels. My children are highly motivated by the software with games included as a reward.	1
3. Skills.	1
4. Higher level.	1
5. What about science?	1
6. None.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	4

## COMPUTER AWARENESS TEACHER QUESTIONNAIRE

*Did any or all of your students use the Touch Typing Tutor software module?*

*If YES, what is your opinion of it?*

Response	Number Responding
POSITIVE COMMENTS	2
1. Very good.	1
2. Fun--easy to understand--good practice.	1
NEGATIVE COMMENTS	2
1. Children used it as a game and not as an actual typing skill.	1
2. They became bored with it unless I was there to help them one on one.	1
TOTAL RESPONSES	4
SURVEYS WITH NO RESPONSE	6

100

Attachment B-9

RESPONSES FROM THIRD GRADE TEACHERS TO OPEN-ENDED QUESTIONS  
ON COMPUTER LITERACY TEACHER QUESTIONNAIRE

(Page 1 of 7)

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B-63



## COMPUTER LITERACY TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

*Introduction to Computers*

If NO, please describe what was lacking.

Response	Number Responding
MISCELLANEOUS	2
1. Time is needed to become familiar with materials.	1
2. Plans for "How to teach the children" very much lacking.	1
TOTAL RESPONSES	2
SURVEYS WITH NO RESPONSE	30

10c

COMPUTER LITERACY TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

LOGO or BASIC Training

If NO, please describe what was lacking.

Response	Number Responding
NOT ENOUGH TIME OR TRAINING	4
1. In my situation, there was not enough time for practicing concepts and skills learned.	1
2. BASIC Training was a one afternoon introduction only.	1
3. Needed more training in BASIC. One instructor would tell us to type in programs but we often didn't know why we were doing it, or how it would benefit us later.	1
4. I think we could have been shown a lot more activities and facets of computers.	1
TRAINING NOT APPLICABLE TO TEACHING	2
1. I feel there was a lot of information offered but it was thrown at us so fast. Five three-hour sessions is overwhelming. Then we are expected to turn around and teach the information. This is something that can't be taught and mastered overnight.	1
2. Too much time spent on impractical or useless concepts--not applicable to classroom instruction. Much time wasted.	1
MISCELLANEOUS	2
1. One session in BASIC left me more confused about it than I already was. There was a problem with the instructors in that they would tell us to do something--but not why. I feel that I can punch buttons--but have no idea what I'm doing or why.	1
2. Sessions did not proceed in a logical step-by-step manner. Instruction was spotty with many gaps.	1

82.45 .

Attachment B-9  
(Page 4 of 7)

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TOTAL RESPONSES	8
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SURVEYS WITH NO RESPONSE	24
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104

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

*In what specific curriculum areas is software lacking?*

Response	Number Responding
<b>CURRICULUM AREAS</b>	<b>10</b>
1. Since we've received no software in the area of reading--that area is lacking.	2
2. More on reading and early vocabulary--putting words together to form sentences, etc., for special needs students.	1
3. Reading and math.	1
4. Reading, beginning sounds.	1
5. Language arts.	1
6. <u>Logic</u> (as in mind benders)-- <u>spelling</u> .	1
7. Reading, social studies, science.	1
8. Simple science and social studies.	1
9. Social studies and science.	1
<b>KINDERGARTEN SOFTWARE</b>	<b>4</b>
1. We need more K software in all areas.	3
2. There are not enough different kinds of software for the early childhood/kindergarten level.	1
<b>MISCELLANEOUS</b>	<b>3</b>
1. I am not familiar enough with the software modules to respond.	1
2. Have not had time to find out.	1
3. None.	1

82.45

Attachment B-9  
(Page 6 of 7)

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TOTAL RESPONSES	17
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SURVEYS WITH NO RESPONSE	15
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106

B-68

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

*What other needs in reading and math should be addressed?*

Response	Number Responding
NEEDS IN READING	5
1. Rules of grammar.	1
2. Grammar, reading, comprehension, rhyming words.	1
3. Specific word analysis skills.	1
4. Comprehension, simple words, sight words.	1
5. Comprehension, easy words, short and long vowels.	1
NEEDS IN MATH	4
1. Decoding skills--lots of comprehension, math-- problem solving. Word problems.	1
2. Telling time, fractions, sequencing.	1
3. Number sequence, counting by fives and tens. Word problems, fractions.	1
4. Measurement (metric and English); geometry, money, time.	1
MISCELLANEOUS	3
1. Pre-reading skills and pre-math skills.	1
2. I am not familiar enough with the software modules to respond.	1
3. None whatsoever!	1
TOTAL RESPONSES	12
SURVEYS WITH NO RESPONSE	20

82.45

Attachment B-10

RESPONSES FROM SIXTH GRADE TEACHERS TO OPEN-ENDED QUESTIONS  
ON COMPUTER LITERACY TEACHER QUESTIONNAIRE

(Page 1 of 7)

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B-71

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

*Introduction to Computers*

If NO, please describe what was lacking.

Response	Number Responding
QUALITY LACKING	1
1. Clear instruction:	1
TOTAL RESPONSES	1
SURVEYS WITH NO RESPONSE	32



## COMPUTER LITERACY TEACHER QUESTIONNAIRE

Was there enough staff development in the following areas?

LOGO or BASIC Training

If NO, please describe what was lacking.

Response	Number Responding
QUALITIES LACKING	7
1. The only thing lacking was that too many people were being trained at the end of a long day. The noise level was too high for the instruction. Handouts should have been prepared ahead of time--most were given out <u>after</u> instruction, which complicated matters.	1
2. Need more practice time and a slower paced instructor to be competent in teaching BASIC programming:	1
3. Needed a <u>scheduled</u> practice period each week. Would like a refresher course next fall!	1
4. I wish that I had received actual lesson plans developed <u>by a teacher</u> who understands children as well as she/he understands computers.	1
5. The instruction was not well organized. LOGO--1 session, then BASIC--2 sessions--then back to LOGO. One instructor was incoherent in his explanations. Other instructor was clear and well organized.	1
6. Did not address class management, beginning strategies, did not provide materials early enough to study. Did not relate well to classroom implementation.	1
7. Clear instruction.	1
MISCELLANEOUS	1
1. But...I need more!	1

82.45

Attachment B-10  
(Page 4 of 7)

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TOTAL RESPONSES

8

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SURVEYS WITH NO RESPONSE

25

111

B-74

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

*In what specific curriculum areas is software lacking?*

Response	Number Responding
CURRICULUM AREAS	6
1. Vocabulary in spelling area, English usage.	1
2. Language area; reading; geometry.	1
3. Higher level math and reading.	1
4. Reading, language arts, science, social studies.	1
5. Social studies and science, <u>more</u> math and reading!	1
6. Social studies.	1
SPECIAL AREAS	4
1. Advanced for above average student so we won't have the same problem as we've experienced with system 80.	1
2. Special education modules.	1
3. Kindergarten, early childhood, bilingual.	1
4. Kindergarten areas.	1
TOTAL RESPONSES	10
SURVEYS WITH NO RESPONSE	23

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

*What other needs in reading and math should be addressed?*

Responses	Number Responding
NEEDS IN READING	2
1. Language arts skills--i.e., subject/verb agreement, correct word usage.	1
2. Word problems, more comprehension in reading; reading--study skills (maps, graphs, charts, etc.).	1
NEEDS IN MATH	2
1. Word problems on all levels in math. Any study skills.	1
2. Averaging.	1
MISCELLANEOUS	2
1. Reading and math games on computer for low functioning students.	1
2. Higher level:	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	27

## COMPUTER LITERACY TEACHER QUESTIONNAIRE

Did any or all of your students use the Touch Typing Tutor software module?

If YES, what is your opinion of it?

Response	Number Responding
POSITIVE COMMENTS	3
1. Very good.	1
2. I used one and it was helpful for review of the keyboard.	1
3. Useful at the beginning only for recognition of key places.	1
NEGATIVE COMMENTS	2
1. Didn't really <u>teach</u> typing (correct placement of fingers on keys). Would be good <u>practice</u> after teaching is done!	1
2. They were confused by it. Did not stick with it independently. They seemed not to understand its purpose.	1
MISCELLANEOUS	1
1. We used it to type certain letters of the alphabet.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	27

Chapter 2--Discretionary

Appendix C

COMPUTER LITERACY STAFF DEVELOPMENT EVALUATIONS

**INSTRUMENT DESCRIPTION: Computer Literacy Staff Development Evaluations**

**Brief Description of the Instrument:**

The Computer Literacy Staff Development Evaluations were used to gather information about the Introduction to Computers and the LOGO and BASIC Training staff development. The two versions of the evaluation forms included questions concerning the organization of the sessions, the effectiveness of the presenter, and the materials used.

**To whom was the instrument administered?**

To participants of the Introduction to Computers Staff Development and the LOGO or BASIC Training Staff Development.

**How many times was the instrument administered?**

Twice (once at the end of each staff development session).

**When was the instrument administered?**

At the end of each staff development session.

**Where was the instrument administered?**

In the schools.

**Who administered the instrument?**

Self-administered.

**What training did the administrators have?**

Instructions for completing the evaluation forms were provided.

**Was the instrument administered under standardized conditions?**

No.

**Were there problems with the instrument or the administration that might affect the validity of the data?**

None were identified.

**Who developed the instrument?**

The Office of Research and Evaluation, with input from program staff.

**What reliability and validity data are available on the instrument?**

None.

**Are there norm data available for interpreting the results?**

No.

## COMPUTER LITERACY STAFF DEVELOPMENT EVALUATIONS

## Purpose

Information from the Computer Literacy Staff Development Evaluations was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded, or revised?

Evaluation Question D1-1: How did the Computer Literacy Component differ from campus to campus with regard to the following:

- i. Which teachers were trained,
- j. Type of training received,
- k. Amount of training received?

Evaluation Question D1-4: How do the teachers evaluate the training they received?

## Procedure

Two staff development evaluation forms were created for the two types of staff development offered to staff in Chapter 2 Computer Literacy schools. The Chapter 2 Computer Literacy schools were Brooke, Campbell, Govalle, Gullett, Highland Park, Ortega, Read, and Sims.

The first evaluation form (see Attachment C-1) was used to evaluate the Introduction to Computers Staff Development, a six-hour training course offered at each Chapter 2 Computer Literacy school. Principals received a memo (see Attachment C-2) explaining how the forms were to be distributed, and enough copies of the form for each staff member.

The second evaluation form (see Attachment C-3) was used to evaluate the LOGO or BASIC Training Staff Development. Staff members in K-3 schools received LOGO training, while staff members in K, 4-6 received BASIC training (with the exception of kindergarten teachers, who received training at a K-3 Chapter 2 Computer Literacy school). Principals received a memo (see Attachment C-4) explaining how the forms were to be distributed, and enough copies of the form for each staff member. Extra copies of the form were sent to Gullett and Brooke, where additional training sessions were held to train teacher trainers.

Principals were asked to distribute the evaluation forms at the end of each of the three types of training sessions, then collect the forms and return them through the school mail. At Read, where the BASIC training was completed in one week, the evaluation forms were distributed after the last session.



At the bottom of each of the evaluation forms, teachers were asked to complete the name of their school, their grade level or special area, and the name(s) of the TI consultants (for the LOGO or BASIC training). This information was requested in order to determine which teachers at each school were trained.

The results of the evaluation forms were analyzed by type of training: Introduction to Computers, LOGO training, and BASIC training. Results will be discussed by these categories.

## Results

### Type and Amount of Training Received

All staff members in Chapter 2 Computer Literacy schools were eligible to participate in the Introduction to Computers staff development. This staff development consisted of two three-hour sessions held on each of the eight campuses. The sessions were held March 21-31, 1983.

The LOGO training was directed to K-3 teachers as well as to Special Education teachers. This training consisted of five three-hour sessions held at various campuses. The sessions were held during the weeks of April 11, 1983 to May 9, 1983.

The BASIC training was directed to 4-5 grade teachers. This training consisted of five three-hour sessions held at various campuses. The sessions were held during the weeks of April 11, 1983 to May 9, 1983.

### Teachers Trained

Classroom teachers, special area teachers, and other members of the school staffs participated in the Introduction to Computers staff development sessions. In general, all teachers in the Chapter 2 Computer Literacy schools participated in this training.

Classroom teachers, special area teachers, and a few members of the school staffs participated in the LOGO and BASIC training sessions. In general, a variety of teachers and staff members attended these sessions from each school (see Figure C-1). Teachers from schools other than the eight Chapter 2 schools also attended the LOGO and BASIC sessions. The teachers either came from private schools receiving Chapter 2 funding or were teachers from other AISD schools who will serve as teacher facilitators for future training sessions. The responses from these teachers' evaluation forms were included in the results in order to obtain a total perspective of the training sessions.

### Introduction to Computers Staff Development Evaluation

Of the 252 evaluation forms sent to principals for distribution, 217 were returned, for a return rate of 86%. Responses of the total group to all items can be found in Figure C-2:

The staff development participants were asked to rate the organization of the staff development sessions. Almost half (47.2%) of the participants reported that the organization was good, and almost a third (32.7%) said that the organization was excellent. Altogether then, about 80% thought the organization was at least good. While 18.2% reported that the organization was adequate, only 1.4% said it was poor, and .5% felt it was very poor.

Participants were asked their opinions of the ideas and activities presented. Ninety-one percent agreed that the ideas and activities were either interesting or very interesting. About 7.5% felt neutral about the ideas and activities, 2.9% said they were dull, and .5% felt they were very dull.

When asked about the pace of the sessions, almost two-thirds (64.7%) of the participants agreed that the pace was just right. Only 17.4% reported that the pace was fast, while 14.0% felt the pace was slow, 2.9% said it was too fast, and 1.0% said it was too slow. Those who did not think the pace was "just right" tended to think the pace was fast (20.3%) rather than slow (15%).

Participants were asked about the presenter's level of knowledge about computers. Of the participants responding, about half (50.7%) agreed that the presenter had a high level of knowledge. Almost a third (30.8%) of the participants felt the presenter had a very high level of knowledge about computers. Only 15.6% reported an intermediate level of knowledge, and 2.8% reported a low level of knowledge. No one felt the presenter's level of knowledge about computers was very low.

When asked how well the presenter communicated information concerning computers, approximately equal percentages reported that the presenter communicated information well (36.0%) or very well (37.4%). While 22.9% agreed that the presenter communicated information adequately, only 2.8% felt information was communicated poorly, and .9% felt information was communicated very poorly.

Participants surveyed were asked a question concerning the introduction to LOGO and BASIC they received. Almost half (46.9%) agreed that the introduction had been informative. More than a quarter (26.1%) thought the introduction was very informative, while 21.3% reported it had been adequate. Only 5.2% reported that the introduction had been confusing and .5% felt it had been very confusing.

The remaining item on the evaluation form asked participants to report how comfortable they felt about doing several computer-related activities. Generally, participants reported that they felt comfortable or very

comfortable with most of the tasks listed indicating that the training had been successful in reaching its objectives. Results from the individual items are listed below.

When asked how comfortable they felt about turning on the computer, the majority (83.3%) of the participants reported that they were very comfortable with this activity. About 14.4% felt comfortable, 1.4% felt very uncomfortable, and .9 felt neutral about turning on the computer.

Participants were asked about their ability to run software demonstrated during the staff development. Over half (64.2%) reported that they felt very comfortable with this activity, while 22.6% reported feeling comfortable. Only 9.4% were neutral about their ability to do this task, while an equal percentage (1.9%) felt uncomfortable or very uncomfortable.

When asked how comfortable they felt loading and running software not practiced with during the staff development, 37.9% reported they felt very comfortable with this activity, and 27.5% reported feeling comfortable. While 22.3% felt neutral, only 6.6% felt uncomfortable, and 5.7% felt very uncomfortable about this activity. When compared to the previous item concerning using software demonstrated during staff development, participants felt less comfortable using software not practiced with during the staff development.

Participants generally felt positive about their knowledge of the keyboard layout. An approximately equal percentage felt comfortable (41.6%) or very comfortable (44.9%) with their knowledge of the keyboard layout. Only 10.3% felt neutral about this function, while 1.9% felt uncomfortable, and 1.4% felt very uncomfortable with their knowledge of the keyboard layout.

When asked how comfortable they felt about the function of the special keys, almost half (49.1%) reported they were comfortable with this item. Approximately one-quarter (25.5%) of the participants felt very comfortable with this function, while 16.5% were neutral about this item. Only 7.5% felt uncomfortable and 1.4% felt very uncomfortable about the function of special keys.

Participants reported feeling the least comfortable with selecting the appropriate software to meet the needs of their students. Less than a third (32.7%) of the participants felt comfortable with this activity, while 28.8% were neutral about their ability to perform this task. Only 18.5% felt very comfortable about selecting software, while 1.4% reported feeling uncomfortable, and 4.4% felt very uncomfortable.

Participants were given the opportunity to make additional comments about the Introduction to Computers training. Comments were divided between positive and negative remarks with a number of suggestions for improving the training. Attachment C-5 lists the comments participants gave.

Several conclusions seem apparent from examining comments. First, the number of extremely positive comments seemed unusually high indicating a very strong interest in the topic.

Secondly, the range of knowledge held by teachers when they entered the training made the selection of content and the pace of presentation difficult for the presenters. Beginning and advanced sessions might have been helpful.

Thirdly, the mechanics of some of the presentations were weak. Handouts and better use of graphics were suggested.

The amount of time for practice with the commands was not sufficient for some teachers.

Finally, several teachers complained about the behavior of their fellow teachers, noting that they were sometimes disruptive and inattentive.

#### LOGO or BASIC Training Evaluation

Of the 302 evaluation forms sent to principals for distribution, 183 were returned, for a return rate of 60.6%. Of the evaluation forms returned, 122 were from LOGO training participants, and 61 were from BASIC training participants. Responses to all items from the LOGO training participants can be found in Figure C-3. Responses to all items from the BASIC training participants can be found in Figure C-4. Results will be presented by type of training.

#### LOGO Training Evaluation

The LOGO training participants were asked to rate the organization of the staff development. An equal percentage (36.1%) reported that the organization was adequate or good. Of the remaining respondents, 16.4% felt the organization was poor, 9.8% felt it was excellent, and 1.6% felt it was very poor.

Participants were asked their opinions of the ideas and activities presented. Over half (57.4%) agreed that the ideas and activities were interesting, while 19.7% reported that they were very interesting and 18.0% felt neutral about this issue. Only 4.1% said the ideas and activities were dull and less than one percent felt they were very dull.

When asked about the pace of the sessions, more than a third (38.6%) agreed that the pace was just right. More than a quarter of the participants (25.4%) reported that the pace was fast, while 21.1% said that the pace was slow. Only 8.8% reported that the pace was too fast, and 6.1% said that the pace was very slow.

Participants were asked about the presenter's level of knowledge about LOGO or BASIC. Of the participants responding, 39.3% reported that the presenter had a high level of knowledge. Approximately equal percentages agreed that the presenter's level of knowledge was intermediate (27.0%)

or very high (26.2%). Only 6.6% reported that the presenter's level of knowledge was low, and less than one percent felt the level of knowledge was very low. Generally, the participants reported that the presenter's level of knowledge about LOGO or BASIC was high or very high.

When asked how well the presenter communicated information concerning LOGO, 37.7% of the participants responding to this question agreed that information was communicated adequately. Over one-fourth (29.5%) of the participants reported that information was communicated well, while 21.3% felt information was communicated very well. About 9.0% felt information was communicated poorly, and 2.5% felt information had been communicated very poorly.

When asked how well the presenter communicated information concerning BASIC, 37.0% of the participants agreed that information had been communicated adequately. Approximately a third (33.6%) of the participants felt information was communicated well, while only 12.6% felt information had been communicated very well. Only 11.8% reported that information was communicated poorly, while 2.5% felt information had been communicated very poorly, and 2.5% did not receive information on BASIC.

Participants surveyed were asked how comfortable they felt teaching LOGO or BASIC. Of the participants responding to this question, 40.2% said they felt comfortable teaching LOGO or BASIC, while 32.8% felt neutral about this matter. Only 11.5% said they felt uncomfortable, while 8.2% felt very comfortable, and 7.3% felt very uncomfortable teaching LOGO or BASIC.

When asked their opinions of the materials used in the LOGO training, over half (54.5%) of the participants agreed that the materials were good. While 22.3% felt neutral about the materials, 13.2% reported that they were excellent, 7.4% said they were poor, and 2.5% felt they were very poor.

The next two questions on the evaluation form dealt with guides selected for teaching LOGO or BASIC. When asked if the LOGO Curriculum Guide was adequate for teaching LOGO, the majority of the participants (61.3%) agreed that it was adequate. Approximately a third (33.6%) of the participants didn't know if the guide was adequate, while only 5.0% reported that it was not adequate for teaching LOGO. When asked to explain the problems with the guide, some participants said they had not had access or the opportunity to review it. The other participants responding listed various problems with the guide. For a list of comments, see Attachment C-6.

When asked if Creative Programming was adequate for teaching BASIC, the majority of the participants (69.3%) didn't know if the guide would be adequate. Over a quarter (28.1%) agreed that this guide would be adequate for teaching BASIC, while only 2.6% felt it would not be adequate. When asked to explain the problems with the guide, most of the participants reported that they had not had an opportunity to review it. (Because this session was primarily geared to teaching LOGO,

some groups did not have access to Creative Programming.) See Attachment C-7 for a listing of comments about this guide.

An open-ended question dealing with support materials for teaching programming was included on the evaluation form. When asked what kinds of support materials they would recommend for teaching programming to children, participants suggested visuals, teacher guides, student textbooks, written materials (handouts), additional software, and materials to use with young children. Participants also recommended hands-on experience for children, as well as a number of miscellaneous suggestions. A complete listing of responses can be found in Attachment C-8.

An open-ended question dealing with the pace of sessions was also included on the evaluation form. Because it was felt that the pace was too slow for some, and too fast for others, participants were asked if they had any suggestions for accommodating different needs. The most frequent response dealt with some method of grouping based on experience, grade level taught, or pace of instruction. Several participants recommended some form of self-paced instruction. Other suggestions dealt with homework and practice, handouts and worksheets, and charts. Participants also suggested increasing the number of instructors, as well as a number of miscellaneous suggestions. See Attachment C-9 for a complete list of responses.

Participants of the LOGO training sessions were given the opportunity to make any additional comments about the training at the end of the evaluation form. Responses included positive and negative comments about the trainers and the training, as well as suggestions to improve the training sessions. A complete list of responses can be found in Attachment C-10.

#### BASIC Training Evaluation

The BASIC training participants were asked to rate the organization of the staff development. Almost half (47.5%) of the participants agreed that the organization was good, while 29.5% reported that the organization was adequate. Only 13.1% felt that the organization was excellent, while equal percentages (4.9%) reported that the organization was poor or very poor.

Participants were asked their opinions of the ideas and activities presented at the BASIC training sessions. A majority (60.7%) of the participants agreed that the ideas and activities were interesting. About 18% felt neutral about this issue, 16.4% reported that ideas and activities were very interesting, and 4.9% felt they were dull.

When asked about the pace of the training, half (50.0%) of the participants agreed that the pace was just right. More than a quarter (28.3%) of the participants reported that the pace was slow while 16.7% of the participants said that the pace was fast. Only 5.0% of the persons returning the survey reported that the pace was very slow.



Participants were asked about the presenter's level of knowledge about BASIC or LOGO. Of the persons responding, 41.7% agreed that the presenter had a very high level of knowledge, and 36.7% reported that the presenter had a high level of knowledge. While 20.0% felt the presenter's level of knowledge was intermediate, only 1.7% felt the presenter had a low level of knowledge about LOGO or BASIC.

When asked how well the presenter communicated information concerning LOGO, 40.0% of the participants agreed that the presenter communicated information well, 33.3% of the participants reported that the presenter communicated information adequately. About 23.3% felt the presenter had communicated information very well, while only 3.3% reported that the presenter had communicated information very poorly.

When asked how well the presenter communicated information concerning BASIC, 36.1% of the participants agreed that the presenter had communicated information well. Approximately equal percentages of the participants reported that the presenters had communicated information very well (29.5%) or adequately (27.9%). An equal percentage (3.3%) of the participants felt the information had been communicated poorly or very poorly.

Participants surveyed were asked how comfortable they felt teaching LOGO or BASIC. Of the participants responding, 45.9% were neutral about this matter, while 39.3% reported that they felt comfortable about teaching LOGO or BASIC. About 8.2% felt very comfortable, 4.9% felt uncomfortable, and 1.6% felt very uncomfortable about teaching LOGO or BASIC.

When asked their opinions of the materials used in the BASIC training, almost half (49.2%) of the participants agreed that the materials were good. Almost one-fourth (24.6%) of the participants felt neutral about the materials, while 21.3% said the materials were excellent. Only 4.9% of the respondents reported that the materials were poor, and no one said the materials were very poor.

The next two questions dealt with guides selected for teaching LOGO or BASIC. When asked if the LOGO Curriculum Guide was adequate for teaching LOGO, half of the participants (50.0%) agreed that it was adequate. Almost half (46.6%) said they didn't know if the guide was adequate. The remaining 3.4% of the participants felt the guide was not adequate. When asked to explain the problems with the guide, most of the participants who gave a response said they did not have access to the guide, or had not had the opportunity to review it. One participant citing a problem reported that it was hard to find information quickly in the guide. For a complete listing of responses, see Attachment C-11.

When asked if Creative Programming was adequate for teaching BASIC, almost half (49.1%) of the participants didn't know if the guide would be adequate. Again, almost half (45.5%) of the participants agreed that the guide would be adequate. Only 5.5% of the respondents felt the guide was not adequate. When asked to explain the problems with the guide some respondents said they had not had access to the guide. Others reported that the guide was confusing, had insufficient sequencing, and too many "gaps." Attachment C-12 lists the responses to this item.

An open-ended question dealing with support materials for teaching programming was included on the evaluation form. When asked what kinds of support materials they would recommend for teaching programming to children, participants suggested workbooks, handouts, prewritten programs, additional software, and additional training, as well as a number of miscellaneous suggestions. A complete listing of suggestions can be found in Attachment C-13.

An open-ended question dealing with the pace of sessions was included on the evaluation form. Because it was felt that the pace was too slow for some, and too fast for others, participants were asked if they had any suggestions for accommodating different needs. The most frequent response dealt with some method of grouping based on experience or pace of instruction. Several respondents suggested smaller groups for training sessions, self-paced instruction, more practice time, as well as a variety of miscellaneous suggestions. A complete listing of responses can be found in Attachment C-14.

Participants of the BASIC training sessions were given the opportunity to make any additional comments about the training at the end of the evaluation form. Responses included suggestions to improve the training sessions, positive and negative comments about the trainers and the training, and several miscellaneous comments. A complete listing of responses can be found in Attachment C-15.



Figure C-1

GRADE LEVEL OR SPECIAL AREA  
TAUGHT BY PARTICIPANTS OF  
LOGO OR BASIC TRAINING

(Page 1 of 3)

School	Grade Level or Special Area								Other
	PreK	K	1	2	3	4	5	6	
Brooke:									
LOGO	2	2	-	-	-	-	-	-	Resource - 2
BASIC	-	-	-	-	-	2	3	1	Counselor - 1 P. E. - 1 G/T Science - 1 Intermediate - 1
Campbell:									
LOGO	1	2	-	-	-	-	-	-	Special Ed. - 1
BASIC	-	1	-	-	-	5	3	3	Counselor - 1 P. E. - 2 Music - 1 Librarian - 1 Ch. 1 Reading - 1 Helping Teacher - 1
Govalle:									
LOGO	-	3	10	8	6	-	-	-	P. E. - 1 Music - 1 Librarian - 1 Ch. 1 Reading - 3 Speech/Language - 1 Resource - 2 Integrated Teacher - 1 Office - 1
BASIC	-	-	-	-	-	-	-	-	
Gullett:									
LOGO	-	2	-	-	-	1	3	3	Special Ed. - 3
BASIC	-	-	-	-	-	-	-	-	
Highland Park:									
LOGO	-	3	2	3	1	-	-	-	P. E. - 1 SCE - 3 Migrant - 1 Principal - 1
BASIC	-	-	-	-	-	-	-	-	
Ortega:									
LOGO	-	2	-	-	-	-	-	-	Special Ed. - 1
BASIC	-	-	-	-	-	2	2	2	Special Ed. - 4 Special Area - 1 Music - 1 Librarian - 1 Principal - 1 Ch. 1 Reading - 1 Special Ed. Aide - 1

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Read:									
LOGO	-	-	-	-	-	-	-	-	
BASIC	-	-	-	-	-	-	2	2	
Sims:									
LOGO	-	1	2	1	3	-	-	-	Special Ed. - 2 Music - 1 Speech Pathologist - 1 1-3 - 1
BASIC	-	-	-	-	-	-	-	-	
Other Schools:									
LOGO	-	3	2	1	4	1	-	-	Special Ed. - 3 Librarian - 3 Math/Computer - 1
BASIC	-	-	-	-	-	-	1	1	Language Arts/ Music - 1
Unknown:									
LOGO									Unknown - 15
BASIC									Unknown - 9

Figure C-2

RESULTS FROM INTRODUCTION TO COMPUTER  
STAFF DEVELOPMENT EVALUATION

(Page 1 of 2)

In order to help us develop the most effective way to train teachers in the use of computers, we are asking you to give us your opinions about the training you have just received. Please read each statement below and circle the number that best describes your evaluation of this staff development.

	<u>Very Poor</u>	<u>Poor</u>	<u>Adequate</u>	<u>Good</u>	<u>Excellent</u>
1. The organization of the staff development was: <i>N=214</i>	1 0.5%	3 1.4%	39 18.2%	101 47.2%	70 32.7%
2. The ideas and activities presented were: <i>N=213</i>	<u>Very Dull</u> 1 0.5%	<u>Dull</u> 2 0.9%	<u>Neutral</u> 16 7.5%	<u>Interesting</u> 105 49.3%	<u>Very Interesting</u> 39 18.3%
3. The pace of the sessions was: <i>N=207</i>	<u>Too Slow</u> 2 1.0%	<u>Slow</u> 29 14.0%	<u>Just Right</u> 134 64.7%	<u>Fast</u> 36 17.4%	<u>Too Fast</u> 6 2.9%
4. The presenter's level of knowledge about computers was: <i>N=211</i>	<u>Very Low</u> 2 0.9%	<u>Low</u> 6 2.8%	<u>Intermediate</u> 33 15.6%	<u>High</u> 107 50.7%	<u>Very High</u> 65 30.8%
5. The presenter communicated information concerning computers: <i>N=214</i>	<u>Very Poorly</u> 2 0.9%	<u>Poorly</u> 6 2.8%	<u>Adequately</u> 49 22.9%	<u>Well</u> 77 36.0%	<u>Very Well</u> 30 14.1%
6. The introduction to LOGO and BASIC was: <i>N=211</i>	<u>Very Confusing</u> 1 0.5%	<u>Confusing</u> 11 5.2%	<u>Adequate</u> 45 21.3%	<u>Informative</u> 39 18.5%	<u>Very Informative</u> 55 26.1%
7. How comfortable do you feel about your ability to do the following activities or functions:	<u>Very Uncomfortable</u>	<u>Uncomfortable</u>	<u>Neutral</u>	<u>Comfortable</u>	<u>Very Comfortable</u>
Turn on the computer. <i>N=215</i>	3 1.4%	0 0.0%	2 0.9%	31 14.4%	179 83.5%
Load and run the software demonstrated during this staff development. <i>N=212</i>	4 1.9%	4 1.9%	20 9.4%	48 22.6%	136 64.2%
Load and run software you did not practice with during this staff development. <i>N=211</i>	10 4.7%	14 6.6%	47 22.3%	58 27.5%	80 37.9%
Knowledge of the keyboard layout. <i>N=214</i>	3 1.4%	4 1.9%	22 10.3%	39 18.2%	146 68.2%
Function of special keys. <i>N=212</i>	3 1.4%	16 7.5%	35 16.5%	104 49.1%	54 25.5%
Selecting the appropriate software to meet the needs of your students. <i>N=205</i>	9 4.4%	32 15.6%	59 28.8%	67 32.7%	33 16.1%
8. Please use the space below to make any additional comments you have about this training: (Continue on back if more space is needed.)					

See Attachment C-5.

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.).

SCHOOL: \_\_\_\_\_ POSITION: \_\_\_\_\_



Figure C-3

RESULTS FROM LOGO TRAINING EVALUATION

(Page 1 of 3)

LOGO OR BASIC TRAINING EVALUATION

In order to help us develop the most effective way to train teachers in LOGO or BASIC, we are asking you to give us your opinions about the training you have received. Please read each statement below and circle the number that best describes your evaluation of this training.

	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1. The organization of the staff development was: N=122	2	1.6%	20	16.4%	44	36.1%	44	36.1%	12	9.8%
	<u>Very Poor</u>		<u>Poor</u>		<u>Adequate</u>		<u>Good</u>		<u>Excellent</u>	
2. The ideas and activities presented were: N=122	1	0.8%	5	4.1%	32	18.0%	70	57.4%	24	19.7%
	<u>Very Dull</u>		<u>Dull</u>		<u>Neutral</u>		<u>Interesting</u>		<u>Very Interesting</u>	
3. The pace of the training was: N=114	7	6.1%	24	21.1%	44	38.6%	29	25.4%	10	8.8%
	<u>Very Slow</u>		<u>Slow</u>		<u>Just Right</u>		<u>Fast</u>		<u>Too Fast</u>	
4. The presenter's level of knowledge about LOGO or BASIC was: N=122	1	0.8%	8	6.6%	33	27.0%	48	39.3%	32	26.2%
	<u>Very Poorly</u>		<u>Poorly</u>		<u>Adequately</u>		<u>Well</u>		<u>Very Well</u>	
5. The presenter communicated information concerning LOGO: N=122	3	2.5%	11	9.0%	46	37.7%	36	29.5%	26	21.3%
	<u>Did not receive LOGO information</u>									
	0	0.0%								
6. The presenter communicated information concerning BASIC: N=119	3	2.5%	14	11.8%	44	37.0%	40	33.6%	15	12.6%
	<u>Very Poorly</u>		<u>Poorly</u>		<u>Adequately</u>		<u>Well</u>		<u>Very Well</u>	
	<u>Did not receive BASIC information</u>									
	3	2.5%								
7. How comfortable do you feel about teaching LOGO or BASIC? N=122	9	7.4%	14	11.5%	40	32.8%	49	40.2%	10	8.2%
	<u>Very Uncomfortable</u>		<u>Uncomfortable</u>		<u>Neutral</u>		<u>Comfortable</u>		<u>Very Comfortable</u>	
8. The materials used in this training were: N=121	3	2.5%	9	7.4%	27	22.3%	56	46.3%	16	13.2%
	<u>Very Poor</u>		<u>Poor</u>		<u>Neutral</u>		<u>Good</u>		<u>Excellent</u>	



9. Is the LOGO Curriculum Guide adequate for teaching LOGO? N=119

N	%	N	%	N	%
		YES		NO	
73	61.3%	6	5.0%	40	33.6%

If NO, what are the problems with it?

See Attachment C-6 for responses.

10. Is Creative Programming adequate for teaching BASIC? N=114

N	%	N	%	N	%
		YES		NO	
32	28.1%	3	2.6%	79	69.3%

If NO, what are the problems with it?

See Attachment C-7 for responses.

11. What other kinds of support materials do you recommend for teaching programming to children?

See Attachment C-8 for responses.

12. For some, the pace of the sessions was too slow; for others, too fast. What suggestions do you have for accommodating different needs?

See Attachment C-9 for responses.

13. Use the space below to make any additional comments you have about this training:

See Attachment C-10 for responses.

Please fill in the following information:

SCHOOL \_\_\_\_\_

POSITION (grade or special area) \_\_\_\_\_

NAME(S) OF TI CONSULTANT(S) \_\_\_\_\_





Figure C-4

RESULTS FROM BASIC TRAINING EVALUATION

(Page 1 of 3)

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C-23

LOGO OR BASIC TRAINING EVALUATION

In order to help us develop the most effective way to train teachers in LOGO or BASIC, we are asking you to give us your opinions about the training you have received. Please read each statement below and circle the number that best describes your evaluation of this training.

	N	%	N	%	N	%	N	%	N	%

9. Is the LOGO Curriculum Guide adequate for teaching LOGO? N=63

N	%	N	%	N	%
	YES		NO		DON'T KNOW
29	50.0%	2	3.2%	27	46.8%

If NO, what are the problems with it?

See Attachment C-11 for responses.

10. Is Creative Programming adequate for teaching BASIC? N=55

N	%	N	%	N	%
	YES		NO		DON'T KNOW
25	45.5%	3	5.5%	27	49.1%

If NO, what are the problems with it?

See Attachment C-12 for responses.

11. What other kinds of support materials do you recommend for teaching programming to children?

See Attachment C-13 for responses.

12. For some, the pace of the sessions was too slow; for others, too fast. What suggestions do you have for accomodating different needs?

See Attachment C-14 for responses.

13. Use the space below to make any additional comments you have about this training.

See Attachment C-15 for responses.

Please fill in the following information:

SCHOOL \_\_\_\_\_

POSITION (grade or special area) \_\_\_\_\_

NAME(S) OF TI CONSULTANT(S) \_\_\_\_\_



INTRODUCTION TO COMPUTERS STAFF DEVELOPMENT EVALUATION

In order to help us develop the most effective way to train teachers in the use of computers, we are asking you to give us your opinions about the training you have just received. Please read each statement below and circle the number that best describes your evaluation of this staff development.

- |   |                                 |                            |                           |                          |                               |
|---|---------------------------------|----------------------------|---------------------------|--------------------------|-------------------------------|
|   | <u>Very Poor</u>                | <u>Poor</u>                | <u>Adequate</u>           | <u>Good</u>              | <u>Excellent</u>              |
| 1. The organization of the staff development was:   | 1                               | 2                          | 3                         | 4                        | 5                             |
|   | <u>Very Dull</u>                | <u>Dull</u>                | <u>Neutral</u>            | <u>Interesting</u>       | <u>Vary Inter-<br/>esting</u> |
| 2. The ideas and activities presented were:   | 1                               | 2                          | 3                         | 4                        | 5                             |
|   | <u>Too Slow</u>                 | <u>Slow</u>                | <u>Just Right</u>         | <u>Fast</u>              | <u>Too Fast</u>               |
| 3. The pace of the sessions was:  | 1                               | 2                          | 3                         | 4                        | 5                             |
|   | <u>Very Low</u>                 | <u>Low</u>                 | <u>Inter-<br/>mediate</u> | <u>High</u>              | <u>Very High</u>              |
| 4. The presenter's level of knowledge about computers was:  | 1                               | 2                          | 3                         | 4                        | 5                             |
|   | <u>Very Poorly</u>              | <u>Poorly</u>              | <u>Adequately</u>         | <u>Well</u>              | <u>Very Well</u>              |
| 5. The presenter communicated information concerning computers:   | 1                               | 2                          | 3                         | 4                        | 5                             |
|   | <u>Very Confusing</u>           | <u>Confusing</u>           | <u>Adequate</u>           | <u>Infor-<br/>mative</u> | <u>Very Informative</u>       |
| 6. The introduction to LOGO and BASIC was:  | 1                               | 2                          | 3                         | 4                        | 5                             |
| 7. How comfortable do you feel about your ability to do the following activities or functions:  |                                 |                            |                           |                          |                               |
|   | <u>Very Un-<br/>comfortable</u> | <u>Uncom-<br/>fortable</u> | <u>Neutral</u>            | <u>Comfortable</u>       | <u>Very<br/>Comfortable</u>   |
| Turn on the computer.   | 1                               | 2                          | 3                         | 4                        | 5                             |
| Load and run the software demonstrated during this staff development.   | 1                               | 2                          | 3                         | 4                        | 5                             |
| Load and run software you did not practice with during this staff development.  | 1                               | 2                          | 3                         | 4                        | 5                             |
| Knowledge of the keyboard layout.   | 1                               | 2                          | 3                         | 4                        | 5                             |
| Function of special keys.   | 1                               | 2                          | 3                         | 4                        | 5                             |
| Selecting the appropriate software to meet the needs of your students.  | 1                               | 2                          | 3                         | 4                        | 5                             |
| 8. Please use the space below to make any additional comments you have about this training. (Continue on back if more space is needed.) | <hr/> <hr/>                     |                            |                           |                          |                               |

\*\*\*\*\*  
Please fill in your school name and your position (4th grade teacher, SCE teacher, etc.).

SCHOOL: \_\_\_\_\_ POSITION: \_\_\_\_\_



March 9, 1983

TO: Chapter 2 Computer Literacy Principals  
FROM: David Doss *DD*  
SUBJECT: Staff Development Evaluations

Enclosed are forms to be used to evaluate the introduction to computers and software applications you and your staff will be receiving in your school March 21-31, 1983. Please pass out these evaluations to your staff at the end of the second day of the staff development. The completed forms should be collected and returned through the school mail to:

Lauren Moede  
Administration Building, Box 79

Thank you for your help.

Approved: *Freda McHale*  
Director, Office of Research and Evaluation

Approved: *Ruth McAllister*  
Assistant Superintendent, Elementary Education

DAD:LHM:ihm

cc: Ann Cunningham  
Yolanda Leo  
Leslie Cohen

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

## LOGO OR BASIC TRAINING EVALUATION

In order to help us develop the most effective way to train teachers in LOGO or BASIC, we are asking you to give us your opinions about the training you have received. Please read each statement below and circle the number that best describes your evaluation of this training.

	<u>Very Poor</u>	<u>Poor</u>	<u>Adequate</u>	<u>Good</u>	<u>Excellent</u>
1. The organization of the staff development was:	1	2	3	4	5
	<u>Very Dull</u>	<u>Dull</u>	<u>Neutral</u>	<u>Interesting</u>	<u>Very Inter- esting</u>
2. The ideas and activities presented were:	1	2	3	4	5
	<u>Very Slow</u>	<u>Slow</u>	<u>Just Right</u>	<u>Fast</u>	<u>Too Fast</u>
3. The pace of the training was:	1	2	3	4	5
	<u>Very Low</u>	<u>Low</u>	<u>Inter- mediate</u>	<u>High</u>	<u>Very High</u>
4. The presenter's level of knowledge about LOGO or BASIC was:	1	2	3	4	5
	<u>Very Poorly</u>	<u>Poorly</u>	<u>Adequately</u>	<u>Well</u>	<u>Very Well</u>
5. The presenter communicated information concerning LOGO:	1	2	3	4	5
	<u>Did not receive LOGO information</u>				
	6				
	<u>Very Poorly</u>	<u>Poorly</u>	<u>Adequately</u>	<u>Well</u>	<u>Very Well</u>
6. The presenter communicated information concerning BASIC:	1	2	3	4	5
	<u>Did not receive BASIC information</u>				
	6				
	<u>Very Un- comfortable</u>	<u>Uncom- fortable</u>	<u>Neutral</u>	<u>Comfortable</u>	<u>Very Comfortable</u>
7. How comfortable do you feel about teaching LOGO or BASIC?	1	2	3	4	5
	<u>Very Poor</u>	<u>Poor</u>	<u>Neutral</u>	<u>Good</u>	<u>Excellent</u>
8. The materials used in this training were:	1	2	3	4	5

9. Is the LOGO Curriculum Guide adequate for teaching LOGO?

YES NO DON'T KNOW

If NO, what are the problems with it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Is Creative Programming adequate for teaching BASIC?

YES NO DON'T KNOW

If NO, what are the problems with it?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. What other kinds of support materials do you recommend for teaching programming to children?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. For some, the pace of the sessions was too slow; for others, too fast. What suggestions do you have for accomodating different needs?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Use the space below to make any additional comments you have about this training.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*

Please fill in the following information:

SCHOOL \_\_\_\_\_

POSITION (grade or special area) \_\_\_\_\_

NAME(S) OF TI CONSULTANT(S) \_\_\_\_\_

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AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

May 3, 1983

TO: Principals Addressed  
FROM: David Doss  
SUBJECT: Staff Development Evaluations

Enclosed are the forms to be used to evaluate the LOGO or BASIC training offered in your school the weeks of April 11, 1983 to May 9, 1983. Please have these forms passed out to participants at the end of the last day of the staff development. The completed forms should be collected and returned through the school mail to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your help.

Approved: *Freida M. Kelly*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Yolanda Leo  
Leslie Cohen

DAD:LHM:lmh

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Attachment C-5

COMMENTS ABOUT INTRODUCTION TO  
COMPUTERS STAFF DEVELOPMENT SESSION

(Page 1 of 5)

Responses	Number Responding
POSITIVE COMMENTS	22
1. Fun!	1
2. Well done!	1
3. Excellent!	1
4. Thank you.	1
5. Very interesting and informative.	1
6. Very well organized. Good hands-on experience.	1
7. Super! This is the best workshop I've ever attended.	1
8. Excellent presentation. The presenter addressed a wide variety of ability levels very well.	1
9. Very well done. It's sure got me interested to learn more! Thanks.	1
10. The presenters had clear voices and were patient with each one of us.	1
11. The woman was very clear last week.	1
12. Very good. Well-paced and clear.	1
13. You went at a good pace. You made lots of sense.	1
14. Excellent--well-paced--you made lots of sense.	1
15. It was an enjoyable and instructive experience. I learned a lot. I am glad I had the opportunity.	1
16. I feel much better about computers. I'm not afraid anymore.	1
17. Very motivating for myself. I'm ready to learn more. I don't know how I would manage a classroom situation.	1
18. I'm excited about learning this! Thanks for your help.	1
19. This course was very helpful to me. I learned so much and in a very interesting way.	1
20. I thought it went well considering plugs and software were not available until 3:00 when the session	

- began. \_\_\_\_\_ was able to communicate more positively than \_\_\_\_\_ but they were both knowledgeable and trying hard. 1
21. Amount of information presented and pace used were just right for those of us (like myself) who are real beginners. 1
22. Second session was better organized. 1

## NEGATIVE COMMENTS

14

1. The second day I was so frustrated on BASIC that I developed an allergy. 1
2. Everyone doesn't learn at the same pace. I felt very frustrated in this course. I would try to write information down as you talked and would get completely lost when I looked up and you were 10 minutes ahead of me. 1
3. Yesterday was much better. Was frustrated twice today. 1
4. Unfortunately, teachers often make the worst students-- too much joking, talking, and chatter. We could have moved faster with more cooperation from the participants. Presenter did a good job despite it! 1
5. I am confused! You work with some and ignore the other people who are slower. All you work with are the fast people. Help! 1
6. The female trainer seems unhappy with the situation for teaching. 1
7. I felt that the teacher representing TI was at a disadvantage because she had just come from teaching all day and the materials were not organized. We received handouts with program mistakes so we experienced frustration when trying to run the program. The second session was better when the two representatives split the groups, had more posters to support the verbal directions, and all the equipment was working. 1
8. With two presenters talking at the same time it was very difficult. Would like handouts on programs we did today. 1
9. Presenter did not use a logical sequence of materials and assumed understanding of things not explained. 1

10. One presenter was very good. The other presenter did not explain things well, and had an unpleasant, condescending manner when showing something on the computer. 1
11. The man, \_\_\_\_\_, that introduced LOGO was excellent. The lady, \_\_\_\_\_, that introduced BASIC was negative and did not instruct. She asked us to "turn to page 20" and copy the programs. BASIC can be taught in a systematic way. First learning PRINT statements, etc. I have prior knowledge of BASIC, but I am very concerned about those teachers that did not. 1
12. Sessions too long (not presenter's fault). 1
13. The session did not discuss BASIC at all. LOGO was the only topic covered. 1
14. Learning about the computer was very exciting. I learned a lot in those first two days. I was very disappointed in the instructor's knowledge. \_\_\_\_\_ was very helpful when questions were asked of him. The other instructor was not. I do not feel that her level of knowledge of computers is adequate for an instructor. I also feel that a good rationale should be given for the type of information we received. We went directly to working on the computer and how the keyboard works. I think a little background information and an introduction to how the class will be presented and why should be first. 1

---

 SUGGESTIONS
 

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1. We needed the strips that indicate how to use the keys for other functions. We need for everyone to get "hands-on" experience. Some teachers tend to "hog" the machine. Someone also needs to get the staff quiet during demonstrations. I had a difficult time listening above all the constant talking. We need the different activities "on paper" for those of us who need help remembering the specific instructions, i.e., when to space or not, or use "dots," etc. 1
2. As a visual (written) learner, I would like a list of commands to use in doing work on the computer independently. 1
3. Consideration should have been made for computer knowledgeable people. 1

- |   |   |
|---|---|
| 4. Need to see lessons with kids modeled.   | 1 |
| 5. Too many people for computers available. Could have felt more comfortable with use of computers if had sole use of machine, or not more than two. (May come in later course.)                                      | 1 |
| 6. Would like to see it used relating to more graphics.   | 1 |
| 7. Visuals need to be larger and written legibly.   | 1 |
| 8. I think that the presenters put up with a lot of noise during instructions. If the activities could have been paced and the instructions given in a more succinct fashion, there might have been a bit more order. | 1 |
| 9. I would like handout information materials at the beginning of session.  | 1 |
| 10. Handouts would have been very helpful.  | 1 |
| 11. Need more time to practice examples. Presenter needs to put posters in order on board, perhaps number them in sequence.   | 1 |
| 12. I think we should have had more time to ourselves for "hands on."   | 1 |
| 13. I need more time.   | 1 |
| 14. Would have liked to have more time.   | 1 |
| 15. Additional practice after the skill has been introduced.  | 1 |
| 16. There were times during the second session when more time would have been nice. She ran through some commands so fast I missed them.  | 1 |
| 17. I think the trainer needs more training with <u>how</u> to <u>teach</u> LOGO and use of TI machine.   | 1 |
| 18. Computers are great but I still need <u>a lot</u> more training so I can really help my class.  | 1 |
| 19. When can we learn BASIC?  | 1 |

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TOTAL RESPONSES

55

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SURVEYS WITH NO RESPONSE

163

82.45

Attachment C-6

RESPONSES TO ITEM 9 FROM  
PARTICIPANTS OF LOGO TRAINING

(Page 1 of 3)

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C-37

## Item 9--LOGO OR BASIC TRAINING EVALUATION

Is the LOGO Curriculum Guide adequate for teaching LOGO?  
If NO, what are the problems with it?

Response	Number Responding
NO ACCESS OR OPPORTUNITY TO REVIEW GUIDE	10
1. Had curriculum guide for only one week.	2
2. Can't evaluate the guide in one week. Which was the only checkout time given us by Texas Instruments.	1
3. Didn't have adequate time to use it.	1
4. I have not studied it in depth.	1
5. It would help for each teacher to have one available. We did not see it till very late!	1
6. If we had it and the disc.	1
7. Need access to one.	1
8. I have had only 1½ days of inservice in LOGO and don't have any real knowledge of what is in the <u>LOGO Curriculum Guide</u> .	1
9. What <u>LOGO Curriculum Guide</u> ?	1
PROBLEMS WITH GUIDE	8
1. Not enough ideas on how to be creative. Not structured well enough. I could write one on how to teach LOGO that would be more adequate. In short - too sketchy.	1
2. The combination of the Curriculum Guide and LOGO Guide is okay. The Guides don't offer many challenges.	1
3. It is adequate--more time should have been spent looking at programs on the disk (sampler) to see what we could use (People, Colors, Line) for younger children.	1
4. It needs to be divided into levels or grades.	1
5. Needs more specifics and directions.	1
6. Not enough program samples.	1

7. Do not have diskette necessary to accompany guide--need multiple copies to work with K-level students. Instructor did not know if we would receive them. 1
8. More details!!! 1

TOTAL RESPONSES	18
SURVEYS WITH NO RESPONSE	104



82.45

Attachment C-7

RESPONSES TO ITEM 10 FROM  
PARTICIPANTS OF LOGO TRAINING

(Page 1 of 3)

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C-41

## Item 10--LOGO OR BASIC TRAINING EVALUATION

Is *Creative Programming* adequate for teaching LOGO?

If NO, what are the problems with it?

Response	Number Responding
HAVE NOT HAD OPPORTUNITY TO REVIEW IT	5
1. I have not had a chance to really review it.	2
2. Haven't looked at it yet.	2
3. Not familiar with it.	1
DID NOT HAVE ACCESS TO IT	4
1. Haven't seen this publication.	2
2. Didn't have manual.	2
TIME NOT GIVEN TO IT IN SESSIONS	3
1. We didn't get to utilize it until the last session so I haven't tried it.	1
2. Not enough time given to it.	1
3. Not enough time to work on it.	1
MISCELLANEOUS	4
1. It can be used but I feel I know of better materials. "Spotlight on Computers" is a good one.	1
2. There's no time to be creative--however this aspect improved.	1
3. Doesn't apply.	1
4. What is Creative Programming? It's hard to know whether something is adequate if you don't know what it is.	1

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TOTAL RESPONSES

16

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SURVEYS WITH NO RESPONSE

106

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Attachment C-8

RESPONSES TO ITEM 11 FROM  
PARTICIPANTS OF LOGO TRAINING

(Page 1 of 4)

## Item 11--LOGO OR BASIC TRAINING EVALUATION

*What other kinds of support materials do you recommend for teaching programming to children?*

Responses	Number Responding
<b>VISUALS</b>	<b>12</b>
1. Visuals and manipulatives.	4
2. Cue cards.	2
3. Charts and introduction before they get to keyboard.	1
4. I keep thinking that the very young children need simple posters with clear graphics so they can learn one concept at a time (no theory) and have lots of opportunity to practice. I wonder if this isn't what teachers need, too.	1
5. A guide and a chart with a sequential order for teaching information.	1
6. Pictures and some kinds of games.	1
7. Provide large "sprites" and professionally made charts for basic instruction--commands, turtles, etc.	1
8. Concrete examples of Sprite and Turtle, act out parts of a computer--functions, why are computers important to learn about?	1
<b>GUIDES AND WRITTEN MATERIALS</b>	<b>10</b>
1. Curriculum guides for grade levels, magazine articles (computer "teaching" magazines).	1
2. More guides/activities.	1
3. Some type of sequential guide.	1
4. For now, the guide seems adequate.	1
5. A guide similar to a teacher's guide or a textbook. A workbook for children written by teachers. This would help accommodate individual differences in children.	1
6. A simple unit of step-by-step lessons for schools with only a few computers.	1

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|--|---|
| 7. Several of the new publications contain articles written by <u>experienced</u> teachers who are sharing some excellent ideas. These articles should be made available to teachers on a regular basis. | 1 |
| 8. More blackline copies rather than charts.   | 1 |
| 9. Handouts (like homework assignments).   | 1 |
| 10. Reading materials to take home to read before coming to class.   | 1 |

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**SOFTWARE**

8

- |   |   |
|---|---|
| 1. Teacher-made software. However the computer course did not adequately prepare us, I feel, to make our own programs. The commercially available software certainly is inadequate. | 1 |
| 2. Programs for younger children.   | 1 |
| 3. Software-- <u>Teach Yourself BASIC</u> -- <u>BASIC User's Manual</u> .   | 1 |
| 4. More modules teaching colors, numbers, shapes, positions; for young children.  | 1 |
| 5. Teacher-made packet with list of commands, what they do, and how to use it. Sample programs for students to use.   | 1 |
| 6. Lots of software.  | 1 |
| 7. Programming activities and ideas.  | 1 |
| 8. Memory disks for basic turtle commands and procedures.   | 1 |

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**MATERIALS TO USE WITH YOUNG CHILDREN**

5

- |  |   |
|--|---|
| 1. Still feel I will have a problem working with kindergartners in the lab.                    | 2 |
| 2. More activities for younger children, i.e., those who do NOT know colors, numbers, letters. | 1 |
| 3. Special materials for teaching small children.  | 1 |
| 4. Concrete directions for lessons and ordering of activities for young children.              | 1 |

153

HANDS-ON EXPERIENCE:	4
1. Hands-on experience is always best so time on the computer will be most beneficial.	2
2. Hands-on where they <u>practice</u> .	1
3. My main concern for teaching programming to children centers on lack of sufficient time on a machine due to school shortages of hardware and software (i.e., LOGO), rather than lack of support materials.	1
MISCELLANEOUS	16
1. Don't know of any at this time.	6
2. Steno pads or spirals; software packages for a class of 20, overhead transparencies, maybe a self-paced diskette that can teach the commands to children, step by step.	1
3. More hardware that will handle LOGO.	1
4. A computer specialist for a teacher/leader, full time, for the whole year.	1
5. Typewriter in every classroom so children can get acquainted with keyboard.	1
6. Keyboard memorization activities.	1
7. Simpler activities and more practice sessions.	1
8. I would like another session.	1
9. Very good for now.	1
10. Need to try to see.	1
11. N/A.	1
TOTAL RESPONSES	55
SURVEYS WITH NO RESPONSE	67

Attachment C-9

RESPONSES TO ITEM 12 FROM  
PARTICIPANTS OF LOGO TRAINING

(Page 1 of 5)



## Item 12--LOGO OR BASIC TRAINING EVALUATION

*For some, the pace of the sessions was too slow; for others, too fast. What suggestions do you have for accommodating different needs?*

Responses	Number Responding
GROUPING	30
1. Possibly offering courses based on experience. Session 1 could be for beginners, Session 2 for people with moderate experience and Session 3 for people with extensive programming experience.	19
2. How about fast-pace/slow-paced sessions?	4
3. Give a pre-test or have a survey filled out concerning previous experience and then set up classes accordingly.	3
4. Work in groups--fast ones go ahead, slow work on present material. Assignments: ones that have hard time review assignment, others go on. Use faster students to help others.	3
5. Divide up--let grade levels decide how to use knowledge.	1
SELF-PACED INSTRUCTION	9
1. Handouts that would let us proceed at own pace. Instructors could circulate to help learners.	5
2. Individualize part of the instruction--maybe use some self-paced activities after the main ideas of each session have been quickly presented. Don't make people keep "hands off" for an hour of lecture!	1
3. Don't know, but I was bored most of the time. If I'd been given the programs to run and allowed to go at own pace, it would've been much faster.	1
4. Place people in groups according to familiarity of material, then allow self-paced instruction.	1
5. At this time, perhaps a self-paced <u>well-developed</u> course.	1

---

 HOMEWORK AND PRACTICE
 

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8

1. For those who find the pace slow--more advanced programs could be worked on. I think someone who finds the pace too fast probably needs more practice time between classes in which to work out problems and develop questions to ask at the following session. Perhaps time could be allowed prior to class for someone to come in early and work individually with an instructor. 1
2. Pacing was fast but kept classes interesting. Lots of time--homework time was a must to keep up in order to profit from class instruction. 1
3. Needed more time to practice concepts learned. Training should be stretched out over a longer period of time. 4
4. Allow more use time with computers with instructors serving as facilitators rather than "walking" participants through activities. 1
5. Simpler activities and more practice sessions. 1

---

 HANDOUTS AND WORKSHEETS
 

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7

1. Give handouts, instead of having us copy them, didn't always understand purpose or sequence, move on and stick to goal instead of going with what one person was doing. 1
2. Have other routines available for manipulation or for figuring out how to do stuff. 1
3. Handouts with lessons and objectives. 1
4. Perhaps present one or two main points at the beginning--have handouts--have more opportunity to practice--(don't demonstrate or give homework that doesn't work!). 1
5. Shorter explanations. More handouts so those with experience or understanding can progress on their own while others get help. 1
6. Divide class in half. Have "work sheets" to challenge the faster learners. 1

7. Have material printed beforehand so we don't have to spend all of our time copying. 1

---

 ALTER PACE
 

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6

1. BASIC could be slowed down--LOGO sessions could be faster. 1
2. It needs to be paced slower. 1
3. The pace was a little too fast because of the many objectives to complete in one night. 1
4. We spent a great deal of time on just drawing with Turtle, then hurried through some more complex things-- a more even pace would help. 1
5. I felt it was too slow for most people. You could have classes specifying speed or level of training prior to this course (Beginning/Intermediate). 1
6. I don't know of any people who thought class was too fast. 1

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 CHARTS
 

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2

1. Need charts--runoffs (faster) and more helpful. 1
2. Make charts before session meets, slow pace down, make copies of procedures for participants. 1

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 INCREASE NUMBER OF INSTRUCTORS
 

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2

1. Lots of computers and instructors. 1
2. Have a larger number of instructors available. 1

---

 MISCELLANEOUS
 

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17

1. Sessions should not be presented after school. Suggest Saturday workshop. 1
2. You need to stay on task and not wander off. 1

- |  |   |
|--|---|
| 3. None, because as adults, whether we are fast or slow, we should be patient with each other and understanding. It was fun learning together, whether we were fast or slow. | 1 |
| 4. Too fast and too short of time.   | 1 |
| 5. Let us do it again.   | 1 |
| 6. I suggest that AISD set up a workshop to accommodate all needs. A two-hour session in more detail.  | 1 |
| 7. The beginning sessions were very full--didn't have enough time to explore. Last sessions little new information presented.  | 1 |
| 8. Sessions were fine as far as amount of material presented but sometimes we had to wait too long between instructions (until everyone in room had it done correctly).      | 1 |
| 9. More access to booklets.  | 1 |
| 10. The sessions (1 and 2) were slow and choppy. Sessions 3 and 5 were excellent. Session 4 was fair.  | 1 |
| 11. Each class should complete the same objectives.  | 1 |
| 12. Employ classroom methods--help individuals.  | 1 |
| 13. Just right. I wish people had listened more and talked less.   | 1 |
| 14. One week for training.   | 1 |
| 15. Individual needs were well met.  | 1 |
| 16. I have no suggestions for improvement--but there were many times that everyone had to wait five minutes or more because of one problem with one person.                  | 1 |
| 17. Don't know.  | 1 |

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 TOTAL RESPONSES
 

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81

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 SURVEYS WITH NO RESPONSE
 

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41

82.45

Attachment C-10

ITEM 13: GENERAL COMMENTS ABOUT LOGO TRAINING

(Page 1 of 7)

C-55

162

Responses	Number Responding
POSITIVE COMMENTS ABOUT TRAINERS	13
1. The computer trainers were very good. They were very sensitive to those of us who had no prior computer training. I learned a lot and I enjoyed it.	1
2. The instructors were extremely anxious to help--accommodated themselves to our time restraints for the purpose of completing assignments.	1
3. Instructors were very pleasant! Increase stipends--make bi-weekly sessions with shorter hours.	1
4. I learned a lot! Both consultants were very helpful and informative. Training was relaxed and a true learning experience. Consultants were always willing to help.	1
5. Instructors were excellent!	1
6. The trainers had a sense of humor amidst our confusion. I think it would have been wise to assign reading material prior to classtime. First 15 minutes should be devoted to discussion. I would have enjoyed a more intensive review of homework.	1
7. The lack of materials, Curriculum Guide, The LOGO Student Guide, and handouts gave us some anxiety but the instructors did a fine job in spite of this lack. They answered every question, always patient and friendly.	1
8. I enjoyed _____ and _____ but I felt they had a lot of information to cover in such a short time.	1
9. _____ did an excellent job of presenting the sessions.	1
10. Excellent! _____ is great!	1
11. _____ is an excellent person for training people to learn to use computers. He has a lot of personality and a good voice. I enjoyed him very much.	1
12. _____ appeared to know and understand the material and should have led the class more.	1
13. _____ and _____ were very organized and knowledgeable of computers. They were very cooperative and had lots of patience. Excellent teachers.	1

---

 POSITIVE COMMENTS ABOUT TRAINING
 

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12

1. Really was fun. Can't wait to explore on my own this summer. Hard to put in extra time at this point in school year. Would have been a little easier if materials were available. 1
2. For the amount of teachers and loud machinery it was fine. 1
3. I am really grateful to have had the opportunity to learn as much as I did. I think it has been at times confusing, but we were given a lot of information and I'm sure are now better prepared to read and learn more. It's been fun. 1
4. I enjoyed the computer training, but I do not feel I know enough about computers at this time. 1
5. I loved it! Sorry it's over. 1
6. That I think computers are great. But I'm not ready to teach it yet. 1
7. We needed it. 1
8. I enjoyed it. 1
9. I think this training has been an exciting introduction to LOGO. I think the trainers have given us an excellent overview of LOGO and have shown us how to get started really learning LOGO on the machines (which is the only way to learn it). 1
10. I enjoyed being in this class. It was exciting and fun! I hope to do as well with my class. 1
11. I had a great time. 1
12. It was more fun than I expected. 1

---

 NEED FOR HANDOUTS
 

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7

1. Do not make us copy programs. Give handouts. Teach commands and then give ideas to be creative with the newly learned commands. 1
2. Felt much time was wasted. Should have handouts instead of having to copy; moved slowly. Should have gotten more specific things to do with students. 1

3. Pass out mimeographed copies of programs. We can't insert correct spacing from \_\_\_\_\_'s handwritten programs--she doesn't space. You have to use trial and error--this is time consuming and frustrating. 1
4. Have copies to read before class. Have posters to follow on board. 1
5. Ditto programs (time-wasting and error-inducing process to copy from chart). 1
6. Programs and lines were just put on board and we typed in and then sat for 30 minutes before anything new. We could not figure anything out for self and spent too much time just sitting and waiting--adequate explanation was not given for mistakes, etc. 1
7. The quality of the print on the handouts needs to improve. 1

---

 NEGATIVE COMMENTS ABOUT TRAINING
 

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5

1. Explanations need to be repeated and given more clearly for a rank beginner. Too much too fast. Homework too difficult for what a real beginner can absorb in class. Need to take into consideration the amount of time during teaching year one can practice. 1
2. It could have been more organized. Too much time was spent watching demonstrations. I wasted too much time writing down programs--handouts would have been nice. 1
3. Machines that weren't functioning weren't repaired, attitude of presenter towards us "slower" ones, were given too many manuals (about 7). 1
4. It's crazy to think that 3 sessions is adequate. 1
5. I think that 3 hours it's too long time for a session (thinking that all the "students" were working 7-8 hours in the same day). 1

---

 MORE PRACTICE TIME
 

---

5

1. I wish we could have had more time to practice. But the weeks when we trained were hectic at school. 4
2. We desperately needed more practice time between sessions on these computers. More time with diskette saving procedures. Some people never got to save a program. More BASIC and less LOGO training. 1



## NEGATIVE COMMENTS ABOUT TRAINERS

4

1. The trainers may be knowledgeable, but they aren't good teachers. There should be a set sequence for teaching LOGO. Also, many were having trouble with the keyboard--one whole session could be used for teaching fn, shift, editing, etc. 1
2. \_\_\_\_\_ did not seem well prepared. \_\_\_\_\_ was more knowledgeable and seemed to explain things more succinctly. Need to describe teaching methods in relation to working with students in computers. 1
3. \_\_\_\_\_ is an excellent teacher. \_\_\_\_\_ omitted instructions that were important to sequencing program or went too fast--did not repeat self. 1
4. I felt the trainers were not adequately prepared. Programs would be given to us and there were flaws in them that kept them from working. They may understand how to program but they were not skilled in teaching. LOGO is difficult to learn when there are 4-5 people in a system. 1

## TRAINING APPROPRIATE TO GRADE LEVEL

4

1. Group together by teaching levels to enable us to present programs to individual grade levels. 1
2. Go over available software appropriate for our grade level during the training. Instead of doing complicated things on the computer, I would rather have done things more on the level of what I will be teaching. 1
3. I felt that this training did not address classroom realities for K-level students. We did not receive the curriculum guide until the last LOGO session. No information on class management. No suggestions or hints for varied levels. 1
4. We need to have experienced elementary teachers doing the instruction of LOGO for teachers experienced in teaching LOGO to children of the ages to be taught by the teachers in the workshops! 1

## CHANGE TIME OF TRAINING

2

1. I would have liked to have taken those sessions at another time not after school. I think three hours was pretty long after a hard day with children all day. 1

2. Not after school! 3-6 is too long for this training. 1

---

MORE DIRECT TEACHING

2

1. Lessons need to be very direct and explained well. Especially in the beginning lessons must be step-by-step and concrete. There was also a great deal of extraneous information given. 1
2. I think that more direct teaching is needed at first. When explaining the commands show an example of what happens on each. Talk about following each line of commands--one at a time. A ditto that has Sprite and Turtle commands would be a good resource. We did not discuss much on how to teach kids the things we were learning. I think that it is just as important as learning it ourselves, play some of the games that are suggested for the kids on Sprites. 1

---

MISCELLANEOUS

4

1. (1) Poorly prepared instructors--did not have adequate knowledge of material or machines prior to instructing; often couldn't answer questions; didn't make corrections in homework before assigning it. 1  
 (2) Poor use of time--spending one hour on the printer was useless since most schools won't have them for at least another year; spent time handwriting a lengthy program and typing it in so fast that we ended up with only ten minutes to run it.  
 (3) Should never put advanced learners with beginners--I learned more from just 30 minutes of playing with the machine than I did in four class sessions.  
 (4) Did not show relevance to academic objectives (particularly in LOGO). 1
2. Organization, different time of day, allow time to work on homework. 1
3. Get the classes to practice the steps for: saving programs, routines you've given us. 1
4. Consistency in the writing of programs is needed. 1

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TOTAL RESPONSES	58
<hr/>	
SURVEYS WITH NO RESPONSE	64

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Attachment C-11  
RESPONSES TO ITEM 9 FROM  
PARTICIPANTS OF BASIC TRAINING

(Page 1 of 2)

16a.

## Item --LOGO OR BASIC TRAINING EVALUATION

Is the LOGO CURRICULUM GUIDE adequate for teaching LOGO?

If NO, what are the problems with it?

Responses	Number Responding
NO ACCESS TO GUIDE	3
1. Haven't seen it.	1
2. Do not have a curriculum guide.	1
3. Is not available.	1
HAVE NOT STUDIED GUIDE	2
1. I haven't perused this as of this date, 5-12-83.	1
2. Have not had <u>time</u> to study it. This is a very busy time of the year.	1
PROBLEMS WITH GUIDE	1
1. Is hard to find information quickly.	1
TOTAL RESPONSES	6
SURVEYS WITH NO RESPONSE	55

82:45

Attachment C-12

RESPONSES TO ITEM 10 FROM  
PARTICIPANTS OF BASIC TRAINING

(Page 1 of 2)

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C-65

## Item 10--LOGO OR BASIC TRAINING EVALUATION

Is Creative Programming adequate for teaching LOGO?  
If NO, what are the problems with it?

Response	Number Responding
NO ACCESS TO GUIDE	4
1. Haven't received it.	2
2. Haven't seen it.	1
3. Do not have this material.	1
<b>NEGATIVE COMMENTS</b>	<b>3</b>
1. Confusing--too much, too fast.	1
2. Insufficient sequencing. For teachers who are new to programming, pre-machine activities need to be spelled out and a hierarchy of skills given.	1
3. There are too many "gaps." Information is presented and then, no follow-up.	1
<b>MISCELLANEOUS</b>	<b>2</b>
1. Have not had time to study it. This is a very busy time of the year.	1
2. Not used in 5th grade this quarter.	1
<b>TOTAL RESPONSES</b>	<b>9</b>
<b>SURVEYS WITH NO RESPONSE</b>	<b>52</b>

82.45

Attachment C-13

RESPONSES TO ITEM 11 FROM  
PARTICIPANTS OF BASIC TRAINING

(Page 1 of 3)

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## Item 11--LOGO OR BASIC TRAINING EVALUATION

*What other kinds of support materials do you recommend for teaching programming to children?*

Responses	Number Responding
<b>BOOKS, WORKBOOKS, AND GUIDES</b>	<b>7</b>
1. Computer Awareness Program and TI Logo Student Guide (Programming, Discovery).	1
2. Sally G. Larsen's book.	1
3. Basic Fun PB.	1
4. Books for the children to work through.	1
5. Student Booklet for each student.	1
6. Any workbooks like the ones the teachers received.	1
7. T.I. workbooks geared toward grade levels. Intensive training for teachers in order to adequately teach to children. How do you teach computer usage to a class of 30 kids when your school only has four computers? Teacher handbooks.	1
<b>HANDOUTS</b>	<b>3</b>
1. Handout material during program.	1
2. Visual handouts on program during lesson.	1
3. It helps to have paper or hard copy for folks who have difficulty copying from the chalkboard or tablets.	1
<b>PREWRITTEN PROGRAMS</b>	<b>3</b>
1. Programs already written out.	1
2. Please teach us with exact programs for classrooms (e.g., five consecutive lessons in division).	1
3. List of programs for children to run which include function as a command.	1

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ADDITIONAL SOFTWARE	2
1. More software, possible simple programs using color graphics.	1
2. More software.	1
ADDITIONAL TRAINING	2
1. More training, need more teachers who will work specifically on computer training.	1
2. More inservice for teachers.	1
MISCELLANEOUS	6
1. Don't know.	3
2. I would like definite lesson plans which were developed by someone who teaches in the classroom.	1
3. Basic skills for instructing children in specialized field, namely Music.	1
4. Filmstrips, materials with straight-forwardly written programs, without so much narrative	1
TOTAL RESPONSES	23
SURVEYS WITH NO RESPONSE	38

Attachment C-14

RESPONSES TO ITEM 12 FROM  
PARTICIPANTS OF BASIC TRAINING

(Page 1 of 4)

## Item 12--LOGO OR BASIC TRAINING EVALUATION

*For some, the pace of the sessions was too slow; for others, too fast. What suggestions do you have for accommodating different needs?*

Responses	Number Responding
GROUPING	13
1. Ability group your teachers.	4
2. Divide class--one consultant work with those who need slower pace; the other one work with faster pace persons.	3
3. Do some ability grouping within the lab, permitting more able to work independently with instructors available for questions. These same "students" can serve as tutors at the same time.	2
4. Divide classes according to skill level. Why not have teachers specialize and teach computers to all classes? That way, you'd ensure proper techniques, knowledge transmitted to the pupils.	1
5. Separate the timorous--especially those not well grounded in math. Let the "quick-studies" move ahead.	1
6. Divide class into two groups (if possible). Have advanced problems for those who are finished to work on. Individualized instruction.	1
7. Have remedial sessions.	1
SMALLER GROUPS	8
1. Teach smaller groups.	3
2. Smaller groups, individual help.	2
3. Instructing smaller groups. Each instructor (we had two) could have taken a fast or slow group--teachers could choose which one they wanted to follow (logistically difficult, I suppose).	1
4. Divide groups into smaller groups working with one instructor.	1
5. Smaller groups with people who know "how to teach." Noise level too high--too many other people trying to help out.	1

SELF-PACED INSTRUCTION	4
1. Develop a workbook that is self-paced.	1
2. Set out an individually paced module of instruction and let teachers progress at their own pace. Come back to large group instruction at beginning and end of sessions.	i
3. Give instructions at beginning of class, handouts on programs/work at own speed/when complete, monitors check work/give help as needed.	i
4. Go slowly at first. Then provide one or two sessions with written programs for self-pace. Also, _____ might try preparing his transparencies beforehand.	i
PRACTICE TIME	2
1. Provide days in between sessions to allow practice times.	i
2. Ask teachers to practice prior to lessons.	i
MISCELLANEOUS	11
1. Have overhead with flawless programs ready--reveal one line at a time. Don't explain until program is running. Then go back and tell us purpose for symbols, e.g., ":".	i
2. Having more than two consultants.	i
3. Better planning.	i
4. _____ emphasized theory too much. _____ was better.	1
5. Individualized teaching as we have to do for the children.	1
6. Start from the beginning of books issued to use with children.	1
7. My sessions were not PRACTICAL! I did not learn the "why's" behind many of the procedures.	1

- |   |   |
|---|---|
| 8. Things seemed slow when I was doing OK and other people were having difficulties--but actually, there was an overabundance of information being given us when some of us were too exhausted to absorb. | 1 |
| 9. These sessions were fine at my school.   | 1 |
| 10. It was just right.  | 1 |
| 11. None really.  | 1 |

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TOTAL RESPONSES

38

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SURVEYS WITH NO RESPONSE

26

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Attachment C-15

ITEM 13: GENERAL COMMENTS ABOUT BASIC TRAINING

(Page 1 of 3)

C-77

130

Responses	Number Responding
SUGGESTIONS	11
1. The necessary information--it might have been better to have computer training sessions twice a week, for 1½ or 2 hours, instead of once a week at a three-hour stretch, and after teaching children all day, I personally was too exhausted to get what I needed out of the training. The instructors, particularly _____, were very patient.	1
2. Give time then for practice so we can figure out our questions and answers individually. Faster people practice--slower people answer. This should solve talk problems.	1
3. We also needed more time to work on computers. More thought was needed in presenting ideas, programming, etc. Needed materials before actual "hands on."	1
4. Materials were sporadically received and we still don't have it all. The librarian and principal should have received a bit of everything--including booklets and to what level teachers each item was for.	1
5. We needed objectives to be more specific. The lessons needed to be more structured.	1
6. We need a smaller class and one teacher who will insist that people not be hopping all over the place or skipping all ahead.	1
7. I'm concerned about retention of information over the summer--perhaps a refresher workshop could be offered in fall. _____ did a good job--teachers can be difficult students. Time of day of the training made matters worse--folks tired and wanting to go home.	1
8. Wanted information on how to teach or program subject areas into computer.	1
9. I needed a more extensive list of commands needed to write the programs. I lost too much time trying to "discover" what worked.	1
10. Need more information on how to apply this to the classroom (ex: programs for X, +, reading programs). More information on how teachers can use it, for grades, etc.	1
11. I would like to have had the classes for a longer period of time so we could have covered more "advanced" concepts.	1



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POSITIVE COMMENTS ABOUT TRAINERS

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6

1. Consultants were very helpful and tolerant. 1
2. \_\_\_\_\_ and \_\_\_\_\_; when they took over, were excellent. 1
3. \_\_\_\_\_ was excellent at pacing us and taking us through the program so we understood what was happening. \_\_\_\_\_, although evident that he was extremely knowledgeable, often got too technical and I would get lost. 1
4. \_\_\_\_\_ was an excellent instructor. He gave you useful, informative material. Did not indulge on the mechanics of the computer. \_\_\_\_\_ was very helpful with individual problems. \_\_\_\_\_'s Spanish jokes were funny! 1
5. \_\_\_\_\_ was a wonderful teacher. Would have not learned if instructed by somebody else. \_\_\_\_\_ was helpful with individual problems with everyone. 1
6. \_\_\_\_\_ seems to have a lot of potential and has grown. If he would be a good teacher. 1

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NEGATIVE COMMENTS ABOUT TRAINERS

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5

1. The presenters did not have teaching skills. Sessions appeared to be poorly planned. Often conflicting instructions were given. 1
2. Too many instructors--with conflictive information--spoil the class. They contradicted each other. The space at Ortega was too crowded and very poorly organized. 1
3. I found the two consultants sometimes worked at cross-purposes (not intentionally). I found it distracting to be trying to follow one closely and have the other interrupt. 1
4. The trainers in some cases seemed to be one page ahead of the class. I understand the problem but feel that more knowledgeable trainers are needed on a year-round basis. Perhaps on an "on call" basis.
5. Both instructors are computer literate in some languages. \_\_\_\_\_ appeared to have no experience teaching and did a poor job. His materials, programs weren't prepared and debugged. He attempted to teach concepts with five or six prerequisite skills not

taught in advance. As a result he commanded little audience respect. His inability to teach combined with his strong accent made attending to his lesson difficult. \_\_\_\_\_ stated that he felt hampered by \_\_\_\_\_ not being able to alter "lesson plans" to meet the needs of the group. \_\_\_\_\_ also needed to become more familiar with LOGO. The time factor, little for preparation, hindered both individuals. 1

---

 POSITIVE COMMENTS ABOUT TRAINING
 

---

4

1. I am now familiar with an instrument that was totally unfamiliar to me before this course began. I believe, with the proper equipment, both I and my students will benefit a great deal from its use. 1
2. I truly enjoyed working with the computers. It gives you a chance to catch up with what's ahead in the future-- especially for kids. 1
3. Taught me quite a bit about microcomputers. I plan on following this up with college courses. 1
4. Must be pretty good to have gotten me over the hump. 1

---

 NEGATIVE COMMENTS ABOUT TRAINING
 

---

3

1. I felt the training was slipshod and thrown together without continuity. I felt it was close to being a waste of about  $\frac{1}{2}$  the time we spent in there. We could have achieved the same end in one half the time allotted to it. 1
2. Had I not had prior computer experience, I'd probably be lost! Teachers not provided with enough background information or the reasoning behind commands, statements, etc. We were just told to execute. 1
3. There wasn't an obvious plan for each of our sessions. I felt very confused at times and very bored at times. I wish that there had been more of a step-by-step approach. 1

---

 MISCELLANEOUS
 

---

3

1. Even though discs were ordered there were none in the warehouse which prevented \_\_\_\_\_ from saving programs. 1

- 2: Since I don't work with it daily or teach it daily, I find it hard to truly evaluate. 1
- 3: Basically, it was an adequate introduction to computers. 1

---

TOTAL RESPONSES	32
-----------------	----

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SURVEYS WITH NO RESPONSE	29
--------------------------	----

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Chapter 2--Discretionary

Appendix 3

COMPUTER LITERACY TEST

## INSTRUMENT DESCRIPTION: Computer Literacy Test

## Brief Description of the instrument:

The Computer Literacy Test was developed to measure the level of computer literacy of 3rd and 6th grade students. The test for 3rd grade students contained 13 items. The test for 6th grade students contained 16 items.

## To whom was the instrument administered?

To 3rd and 6th grade students in the eight Chapter 2 Computer Literacy Schools.

## How many times was the instrument administered?

Twice, before and after instruction using the Computer Awareness Unit developed by Elementary Education.

## When was the instrument administered?

The tests were administered at the teacher's discretion.

## Where was the instrument administered?

In the student's classroom.

## Who administered the instrument?

Room teachers.

## What training did the administrators have?

Instructions for administering the tests were provided to teachers.

## Was the instrument administered under standardized conditions?

No.

## Were there problems with the instrument or the administration that might affect the validity of the data?

None were identified.

## Who developed the instrument?

Elementary instructional coordinators and Office of Research and Evaluation staff.

## What reliability and validity data are available on the instrument?

None.

## Are there norm data available for interpreting the results?

No.

## COMPUTER LITERACY TEST

## Purpose

Results of the Computer Literacy Test were used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded or revised?

Evaluation Question D1-2: Do the students demonstrate a gain in computer literacy from pre- to posttest?

Evaluation Question D1-3: If the schools differed in the characteristics included in D1-1, do those differences seem to relate to differences in outcome?

## Procedure

The Computer Literacy Test was administered as a pretest and a posttest to third and sixth grade students in Chapter 2 Computer Literacy schools. The Computer Literacy Test has two versions, one for third grade students, and another for sixth grade students (see Attachments D-1 and D-2).

The Computer Literacy pretests and posttests were sent to classroom teachers with the Computer Awareness Unit. The third grade tests were sent to teachers May 3, 1983 and the sixth grade tests were sent May 4, 1983. A memo (Attachment D-3) was enclosed with the tests explaining how the tests were to be administered. No specific dates were given for the pre- and posttest because teachers were allowed to teach it at their discretion. Teachers were asked to give the pretest before the first lesson was taught and then to return the test through the school mail.

After one set of pretests was returned without students' names or any way of identifying the teacher or school name, a second memo was sent to third and sixth grade teachers. This memo requested teachers to instruct students taking the tests to write the school name at the top of the front page (see Attachment D-4).

Pretests and posttests were not returned from every teacher who taught the Awareness Unit. At Ortega, one sixth grade teacher did not return either pretests or posttests for her students. At Gullett, one sixth grade teacher did not return posttests for his students. At Brooke, no pretests were given to any of the sixth grade students. One teacher from Brooke did not administer the posttest to her students.

Completed computer literacy tests were coded onto coding sheets in the formats found in Attachment D-5. Coded information was keypunched onto cards at the Southwest Educational Development Laboratory and stored on the UT Dual Cyber System as files LITER3 (grade 3 results) and LITER6 (grade 6 results) on PF set A948. Because some items required multiple responses, the item numbers were changed during analysis. The numbers in parentheses on the copies of the tests in Attachments D-1 and D-2 correspond to the item numbers used in the analyses.

Several different analyses were done at each grade. All analyses were done using the SPSS package on the UT system.

1. Items were scored using the keys in Attachments D-6 and D-7; and the percentage passing each item was determined by school and for all students together. In addition, a total score was calculated for each student.
2. A t-test was used to determine whether the average gain from pre- to posttest was statistically significant at each grade.
3. The schools at each grade were compared on their pretest and posttest means using the analysis of variance.

#### Results

The percentage passing each item before and after computer awareness instruction can be found in Figures D-1 and D-2. A comparison of the percentages with the test items can be used to determine in which areas covered by the tests students made the most progress. These results deserve the close attention of those persons responsible for modifying the Computer Awareness Units prior to their dissemination districtwide. Similar results by school can be found in Attachments D-7 and D-8. In those printouts, an item value of "1" is correct and a "9" is incorrect.

The results showed that the students already knew something about computers prior to receiving instruction in the units. Third graders answered about 12 of 22 items correctly on the pretest, and sixth graders got about 13 of 25 items correct prior to the unit.

Only four items were missed by more than 30% of the third graders on the posttest. The content of these items covered specific hardware terminology and the history of computers.

At the sixth grade level, about half of the items on the posttest were missed by at least 30% of the students. Again specific hardware terminology and the history of computers were areas of greatest weakness. Item 12 on the test seemed especially difficult. The students had trouble dealing with the abstract terminology in the item such as "information retrieval," "process control," and "simulation." In addition, there may be two correct answers to item number 10.

Figure D-3 shows the results of t-tests comparing the mean scores at pretest and posttest for each grade. In both cases the students showed gains after studying the units. Figures D-4 and D-5 show the mean pretest, posttest, and gain scores by school at each grade. Figures D-6 and D-7 graphically display the results. At each grade a one way analysis of variance (ANOVA) was done on the pretest mean scores and then on the posttest means in order to see if the schools differed significantly in their gains. At third grade, the schools did not differ significantly on either the pretest or posttest. Therefore, at third grade we can conclude that the students increased in computer awareness from studying the unit, and the gain was essentially the same for all schools.

At grade six, the ANOVA on pretest scores showed that the schools began at slightly different places. The pretest mean for Campbell was significantly lower than the mean for Gullett. Posttest means also differed significantly. On the posttest, Campbell, Gullett, and Read did not differ significantly, but Ortega was significantly higher than the others. Additional t-tests by school (see Figure D-8) showed that all schools gained significantly from pretest to posttest. Brooke was omitted from the calculation of all t-tests and ANOVA's.



Question Descriptor and Number		Percent Testing		Gain
		Pre	Post	
BASIC	1	66.5	73.2	6.7
Module	2	41.5	62.8	21.3
Chip	3	35.4	54.8	19.4
Program	4	63.1	70.5	7.4
Menu	5	69.2	78.5	9.3
Microcomp	6	31.2	73.2	42.0
Hardware	7	41.2	69.3	28.1
Monitor	8	88.1	98.9	10.8
Keyboard	8	93.5	98.5	5.0
Disk Drive	8	65.4	82.4	17.0
Speech Synthesizer	8	56.2	83.1	26.9
Peripheral				
Expansion System	8	65.8	83.1	17.3
Rule	9	67.7	71.3	3.6
CPU	10	49.6	71.3	21.7
Input	10	25.8	74.7	48.9
Memory	10	45.0	71.6	26.6
Output	10	21.5	72.4	50.9
Computing	11	23.5	80.5	57.0
History	12	8.1	38.3	30.2
Remember	13	70.4	88.9	18.5
Add	13	73.3	88.9	15.6
List	13	50.4	76.6	26.2
Total Score				
Mean		11.52	16.63	5.11
Standard Deviation		3.47	4.14	-
Range		2-19	6-22	-
N		260	261	-

Figure D-1. PERFORMANCE OF THIRD GRADE COMPUTER AWARENESS STUDENTS ON THE COMPUTER AWARENESS TEST.

Question Descriptor and Number		Percent Correct		Gain
		Pre	Post	
Data Bank	1	88.4	88.2	5.8
Bit	2	32.5	66.8	34.3
Memory	3	75.7	83.4	7.7
UNIVAC	4	25.6	50.0	24.4
Hardware	5	56.6	72.6	16.0
Program	6	81.3	86.7	5.4
Chip	7	50.6	61.0	10.4
Monitor	8	89.5	94.4	4.9
Keyboard	8	90.3	98.1	7.8
Disk Drive	8	55.0	72.4	7.4
Speech Synthesizer	8	61.2	70.3	9.1
Peripheral				
Expansion System	8	76.2	79.0	2.8
History	9	19.2	50.6	31.4
Computers Today	10	16.0	38.8	22.8
Business	11	88.0	81.3	-6.7
Educational	11	85.5	77.2	-8.3
General Purpose	11	59.0	68.3	9.3
Information				
Retrieval	12	34.5	45.6	11.1
Data Processing	12	26.1	40.5	14.4
Process Control	12	29.4	36.7	7.3
Simulations	12	34.3	40.7	6.4
Binary Numbers	13	60.6	79.0	18.4
Byte	14	22.9	51.9	29.0
Improper Use	15	28.3	30.1	1.8
Crime	16	53.0	43.4	10.4
Total Score				
Mean		13.287	16.071	
Standard Deviation		3.971	4.697	
Range		3-25	3-25	
N		449	482	

Figure D-2. PERFORMANCE OF SIXTH GRADE COMPUTER AWARENESS STUDENTS ON THE COMPUTER AWARENESS TEST.

Grade	Time	N	Mean	Standard Deviation	t	df	p
3	Pre	260	11.52	3.467	-15.25	519	<.001
	Post	261	16.63	4.141			
6	Pre	449	13.29	3.971	-9.84	873	<.001
	Post	426	16.17	4.675			

Figure D-3. T-TESTS COMPARING PRE- AND POSTTEST SCORES AT GRADES 3 AND 6.

School	Pretest		Posttest		Gain
	N	Mean	N	Mean	
Govalle	129	11.85	125	17.18	5.26
Highland Park	78	11.27	82	15.89	4.62
Sims	53	11.11	54	16.48	5.37
ANOVA Results					
F	1.137		2.457		
p	.3225		.0877		

Figure D-4. GRADE THREE COMPUTER AWARENESS TEST RESULTS BY SCHOOL. ANOVA'S compared schools on pretest and posttest means.

School	Pretest		Posttest		Gain
	N	Mean	N	Mean	
Brooke	-	-	56	15.32	-
Campbell	84	12.50	79	16.59	4.09
Gullett	122	13.96	102	15.26	1.30
Ortega	47	13.77	46	18.80	5.03
Read	196	13.09	199	15.85	2.76

## ANOVA Results

F	3.679	6.942*
p	.0465	.0001

\*The calculation of this ANOVA did not include Brooke.

Figure D-5. GRADE SIX COMPUTER AWARENESS TEST RESULTS BY SCHOOL:  
ANOVA's compared schools on pretest and posttest means.

D-10

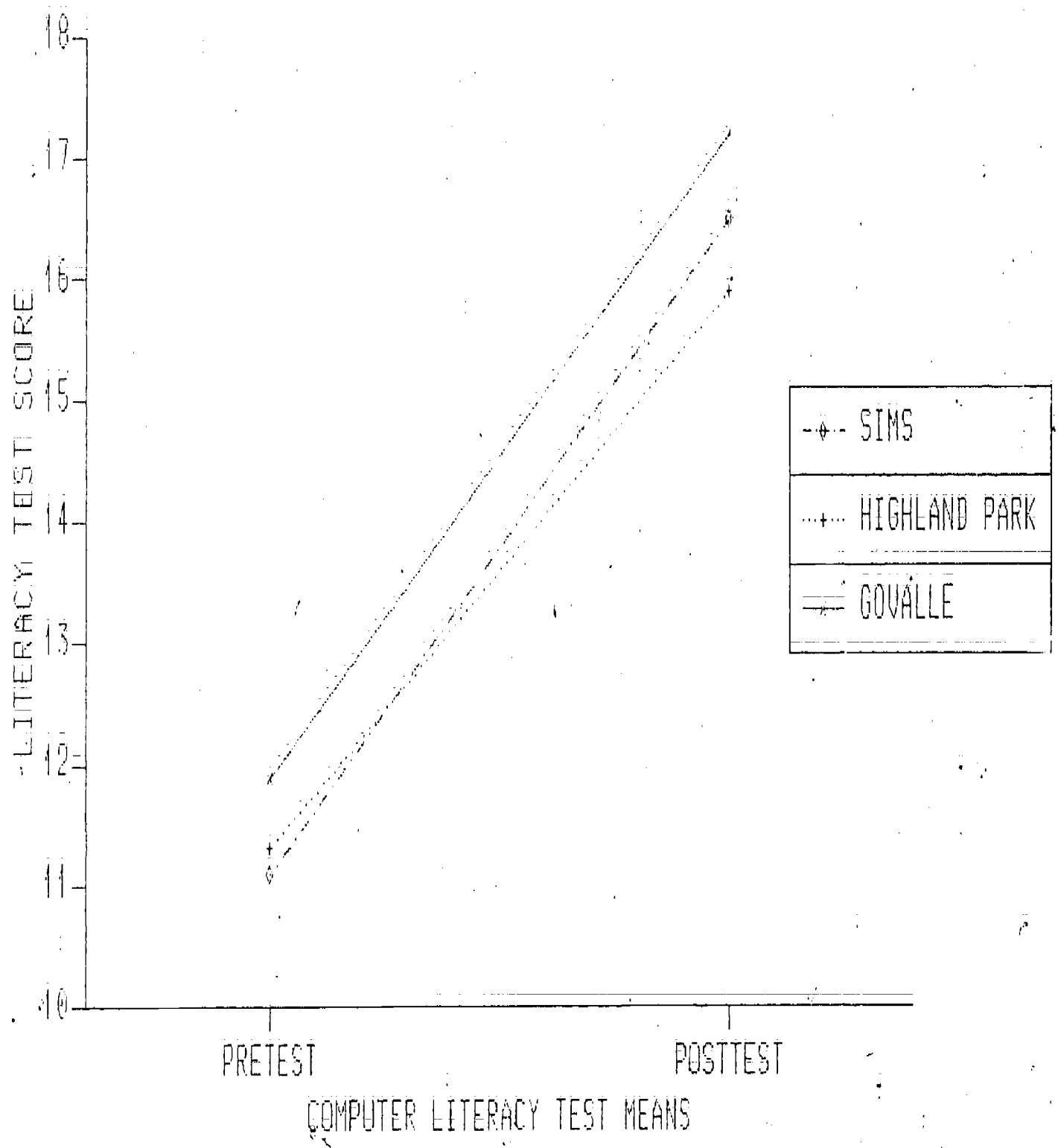


Figure D-6. MEAN COMPUTER AWARENESS SCORES BY SCHOOL--GRADE 3.

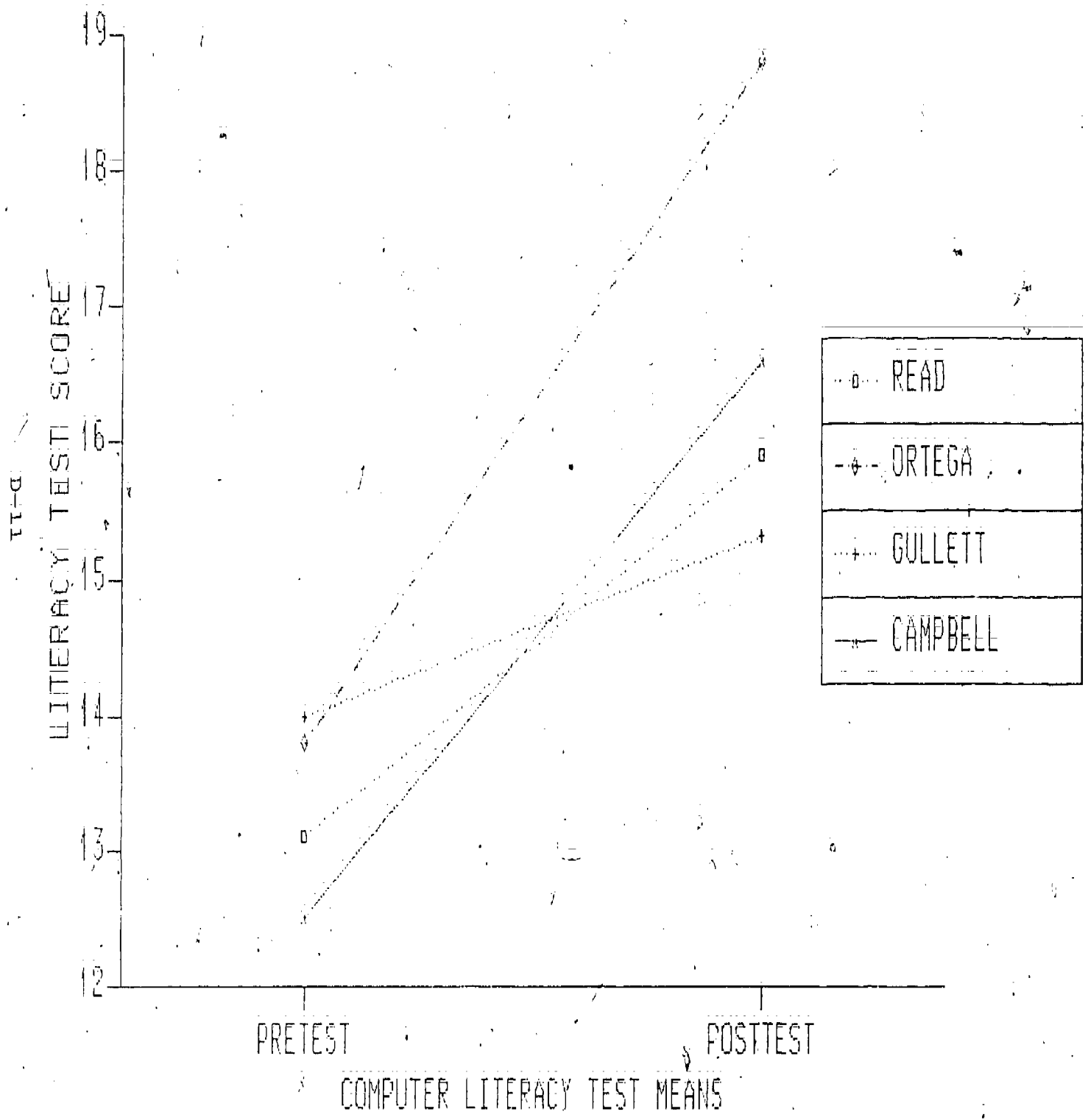


Figure D-7. MEAN COMPUTER AWARENESS SCORES BY SCHOOL--GRADE 6.

School	N	t	df	p
Campbell	84, 79	-6.86	161	<.001
Gullett	122, 102	-2.17	222	.031
Ortega	47, 46	-5.17	91	<.001
Read	196, 199	-6.51	393	<.001

Figure D-8. T-TEST RESULTS COMPARING PRETEST AND POSTTEST MEAN SCORES BY SCHOOL.

Attachment D-1

COMPUTER LITERACY TEST--GRADE 3

(Page 1 of 4)



## GRADE 3

## COMPUTER AWARENESS PRETEST

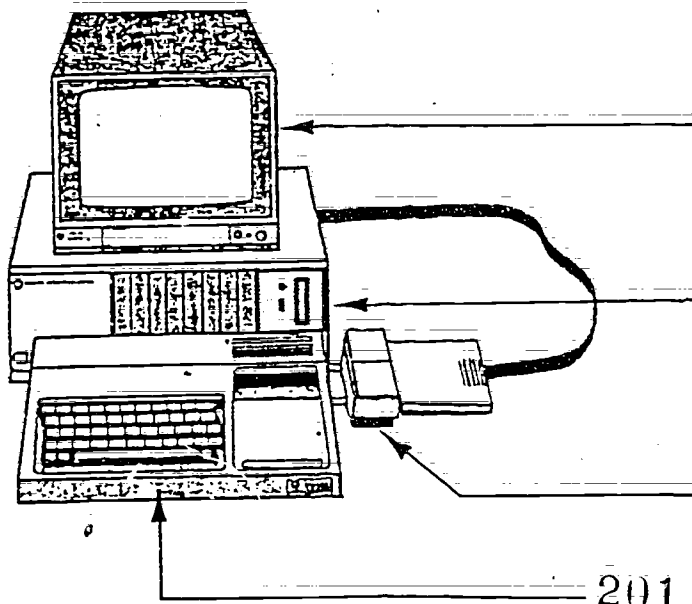
For items 1 to 7, check the answer that gives the best meaning for the underlined word.

- 1) 1. BASIC is
- a. the desk a computer sits on.
  - b. a brand of computer.
  - c. the part of the computer that holds the disk drive.
  - d. a computer language.
- 2) 2. Module is
- a. the TV screen attached to the computer.
  - b. a list of the contents of a program.
  - c. a piece of software that gives instructions to the computer.
  - d. the parts of a computer you can touch.
- 3) 3. Chip is
- a. the part of the computer that holds the disk drive.
  - b. a way of using the keyboard to make pictures appear on the screen.
  - c. the part of the computer that does the work.
  - d. the electrical power unit.
- 4) 4. Program is
- a. the parts of a computer you can touch.
  - b. the desk the computer sits on.
  - c. instructions to the computer.
  - d. the electrical power unit.

- (5) 5. Menu is
- \_\_\_ a. a computer language.
  - \_\_\_ b. the part of a computer that does the work.
  - \_\_\_ c. the parts of a computer you can touch.
  - \_\_\_ d. a list of the contents of a program.
- (6) 6. A microcomputer is a computer that
- \_\_\_ a. can be used only for playing games.
  - \_\_\_ b. is small: fits on a desk and can be moved easily.
  - \_\_\_ c. is used to see small objects.
  - \_\_\_ d. is large: fills a small room and requires several people to move it.

- (7) 7. Hardware is
- \_\_\_ a. instructions to the computer.
  - \_\_\_ b. a computer language.
  - \_\_\_ c. the parts of a computer that are not easy to use.
  - \_\_\_ d. the parts of a computer that you can touch.

8. Label the parts of a computer. Use the word list to help you.



- Word list
- monitor (8)
  - keyboard (9)
  - disk drive (10)
  - speech synthesizer (11)
  - peripheral expansion system (12)



Attachment D-2

COMPUTER LITERACY TEST--GRADE 6

(Page 1 of 5)

## Grade 6

## COMPUTER AWARENESS PRETEST

For items 1 - 7, check the answer that gives the best meaning for the underlined word.

- (1) 1. Data bank is
- a. a place where money is stored.
  - b. an invasion of privacy.
  - c. a book.
  - d. a file of information.
- (2) 2. Bit is
- a. computer hardware.
  - b. a small output.
  - c. a binary digit.
  - d. in the cassette recorder.
- (3) 3. Memory is
- a. where calculations are performed.
  - b. the device that prints output.
  - c. a place where data is stored.
  - d. the video display monitor.
- (4) 4. UNIVAC is
- a. a computer language.
  - b. the first computer to use vacuum tubes.
  - c. the first calculating device.
  - d. a microcomputer.

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(5) 5. Hardware is

- a. the parts of a computer that are not easy to use.
- b. instructions to the computer.
- c. a computer language.
- d. the parts of a computer you can touch.

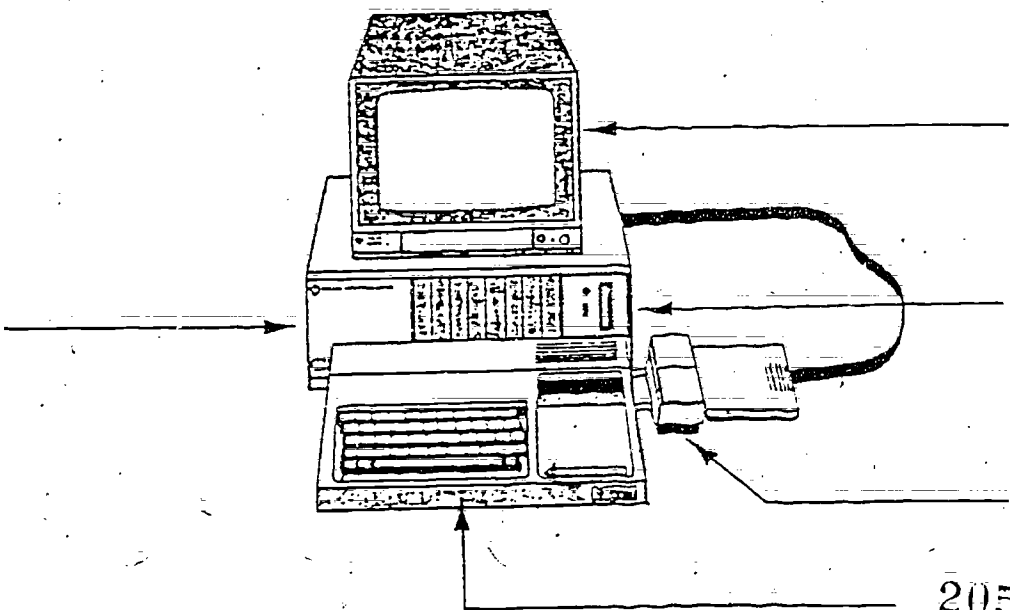
(6) 6. Program is

- a. instructions to the computer.
- b. the hardware.
- c. the electrical power unit.
- d. the desk on which a computer sits.

(7) 7. Chip is

- a. the part of the computer that holds the disk drive.
- b. the part of a computer that does the work.
- c. a way of using the keyboard to make pictures appear on the screen.
- d. a key on the console.

8. Label the parts of a computer.



Word list

- monitor (8)
- keyboard (9)
- disk drive (10)
- speech synthesizer (11)
- peripheral expansion system (12)

- (13) 9. Place these in order according to the generation of computers in which they are found. Use a (1) for the first generation, a (2) for the second generation, (3) for the third generation, and (4) for the fourth generation.
- \_\_\_\_\_ vacuum tubes  
 \_\_\_\_\_ integrated circuit chips  
 \_\_\_\_\_ transistors  
 \_\_\_\_\_ integrated circuits
- (14) 10. Compared to the first generation of computers in 1944, computers of today
- \_\_\_\_\_ a. produce less heat and are more expensive.  
 \_\_\_\_\_ b. can perform millions of calculations per second and are quite large.  
 \_\_\_\_\_ c. are small and inexpensive to produce.  
 \_\_\_\_\_ d. use silicon chips and transistors to operate.
11. Circle three types of computers:
- |               |                      |
|---------------|----------------------|
| small         | (16) educational     |
| (15) business | (17) general purpose |
| hospital      | expensive            |
| large         | supermarket          |
12. Choose the best definition for each of the four functions of computers. Write the letter next to the function.
- (18) \_\_\_\_\_ information retrieval a. regulates a situation or routine  
 (19) \_\_\_\_\_ data processing b. instructions to the computer  
 (20) \_\_\_\_\_ process control c. gets back stored data  
 (21) \_\_\_\_\_ simulation d. imitates a real-life situation  
 e. writes books  
 f. does something with information

82.45

- (22) 13. What are the digits in the binary number system? \_\_\_\_\_
- (23) 14. How does a computer "read" a number, letter, or symbol?
- a. like we read a word
  - b. as one byte
  - c. as RAM
  - d. with the keyboard
- (24) 15. Check (✓) the statement that describes an improper use of a data bank.
- a. A department store runs a credit check on a person who is opening a charge account.
  - b. A grocery store clerk asks a person writing a check for some identification.
  - c. A person hiring a teacher asks a credit bureau if he has a good credit rating.
  - d. A bank making a car loan finds out if this person has any loans which have not been paid.
- (25) 16. Check (✓) the statement that does not describe the use of computers to commit crime.
- a. Money is transferred from one person's account to that of another by changing a bank's computer files without permission.
  - b. A computer diskette containing a new design for a mousetrap is copied without permission and sold.
  - c. Grades stored in a computer's memory are changed without the approval of the teacher.
  - d. Computers are stolen from a store and sold at reduced prices.



April 29, 1983

TO: Teachers Addressed  
FROM: David Doss *DD*  
SUBJECT: Computer Literacy Pre- and Posttest

Part of the evaluation of the Chapter 2 Computer Literacy program is a computer literacy test given to 3rd and 6th grade students receiving the Computer Awareness unit. The enclosed pre- and posttest will be used to measure changes in computer literacy resulting from instruction in computer awareness.

Give the pretest to your students before you teach the first lesson. Immediately return the completed tests to:

Lauren Moede, ORE  
Administration Building, Box 79

Give the posttest after your students have completed the last lesson in the unit. Please return these tests to the address given above.

If you have any questions about these tests, give me a call at 458-1227.

Approved: \_\_\_\_\_  
Director, Office of Research and Evaluation

Approved: *Ruth Mae Allister*  
Assistant Superintendent, Elementary Education

cc: Timy Baranoff  
Ann Cunningham  
Leslie Cohen  
Yolanda Leo  
Chapter 2 Computer Literacy Principals

DAD:LHM:lhm

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May 11, 1983

TO: Teachers Addressed  
FROM: David Doss <sup>DD</sup>  
SUBJECT: Computer Literacy Tests

Recently, you received copies of the Computer Literacy pretest and posttest. To do our analyses of these tests, we need the school name at the top of each test. Before students take the pre- and posttest, please have them put the school name at the top of the front page. If the pretests have been completed, please clip or fasten them together and label them with the school name before returning them to our office. We are attempting to identify those that have already been returned. I apologize for any inconvenience this oversight has caused.

Approved: *Gilda Holley*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

cc: Chapter 2 Computer Literacy Principals

DAD:lhm

82.45

Attachment D-5

CARD FILE LAYOUT FOR LITER3 AND LITER6

(Page 1 of 5)

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D-25

FILE ID A / U / M

CARD FILE LAYOUT

LOCATION:

PROGRAM: Chapter 2--Discretionary

AISD

YEAR: 1982-83

✓ UT PFA948 ; , LITER3

acct. pass. file name

CONTENTS:

Field	Columns	Description
	1-3	File ID (AUM)
	4-6	School ID
	7	Grade (3)
	8	Test (Pre=1; Post=2)
	9	Item 1
	10	Item 2 Code Answers
	11	Item 3 a=1
	12	Item 4 b=2
	13	Item 5 c=3
	14	Item 6 d=4
	15	Item 7
	16-20	Item 8 (0=correct, 1=incorrect)
	21	Item 9 (code 5 if more than one checked)
	22-25	Item 10 (0=correct, 1=incorrect) (code 2 if more than four checked)

82.45

D-26

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Attachment D-5  
(Page 2 of 5)

21



FILE ID A / U / L

CARD FILE LAYOUT

LOCATION:

PROGRAM: Chapter 2--Discretionary

ATSD

YEAR: 1982-83

✓ UT PF A948, LITER6

acct. pass. file name

CONTENTS:

Field	Columns	Description
	1-3	File ID (AUL)
	4-6	School ID
	7	Grade (6)
	8	Test (Pre=1, Post=2)
	9	Item 1
	10	Item 2 Code Answers
	11	Item 3 a=1
	12	Item 4 b=2
	13	Item 5 c=3
	14	Item 6 d=4
	15	Item 7
	16-20	Item 8 (0=correct, 1=incorrect)
	21-24	Item 9 (enter number)
	25	Item 10

82.45

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Attachment D-5  
(Page 4 of 5)



Attachment D-6

KEY TO COMPUTER LITERACY TEST--GRADE 3

(Page 1 of 4)



## GRADE 3

## COMPUTER AWARENESS POSTTEST

For items 1 to 7, check the answer that gives the best meaning for the underlined word.

1. BASIC is

- a. the desk a computer sits on.
- b. a brand of computer.
- c. the part of the computer that holds the disk drive.
- d. a computer language.

2. Module is

- a. the TV screen attached to the computer.
- b. a list of the contents of a program.
- c. a piece of software that gives instructions to the computer.
- d. the parts of a computer you can touch.

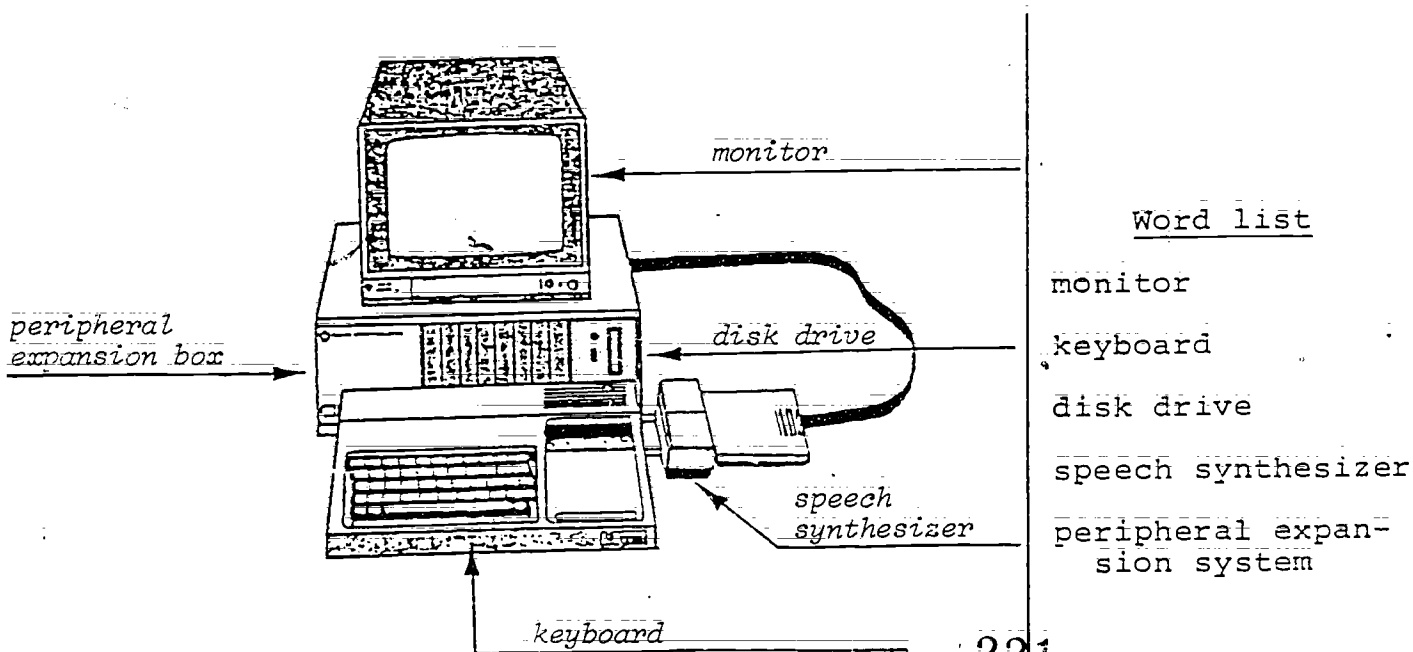
3. Chip is

- a. the part of the computer that holds the disk drive.
- b. a way of using the keyboard to make pictures appear on the screen.
- c. the part of the computer that does the work.
- d. the electrical power unit.

4. Program is

- a. the parts of a computer you can touch.
- b. the desk the computer sits on.
- c. instructions to the computer.
- d. the electrical power unit.

5. Menu is
- a. a computer language.
  - b. the part of a computer that does the work.
  - c. the parts of a computer you can touch.
  - d. a list of the contents of a program.
6. A microcomputer is a computer that
- a. can be used only for playing games.
  - b. is small: fits on a desk and can be moved easily.
  - c. is used to see small objects.
  - d. is large: fills a small room and requires several people to move it.
7. Hardware is
- a. instructions to the computer.
  - b. a computer language.
  - c. the parts of a computer that are not easy to use.
  - d. the parts of a computer that you can touch.
8. Label the parts of a computer. Use the word list to help you.



9. Check (✓) the one below that is not a rule for taking care of the computer:
- a. Wash the keyboard often with warm, soapy water.
- b. Don't hammer on the keyboard.
- c. Don't touch the module contacts.
- d. Keep all software away from heat and static electricity.

10. Circle the four parts of a computer:

central processing unit	LOGO	menu
input	memory	output
	software	program

11. When did people begin computing?

- a. many thousands of years ago using their fingers.
- b. five thousand years ago using the abacus.
- c. three hundred years ago using Napier's bones.
- d. ten years ago using the microcomputer.

12. Put these in order from the earliest to the most recent computing device. Put a (1) beside the earliest, a (2) beside the next one, etc.

4 microcomputer

1 abacus

3 Mark I

2 tabulating machine

13. Check (✓) three things a computer can do better than people:

- Remember the name, address, and birthday of everyone in the school.
- Add a hundred numbers in one second.
- Work without instructions.
- Write a book. 222
- Make a list of students born on May 1st.

Attachment D-7

KEY TO COMPUTER LITERACY TEST--GRADE 6

(Page 1 of 5)

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

Grade 6

## COMPUTER AWARENESS POSTTEST

For items 1 - 7, check the answer that gives the best meaning for the underlined word.

1. Data bank is

- a. a place where money is stored.  
 b. an invasion of privacy.  
 c. a book.  
 d. a file of information.

2. Bit is

- a. computer hardware.  
 b. a small output.  
 c. a binary digit.  
 d. in the cassette recorder.

3. Memory is

- a. where calculations are performed.  
 b. the device that prints output.  
 c. a place where data is stored.  
 d. the video display monitor.

4. UNIVAC is

- a. a computer language.  
 b. the first computer to use vacuum tubes.  
 c. the first calculating device.  
 d. a microcomputer.

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5. Hardware is

- a. the parts of a computer that are not easy to use.
- b. instructions to the computer.
- c. a computer language.
- d. the parts of a computer you can touch.

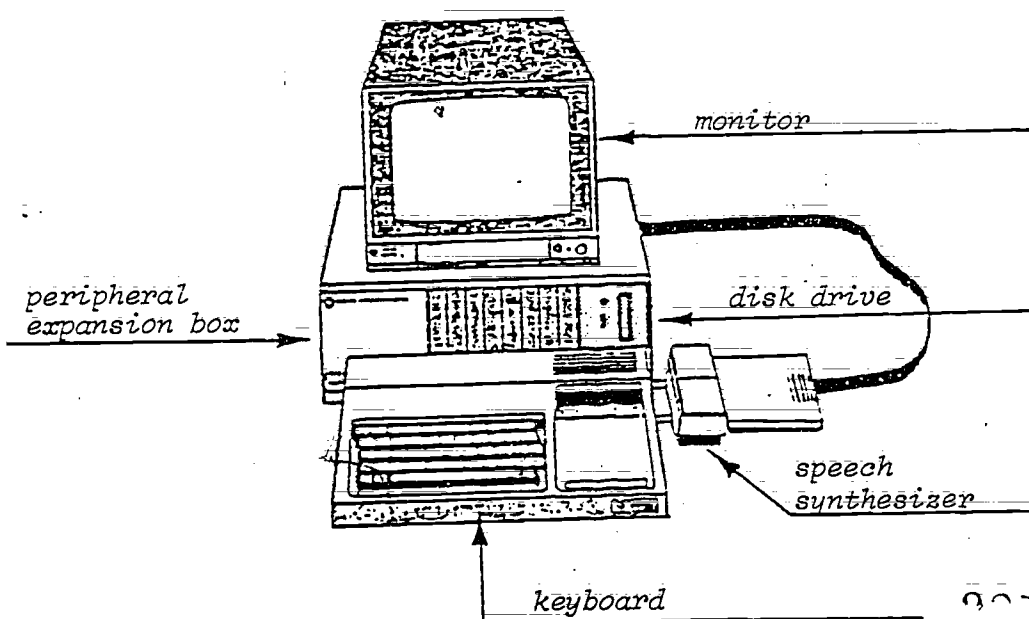
6. Program is

- a. instructions to the computer.
- b. the hardware.
- c. the electrical power unit.
- d. the desk on which a computer sits.

7. Chip is

- a. the part of the computer that holds the disk drive.
- b. the part of a computer that does the work.
- c. a way of using the keyboard to make pictures appear on the screen.
- d. a key on the console.

8. Label the parts of a computer.



Word list

monitor  
 keyboard  
 disk drive  
 speech synthesizer  
 peripheral expansion system

9. Place these in order according to the generation of computers in which they are found. Use a (1) for the first generation, a (2) for the second generation, (3) for the third generation, and (4) for the fourth generation.

1 vacuum tubes  
4 integrated circuit chips  
2 transistors  
3 integrated circuits

10. Compared to the first generation of computers in 1944, computers of today

     a. produce less heat and are more expensive.  
     b. can perform millions of calculations per second and are quite large.  
  ✓   c. are small and inexpensive to produce.  
     d. use silicon chips and transistors to operate.

11. Circle three types of computers:

small	educational
business	general purpose
hospital	expensive
large	supermarket

12. Choose the best definition for each of the four functions of computers. Write the letter next to the function.

<u>e</u> information retrieval	a. regulates a situation or routine
<u>f</u> data processing	b. instructions to the computer
<u>a</u> process control	c. gets back stored data
<u>d</u> simulation	d. imitates a real-life situation
	e. writes books
	f. does something with information

13. What are the digits in the binary number system? 0, 1
14. How does a computer "read" a number, letter, or symbol?
- a. like we read a word
  - b. as one byte
  - c. as RAM
  - d. with the keyboard
15. Check (✓) the statement that describes an improper use of a data bank.
- a. A department store runs a credit check on a person who is opening a charge account.
  - b. A grocery store clerk asks a person writing a check for some identification.
  - c. A person hiring a teacher asks a credit bureau if he has a good credit rating.
  - d. A bank making a car loan finds out if this person has any loans which have not been paid.
16. Check (✓) the statement that does not describe the use of computers to commit crime.
- a. Money is transferred from one person's account to that of another by changing a bank's computer files without permission.
  - b. A computer diskette containing a new design for a mousetrap is copied without permission and sold.
  - c. Grades stored in a computer's memory are changed without the approval of the teacher.
  - d. Computers are stolen from a store and sold at reduced prices.



82.45

Attachment D-8

PERCENTAGE OF STUDENTS PASSING EACH COMPUTER LITERACY  
TEST ITEM BY SCHOOL--GRADE 3

(Page 1 of 47)

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COMPUTATION CENTER  
UNIVERSITY OF TEXAS AT AUSTIN

82.45

S P S S - - STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES

DDC 6000/CYBER VERSION 8.3 - LOCAL RELEASE 1.0

376000 CM MAXIMUM FIELD LENGTH REQUEST

RUN NAME CROSSTABS ON RECODED VARIABLES BY SCHOOL--LITERACY TEST--GRADE 3  
VARIABLE LIST SCHOOL GRADE TIME ITEM1 TO ITEM22  
INPUT FORMAT (3X,F3,2F1,18F1,F4,3F1)

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
SCHOOL	F 3. 0	1	4- 6
GRADE	F 1. 0	1	7- 7
TIME	F 1. 0	1	8- 8
ITEM1	F 1. 0	1	9- 9
ITEM2	F 1. 0	1	10- 10
ITEM3	F 1. 0	1	11- 11
ITEM4	F 1. 0	1	12- 12
ITEM5	F 1. 0	1	13- 13
ITEM6	F 1. 0	1	14- 14
ITEM7	F 1. 0	1	15- 15
ITEM8	F 1. 0	1	16- 16
ITEM9	F 1. 0	1	17- 17
ITEM10	E 1. 0	1	18- 18
ITEM11	F 1. 0	1	19- 19
ITEM12	F 1. 0	1	20- 20
ITEM13	F 1. 0	1	21- 21
ITEM14	F 1. 0	1	22- 22
ITEM15	E 1. 0	1	23- 23
ITEM16	F 1. 0	1	24- 24
ITEM17	F 1. 0	1	25- 25
ITEM18	F 1. 0	1	26- 26
ITEM19	E 4. 0	1	27- 30
ITEM20	F 1. 0	1	31- 31
ITEM21	F 1. 0	1	32- 32
ITEM22	F 1. 0	1	33- 33

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THE INPUT FORMAT PROVIDES FOR 25 VARIABLES. 25 WILL BE READ.  
IT PROVIDES FOR 1 RECORDS (\*CARDS\*) PER CASE.  
A MAXIMUM OF 33 \*COLUMNS\* ARE USED ON A RECORD.

RECODE ITEM8 TO ITEM12 ITEM14 TO ITEM17 ITEM20 TO ITEM22  
(0=1)(ELSE=9)

RECODE ITEM13 ITEM18 (1=1)(ELSE=9)

RECODE ITEM6 (2=1)(ELSE=9)

RECODE ITEM2, ITEM3 ITEM4 (3=1)(ELSE=9)

RECODE ITEM5 ITEM7 (4=1)(ELSE=9)



COUNT TOTAL=ITEM1 TO ITEM22 (1)

CPU TIME REQUIRED.. 064 SECONDS

CROSSTABS TABLES=SCHOOL BY ITEM1 TO ITEM22 BY TIME  
STATISTICS ALL

GIVEN 3 DIMENSIONS, INITIAL CH ALLOWS FOR 582 CELLS  
MAXIMUM CH ALLOWS FOR 18331 CELLS

OPTION - 1  
IGNORE MISSING VALUE INDICATORS  
(NO MISSING VALUES DEFINED; OPTION 1 MAY HAVE BEEN FORCED)

END OF FILE ON FILE LITER3  
AFTER READING 921 CASES FROM SUBFILE NONAME

ID-43

8249

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM1

CONTROLLING FOR..  
TIME

VALUE 1.

PAGE 1 OF 1

82.45

SCHOOL	COUNT	ITEM1		ROW TOTAL
		1.	9.	
116.	129	88	41	129
	68.2	31.8		49.6
	50.9	47.1		
	33.8	15.8		
119.	78	53	25	78
	67.9	32.1		30.0
	30.6	28.7		
	20.4	9.6		
139.	53	32	21	53
	60.4	39.6		20.4
	18.5	24.1		
	12.3	8.1		
COLUMN TOTAL	173	87		260
	66.5	33.5		100.0

RAW CHI SQUARE = 1.13652 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .3665  
 CRAMER'S V = .06612  
 CONTINGENCY COEFFICIENT = .06597  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM1 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00207 WITH SCHOOL DEPENDENT. = .00336 WITH ITEM1 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00257  
 KENDALL'S TAU B = .04923 SIGNIFICANCE = .2021  
 KENDALL'S TAU C = .05183 SIGNIFICANCE = .2021  
 GAMMA = .09274  
 SOMERS'S D (ASYMMETRIC) = .05820 WITH SCHOOL DEPENDENT. = .04165 WITH ITEM1 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .04855  
 ETA = .06572 WITH SCHOOL DEPENDENT.  
 ETA = .06612 WITH ITEM1 DEPENDENT.  
 PEARSON'S R = .06572 SIGNIFICANCE = .1455

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM1

8245

SCHOOL CONTROLLING FOR TIME

VALUE 2

PAGE 1 OF 1

SCHOOL	ITEM1		TOTAL
	1.1	9.1	
116.	95	30	125
	76.0	24.0	100.0
	49.7	42.9	92.6
	36.4	11.5	47.9
119.	57	25	82
	69.5	30.5	100.0
	29.8	35.7	65.5
	21.8	9.6	31.4
139.	35	15	54
	72.2	27.8	100.0
	20.4	21.4	41.8
	14.9	5.7	20.6
COLUMN TOTAL	191	70	261
	73.2	26.8	100.0

RAW CHI SQUARE = 1.09377 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .5788  
 CRAHER'S V = .06474  
 CONTINGENCY COEFFICIENT = .06460  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM1 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00200 WITH SCHOOL DEPENDENT. = .00359 WITH ITEM1 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00257  
 KENDALL'S TAU B = .04726 SIGNIFICANCE = .2110  
 KENDALL'S TAU C = .04698 SIGNIFICANCE = .2110  
 GAMMA = .09401  
 SOMERS'S D (ASYMMETRIC) = .05984 WITH SCHOOL DEPENDENT. = .03733 WITH ITEM1 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .04598  
 ETA = .02026 WITH SCHOOL DEPENDENT.  
 ETA = .06474 WITH ITEM1 DEPENDENT.  
 PEARSON'S R = .02026 SIGNIFICANCE = .3723

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF

82.45

SCHOOL  
CONTROLLING FOR..  
TIME

BY ITEM2  
VALUE 1.

PAGE 1 OF 1

SCHOOL	COUNT	ITEM2		ROW TOTAL
		1:1	9:1	
116.	53	76	129	
	41.1	58.9	49.6	
	49.1	50.0		
	20.4	29.2		
119.	29	49	78	
	37.2	62.8	30.0	
	26.9	32.2		
	11.2	18.8		
139.	26	27	53	
	49.1	50.9	20.4	
	24.1	17.8		
	10.0	10.4		
COLUMN TOTAL	108	152	260	
	41.5	58.5	100.0	

RAW CHI SQUARE = 1.85481 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .3956  
 CRAHER'S V = .08446  
 CONTINGENCY COEFFICIENT = .08416  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM2 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00314 WITH SCHOOL DEPENDENT. = .00523 WITH ITEM2 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00415  
 KENDALL'S TAU B = -.03460 SIGNIFICANCE = .2789  
 KENDALL'S TAU C = -.03805 SIGNIFICANCE = .2789  
 GAMMA = -.06264  
 SOMERS'S D (ASYMMETRIC) = -.03917 WITH SCHOOL DEPENDENT. = -.03057 WITH ITEM2 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.03434  
 ETA = .07138 WITH SCHOOL DEPENDENT.  
 ETA = .08446 WITH ITEM2 DEPENDENT.  
 PEARSON'S R = -.07138 SIGNIFICANCE = .1257

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR.. TIME BY ITEM2 VALUE 2. PAGE 1 OF 1

82.45

SCHOOL	ITEM2		ROW TOTAL
	1.1	9.1	
116.	85	40	125
	68.0	32.0	47.9
	51.8	41.2	
	32.6	15.3	
119.	47	35	82
	57.3	42.7	31.4
	28.7	36.1	
	18.0	13.4	
139.	32	22	54
	59.3	40.7	20.7
	19.5	22.7	
	12.3	8.4	
COLUMN TOTAL	164	97	261
	62.8	37.2	100.0

RAW CHI SQUARE = 2.79275 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .2475  
 CRAMER'S V = .10344  
 CONTINGENCY COEFFICIENT = .10289  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM2 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00515 WITH SCHOOL DEPENDENT. = .00813 WITH ITEM2 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00631  
 KENDALL'S TAU B = .08661 SIGNIFICANCE = .0706  
 KENDALL'S TAU C = .09389 SIGNIFICANCE = .0706  
 GAMMA = .15740  
 SOMERS'S D (ASYMMETRIC) = .10052 WITH SCHOOL DEPENDENT. = .07462 WITH ITEM2 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .08565  
 ETA = .05148 WITH SCHOOL DEPENDENT.  
 ETA = .10344 WITH ITEM2 DEPENDENT.  
 PEARSON'S R = .05148 SIGNIFICANCE = .2038

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF

SCHOOL BY ITEMS

CONTROLLING FOR:

TIME

VALUE 1.

PAGE 1 OF 1

82-45

SCHOOL	ITEMS	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		116.	53	76	129	129
		41.1	58.9		49.6	
		57.6	45.2			
		20.4	29.2			
		119.	24	54	78	78
		30.8	69.2		30.0	
		26.1	32.1			
		9.2	20.8			
		139.	15	38	53	53
		28.3	71.7		20.4	
		16.3	22.6			
		5.8	14.6			
		COLUMN	92	168	260	
		TOTAL	35.4	64.6	100.0	

RAW CHI SQUARE = 3.72310 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .1554  
 CRAMER'S V = .11966  
 CONTINGENCY COEFFICIENT = .11882  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00696 WITH SCHOOL DEPENDENT. = .01102 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00855  
 KENDALL'S TAU B = .11170 SIGNIFICANCE = .0292  
 KENDALL'S TAU C = .11917 SIGNIFICANCE = .0292  
 GAMMA = .21063  
 SOMERS'S D (ASYMMETRIC) = .13031 WITH SCHOOL DEPENDENT. = .09575 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .11039  
 ETA = .08774 WITH SCHOOL DEPENDENT.  
 ETA = .11966 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .08774 SIGNIFICANCE = .0792

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
SCHOOL BY ITEMS

SCHOOL CONTROLLING FOR..  
TIME

VALUE 2.

PAGE 1 OF 1

82.45

SCHOOL	ITEM3		ROW TOTAL
	1.1	9.1	
116.	77	48	125
	61.6	38.4	47.9
	53.8	40.7	
	29.5	18.4	
119.	42	40	82
	51.2	48.8	31.4
	29.4	33.9	
	16.1	15.3	
139.	24	30	54
	44.4	55.6	20.7
	16.6	25.4	
	9.2	11.5	
COLUMN TOTAL	143	118	261
TOTAL	54.8	45.2	100.0

RAW CHI SQUARE = 5.09556 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0783  
 CRAMER'S V = .13973  
 CONTINGENCY COEFFICIENT = .13838  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .05085 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = .02362  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00939 WITH SCHOOL DEPENDENT. = .01421 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01131  
 KENDALL'S TAU B = .13263 SIGNIFICANCE = .0131  
 KENDALL'S TAU C = .14809 SIGNIFICANCE = .0121  
 GAMMA = .23400  
 SOMERS'S D (ASYMMETRIC) = .14946 WITH SCHOOL DEPENDENT. = .11770 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .13169  
 ETA = .11831 WITH SCHOOL DEPENDENT.  
 ETA = .13973 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .11831 SIGNIFICANCE = .0281

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF SCHOOL BY ITEM4

82.45

SCHOOL CONTROLLING FOR TIME

VALUE 1.

PAGE 1 OF 1

SCHOOL	ITEM4		ROW TOTAL
	COUNT I	COL PCT I	
	1.1	9.1	
116.	77	52	129
	59.7	40.3	49.6
	47.0	54.2	
	29.6	20.0	
119.	58	20	78
	74.4	25.6	30.0
	35.4	20.8	
	22.3	7.7	
139.	29	24	53
	54.7	45.3	20.4
	17.7	25.0	
	11.2	9.2	
COLVAN	164	96	260
TOTAL	63.1	36.9	100.0

RAW CHI SQUARE = 6.48871 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0390  
 CRAMER'S V = .15798  
 CONTINGENCY COEFFICIENT = .15604  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM4 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01243 WITH SCHOOL DEPENDENT. = .01951 WITH ITEM4 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01519  
 KENDALL'S TAU B = -.01780 SIGNIFICANCE = .3815  
 KENDALL'S TAU C = -.01917 SIGNIFICANCE = .3815  
 GAMMA = -.03278  
 SOMERS'S D (ASYMMETRIC) = -.02058 WITH SCHOOL DEPENDENT. = -.01540 WITH ITEM4 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.01762  
 ETA = .06758 WITH SCHOOL DEPENDENT.  
 ETA = .15798 WITH ITEM4 DEPENDENT.  
 PEARSON'S R = .06758 SIGNIFICANCE = .1388

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM4

SCHOOL CONTROLLING FOR TIME

VALUE 2

PAGE 1 OF 1

82.45

SCHOOL	ITEM4		ROW TOTAL
	1.1	9.1	
116.	84	41	125
	67.2	32.8	100.0
	45.7	53.2	98.9
	32.2	15.7	47.9
119.	63	19	82
	76.8	23.2	100.0
	34.2	24.7	58.9
	24.1	7.3	31.4
139.	37	17	54
	68.5	31.5	100.0
	20.1	22.1	42.2
	14.2	6.5	20.7
COLUMN TOTAL	184	77	261
	70.5	29.5	100.0

RAW CHI SQUARE = 2.33585 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .3110  
 CRAMER'S V = .09460  
 CONTINGENCY COEFFICIENT = .09410  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM4 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00441 WITH SCHOOL DEPENDENT. = .00757 WITH ITEM4 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00557  
 KENDALL'S YAU B = -.04063 SIGNIFICANCE = .2450  
 KENDALL'S TAU C = -.04157 SIGNIFICANCE = .2450  
 GAMMA = -.07957  
 SOMERS'S D (ASYMMETRIC) = -.04997 WITH SCHOOL DEPENDENT. = -.03304 WITH ITEM4 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.03978  
 ETA = .00848 WITH SCHOOL DEPENDENT.  
 ETA = .09460 WITH ITEM4 DEPENDENT.  
 PEARSON'S R = .00448 SIGNIFICANCE = .4458

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FILE NONAME (CREATION DATE = 21 JUN 83)

\*\*\*\*\* CROSSTABULATION OF \*\*\*\*\*  
 SCHOOL BY ITEMS  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 \*\*\*\*\* PAGE 1 OF 1 \*\*\*\*\*

82.45

SCHOOL	ITEMS		TOTAL
	1,I	9,I	
116.	100	29	129
	77.5	22.5	49.6
	55.6	36.2	
	38.5	11.2	
119.	57	21	78
	73.1	26.9	30.0
	31.7	26.2	
	21.9	8.1	
139.	23	30	53
	43.4	56.6	20.4
	12.8	37.5	
	8.8	11.5	
COLUMN TOTAL	180	80	260
	69.2	30.8	100.0

RAW CHI SQUARE = 21.30796 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .28628  
 CONTINGENCY COEFFICIENT = .27522  
 LAMBDA (ASYMMETRIC) = .00763 WITH SCHOOL DEPENDENT. = .08750 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = .03791  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .03733 WITH SCHOOL DEPENDENT. = .06219 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .04674  
 KENDALL'S TAU B = .23024 SIGNIFICANCE = .0000  
 KENDALL'S TAU C = .23710 SIGNIFICANCE = .0000  
 GAMMA = .41683  
 SOMERS'S D (ASYMMETRIC) = .27826 WITH SCHOOL DEPENDENT. = .19051 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .22617  
 ETA = .28628 WITH SCHOOL DEPENDENT.  
 ETA = .28628 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .28628 SIGNIFICANCE = .0000

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF BY ITEMS

SCHOOL CONTROLLING FOR.. TIME

VALUE 2.

PAGE 1 OF 1

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		ITEMS			
		COUNT			ROW TOTAL
		PCT			
		COL			
		TOT	1.	9.	
SCHOOL	118.	109	16	125	
		87.2	12.8	47.9	
		53.2	28.6		
		41.8	6.1		
	119.	58	24	82	
		70.7	29.3	31.4	
		28.3	42.9		
		22.2	9.2		
	139.	38	16	54	
		70.4	29.6	20.7	
		18.5	28.6		
		14.6	6.1		
COLUMN TOTAL		205	56	261	
		78.5	21.5	100.0	

RAW CHI SQUARE = 10.66797 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0048  
 CRAMER'S V = .20217  
 CONTINGENCY COEFFICIENT = .19816  
 LAMBDA (ASYMMETRIC) = .05882 WITH SCHOOL DEPENDENT. = .0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = .04167  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02028 WITH SCHOOL DEPENDENT. = .04049 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02695  
 KENDALL'S TAU B = .18107 SIGNIFICANCE = .0028  
 KENDALL'S TAU C = .16676 SIGNIFICANCE = .0018  
 GAMMA = .16711  
 SOMERS'S D (ASYMMETRIC) = .24739 WITH SCHOOL DEPENDENT. = .13254 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .17260  
 ETA = .12616 WITH SCHOOL DEPENDENT.  
 ETA = .20217 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .12616 SIGNIFICANCE = .0208

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF

82.45

SCHOOL BY ITEM6

CONTROLLING FOR..

TIME VALUE 1.

PAGE 1 OF 1

ITEM6

COUNT I  
ROW PCT I  
COL PCT I  
TOT PCT I 1.1 9.1

SCHOOL	1.1	9.1	TOTAL
116.	40	89	129
	31.0	69.0	49.6
	49.4	49.7	
	15.4	34.2	
119.	27	51	78
	34.6	65.4	30.0
	33.3	28.5	
	10.4	19.6	
139.	14	39	53
	26.4	73.6	20.4
	17.3	21.8	
	5.4	15.0	
COLUMN TOTAL	81	179	260
	31.2	68.8	100.0

RAW CHI SQUARE = .99193 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .6090

CRAMER'S V = .06177

CONTINGENCY COEFFICIENT = .06165

LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM6 DEPENDENT.

LAMBDA (SYMMETRIC) = 0

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00186 WITH SCHOOL DEPENDENT. = .00310 WITH ITEM6 DEPENDENT.

UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00233

KENDALL'S TAU B = .01661 SIGNIFICANCE = .3892

KENDALL'S TAU C = .01716 SIGNIFICANCE = .3892

GAMA = .03217

SONERS'S D (ASYMMETRIC) = .02000 WITH SCHOOL DEPENDENT. = .01379 WITH ITEM6 DEPENDENT.

SONERS'S D (SYMMETRIC) = .01632

ETA = .04632 WITH SCHOOL DEPENDENT.

ETA = .06177 WITH ITEM6 DEPENDENT.

PEARSON'S R = .04632 SIGNIFICANCE = .2285

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
BY ITEM6

82.45

SCHOOL  
CONTROLLING FOR  
TIME

VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM6		ROW TOTAL
	1.1	9.1	
116.	90	35	125
	72.0	28.0	100.0
	47.1	50.0	97.1
	34.5	13.4	47.9
119.	63	19	82
	76.8	23.2	100.0
	33.0	27.1	60.1
	24.1	7.3	31.4
139.	38	16	54
	70.4	29.6	100.0
	19.9	22.9	42.8
	14.6	6.1	20.7
COLUMN TOTAL	191	70	261
	73.2	26.8	100.0

RAW CHI SQUARE = .86225 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .6498  
 CRAHER'S V = .05748  
 CONTINGENCY COEFFICIENT = .05738  
 LAMBDA (ASYMMEIRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM6 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00161 WITH SCHOOL DEPENDENT. = .00288 WITH ITEM6 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00206  
 KENDALL'S TAU B = -.00585 SIGNIFICANCE = .4604  
 KENDALL'S TAU C = -.00581 SIGNIFICANCE = .4604  
 GAMMA = -.01176  
 SOMERS'S D (ASYMMETRIC) = -.00740 WITH SCHOOL DEPENDENT. = -.00462 WITH ITEM6 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00569  
 ETA = .02510 WITH SCHOOL DEPENDENT.  
 ETA = .05748 WITH ITEM6 DEPENDENT.  
 PEARSON'S R = .02510 SIGNIFICANCE = .3433

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF

SCHOOL BY ITEM7

CONTROLLING FOR:

TIME VALUE

PAGE 1 OF 1

82145

SCHOOL	COUNT	ITEM7		ROW TOTAL
		1	9	
116.	129	46	83	129
		35.7	64.3	99.6
		43.0	54.2	
		17.7	31.9	
119.	78	35	43	78
		44.9	55.1	100.0
		32.7	28.1	
		13.5	16.5	
139.	53	26	27	53
		49.1	50.9	100.0
		24.3	17.6	
		10.0	10.4	
COLUMN TOTAL		107	153	260
		41.2	58.8	100.0

RAW CHI SQUARE = 3.42039 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .1808  
 CRAHER'S V = .21470  
 CONTINGENCY COEFFICIENT = .11395  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM7 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00637 WITH SCHOOL DEPENDENT. = .00972 WITH ITEM7 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00770  
 KENDALL'S TAU B = -.10864 SIGNIFICANCE = .0328  
 KENDALL'S TAU C = -.11929 SIGNIFICANCE = .0328  
 GAMMA = -.19486  
 SOMERS'S D (ASYMMETRIC) = -.12314 WITH SCHOOL DEPENDENT. = -.09585 WITH ITEM7 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.10780  
 ETA = .09218 WITH SCHOOL DEPENDENT.  
 ETA = .11470 WITH ITEM7 DEPENDENT.  
 PEARSON'S R = -.09218 SIGNIFICANCE = .0691

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FILE NONAME (CREATION DATE = 21 JUN 83)

82.45

\*\*\*\*\* CROSSTABULATION OF \*\*\*\*\*  
 SCHOOL BY ITEM8  
 CONTROLLING FOR..  
 TIME VALUE 1.  
 \*\*\*\*\* PAGE 1 OF 1 \*\*\*\*\*

SCHOOL	ITEM8		ROW TOTAL
	COUNT	PCT	
116.	123	6	129
	95.3	4.7	49.6
	53.7	19.4	
	47.3	2.3	
119.	61	17	78
	78.2	21.8	30.0
	26.6	54.8	
	23.5	6.5	
139.	45	8	53
	84.9	15.1	20.4
	19.7	25.8	
	17.3	3.1	
COLUMN TOTAL	229	31	260
	88.1	11.9	100.0

RAW CHI SQUARE = 14.24172 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0038  
 CRAMER'S V = .23404  
 CONTINGENCY COEFFICIENT = .22782  
 LAMBDA (ASYMMETRIC) = .08397 WITH SCHOOL DEPENDENT. = .0 WITH ITEM8 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .06790  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02736 WITH SCHOOL DEPENDENT. = .07735 WITH ITEM8 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .04042  
 KENDALL'S TAU B = .17693 SIGNIFICANCE = .0114  
 KENDALL'S TAU C = .12793 SIGNIFICANCE = .0014  
 GAMMA = .43554  
 SOMERS'S D (ASYMMETRIC) = .30455 WITH SCHOOL DEPENDENT. = .10279 WITH ITEM8 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .15370  
 ETA = .08231 WITH SCHOOL DEPENDENT.  
 ETA = .23404 WITH ITEM8 DEPENDENT.  
 PEARSON'S R = .08231 SIGNIFICANCE = .0925

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF

SCHOOL BY ITEM8

CONTROLLING FOR:

TIME VALUE 25

PAGE 1 OF 1

82145

SCHOOL	COUNT	ITEM8		ROW TOTAL
		1	2	
	116.	124	1	125
		99.2	.8	100.0
		48.1	33.3	81.4
		47.5	.4	47.9
	115.	81	1	82
		98.8	1.2	100.0
		31.4	33.3	64.7
		31.0	.0	31.0
	139.	53	1	54
		98.1	1.9	100.0
		20.5	33.3	53.8
		20.3	.4	20.7
	COLUMN TOTAL	258	3	261
	TOTAL	98.9	1.1	100.0

RAW CHI SQUARE = .37237 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .8301  
 CRAMER'S V = .03777  
 CONTINGENCY COEFFICIENT = .03774  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM8 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00055 WITH SCHOOL DEPENDENT. = .01079 WITH ITEM8 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00122  
 KENDALL'S TAU B = .03487 SIGNIFICANCE = .2768  
 KENDALL'S TAU C = .00834 SIGNIFICANCE = .2768  
 GAMMA = .27519  
 SOMERS'S D (ASYMMETRIC) = .18346 WITH SCHOOL DEPENDENT. = .00663 WITH ITEM8 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01279  
 ETA = .03580 WITH SCHOOL DEPENDENT.  
 ETA = .03777 WITH ITEM8 DEPENDENT.  
 PEARSON'S R = .03580 SIGNIFICANCE = .2824



FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF

SCHOOL  
CONTROLLING FOR:  
TIME

BY ITEM9

VALUE

PAGE 1 OF 1

82.45

ITEM9

SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL	COLUMN TOTAL
116.	125	96.9	51.4	48.1	129	243
119.	68	87.2	26.2	10	78	17
139.	50	94.3	20.6	19.2	53	260
TOTAL	243	93.5	6.5	100.0	260	260

D-60

RAW CHI-SQUARE = 7.59874 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0224  
 CRAMER'S V = .17096  
 CONTINGENCY COEFFICIENT = .16851  
 LAMBDA (ASYMMETRIC) = .04580 WITH SCHOOL DEPENDENT. = .0 WITH ITEM9 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .04054  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01328 WITH SCHOOL DEPENDENT. = .05601 WITH ITEM9 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02153  
 KENDALL'S TAU B = .09194 SIGNIFICANCE = .0597  
 KENDALL'S TAU C = .05071 SIGNIFICANCE = .0597  
 GAMMA = .30596  
 SOMERS'S D (ASYMMETRIC) = .20746 WITH SCHOOL DEPENDENT. = .04075 WITH ITEM9 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .06811  
 ETA = .00698 WITH SCHOOL DEPENDENT.  
 ETA = .17096 WITH ITEM9 DEPENDENT.  
 PEARSON'S R = .00698 SIGNIFICANCE = .4554

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM9

8245

SCHOOL CONTROLLING FOR TIME

VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM9		ROW TOTAL
	1.1	9.1	
116.	124	1	125
	99.2	.8	97.9
	48.2	25.0	
	47.5	.4	
119.	79	3	82
	96.3	3.7	31.4
	30.7	75.0	
	30.3	1.1	
139.	54	0	54
	100.0	0	20.7
	21.0	0	
	20.7	0	
COLUMN TOTAL	257	4	261
	98.5	1.5	100.0

RAW CHI SQUARE = 3.14092 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .1541  
 CRAMER'S V = .11972  
 CONTINGENCY COEFFICIENT = .11887  
 LAMBDA (ASYMMETRIC) = .01471 WITH SCHOOL DEPENDENT. = 0 WITH ITEM9 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01429  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00731 WITH SCHOOL DEPENDENT. = .09617 WITH ITEM9 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01359  
 KENDALL'S TAU U = .01641 SIGNIFICANCE = .3902  
 KENDALL'S TAU C = .00452 SIGNIFICANCE = .3902  
 GAMMA = .11544  
 SOMERS'S D (ASYMMETRIC) = .07490 WITH SCHOOL DEPENDENT. = .00359 WITH ITEM9 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .00686  
 ETA = .04021 WITH SCHOOL DEPENDENT.  
 ETA = .11972 WITH ITEM9 DEPENDENT.  
 PEARSON'S R = -.04021 SIGNIFICANCE = .2190



FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR.. TIME BY ITEM10 VALUE 1. PAGE 1 OF 1

82-45

SCHOOL	ITEM10	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
	1	97	75.2	57.1	1.1	129
	2	32	24.8	35.6	9.1	49.6
	3	12	9.1	12.3		
	4	36	46.2	40.0		78
	5	42	53.8	29.7		30.0
	6	13	16.2	13.8		
	7	22	27.5	24.4		53
	8	31	38.5	11.9		20.4
	9	8	10.1	8.5		
	10	90	65.4	34.6		260
	11	260				100.0

D-62

RAW CHI SQUARE = 11.18536 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0037  
 CRAMER'S V = .20741  
 CONTINGENCY COEFFICIENT = .20309  
 LAMBDA (ASYMMETRIC) = .03053 WITH SCHOOL DEPENDENT. = 0 WITH ITEM10 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01810  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02100 WITH SCHOOL DEPENDENT. = .03353 WITH ITEM10 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02585  
 KENDALL'S TAU B = .17270 SIGNIFICANCE = .0017  
 KENDALL'S TAU C = .18331 SIGNIFICANCE = .0017  
 GAMMA = .30974  
 SOMERS'S D (ASYMMETRIC) = .20248 WITH SCHOOL DEPENDENT. = .14729 WITH ITEM10 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .17053  
 ETA = .10080 WITH SCHOOL DEPENDENT.  
 ETA = .20741 WITH ITEM10 DEPENDENT.  
 PEARSON'S R = .10080 SIGNIFICANCE = .0524

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR.. TIME BY ITEM10 VALUE 25 PAGE 1 OF 1

82.45

SCHOOL	ITEM10		ROW TOTAL
	COUNT	PCT	
116.	107	18	125
	85.6	14.4	47.9
	49.8	39.1	
	41.0	6.9	
119.	62	20	82
	75.6	24.4	31.4
	28.8	43.5	
	23.8	7.7	
139.	46	8	54
	85.2	14.8	20.7
	21.4	17.4	
	17.6	3.1	
COLUMN TOTAL	215	46	261
	82.4	17.6	100.0

D-63

RAW CHI SQUARE = 3.77424 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .1515  
 CRAMER'S V = .12025  
 CONTINGENCY COEFFICIENT = .11939  
 LAMBDA (ASYMMETRIC) = .01471 WITH SCHOOL DEPENDENT. = 0 WITH ITEM10 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01099  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00665 WITH SCHOOL DEPENDENT. = .01489 WITH ITEM10 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00919  
 KENDALL'S TAU B = .04314 SIGNIFICANCE = .2318  
 KENDALL'S TAU C = .03688 SIGNIFICANCE = .2318  
 GAMMA = .09880  
 SOMERS'S D (ASYMMETRIC) = .06350 WITH SCHOOL DEPENDENT. = .02931 WITH ITEM10 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .04010  
 ETA = .02055 WITH SCHOOL DEPENDENT.  
 ETA = .12025 WITH ITEM10 DEPENDENT.  
 PEARSON'S R = -.02055 SIGNIFICANCE = .3705

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FILE HONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEM1 VALUE 25 PAGE 1 OF 1

82-45

SCHOOL	ITEM1		ROW TOTAL
	1.1	9.1	
116.	103	22	125
	82.4	17.6	47.9
	47.5	50.0	
	39.5	8.4	
119.	66	16	82
	80.5	19.5	31.4
	30.4	36.4	
	25.3	6.1	
139.	48	6	54
	88.9	11.1	20.7
	22.1	13.6	
	18.4	2.3	
COLUMN TOTAL	217	44	261
	83.1	16.9	100.0

D-05

RAW CHI SQUARE = 1.73366 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .4203  
 CRAMER'S V = .08150  
 CONTINGENCY COEFFICIENT = .08123  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM1 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00312 WITH SCHOOL DEPENDENT. = .00785 WITH ITEM1 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00476  
 KENDALL'S TAU B = -.04293 SIGNIFICANCE = .2329  
 KENDALL'S TAU C = -.03605 SIGNIFICANCE = .2329  
 GAMMA = -.10340  
 SOAERS'S D (ASYMMETRIC) = -.06431 WITH SCHOOL DEPENDENT. = -.02865 WITH ITEM1 DEPENDENT.  
 SOAERS'S D (SYMMETRIC) = -.03964  
 ETA = .07431 WITH SCHOOL DEPENDENT.  
 ETA = .08150 WITH ITEM1 DEPENDENT.  
 PEARSON'S R = -.07431 SIGNIFICANCE = .1158

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM12

CONTROLLING FOR TIME

VALUE 1

PAGE 1 OF 1

82-45

SCHOOL	ITEM12		TOTAL
	1	2	
	COUNT		
	ROW PCT		ROW
	COL PCT		TOTAL
	TOT PCT	1.1 9.1	
116.	100	29	129
	77.5	22.5	49.6
	58.5	32.6	
	38.5	11.2	
119.	47	31	78
	60.3	39.7	30.0
	27.5	34.8	
	18.1	11.9	
139.	24	29	53
	45.3	54.7	20.4
	14.0	32.6	
	9.2	11.2	
COLUMN	171	89	260
TOTAL	5.8	34.2	100.0

D-66

RAW CHI SQUARE = 4411 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0001  
 CRAMER'S V = .2892  
 CONTINGENCY COEFFIC = .25996  
 LAMBDA (ASYMMETRIC) = .527 WITH SCHOOL DEPENDENT. = .05618 WITH ITEM12 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .03182  
 UNCERTAINTY COEFFICIENT (ASYMME) = .03501 WITH SCHOOL DEPENDENT. = .05629 WITH ITEM12 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .04517  
 RENDALL'S TAU B = .25487 SIGNIFICANCE = .0000  
 RENDALL'S TAU C = .26982 SIGNIFICANCE = .0000  
 GAMMA = .44055  
 SOMERS'S D (ASYMMETRIC) = .29963 WITH SCHOOL DEPENDENT. = .21680 WITH ITEM12 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .25157  
 ETA = .23906 WITH SCHOOL DEPENDENT.  
 ETA = .26922 WITH ITEM12 DEPENDENT.  
 PEARSON'S R = .23906 SIGNIFICANCE = .0000

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
BY ITEM12

SCHOOL  
CONTROLLING FOR:  
TIME

VALUE 2.

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82.45

SCHOOL	ITEM12			
	COUNT	ROW PCT	COL PCT	TOT PCT
116.	108	86.4	49.8	91.4
	17	13.6	38.6	6.5
119.	64	78.0	29.5	24.5
	18	22.0	40.9	6.9
139.	45	83.3	20.7	17.2
	9	16.7	20.5	3.4
COLUMN TOTAL	217	83.1	16.9	100.0
ROW TOTAL	125	97.9	31.4	54
	125	97.9	31.4	54

RAW CHI SQUARE = 2.46568 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .2915  
 CRAMER'S V = .09720  
 CONTINGENCY COEFFICIENT = .09674  
 LAMBDA (ASYMMETRIC) = .00735 WITH SCHOOL DEPENDENT. = 0 WITH ITEM12 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00556  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00744 WITH SCHOOL DEPENDENT. = .01020 WITH ITEM12 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .0078  
 KENDALL'S TAU B = .05145 SIGNIFICANCE = .1624  
 KENDALL'S TAU C = .04868 SIGNIFICANCE = .1624  
 GAMMA = .13469  
 SOMERS' D (ASYMMETRIC) = .00682 WITH SCHOOL DEPENDENT. = .03689 WITH ITEM12 DEPENDENT.  
 SOMERS' D (SYMMETRIC) = .05353  
 ETA = .01163 WITH SCHOOL DEPENDENT.  
 ETA = .09720 WITH ITEM12 DEPENDENT.  
 PEARSON'S R = .01163 SIGNIFICANCE = .4258

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM13

CONTROLLING FOR TIME VALUE 1. PAGE 1 OF 1

82.45

SCHOOL	ITEM13		ROW TOTAL
	1	2	
116.	92	37	129
	71.3	28.7	49.6
	52.3	43.0	
	35.4	14.2	
119.	47	31	78
	60.3	39.7	30.0
	26.7	35.9	
	18.1	11.9	
139.	37	16	53
	69.8	30.2	20.4
	21.0	19.0	
	14.2	6.2	
COLUMN TOTAL	176	84	260
	67.7	32.3	100.0

RAW CHI SQUARE = 2.85619 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .2398  
 CRAMER'S V = .10481  
 CONTINGENCY COEFFICIENT = .10424  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT, = 0 WITH ITEM13 DEPENDENT,  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00522 WITH SCHOOL DEPENDENT, = .00858 WITH ITEM13 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00649  
 KENDALL'S B = .04656 SIGNIFICANCE = .2151  
 KENDALL'S TAU C = .04858 SIGNIFICANCE = .2151  
 GAMMA = .08799  
 SOMERS'S D (ASYMMETRIC) = .05553 WITH SCHOOL DEPENDENT, = .03903 WITH ITEM13 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .04584  
 ETA = .00779 WITH SCHOOL DEPENDENT.  
 ETA = .10481 WITH ITEM13 DEPENDENT.  
 PEARSON'S R = -.00779 SIGNIFICANCE = .4503

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FILE NONAME (CREATED BY) 10/1/83

CROSS TABULATION OF SCHOOL BY ITEM13  
 CONTROLLING FOR:  
 TIME VALUE 2.  
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C.

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SCHOOL	ITEM13		ROW TOTAL
	COUNT	PCT	
116.	88	37	125
	70.4	29.6	47.9
	47.3	49.3	
	33.7	14.2	
119.	60	22	82
	73.2	26.8	31.4
	32.3	29.3	
	23.0	8.4	
139.	38	16	54
	70.4	29.6	20.7
	20.4	21.3	
	14.6	6.1	
COLUMNS	186	75	261
TOTAL	71.3	28.7	100.0

RAW CHI SQUARE = .21220 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .8993  
 CRAHER'S V = .02851  
 CONTINGENCY COEFFICIENT = .02850  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM13 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00039 WITH SCHOOL DEPENDENT. = .00039 WITH ITEM13 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00050  
 KENDALL'S TAU B = -.00914 SIGNIFICANCE = .4383  
 KENDALL'S TAU C = -.00928 SIGNIFICANCE = .4383  
 GAMMA = -.01802  
 SOMERS'S D (ASYMMETRIC) = -.01133 WITH SCHOOL DEPENDENT. = -.00737 WITH ITEM13 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00893  
 ETA = .00608 WITH SCHOOL DEPENDENT.  
 ETA = .02851 WITH ITEM13 DEPENDENT.  
 PEARSON'S R = .00608 SIGNIFICANCE = .4611

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF SCHOOL CONTROLLING FOR TIME GRADE 3 PAGE 1

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SCHOOL	ITEM14			ROW TOTAL
	COUNT	ROW PCT	COL PCT	
116.	70	54.3	26.9	129
119.	40	31.0	15.4	78
139.	19	14.7	7.3	53
COLUMN TOTAL	129	100.0	100.0	260

RAW CHI SQUARE = 5.21947 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0736  
 CRAHER'S V = .14169  
 CONTINGENCY COEFFICIENT = .14028  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .10078 WITH ITEM14 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .05000  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00983 WITH SCHOOL DEPENDENT. = .01465 WITH ITEM14 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01176  
 KENDALL'S TAU B = .11653 SIGNIFICANCE = .0242  
 KENDALL'S TAU C = .13000 SIGNIFICANCE = .0242  
 GAMMA = .20721  
 SOMERS'S D (ASYMMETRIC) = .13001 WITH SCHOOL DEPENDENT. = .10443 WITH ITEM14 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .11584  
 ETA = .14159 WITH SCHOOL DEPENDENT.  
 ETA = .14169 WITH ITEM14 DEPENDENT.  
 PEARSON'S R = .14159 SIGNIFICANCE = .0112

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
SCHOOL BY ITEM14

82.45

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM14		ROW TOTAL
	1.1	9.1	
116.	98	27	125
	78.4	21.6	47.9
	52.7	36.0	
	37.5	10.3	
119.	56	26	82
	68.3	31.7	31.7
	30.1	34.7	
	21.5	10.0	
139.	32	22	54
	59.3	40.7	40.7
	17.2	29.3	
	12.3	8.4	
COLUMN TOTAL	186	75	261
TOTAL	71.3	28.7	100.0

RAW CHI SQUARE = 7.26205 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0265  
 CRAMER'S V = .16681  
 CONTINGENCY COEFFICIENT = .16453  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM14 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01322 WITH SCHOOL DEPENDENT. = .02297 WITH ITEM14 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01678  
 KENDALL'S TAU B = .15779 SIGNIFICANCE = .0037  
 KENDALL'S TAU C = .16019 SIGNIFICANCE = .0037  
 GAMMA = .29834  
 SOMERS'S D (ASYMMETRIC) = .19556 WITH SCHOOL DEPENDENT. = .12731 WITH ITEM14 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .15422  
 ETA = .14827 WITH SCHOOL DEPENDENT.  
 ETA = .16681 WITH ITEM14 DEPENDENT.  
 PEARSON'S R = .14827 SIGNIFICANCE = .0083

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEMS

82.45

VALUE 1.

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SCHOOL	ITEM15		ROW TOTAL
	COUNT	PCT	
116.	129	107.22	129
	49.6	17.1	129
		32.8	129
		8.5	129
119.	70	62.16	70
	30.0	20.5	70
		23.9	70
		6.2	70
139.	53	25.29	53
	20.4	54.7	53
		43.3	53
		11.2	53
COLUMN TOTAL	260	25.8	260
	100.0	74.2	260

RAW CHI SQUARE = 29.46635 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .33665  
 CONTINGENCY COEFFICIENT = .31905  
 LAMBDA (ASYMMETRIC) = .05344 WITH SCHOOL DEPENDENT. = .07463 WITH ITEM15 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .06061  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .04975 WITH SCHOOL DEPENDENT. = .09007 WITH ITEM15 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .06410  
 KENDALL'S TAU B = -.26298 SIGNIFICANCE = .0000  
 KENDALL'S TAU C = -.25663 SIGNIFICANCE = .0000  
 GAMMA = -.48791  
 SOMERS'S D (ASYMMETRIC) = -.33540 WITH SCHOOL DEPENDENT. = -.20620 WITH ITEM15 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.25539  
 ETA = .33632 WITH SCHOOL DEPENDENT.  
 ETA = .33665 WITH ITEM15 DEPENDENT.  
 PEARSON'S R = -.33632 SIGNIFICANCE = .0000

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF

SCHOOL CONTROLLING FOR..  
TIME

BY ITEM15 VALUE 2.

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SCHOOL	ITEM15				ROW TOTAL
	COUNT	ROW PCT	COL PCT	TOT PCT	
116.	97	77.6	22.4	28	125
	37.2	10.7			
119.	52	63.4	36.6	30	82
	26.7	45.5			
139.	46	85.2	14.8	8	54
	23.8	12.1			
	17.6	3.1			
COLUMN TOTAL	195	74.7	25.3	66	261

RAW CHI SQUARE = 9.22645 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0099  
 CRAMER'S V = .18802  
 CONTINGENCY COEFFICIENT = .18478  
 LAMBDA (ASYMMETRIC) = .01471 WITH SCHOOL DEPENDENT. = .0 WITH ITEM15 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00990  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01689 WITH SCHOOL DEPENDENT. = .03113 WITH ITEM15 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02190  
 KENDALL'S TAU B = -.00132 SIGNIFICANCE = .4910  
 KENDALL'S TAU C = -.00129 SIGNIFICANCE = .4910  
 GAMMA = -.00267  
 SOMERS'S D (ASYMMETRIC) = -.00171 WITH SCHOOL DEPENDENT. = -.00103 WITH ITEM15 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00128  
 ETA = .10094 WITH SCHOOL DEPENDENT.  
 ETA = .18802 WITH ITEM15 DEPENDENT.  
 PEARSON'S R = -.10094 SIGNIFICANCE = .0519



FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
 SCHOOL CONTROLLING FOR...  
 BY ITEM16  
 VALUE 1.  
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SCHOOL	ITEM16		ROW TOTAL
	1.1	9.1	
116.	61	68	129
	47.3	52.7	49.6
	52.1	47.6	
	23.5	26.2	
119.	42	36	78
	53.8	46.2	30.0
	35.9	25.2	
	16.2	13.0	
139.	14	39	53
	26.4	73.6	20.4
	12.0	27.3	
	5.4	15.0	
COLUMN TOTAL	117	143	260
	45.0	55.0	100.0

RAW CHI SQUARE = 10.13519 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0063  
 CRAMER'S V = .19744  
 CONTINGENCY COEFFICIENT = .19370  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT, = .05128 WITH ITEM16 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .02419  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01957 WITH SCHOOL DEPENDENT, = .02938 WITH ITEM16 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02349  
 KENDALL'S TAU B = .10134 SIGNIFICANCE = .0430  
 KENDALL'S TAU C = .11249 SIGNIFICANCE = .0430  
 GAMMA = .18062  
 SOMERS'S D (ASYMMETRIC) = .11362 WITH SCHOOL DEPENDENT, = .09038 WITH ITEM16 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .10068  
 ETA = .17871 WITH SCHOOL DEPENDENT.  
 ETA = .19744 WITH ITEM16 DEPENDENT.  
 PEARSON'S R = .17871 SIGNIFICANCE = .0019



FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
 SCHOOL BY ITEM16  
 CONTROLLING FOR...  
 TIME VALUE 2.  
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SCHOOL	ITEM16			
	COUNT	ROW PCT	COL PCT	TOT PCT
116.	93	74.4	49.7	35.6
119.	56	68.3	29.9	21.5
139.	38	70.4	20.3	14.6
COLUMN TOTAL	187	71.6	28.4	100.0

RAW CHI SQUARE = .96388 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .6176  
 CRAMER'S V = .06077  
 CONTINGENCY COEFFICIENT = .06066  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM16 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00177 WITH SCHOOL DEPENDENT. = .00302 WITH ITEM16 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00225  
 KENDALL'S TAU B = .04681 SIGNIFICANCE = .2133  
 KENDALL'S TAU C = .04733 SIGNIFICANCE = .2133  
 GAMMA = .09161  
 SOMERS'S D (ASYMMETRIC) = .05825 WITH SCHOOL DEPENDENT. = .03761 WITH ITEM16 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .04571  
 ETA = .02295 WITH SCHOOL DEPENDENT.  
 ETA = .06077 WITH ITEM16 DEPENDENT.  
 PEARSON'S R = .02295 SIGNIFICANCE = .3560

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEM17 VALUE 1. PAGE 1 OF 1

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SCHOOL	ITEM17	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		116	16	113	129	129
		124	87.6	49.6		49.6
		28.6	55.4			
		6.2	43.5			
		119	9	69	78	78
		11.5	88.5	30.0		30.0
		16.1	35.8			
		3.5	26.5			
		139	31	22	53	53
		58.5	41.5	20.4		20.4
		55.4	10.8			
		11.9	8.5			
		COLUMN TOTAL	56	204	260	
		TOTAL	21.5	78.5	100.0	

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RAW CHI SQUARE = 53.80954 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .45493  
 CONTINGENCY COEFFICIENT = .41409  
 LAMBDA (ASYMMETRIC) = .11450 WITH SCHOOL DEPENDENT. = .16071 WITH ITEM17 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .12834  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00651 WITH SCHOOL DEPENDENT. = .17151 WITH ITEM17 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .11502  
 KENDALL'S TAU B = -.32288 SIGNIFICANCE = .0000  
 KENDALL'S TAU C = -.29615 SIGNIFICANCE = .0000  
 GAMMA = -.60201  
 SOMERS'S D (ASYMMETRIC) = -.43811 WITH SCHOOL DEPENDENT. = -.23796 WITH ITEM17 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.30841  
 ETA = .44866 WITH SCHOOL DEPENDENT.  
 ETA = .45493 WITH ITEM17 DEPENDENT.  
 PEARSON'S R = -.44866 SIGNIFICANCE = .0000

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF SCHOOL BY ITEM17  
 CONTROLLING FOR: TIME VALUE 2.  
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SCHOOL	ITEM17		ROW TOTAL
	COUNT	PCT	
116.	94	31	125
	75.2	24.8	47.9
	49.7	43.1	
	36.0	11.9	
119.	50	32	82
	61.0	39.0	31.4
	26.5	44.4	
	19.2	12.3	
139.	45	9	54
	83.3	16.7	20.7
	23.8	12.5	
	17.2	3.4	
COLUMN TOTAL	189	72	261
	72.4	27.6	100.0

RAW CHI SQUARE = 9.07948 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .0107  
 CRAMER'S V = .18651  
 CONTINGENCY COEFFICIENT = .18335  
 LAMBDA (ASYMMETRIC) = .00735 WITH SCHOOL DEPENDENT. = 0 WITH ITEM17 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00481  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01658 WITH SCHOOL DEPENDENT. = .02951 WITH ITEM17 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02131  
 KENDALL'S TAU B = -.00474 SIGNIFICANCE = .4679  
 KENDALL'S TAU C = -.00476 SIGNIFICANCE = .4679  
 GAMMA = -.00932  
 SOMERS'S D (ASYMMETRIC) = -.00595 WITH SCHOOL DEPENDENT. = -.00378 WITH ITEM17 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00462  
 ETA = .10316 WITH SCHOOL DEPENDENT.  
 ETA = .18651 WITH ITEM17 DEPENDENT.  
 PEARSON'S R = -.10316 SIGNIFICANCE = .0482

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM18

82.45

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SCHOOL	ITEM18		ROW TOTAL
	COUNT	PCT	
	116.	9.1	129
	19.4	80.6	49.6
	41.0	52.3	
	9.6	40.0	
	119.	5.1	78
	25.6	74.4	30.0
	32.8	29.1	
	7.7	22.3	
	139.	1.1	53
	30.2	69.8	20.4
	26.2	18.6	
	6.2	14.2	
COLUMN TOTAL	61	199	260
	23.5	76.5	100.0

RAW CHI SQUARE = 2.73884 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .2543  
 CRAMER'S V = .10264  
 CONTINGENCY COEFFICIENT = .10210  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM18 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00505 WITH SCHOOL DEPENDENT. = .00957 WITH ITEM18 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00661  
 KENDALL'S TAU B = -.09744 SIGNIFICANCE = .0494  
 KENDALL'S TAU C = -.09213 SIGNIFICANCE = .0494  
 GAMMA = -.19995  
 SOMERS'S D (ASYMMETRIC) = -.12826 WITH SCHOOL DEPENDENT. = -.07403 WITH ITEM18 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.09387  
 ETA = .08878 WITH SCHOOL DEPENDENT.  
 ETA = .10264 WITH ITEM18 DEPENDENT.  
 PEARSON'S R = -.08878 SIGNIFICANCE = .0767

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF  
 SCHOOL BY ITEM18  
 CONTROLLING FOR..  
 TIME VALUE 2.  
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SCHOOL	ITEM18		ROW TOTAL
	COUNT	PCT	
116.	107	18	125
	85.6	14.4	47.9
	51.0	35.3	
	41.0	6.9	
119.	61	21	82
	79.4	25.6	31.4
	29.0	41.2	
	23.4	8.0	
139.	42	12	54
	77.8	22.2	20.7
	20.0	23.5	
	16.1	4.6	
COLUMN	210	51	261
TOTAL	80.5	19.5	100.0

RAW CHI SQUARE = 4.26916 WITH 2 DEGREES OF FREEDOM, SIGNIFICANCE = .1183  
 CRAMER'S V = .12789  
 CONTINGENCY COEFFICIENT = .12686  
 LAMBDA (ASYMMETRIC) = .02206 WITH SCHOOL DEPENDENT. = 0 WITH ITEM18 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01604  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00789 WITH SCHOOL DEPENDENT. = .01666 WITH ITEM18 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01071  
 KENDALL'S TAU B = .10080 SIGNIFICANCE = .0434  
 KENDALL'S TAU C = .08966 SIGNIFICANCE = .0434  
 GAMMA = .21817  
 SOMERS'S D (ASYMMETRIC) = .14258 WITH SCHOOL DEPENDENT. = .07129 WITH ITEM18 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .09503  
 ETA = .05219 WITH SCHOOL DEPENDENT.  
 ETA = .12789 WITH ITEM18 DEPENDENT.  
 PEARSON'S R = .05219 SIGNIFICANCE = .2005

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF  
BY ITEM19

82.45

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 1.

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ITEM19

SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
116.	13	10.1	61.9	5.0	116
119.	3	3.8	14.3	1.2	75
139.	5	9.4	23.8	1.9	48
COLUMN TOTAL	21	8.1	91.9	260	260

RAW CHI SQUARE = 2.70732 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .2583  
 CRAMER'S V = .10204  
 CONTINGENCY COEFFICIENT = .10152  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM19 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00572 WITH SCHOOL DEPENDENT. = .02105 WITH ITEM19 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00899  
 KENDALL'S TAU B = .04282 SIGNIFICANCE = .2341  
 KENDALL'S TAU C = .02604 SIGNIFICANCE = .2341  
 GAMMA = .14445  
 SOMERS'S D (ASYMMETRIC) = .08767 WITH SCHOOL DEPENDENT. = .02092 WITH ITEM19 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .03378  
 ETA = .01053 WITH SCHOOL DEPENDENT.  
 ETA = .10204 WITH ITEM19 DEPENDENT.  
 PEARSON'S R = -.01053 SIGNIFICANCE = .4329

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEM19 VALUE 2. PAGE 1 OF 1

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SCHOOL	ITEM15		ROW TOTAL
	1.1	9.1	
116.	55	70	125
	44.0	56.0	100.0
	55.0	43.5	98.5
	21.1	26.8	47.9
119.	30	52	82
	36.6	63.4	100.0
	30.0	32.3	62.3
	11.5	19.9	31.4
139.	15	39	54
	27.8	72.2	100.0
	15.0	24.2	39.2
	5.7	14.9	20.7
COLUMN TOTAL	100	161	261
	38.3	61.7	100.0

RAW CHI SQUARE = 4.35001 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .1136  
 CRAHER'S V = .12910  
 CONTINGENCY COEFFICIENT = .12804  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM19 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00816 WITH SCHOOL DEPENDENT. = .01220 WITH ITEM19 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00996  
 KENDALL'S TAU B = .12087 SIGNIFICANCE = .0200  
 KENDALL'S TAU C = .13182 SIGNIFICANCE = .0200  
 GAMMA = .22217  
 SOMERS'S D (ASYMMETRIC) = .13944 WITH SCHOOL DEPENDENT. = .10477 WITH ITEM19 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .11964  
 ETA = .11922 WITH SCHOOL DEPENDENT.  
 ETA = .12910 WITH ITEM19 DEPENDENT.  
 PEARSON'S R = .11922 SIGNIFICANCE = .0272

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FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF

SCHOOL  
CONTROLLING FOR..  
TIME

BY ITEM20

VALUE 1.

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B2-45

SCHOOL	ITEM20		ROW TOTAL
	1.	9.	
116.	87	42	129
	67.4	32.6	100.0
	47.5	54.5	102.0
	33.5	16.2	49.7
119.	57	21	78
	73.1	26.9	100.0
	31.1	27.3	58.4
	21.5	8.1	29.6
139.	39	14	53
	73.6	26.4	100.0
	21.3	18.2	39.5
	15.0	5.4	20.4
COLUMN TOTAL	183	77	260
	70.4	29.6	100.0

RAW CHI SQUARE = 1.06757 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .5864  
 CRAMER'S V = .06408  
 CONTINGENCY COEFFICIENT = .06395  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM20 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00199 WITH SCHOOL DEPENDENT. = .00338 WITH ITEM20 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00251  
 KENDALL'S TAU B = -.05855 SIGNIFICANCE = .1606  
 KENDALL'S TAU C = -.05964 SIGNIFICANCE = .1606  
 GAMMA = -.11594  
 SOMERS'S D (ASYMMETRIC) = -.07154 WITH SCHOOL DEPENDENT. = -.04792 WITH ITEM20 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.05740  
 ETA = .04286 WITH SCHOOL DEPENDENT.  
 ETA = .06408 WITH ITEM20 DEPENDENT.  
 PEARSON'S R = -.04286 SIGNIFICANCE = .2457

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FILE NONAME (CREATION DATE = 21 JUN 83)

82.45

CROSSTABULATION OF

SCHOOL  
CONTROLLING FOR..  
TIME

BY ITEM20

VALUE

2.

PAGE 1 OF 1

SCHOOL	ITEM20		ROW TOTAL
	1.1	9.1	
116.	111	14	125
	88.8	11.2	47.9
	47.8	48.3	
	42.5	5.4	
119.	73	9	82
	89.0	11.0	31.4
	31.5	31.0	
	28.0	3.4	
139.	48	6	54
	88.9	11.1	20.7
	20.7	20.7	
	18.4	2.3	
COLUMN TOTAL	232	29	261
	88.9	11.1	100.0

RAW CHI SQUARE = .00252 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .9987  
 CRAHER'S V = .00311  
 CONTINGENCY COEFFICIENT = .00311  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM20 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00000 WITH SCHOOL DEPENDENT. = .00001 WITH ITEM20 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00001  
 KENDALL'S TAU B = -.00192 SIGNIFICANCE = .4870  
 KENDALL'S TAU C = -.00135 SIGNIFICANCE = .4870  
 GAMMA = -.00544  
 SOMERS'S D (ASYMMETRIC) = -.00342 WITH SCHOOL DEPENDENT. = -.00107 WITH ITEM20 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00163  
 ETA = .00045 WITH SCHOOL DEPENDENT.  
 ETA = .00311 WITH ITEM20 DEPENDENT.  
 PEARSON'S R = -.00045 SIGNIFICANCE = .4971

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312

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF

SCHOOL CONTROLLING FOR.. BY ITEM21  
TIME VALUE 1.

B2.45

PAGE 1 OF 1

ITEM21

SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
116.	92	71.3	48.2	35.4	129
	37	28.7	53.6	14.2	49.6
119.	61	78.2	31.9	23.5	78
	17	21.8	24.6	6.5	30.0
139.	38	71.7	19.9	14.6	53
	15	28.3	21.7	5.8	20.4
COLUMN	191	69	260		
TOTAL	73.5	26.5	100.0		

1D+84

RAW CHI SQUARE = 1.28889 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .5250  
 CRAMER'S V = .07041  
 CONTINGENCY COEFFICIENT = .07023  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM21 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00246 WITH SCHOOL DEPENDENT. = .00439 WITH ITEM21 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00315  
 KENDALL'S TAU B = -.02703 SIGNIFICANCE = .3235  
 KENDALL'S TAU C = -.02663 SIGNIFICANCE = .3235  
 GAMMA = -.05509  
 SOMERS'S D (ASYMMETRIC) = -.03415 WITH SCHOOL DEPENDENT. = -.02139 WITH ITEM21 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.02631  
 ETA = .01017 WITH SCHOOL DEPENDENT.  
 ETA = .07041 WITH ITEM21 DEPENDENT.  
 PEARSON'S R = .01017 SIGNIFICANCE = .4352



FILE NONAME (CREATION DATE = 21 JUN 83)

..... CROSSTABULATION OF .....  
 SCHOOL CONTROLLING FOR. BY ITEM21  
 TIME VALUE 2.  
 ..... PAGE 1 OF 1

82.45

SCHOOL	ITEM21		ROW TOTAL
	1.1	9.1	
116.	112	13	125
	89.6	10.4	47.9
	48.3	44.8	
	42.9	5.0	
119.	70	12	82
	85.4	14.6	31.4
	30.2	41.4	
	26.8	4.6	
139.	50	4	54
	92.6	7.4	20.7
	21.6	13.8	
	19.2	1.5	
COLUMN TOTAL	232	29	261
	88.9	11.1	100.0

RAW CHI SQUARE = 1.84449 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .3976  
 CRAMER'S V = .08407  
 CONTINGENCY COEFFICIENT = .08377  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM21 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00310 WITH SCHOOL DEPENDENT. = .01017 WITH ITEM21 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00510  
 KENDALL'S TAU B = -.00733 SIGNIFICANCE = .4505  
 KENDALL'S TAU C = -.00517 SIGNIFICANCE = .4505  
 GAMMA = -.02079  
 SOMERS'S D (ASYMMETRIC) = -.01308 WITH SCHOOL DEPENDENT. = -.00411 WITH ITEM21 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00625  
 ETA = .05096 WITH SCHOOL DEPENDENT.  
 ETA = .08407 WITH ITEM21 DEPENDENT.  
 PEARSON'S R = -.05096 SIGNIFICANCE = .2061



FILE NONAME (CREATION DATE = 21 JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM22

CONTROLLING FOR:  
TIME

VALUE 1.

PAGE 1 OF 1

82-45

SCHOOL	ITEM22		ROW TOTAL
	1.1	9.1	
116.	61	68	129
	47.3	52.7	49.6
	46.6	52.7	
	23.5	26.2	
119.	42	36	78
	53.8	46.2	30.0
	32.1	27.9	
	16.2	13.8	
139.	28	25	53
	52.8	47.2	20.4
	21.4	19.4	
	10.8	9.6	
COLUMN TOTAL	131	129	260
	50.4	49.6	100.0

RAW CHI SQUARE = .99507 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .6078  
 CRAMER'S V = .06189  
 CONTINGENCY COEFFICIENT = .06177  
 LAMBDA (ASYMMETRIC) = .05426 WITH SCHOOL DEPENDENT. = .05426 WITH ITEM22 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .02692  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00185 WITH SCHOOL DEPENDENT. = .00276 WITH ITEM22 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00222  
 KENDALL'S TAU B = -.05288 SIGNIFICANCE = .1852  
 KENDALL'S TAU C = -.05899 SIGNIFICANCE = .1852  
 GAMMA = -.09460  
 SOMERS'S D (ASYMMETRIC) = -.05900 WITH SCHOOL DEPENDENT. = -.04740 WITH ITEM22 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.05257  
 ETA = .03275 WITH SCHOOL DEPENDENT.  
 ETA = .06189 WITH ITEM22 DEPENDENT.  
 PEARSON'S R = -.03275 SIGNIFICANCE = .2996

D+86

FILE NONAME (CREATION DATE = 21 JUN 83)

CROSSTABULATION OF  
BY ITEM22

SCHOOL  
CONTROLLING FOR  
TIME

VALUE

2.

PAGE 1 OF 1

8245

SCHOOL	ITEM22				ROW TOTAL
	COUNT I	ROW PCT I	COL PCT I	TOT PCT I	
		1.1	9.1		
116.	100	25		125	
	80.0	20.0		97.9	
	50.0	41.0			
	38.3	9.6			
119.	59	23		82	
	72.0	28.0		31.4	
	29.5	37.7			
	22.6	8.8			
139.	41	13		54	
	75.9	24.1		20.7	
	20.5	21.3			
	15.7	5.0			
COLUMN TOTAL	200	61		261	
	76.6	23.4		100.0	

RAW CHI SQUARE = 1.80992 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .4046  
 CRAHER'S V = .08327  
 CONTINGENCY COEFFICIENT = .08299  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM22 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00330 WITH SCHOOL DEPENDENT. = .00633 WITH ITEM22 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00434  
 KENDALL'S TAU B = .05715 SIGNIFICANCE = .1658  
 KENDALL'S TAU C = .05426 SIGNIFICANCE = .1658  
 GAMMA = .11831  
 SOMERS'S D (ASYMMETRIC) = .07574 WITH SCHOOL DEPENDENT. = .04312 WITH ITEM22 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .05495  
 ETA = .02051 WITH SCHOOL DEPENDENT.  
 ETA = .08327 WITH ITEM22 DEPENDENT.  
 PEARSON'S R = .02051 SIGNIFICANCE = .3708

Attachment D-9

PERCENTAGE OF STUDENTS PASSING EACH COMPUTER LITERACY  
TEST ITEM BY SCHOOL--GRADE 6

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82.45

\*\*\*\*\*  
 \* COMPUTATION CENTER \*  
 \* UNIVERSITY OF TEXAS AT AUSTIN \*  
 \*\*\*\*\*

S P S S - - STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES

CDC 6000/CYBER VERSION B.3 - LOCAL RELEASE 1.0

376000 CM MAXIMUM FIELD LENGTH REQUEST

RUN NAME RECODING AND GETTING FREQ AND CROSSTABS--LITERACY TEST--GRADE6  
 VARIABLE LIST SCHOOL GRADE TIME ITEM1 TO ITEM25  
 INPUT FORMAT (3X,F3,2F1,12F1,F1,4F1,4A1,4F1)

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

VARIABLE	FORMAT	RECORD	COLUMNS
SCHOOL	F 3. 0	1	4- 6
GRADE	F 1. 0	1	7- 7
TIME	F 1. 0	1	8- 8
ITEM1	E 1. 0	1	9- 9
ITEM2	F 1. 0	1	10- 10
ITEM3	F 1. 0	1	11- 11
ITEM4	F 1. 0	1	12- 12
ITEM5	F 1. 0	1	13- 13
ITEM6	F 1. 0	1	14- 14
ITEM7	F 1. 0	1	15- 15
ITEM8	F 1. 0	1	16- 16
ITEM9	E 1. 0	1	17- 17
ITEM10	E 1. 0	1	18- 18
ITEM11	F 1. 0	1	19- 19
ITEM12	F 1. 0	1	20- 20
ITEM13	F 4. 0	1	21- 24
ITEM14	E 1. 0	1	25- 25
ITEM15	F 1. 0	1	26- 26
ITEM16	F 1. 0	1	27- 27
ITEM17	F 1. 0	1	28- 28
ITEM18	A 1	1	29- 29
ITEM19	A 1	1	30- 30
ITEM20	A 1	1	31- 31
ITEM21	A 1	1	32- 32
ITEM22	F 1. 0	1	33- 33
ITEM23	F 1. 0	1	34- 34
ITEM24	E 1. 0	1	35- 35
ITEM25	F 1. 0	1	36- 36

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THE INPUT FORMAT PROVIDES FOR 28 VARIABLES. 28 WILL BE READ.  
 IT PROVIDES FOR 1 RECORDS (\*CARDS\*) PER CASE.  
 A MAXIMUM OF 36 \*COLUMNS\* ARE USED ON A RECORD.



RECODE ITEM8 TO ITEM12 ITEM15 TO ITEM17 ITEM22 (0=1)(ELSE=9)  
 RECODE ITEM6 (1=1)(ELSE=9)  
 RECODE ITEM7 ITEM21 (2=1)(ELSE=9)

```

RECODE      ITEM1 ITEM5 ITEM25 (4=1)(ELSE=9)
RECODE      ITEM20 (*A*=1)(ELSE=9)
RECODE      ITEM18 (*C*=1)(ELSE=9)
RECODE      ITEM21 (*D*=1)(ELSE=9)
RECODE      ITEM19 (*F*=1)(ELSE=9)
RECODE      ITEM13 (1123=1)(ELSE=9)
COUNT      TOTAL=ITEM1 TO ITEM25 (1)
*SELECT IF  (LINE EQ 1)
TASK NAME    FREQUENCIES FOR PRETEST

```

82145

CPU TIME REQUIRED.. .088 SECONDS

```

FREQUENCIES  GENERAL=ALL
STATISTICS   ALL

```

```

FREQUENCIES - INITIAL CM ALLOWS FOR 1467 VALUES
                MAXIMUM CM ALLOWS FOR 37264 VALUES

```

```

OPTION - 1
IGNORE MISSING VALUE INDICATORS
(NO MISSING VALUES DEFINED...OPTION 1 MAY HAVE BEEN FORCED)

```

\*\*\* DATA ERRORS IN CASE 584 OF SUBFILE N0NAME

```

VARIABLE      ERROR

```

```

ITEM17      BAD CHARACTER *:* IN COLUMN 28 OF RECD0 1

```

```

END OF FILE ON FILE LITER6
AFTER READING 931 CASES FROM SUBFILE N0NAME

```

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CROSSTABS FOR PRE AND POST

FILE N0NAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF SCHOOL CONTROLLING FOR.. TIME BY ITEM1 VALUE 1. PAGE 1 OF 1

82.45

SCHOOL	ITEM1	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL	COLUMN TOTAL
		1.1	9.1				
	111.	65	19	77.4	22.6	18.7	
		17.6	24.1				
		14.5	4.2				
	117.	101	21	82.8	17.2	27.2	
		27.3	26.6				
		22.5	4.7				
	125.	37	10	78.7	21.3	10.5	
		10.0	12.7				
		8.2	2.2				
	131.	167	29	85.2	14.8	43.7	
		45.1	36.7				
		37.2	6.5				
		370	79			949	
	TOTAL	82.4	17.6			100.0	

RAW CHI SQUARE = 2.97313 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .3958  
 CRAMER'S V = .08137  
 CONTINGENCY COEFFICIENT = .08111  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM1 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00256 WITH SCHOOL DEPENDENT. = .00695 WITH ITEM1 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00374  
 KENDALL'S TAU B = -.06294 SIGNIFICANCE = .0754  
 KENDALL'S TAU C = -.05629 SIGNIFICANCE = .0754  
 GAMMA = -.13731  
 SOMERS'S D (ASYMMETRIC) = -.09706 WITH SCHOOL DEPENDENT. = -.04081 WITH ITEM1 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.05746  
 ETA = .06250 WITH SCHOOL DEPENDENT.  
 ETA = .08137 WITH ITEM1 DEPENDENT.  
 PEARSON'S R = -.06250 SIGNIFICANCE = .0931

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CROSSTABULATION OF BY ITEM

82.45

SCHOOL CONTROLLING FOR TIME

VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
				1.1	9.1	
	108.	55	1.0			56
		98.2	1.8			11.6
		12.9	1.8			
		11.4	.2			
	111.	71	.8			79
		89.9	10.1			16.4
		16.7	14.0			
		14.7	1.7			
	117.	86	.16			102
		84.3	15.7			21.2
		20.2	28.1			
		17.8	3.3			
	126.	42	4			46
		91.3	8.7			9.5
		9.9	7.0			
		8.7	.8			
	131.	171	.28			199
		85.9	14.1			41.3
		40.2	49.1			
		35.5	5.8			
COLUMN TOTAL		425	57			482
		88.2	11.8			100.0

RAW CHI-SQUARE = 8.48401 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0754  
 CRAMER'S V = .13267  
 CONTINGENCY COEFFICIENT = .13152  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00781 WITH SCHOOL DEPENDENT. = .03149 WITH ITEM DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01252  
 KENDALL'S TAU B = .07831 SIGNIFICANCE = .0296  
 KENDALL'S TAU C = .06133 SIGNIFICANCE = .0296  
 GAMMA = .20625  
 SOMERS'S D (ASYMMETRIC) = .14704 WITH SCHOOL DEPENDENT. = .04170 WITH ITEM DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .06498  
 ETA = .07646 WITH SCHOOL DEPENDENT.  
 ETA = .13267 WITH ITEM DEPENDENT.  
 PEARSON'S R = .07646 SIGNIFICANCE = .0468

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82.45

..... C R O S S T A B U L A T I O N   O F .....  
 SCHOOL BY ITEM2  
 CONTROLLING FOR.....  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

SCHOOL	ITEM2		ROW TOTAL
	COUNT	PCT	
	111.	117.	126.
	1	1	1
	26	46	9
	31.0	37.7	19.1
	17.0	31.5	6.2
	5.8	10.2	2.0
	131.	126.	131.
	1	1	1
	65	46	131
	33.2	37.7	66.8
	44.5	43.2	43.2
	14.5	29.2	29.2
COLUMN	146	303	449
TOTAL	32.5	67.5	100.0

RAW CHI SQUARE = 5.45505 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1414  
 CRAMER'S V = .11022  
 CONTINGENCY COEFFICIENT = .10956  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM2 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00510 WITH SCHOOL DEPENDENT. = .01023 WITH ITEM2 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00681  
 KENDALL'S TAU B = .00485 SIGNIFICANCE = .4559  
 KENDALL'S TAU C = .00534 SIGNIFICANCE = .4559  
 GAMMA = .00886  
 SOMERS'S D (ASYMMETRIC) = .00698 WITH SCHOOL DEPENDENT. = .00387 WITH ITEM2 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .00473  
 ETA = .01815 WITH SCHOOL DEPENDENT.  
 ETA = .11022 WITH ITEM2 DEPENDENT.  
 PEARSON'S R = .01815 SIGNIFICANCE = .3506

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CROSSTABULATION OF  
 BY ITEM2

SCHOOL  
 CONTROLLING FOR  
 TIME

VALUE 2.

PAGE 1 OF 1

82-45

SCHOOL	ITEM2				ROW TOTAL
	COUNT I	ROW PCT I	COL PCT I	TOT PCT I	
	1.I	9.I			
108.	25	31			56
	44.6	55.4			11.6
	7.8	19.4			
	5.2	6.4			
111.	63	16			79
	79.7	20.3			16.4
	19.6	10.0			
	13.1	3.3			
117.	59	43			102
	57.8	42.2			21.2
	18.3	26.9			
	12.2	8.9			
126.	36	10			46
	78.3	21.7			9.5
	11.2	6.3			
	7.5	2.1			
131.	139	60			199
	69.8	30.2			41.3
	43.2	37.5			
	28.8	12.4			
COLUMN TOTAL	322	160			482
	66.8	33.2			100.0

RAW CHI SQUARE = 25.61789 WITH 1 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .23054  
 CONTINGENCY COEFFICIENT = .22465  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .03750 WITH ITEM2 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01354  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01798 WITH SCHOOL DEPENDENT. = .04143 WITH ITEM2 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02508  
 KENDALL'S TAU B = -.07887 SIGNIFICANCE = .0297  
 KENDALL'S TAU C = -.09008 SIGNIFICANCE = .0287  
 GAMMA = -.13590  
 SOMERS'S D (ASYMMETRIC) = -.10155 WITH SCHOOL DEPENDENT. = -.06126 WITH ITEM2 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.07642  
 ETA = .08845 WITH SCHOOL DEPENDENT.  
 ETA = .23054 WITH ITEM2 DEPENDENT.  
 PEARSON'S R = -.08845 SIGNIFICANCE = .0261

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..... CROSSTABULATION OF .....  
 SCHOOL BY ITEMS  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

82.45

SCHOOL	ITEMS		ROW TOTAL
	1.1	9.1	
111.	55	29	84
	65.5	34.5	100.0
	16.2	26.6	42.8
	12.2	6.5	18.7
117.	96	26	122
	78.7	21.3	100.0
	28.2	23.9	52.1
	21.4	5.8	27.2
126.	38	9	47
	80.9	19.1	100.0
	11.2	8.3	19.5
	8.5	2.0	10.5
131.	151	45	196
	77.0	23.0	100.0
	44.4	41.3	85.7
	33.6	10.0	43.6
COLUMN TOTAL	340	109	449
	75.7	24.3	100.0

RAW CHI SQUARE = 6.23897 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1005  
 CRAMER'S V = .11788  
 CONTINGENCY COEFFICIENT = .11707  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00521 WITH SCHOOL DEPENDENT. = .01191 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00725  
 KENDALL'S TAU B = -.06391 SIGNIFICANCE = .0723  
 KENDALL'S TAU C = -.06436 SIGNIFICANCE = .0723  
 GAMMA = -.12558  
 SOMERS'S D (ASYMMETRIC) = -.08753 WITH SCHOOL DEPENDENT. = -.04666 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.06088  
 ETA = .011 WITH SCHOOL DEPENDENT.  
 ETA = .11788 WITH ITEMS DEPENDENT.  
 PEARSON'S R = -.07021 SIGNIFICANCE = .0687

CROSSTABULATION OF BY ITEMS

82.45

SCHOOL  
CONTROLLING FDR.  
TIME

VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEMS	COUNT I	ROW PCT I	COL PCT I	TOT PCT I	ROW TOTAL
		108	50	6	56	11.6
			89.3	10.7		
			12.4	7.5		
			10.4	1.2		
		111	65	14	79	16.4
			82.3	17.7		
			16.2	17.5		
			13.5	2.9		
		117	82	20	102	21.2
			80.4	19.6		
			20.4	25.0		
			17.0	4.1		
		126	39	7	46	9.5
			84.8	15.2		
			9.7	8.8		
			8.1	1.5		
		131	166	33	199	41.3
			83.4	16.6		
			41.3	41.3		
			34.4	6.8		
COLUMN		402	80	482		
TOTAL		83.4	16.6	100.0		

D-97

RAW CHI SQUARE = 2.20339 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .6984  
 CRAHER'S V = .06761  
 CONTINGENCY COEFFICIENT = .06746  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00166 WITH SCHOOL DEPENDENT. = .00540 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00253  
 KENDALL'S TAU B = .01479 SIGNIFICANCE = .3609  
 KENDALL'S TAU C = .01334 SIGNIFICANCE = .3609  
 GAMMA = .03290  
 SOMERS'S D (ASYMMETRIC) = .02410 WITH SCHOOL DEPENDENT. = .00907 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01318  
 ETA = .01116 WITH SCHOOL DEPENDENT.  
 ETA = .06761 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .01116 SIGNIFICANCE = .4035

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CROSS TABULATION OF  
 SCHOOL BY ITEM  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 PAGE 1 OF 1

SCHOOL	ITEM	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		111	26	58	84	84
			31.0	69.0	18.7	18.7
			22.6	17.4		
			5.8	12.9		
		117	36	86	122	122
			29.5	70.5	27.2	27.2
			31.3	25.7		
			8.0	19.2		
		126	14	33	47	47
			29.8	70.2	10.5	10.5
			12.2	9.9		
			3.1	7.3		
		131	39	157	196	196
			19.9	80.1	43.7	43.7
			33.9	47.0		
			8.7	35.0		
		COLUMN TOTAL	115	334	449	449
			25.6	74.4	100.0	

RAW CHI SQUARE = 6.01834 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1107

CRAMER'S V = .11578

CONTINGENCY COEFFICIENT = .11501

LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM DEPENDENT.

LAMBDA (SYMMETRIC) = 0

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00538 WITH SCHOOL DEPENDENT. = .01196 WITH ITEM DEPENDENT.

UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00742

KENDALL'S TAU B = .10077 SIGNIFICANCE = .0107

KENDALL'S TAU C = .10331 SIGNIFICANCE = .0107

GAMMA = .19129

SOMERS'S D (ASYMMETRIC) = .13556 WITH SCHOOL DEPENDENT. = .07490 WITH ITEM DEPENDENT.

SOMERS'S D (SYMMETRIC) = .09649

EYI = .10462 WITH SCHOOL DEPENDENT.

EYI = .11578 WITH ITEM DEPENDENT.

PEARSON'S R = .10462 SIGNIFICANCE = .0133

82.45

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CROSSTABULATION OF SCHOOL BY ITEM  
 CONTROLLING FOR TIME VALUE 2  
 PAGE 1 OF 1

SCHOOL	ITEM	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		108.	24	32	56	56
			92.9	57.1	11.6	11.6
			10.0	13.3		
			5.0	6.6		
		111.	45	34	79	79
			57.0	43.0	16.4	16.4
			18.7	14.1		
			9.3	7.1		
		117.	46	56	102	102
			45.1	54.9	21.2	21.2
			19.1	23.2		
			9.5	11.6		
		126.	23	23	46	46
			50.0	50.0	9.5	9.5
			9.5	9.5		
			4.8	4.8		
		131.	103	96	199	199
			51.0	48.2	41.3	41.3
			42.7	39.8		
			21.4	19.9		
		COLUMN TOTAL	241	241	482	482
			50.0	50.0	100.0	100.0

RAW CHI SQUARE = 3.90113 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .4196  
 CRAMER'S V = .08996  
 CONTINGENCY COEFFICIENT = .08960  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .07469 WITH ITEM DEPENDENT.  
 LAMBDA (SYMMETRIC) = .03435  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00277 WITH SCHOOL DEPENDENT. = .00585 WITH ITEM DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00376  
 KENDALL'S TAU B = -.02339 SIGNIFICANCE = .2869  
 KENDALL'S TAU C = -.02831 SIGNIFICANCE = .2869  
 GAMMA = -.03842  
 SOMERS'S D (ASYMMETRIC) = -.02831 WITH SCHOOL DEPENDENT. = -.01925 WITH ITEM DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.02291  
 ETA = .02372 WITH SCHOOL DEPENDENT.  
 ETA = .08996 WITH ITEM DEPENDENT.  
 PEARSON'S R = -.02372 SIGNIFICANCE = .3017

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82.45



..... CROSSTABULATION OF .....  
 SCHOOL BY ITEMS  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

82.45

SCHOOL	ITEMS				ROW TOTAL
	COUNT I	ROW PCT I	COL PCT I	TOT PCT I	
			1.1	9.1	
111.	61	23		84	
	72.6	27.4		18.7	
	24.0	11.9			
	13.6	5.1			
117.	63	59		122	
	51.6	48.4		27.2	
	24.8	30.3			
	14.0	13.1			
126.	36	11		47	
	76.6	23.4		10.5	
	14.2	5.6			
	8.0	2.4			
131.	94	102		196	
	48.0	52.0		43.7	
	37.0	52.3			
	20.9	22.7			
COLUMN TOTAL	254	195		449	
	56.6	43.4		100.0	

D-100

RAW CHI SQUARE = 23.60075 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .22927  
 CONTINGENCY COEFFICIENT = .22347  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .04103 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01786  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02157 WITH SCHOOL DEPENDENT. = .03990 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02001  
 KENDALL'S TAU B = .13872 SIGNIFICANCE = .0008  
 KENDALL'S TAU C = .15151 SIGNIFICANCE = .0009  
 GAMMA = .23645  
 SOMERS'S D (ASYMMETRIC) = .16434 WITH SCHOOL DEPENDENT. = .11709 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .13675  
 ETA = .12897 WITH SCHOOL DEPENDENT.  
 ETA = .22927 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .12897 SIGNIFICANCE = .0031

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\*\*\*\*\* CROSSTABULATION OF \*\*\*\*\*  
 SCHOOL BY ITEMS  
 CONTROLLING FOR..  
 TIME VALUE 2  
 \*\*\*\*\* PAGE 1 OF 1 \*\*\*\*\*

82.45

D-101

SCHOOL	ITEMS		TOTAL
	COUNT	ROW PCT	
	TOT PCT		
	1.1	9.1	
108.	38	18	56
	67.9	32.1	11.6
	10.9	13.6	
	7.9	3.7	
111.	64	15	79
	81.0	19.0	16.4
	18.3	11.4	
	13.3	3.1	
117.	78	24	102
	76.5	23.5	21.2
	22.3	18.2	
	16.2	5.0	
126.	45	1	46
	97.8	2.2	9.5
	12.9	.8	
	9.3	.2	
131.	125	74	199
	62.6	37.2	41.3
	35.7	56.1	
	25.9	15.4	
COLUMN	350	132	482
TOTAL	72.6	27.4	100.0

RAW CHI SQUARE = 28.51663 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .24323  
 CONTINGENCY COEFFICIENT = .23634  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02494 WITH SCHOOL DEPENDENT. = .06222 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .03551  
 KENDALL'S TAU B = .10940 SIGNIFICANCE = .0078  
 KENDALL'S TAU C = .10859 SIGNIFICANCE = .0079  
 GAMMA = .10889  
 SOMERS'S D (ASYMMETRIC) = .13652 WITH SCHOOL DEPENDENT. = .07384 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .09584  
 ETA = .09438 WITH SCHOOL DEPENDENT.  
 ETA = .24323 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .09438 SIGNIFICANCE = .0192

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..... CROSSTABULATION OF .....  
 SCHOOL BY ITEM6  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

82-45

SCHOOL	ITEMS		ROW TOTAL
	COUNT	PCT	
	111.	117.	
	69	98	184
	82.1	80.3	181.4
	18.9	26.8	45.7
	15.4	21.8	37.2
	126.	131.	
	35	163	198
	74.5	85.2	159.7
	9.6	44.7	54.3
	7.8	36.3	44.1
	COLUMN TOTAL	TOTAL	
	365	81.3	449
	84	18.7	100.0

D-102

RAW CHI SQUARE = 2.00492 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .5714  
 CRAMER'S V = .06682  
 CONTINGENCY COEFFICIENT = .06667  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM6 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00167 WITH SCHOOL DEPENDENT. = .00440 WITH ITEM6 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00243  
 KENDALL'S TAU B = -.01780 SIGNIFICANCE = .3422  
 KENDALL'S TAU C = -.01631 SIGNIFICANCE = .3422  
 GAMMA = -.03828  
 SOMERS'S D (ASYMMETRIC) = -.02681 WITH SCHOOL DEPENDENT. = -.01182 WITH ITEM6 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.01641  
 ETA = .01283 WITH SCHOOL DEPENDENT.  
 ETA = .06682 WITH ITEM6 DEPENDENT.  
 PEARSON'S R = -.01283 SIGNIFICANCE = .3931

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF

82.45

SCHOOL  
CONTROLLING FOR  
TIME

BY ITEM6

VALUE 2.

PAGE 1 OF 1

		ITEM6		
COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
SCHOOL				
108.	.49	.7	9.1	56
	87.5	12.5		11.6
	11.7	10.9		
	10.2	1.5		
111.	.69	10		79
	87.3	12.7		16.4
	16.5	15.6		
	14.3	2.1		
117.	.89	13		102
	87.3	12.7		21.2
	21.3	20.3		
	18.5	2.7		
126.	.41	5		46
	89.1	10.9		9.5
	9.8	7.8		
	8.5	1.0		
131.	.170	29		199
	85.4	14.6		41.3
	40.7	45.3		
	35.3	6.0		
COLUMN	418	64		482
TOTAL	86.7	13.3		100.0

RAW CHI SQUARE = .60243 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .9628  
 CRAMER'S V = .03535  
 CONTINGENCY COEFFICIENT = .03533  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM6 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00043 WITH SCHOOL DEPENDENT. = .00161 WITH ITEM6 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00068  
 KENDALL'S TAU B = .02249 SIGNIFICANCE = .2933  
 KENDALL'S TAU C = .01851 SIGNIFICANCE = .2933  
 GAMMA = .05534  
 SOMERS'S D (ASYMMETRIC) = .04018 WITH SCHOOL DEPENDENT. = .01259 WITH ITEM6 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01917  
 ETA = .02216 WITH SCHOOL DEPENDENT.  
 ETA = .03535 WITH ITEM6 DEPENDENT.  
 PEARSON'S R = .02216 SIGNIFICANCE = .3137

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D-103

..... CROSSTABULATION OF .....  
 SCHOOL CONTROLLING FOR.....  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

812 145

SCHOOL	ITEM7		TOTAL
	COUNT	PERCENT	
111.	36	18.7	18.7
117.	54	27.2	27.2
126.	19	10.5	10.5
131.	113	43.7	43.7
COLUMN TOTAL	227	100.0	100.0

D-104

RAW CHI SQUARE = 9.58159 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0225  
 CRAMER'S V = .14608  
 CONTINGENCY COEFFICIENT = .14455  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .13514 WITH ITEM7 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .06316  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00846 WITH SCHOOL DEPENDENT. = .01545 WITH ITEM7 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01094  
 KENDALL'S TAU B = .11916 SIGNIFICANCE = .0035  
 KENDALL'S TAU C = .13994 SIGNIFICANCE = .0035  
 GAMMA = .20104  
 SOMERS'S D (ASYMMETRIC) = .13996 WITH SCHOOL DEPENDENT. = .10146 WITH ITEM7 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .11764  
 ETA = .12118 WITH SCHOOL DEPENDENT.  
 ETA = .14608 WITH ITEM7 DEPENDENT.  
 PEARSON'S R = .12118 SIGNIFICANCE = .0051

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CROSSTABULATION OF  
BY ITEM7

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 2.

PAGE 1 OF 1

B2.45

SCHOOL	ITEM7	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
			1.		9.	
108.	1	39	17			56
		69.6	30.4			11.6
		13.3	9.0			
		8.1	3.5			
111.	1	40	9			79
		50.6	49.3			16.4
		13.6	20.7			
		8.3	8.1			
117.	1	64	38			102
		62.7	37.3			21.2
		21.8	20.2			
		13.3	7.9			
126.	1	36	10			46
		78.3	21.7			9.5
		12.2	5.3			
		7.5	2.1			
131.	1	115	84			199
		57.8	42.2			41.3
		39.1	44.7			
		23.9	17.4			
COLUMN		294	188			482
TOTAL		61.0	39.0			100.0

ID-105

RAW CHI SQUARE = 12.08083 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0168  
 CRAMER'S V = .15832  
 CONTINGENCY COEFFICIENT = .15637  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM7 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00888 WITH SCHOOL DEPENDENT. = .01945 WITH ITEM7 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01219  
 KENDALL'S TAU B = .02010 SIGNIFICANCE = .3140  
 KENDALL'S TAU C = .02378 SIGNIFICANCE = .3140  
 GAMMA = .03402  
 SOMERS'S D (ASYMMETRIC) = .02439 WITH SCHOOL DEPENDENT. = .01617 WITH ITEM7 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01963  
 ETA = .00577 WITH SCHOOL DEPENDENT.  
 ETA = .15832 WITH ITEM7 DEPENDENT.  
 PEARSON R = .00577 SIGNIFICANCE = .9498

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSS TABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEM VALUE

82.45

PAGE 1 OF 1

SCHOOL	ITEM	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
	111.	65	19	16.2	14.5	84
		77.4	22.6	40.4	4.2	18.7
	117.	110	12	27.4	24.5	122
		90.2	9.8	25.5	2.7	27.2
	126.	42	5	10.4	9.4	47
		89.4	10.6	10.6	1.1	10.5
	131.	185	11	94.4	46.0	196
		41.2	2			43.7
	COLUMN TOTAL	402	47	89.5	10.5	449
	TOTAL					100.0

RAW CHI SQUARE = 18.21800 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0004  
 CRAMER'S V = .20143  
 CONTINGENCY COEFFICIENT = .19747  
 LAMBDA (ASYMMETRIC) = .03162 WITH SCHOOL DEPENDENT. = 0 WITH ITEM DEPENDENT.  
 LAMBDA (SYMMETRIC) = .02667  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01425 WITH SCHOOL DEPENDENT. = .05381 WITH ITEM DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02253  
 KENDALL'S TAU B = -.16583 SIGNIFICANCE = .0001  
 KENDALL'S TAU C = -.11925 SIGNIFICANCE = .0001  
 GAMMA = -.42642  
 SOMERS'S D (ASYMMETRIC) = -.31809 WITH SCHOOL DEPENDENT. = -.08645 WITH ITEM DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.13595  
 ETA = .17404 WITH SCHOOL DEPENDENT.  
 ETA = .20143 WITH ITEM DEPENDENT.  
 PEARSON'S R = -.17404 SIGNIFICANCE = .0001

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D-106

..... CROSSTABULATION OF .....  
 SCHOOL BY ITEM8  
 CONTROLLING FOR:  
 TIME VALUE 25  
 ..... PAGE 1 OF 1

82-45

SCHOOL	ITEM8		TOTAL
	COUNT I	ROW PCT I	
	109.	111.	
	46	10	56
	82.1	17.9	117.6
	10.1	37.0	
	9.5	2.1	
	78	1	79
	98.7	1.3	16.4
	17.1	3.7	
	16.2	.2	
	94	8	102
	92.2	7.8	21.2
	20.7	29.6	
	19.5	1.7	
	42	4	46
	91.3	8.7	9.5
	9.2	14.8	
	8.7	.8	
	195	4	199
	98.0	2.0	41.3
	42.9	14.8	
	40.5	.8	
COLUMN	455	27	482
TOTAL	94.4	5.6	100.0

D-107

RAW CHI SQUARE = 25.37132 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 GAMMA'S V = .22943  
 CONTINGENCY COEFFICIENT = .22362  
 LAMBDA (ASYMMETRIC) = .02120 WITH SCHOOL DEPENDENT. = 0 WITH ITEM8 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01935  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02585 WITH SCHOOL DEPENDENT. = .10752 WITH ITEM8 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02762  
 KENDALL'S TAU B = -.12802 SIGNIFICANCE = .0019  
 KENDALL'S TAU C = -.07140 SIGNIFICANCE = .0019  
 GAMMA = -.04276  
 SOMER'S D (ASYMMETRIC) = -.33257 WITH SCHOOL DEPENDENT. = -.04855 WITH ITEM8 DEPENDENT.  
 SOMER'S D (SYMMETRIC) = -.08489  
 Cramer's V = .22943 WITH SCHOOL DEPENDENT.  
 Cramer's V = .22943 WITH ITEM8 DEPENDENT.  
 GAMMA'S R = -.12745 SIGNIFICANCE = .0025

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF SCHOOL CONTROLLING FOR TIME BY ITEM9

82.45

PAGE 1 OF 1

SCHOOL	ITEM9		COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
	1	2					
111.	82	2	84	97.6	19.2	18.3	19.7
117.	118	3	122	96.7	27.6	26.3	27.2
126.	46	1	47	97.9	10.7	10.2	10.5
131.	102	14	116	92.9	42.5	40.5	43.7
COLUMN	228	21	249				
TOTAL	95.3	4.7	100.0				

D-108

RAW CHI SQUARE = 4.88662 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1803  
 CRAMER'S V = .10432  
 CONTINGENCY COEFFICIENT = .10376  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM9 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00437 WITH SCHOOL DEPENDENT. = .02928 WITH ITEM9 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00761  
 KENDALL'S TAU B = .08745 SIGNIFICANCE = .0229  
 KENDALL'S TAU C = .04337 SIGNIFICANCE = .0229  
 GAMMA = .37965  
 SOMERS'S D (ASYMMETRIC) = .24321 WITH SCHOOL DEPENDENT. = .0314 WITH ITEM9 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .05569  
 ETA = .08915 WITH SCHOOL DEPENDENT.  
 ETA = .10432 WITH ITEM9 DEPENDENT.  
 PEARSON'S R = .08915 SIGNIFICANCE = .0295

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

..... CROSSTABULATION OF .....  
 SCHOOL BY ITEM9  
 CONTROLLING FOR:  
 TIME VALUE 2.  
 ..... PAGE 1 OF 1

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	ITEM9	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL	COL TOTAL
108.	1	56	100.0	11.8	11.8	56	11.8
	2	0	0.0	0.0	0.0	0	0.0
	3	0	0.0	0.0	0.0	0	0.0
	4	0	0.0	0.0	0.0	0	0.0
111.	1	79	100.0	16.7	16.7	79	16.7
	2	0	0.0	0.0	0.0	0	0.0
	3	0	0.0	0.0	0.0	0	0.0
	4	0	0.0	0.0	0.0	0	0.0
117.	1	97	95.2	20.5	20.5	102	21.2
	2	4	3.9	0.8	0.8	4	0.8
	3	55	53.6	11.8	11.8	55	11.8
	4	1	0.9	0.2	0.2	1	0.2
126.	1	46	100.0	9.7	9.7	46	9.7
	2	0	0.0	0.0	0.0	0	0.0
	3	0	0.0	0.0	0.0	0	0.0
	4	0	0.0	0.0	0.0	0	0.0
131.	1	195	98.0	41.2	41.2	199	41.3
	2	4	2.0	0.8	0.8	4	0.8
	3	44	21.8	9.5	9.5	44	9.5
	4	8	4.0	1.7	1.7	8	1.7
COLUMN		473	9	482			
TOTAL		9	1	1.9	100.0		

RAW CHI SQUARE = 8.59278 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0721  
 CRAMER'S V = .13352  
 CONTINGENCY COEFFICIENT = .13234  
 LAMBDA (ASYMMETRIC) = .00353 WITH SCHOOL DEPENDENT. = 0 WITH ITEM9 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00342  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00737 WITH SCHOOL DEPENDENT. = .11625 WITH ITEM9 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01386  
 KENDALL'S TAU B = .03052 SIGNIFICANCE = .2310  
 KENDALL'S TAU C = .01002 SIGNIFICANCE = .2310  
 GAMMA = .19452  
 SOMERS'S D (ASYMMETRIC) = .13672 WITH SCHOOL DEPENDENT. = .00681 WITH ITEM9 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01298  
 ETA = .02445 WITH SCHOOL DEPENDENT.  
 ETA = .13352 WITH ITEM9 DEPENDENT.  
 PEARSON'S R = .02445 SIGNIFICANCE = .2961

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..... CROSS TABULATION OF .....  
 SCHOOL BY ITEM10  
 CONTROLLING FOR..  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

182.45

SCHOOL	ITEM10	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		1.1			9.1	
	111.	44	52.4	15.1	9.8	84
		47.6	25.5	8.9		18.7
	117.	81	66.4	27.7	18.0	122
		41	33.6	26.1	9.1	27.2
	126.	34	72.3	11.6	7.6	47
		13	27.7	8.3	2.9	10.5
	131.	133	67.9	45.5	28.6	196
		63	32.1	40.1	14.0	43.7
		292				449
		65.0	35.0			100.0

RAW CHI SQUARE = 7.80345 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0503  
 CRAMER'S V = .13103  
 CONTINGENCY COEFFICIENT = .13070  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM10 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00670 WITH SCHOOL DEPENDENT. = .00309 WITH ITEM10 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00886  
 KENDALL'S TAU B = -.08945 SIGNIFICANCE = .0206  
 KENDALL'S TAU C = -.10020 SIGNIFICANCE = .0206  
 GAMMA = -.15810  
 SOMERS'S D (ASYMMETRIC) = -.11016 WITH SCHOOL DEPENDENT. = -.07264 WITH ITEM10 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.08255  
 ETA = .09928 WITH SCHOOL DEPENDENT.  
 ETA = .13183 WITH ITEM10 DEPENDENT.  
 PEARSON'S R = -.09928 SIGNIFICANCE = .0177

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CROSSTABULATION OF  
 BY ITEM10

SCHOOL  
 CONTROLLING FOR,  
 TIME

VALUE 2.

PAGE 1 OF 1

82.45

SCHOOL	ITEM10		ROW TOTAL
	COUNT	PERCENT	
	1.1	9.1	
108.	31	25	56
	55.4	44.6	11.6
	8.9	18.8	
	6.4	5.2	
111.	63	16	79
	79.7	20.3	16.4
	18.1	12.0	
	13.1	3.3	
117.	70	32	102
	68.6	31.4	21.2
	20.1	24.1	
	14.5	6.6	
126.	34	12	46
	73.9	26.1	9.5
	9.7	9.0	
	7.1	2.5	
131.	151	48	199
	75.9	24.1	41.3
	43.3	36.1	
	31.3	10.0	
COLUMN TOTAL	349	133	482
TOTAL	72.4	27.6	100.0

RAW CHI SQUARE = 12.26056 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0155  
 CRAMER'S V = .15949  
 CONTINGENCY COEFFICIENT = .15750  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM10 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00827 WITH SCHOOL DEPENDENT. = .02056 WITH ITEM10 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01180  
 KENDALL'S TAU B = -.07601 SIGNIFICANCE = .0335  
 KENDALL'S TAU C = -.08243 SIGNIFICANCE = .0335  
 GAMMA = -.13777  
 SOMERS'S D (ASYMMETRIC) = -.10311 WITH SCHOOL DEPENDENT. = -.05603 WITH ITEM10 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.07261  
 ETA = .07866 WITH SCHOOL DEPENDENT.  
 ETA = .15949 WITH ITEM10 DEPENDENT.  
 PEARSON'S R = -.07866 SIGNIFICANCE = .0423

..... C R O S S T A B U L A T I O N O F .....  
SCHOOL BY ITEM1  
CONTROLLING FOR:  
TIME VALUE 1  
..... PAGE 1 OF 1

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SCHOOL	ITEM1		TOTAL
	1.1	9.1	
111.	41	43	84
	48.8	51.2	18.7
	14.9	24.7	
	9.1	9.6	
117.	70	52	122
	57.4	42.6	27.2
	25.5	29.9	
	15.6	11.6	
126.	36	11	47
	76.6	23.4	10.5
	13.1	6.3	
	8.0	2.4	
131.	128	68	196
	65.3	34.7	43.7
	46.5	39.1	
	28.5	15.1	
COLUMN	275	174	449
TOTAL	61.2	38.8	100.0

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RAW CHI SQUARE = 12.27006 WITH 3 DEGREES OF FREEDOM, SIGNIFICANCE = .0065.  
 CRAMER'S V = .16531  
 CONTINGENCY COEFFICIENT = .16310  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .01149 WITH ITEM1 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00468  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01097 WITH SCHOOL DEPENDENT. = .02080 WITH ITEM1 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01437  
 KENDALL'S TAU B = -.11528 SIGNIFICANCE = .0042  
 KENDALL'S TAU C = -.13192 SIGNIFICANCE = .0042  
 GAMMA = -.19939  
 SOMERS'S D (ASYMMETRIC) = -.13896 WITH SCHOOL DEPENDENT. = -.09564 WITH ITEM1 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.11330  
 ETA = .13489 WITH SCHOOL DEPENDENT.  
 ETA = .15531 WITH ITEM1 DEPENDENT.  
 PEARSON'S R = -.13489 SIGNIFICANCE = .0021

CROSSTABS FOR PRE AND POST

FILE: NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF

SCHOOL BY ITEM11

CONTROLLING FOR:

TIME VALUE 2 PAGE 1 OF 1

82.4:5

SCHOOL	ITEM11	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
				1.1	9.1	
108.	1	29	27			56
		51.8	48.2			11.6
		8.6	18.9			
		6.0	5.6			
111.	1	68	11			79
		86.1	13.9			16.4
		20.1	7.7			
		14.1	2.3			
117.	1	63	39			102
		61.8	38.2			21.2
		18.6	27.3			
		13.1	8.1			
126.	1	34	12			46
		73.9	26.1			9.5
		10.0	8.4			
		7.1	2.5			
131.	1	145	54			199
		72.9	27.1			41.3
		42.8	37.8			
		30.1	11.2			
COLUMN		339	143			482
TOTAL		70.3	29.7			100.0

RAW CHI SQUARE = 23.09801 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0001  
 CRAMER'S V = .21891  
 CONTINGENCY COEFFICIENT = .21385  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM11 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01674 WITH SCHOOL DEPENDENT. = .04032 WITH ITEM11 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02355  
 KENDALL'S TAU B = -.05058 SIGNIFICANCE = .1119  
 KENDALL'S TAU C = -.05604 SIGNIFICANCE = .1119  
 GAMMA = -.08979  
 SOMERS'S D (ASYMMETRIC) = -.06715 WITH SCHOOL DEPENDENT. = -.03811 WITH ITEM11 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.04862  
 ETA = .05205 WITH SCHOOL DEPENDENT.  
 ETA = .21891 WITH ITEM11 DEPENDENT.  
 PEARSON'S R = -.05205 SIGNIFICANCE = .1270

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CROSSTABULATION OF SCHOOL BY ITEM12

CONTROLLING FOR:  
TIME

VALUE 1.

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SCHOOL	ITEM12		TOTAL
	1.1	9.1	
111.	53	31	84
	63.1	36.9	100.0
	15.5	29.0	44.5
	117.8	67.9	185.7
117.	96	26	122
	78.7	21.3	100.0
	28.1	24.3	52.4
	21.4	5.8	27.2
126.	44	3	47
	93.6	6.4	100.0
	12.9	2.8	15.7
	9.8	.7	10.5
131.	149	47	196
	76.0	24.0	100.0
	43.6	43.9	87.5
	33.2	10.5	43.7
COLUMN	342	107	449
TOTAL	76.2	23.8	100.0

RAW CHI SQUARE = 16.22146 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0010  
 CRAMER'S V = .19007  
 CONTINGENCY COEFFICIENT = .18673  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM12 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01570 WITH SCHOOL DEPENDENT. = .03618 WITH ITEM12 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02190  
 KENDALL'S TAU B = -.06995 SIGNIFICANCE = .0551  
 KENDALL'S TAU C = -.07000 SIGNIFICANCE = .0551  
 GAMMA = -.13934  
 SOMERS'S D (ASYMMETRIC) = -.09641 WITH SCHOOL DEPENDENT. = -.05075 WITH ITEM12 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.06650  
 ETA = .08753 WITH SCHOOL DEPENDENT.  
 ETA = .19007 WITH ITEM12 DEPENDENT.  
 PEARSON'S R = -.08753 SIGNIFICANCE = .0319

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CROSSHAUS FOR PRE AND POST

FILE NNAME (CREATION DATE = 22 JUN 83)

..... C R ..... TABULATION OF .....  
 SCHOOL ..... BY ITEM12 .....  
 CONTROLLING FOR: .....  
 TIME ..... VALUE 2 .....  
 ..... PAGE 1 OF 1

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SCHOOL	ITEM12				ROW TOTAL
	COUNT	ROW PCT	COL PCT	TOT PCT	
		1.1	9.1		
108.	31	25		56	
	55.4	44.6		11.6	
	8.1	24.8			
	6.4	5.2			
111.	72	7		79	
	91.1	8.9		16.4	
	18.9	6.9			
	14.9	1.5			
117.	75	27		102	
	75.5	26.5		21.2	
	19.7	26.7			
	15.6	5.6			
124.	36	10		46	
	78.3	21.7		9.5	
	9.4	9.9			
	7.5	2.1			
131.	167	32		199	
	83.9	16.1		41.3	
	8	31.7			
	6.6	6.6			
COLUMN	381	101		482	
TOTAL	79.6	21.0		100.0	

RAW CHI SQUARE = 30.69258 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .25234  
 CONTINGENCY COEFFICIENT = .24467  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM12 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02055 WITH SCHOOL DEPENDENT. = .05862 WITH ITEM12 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .03083  
 KENDALL'S TAU B = -.10851 SIGNIFICANCE = .0045  
 KENDALL'S TAU C = -.10711 SIGNIFICANCE = .0045  
 GAMMA = -.21107  
 SOMERS'S D (ASYMMETRIC) = -.16166 WITH SCHOOL DEPENDENT. = -.07283 WITH ITEM12 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.10042  
 ETA = .10908 WITH SCHOOL DEPENDENT.  
 ETA = .25234 WITH ITEM12 DEPENDENT.  
 PEARSON'S R = -.10908 SIGNIFICANCE = .0083



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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

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CROSS TABULATION OF SCHOOL CONTROLLING FOR: TIME VALUE 1. PAGE 1 OF 1

SCHOOL	ITEM13	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL	COL TOTAL
		15	17.9	3.3	1.1	69	84
		82	17.4	15.4	9.1	187	107
		91	25.4	19.0	11.7	272	165
		25	36.0	6.9	8.6	69	80
		36	12.0	2.4	4.7	167	105
		167	14.0	33.7	19.6	437	242
		85	6.5	37.2	11.6	196	170
		86	19.2	80.8	44.9	449	449

RAW CHI SQUARE = 6.2685 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1056  
 CRAMER'S V = .1161  
 CONTINGENCY COEFFICIENT = .11603  
 LAMBDA (ASYMMETRIC) = .00791 WITH SCHOOL DEPENDENT. = 0 WITH ITEM13 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00590  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00532 WITH SCHOOL DEPENDENT. = .01377 WITH ITEM13 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00767  
 KENDALL'S TAU B = .06347 SIGNIFICANCE = .0135  
 KENDALL'S TAU C = .05867 SIGNIFICANCE = .0735  
 GAMMA = .13366  
 SOMERS'S D (ASYMMETRIC) = .09472 WITH SCHOOL DEPENDENT. = .04254 WITH ITEM13 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .05871  
 ETA = .06643 WITH SCHOOL DEPENDENT.  
 ETA = .11681 WITH ITEM13 DEPENDENT.  
 PEARSON'S R = .06843 SIGNIFICANCE = .0800

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CROSSTABULATION OF  
SCHOOL BY ITEMS

82.45

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 2

PAGE 1 OF 1

SCHOOL	ITEMS			ROW TOTAL
	COUNT	1	9	
108	21	35	56	
	37.5	62.5	11.6	
	8.6	14.7		
	4.4	7.3		
111	38	41	79	
	48.1	51.9	16.4	
	15.6	17.2		
	7.9	8.5		
117	48	54	102	
	47.1	52.9	21.2	
	19.7	22.7		
	10.0	11.2		
126	30	16	46	
	65.2	34.8	9.5	
	12.3	6.7		
	6.2	3.3		
131	107	92	199	
	53.8	46.2	41.3	
	45.9	38.7		
	22.2	19.1		
COLUMN	244	238	482	
TOTAL	50.6	49.4	100.0	

RAW CHI SQUARE = 9.20514 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0544  
 CRAMER'S V = .13879  
 CONTINGENCY COEFFICIENT = .13744  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .09664 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = .04415  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00665 WITH SCHOOL DEPENDENT. = .01406 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01003  
 KENDALL'S TAU B = -.08714 SIGNIFICANCE = .0179  
 KENDALL'S TAU C = -.10566 SIGNIFICANCE = .0179  
 GAMMA = -.14310  
 SOMERS'S D (ASYMMETRIC) = -.10568 WITH SCHOOL DEPENDENT. = -.07105 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.08554  
 ETA = .10320 WITH SCHOOL DEPENDENT.  
 ETA = .13879 WITH ITEMS DEPENDENT.  
 PEARSON'S R = -.10320 SIGNIFICANCE = .0117

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CROSS TABS FOR PRE AND POST

FILE NONAME (CREATION DATE: JUN 83)

CROSS TABULATION OF SCHOOL BY ITEM14

SCHOOL CONTROLLING FOR TIME VALUE 1. PAGE 1 OF 1

SCHOOL	ITEM14	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
111.	1	12	1	72	1	84
	2	14.3	1	85.7	1	18.7
	3	16.7	1	19.1	1	
	4	2.7	1	16.0	1	
117.	1	24	1	98	1	122
	2	19.7	1	80.3	1	27.2
	3	33.3	1	26.0	1	
	4	5.3	1	21.8	1	
126.	1	11	1	36	1	47
	2	25.4	1	76.6	1	10.5
	3	15.3	1	9.5	1	
	4	2.4	1	8.0	1	
131.	1	25	1	171	1	196
	2	12.8	1	87.2	1	43.7
	3	39.7	1	45.4	1	
	4	5.6	1	38.1	1	
COLUMN		72	377			449
TOTAL		16.0	84.0			100.0

RAW CHI SQUARE = 4.85126 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1830  
 CRAMER'S V = .10395  
 CONTINGENCY COEFFICIENT = .10399  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM14 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .09113 WITH SCHOOL DEPENDENT. = .01188 WITH ITEM14 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00613  
 KENDALL'S TAU B = .04054 SIGNIFICANCE = .1773  
 KENDALL'S TAU C = .03494 SIGNIFICANCE = .1773  
 GAMMA = .09195  
 SOMERS'S D (ASYMMETRIC) = .06488 WITH SCHOOL DEPENDENT. = .02533 WITH ITEM14 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .03644  
 ETA = .03749 WITH SCHOOL DEPENDENT.  
 ETA = .10395 WITH ITEM14 DEPENDENT.  
 PEARSON'S R = .03749 SIGNIFICANCE = .2140

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CROSS TABULATION OF  
 SCHOOL BY ITEM14  
 CONTROLLING FOR..  
 TIME  
 PAGE

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SCHOOL	ITEM14	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
					9.1	
	108.	34	39.1	11.5	4.6	56
						11.6
	111.	65	17.7	20.3	7.5	79
						16.4
	117.	78	23.5	12.8	5.0	102
						21.2
	126.	8	2.3	7.9	1.7	46
						9.5
	131.	110	44.7	47.6	18.5	199
						41.3
		187				402
		38.8				100.0

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RAW CHI SQUARE = 64.92547 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .36702  
 CONTINGENCY COEFFICIENT = .34454  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .16093 WITH ITEM14 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .06383  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .04779 WITH SCHOOL DEPENDENT. = .10481 WITH ITEM14 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .06565  
 KENDALL'S TAU B = -.15362 SIGNIFICANCE = .0001  
 KENDALL'S TAU C = -.18156 SIGNIFICANCE = .0001  
 GAMMA = -.25385  
 SQUARED (ASYMMETRIC) = -.19115 WITH SCHOOL DEPENDENT. = -.12346 WITH ITEM14 DEPENDENT.  
 SQUARED (SYMMETRIC) = -.15002  
 ETA = .20783 WITH SCHOOL DEPENDENT.  
 ETA = .36702 WITH ITEM14 DEPENDENT.  
 PEARSON'S R = -.20783 SIGNIFICANCE = .0000

381

82.45

..... CROSSTABULATION OF .....  
 SCHOOL BY ITEM15  
 CONTROLLING FOR:  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

SCHOOL	ITEM15		TOTAL
	COUNT	PCT	
	111.	12	84
		14.3	18.7
		22.2	
		2.7	
	117.	13	122
		10.7	12.2
		24.1	
		2.9	
	126.	11	47
		23.4	10.5
		20.4	
		2.4	
	131.	18	196
		9.2	43.7
		33.3	
		4.0	
COLUMN	395	54	449
TOTAL	68.0	12.0	100.0

D-120

CHI SQUARE = 7.86961 WITH 1 DEGREES OF FREEDOM. SIGNIFICANCE = .0488  
 Cramer's V = .13239  
 CONTINGENCY COEFFICIENT = .13124  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 1 WITH ITEM15 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00607 WITH SCHOOL DEPENDENT. = .02091 WITH ITEM15 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00941  
 KENDALL'S TAU B = -.04630 SIGNIFICANCE = .1452  
 KENDALL'S TAU C = -.03538 SIGNIFICANCE = .1452  
 GAMMA = -.11541  
 SOMERS'S D (ASYMMETRIC) = -.08359 WITH SCHOOL DEPENDENT. = -.02565 WITH ITEM15 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.03925  
 ETA = .03489 WITH SCHOOL DEPENDENT.  
 ETA = .13239 WITH ITEM15 DEPENDENT.  
 PEARSON'S R = -.03489 SIGNIFICANCE = .2304

332

383

CROSSTABULATION OF

BY ITEMS

82.45

SCHOOL  
CONTROLLING FOR..

VALUE 2.

PAGE 1 OF 1

SCHOOL

		ITEMS		
COUNT	I			
ROW PCT	I			ROW
COL PCT	I			TOTAL
TOT PCT	I	1.I	9.I	
108.	I	49	7	56
	I	87.5	12.5	11.6
	I	12.5	7.8	
	I	10.2	1.5	
111.	I	64	15	79
	I	81.0	19.0	16.4
	I	16.3	16.7	
	I	13.3	3.1	
117.	I	85	17	102
	I	83.3	16.7	21.2
	I	21.7	18.9	
	I	17.6	3.5	
126.	I	43	3	46
	I	93.5	6.5	9.5
	I	11.0	3.3	
	I	8.9	.6	
131.	I	151	48	199
	I	75.9	24.1	41.3
	I	38.5	53.3	
	I	31.3	10.0	
COLUMN		392	90	482
TOTAL		81.3	18.7	100.0

RAW CHI SQUARE = 10.04233 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0397  
 CRAMER'S V = .14434  
 CONTINGENCY COEFFICIENT = .14286  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEMS DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00789 WITH SCHOOL DEPENDENT. = .02399 WITH ITEMS DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01187  
 KENDALL'S TAU B = .08163 SIGNIFICANCE = .0246  
 KENDALL'S TAU C = .07715 SIGNIFICANCE = .0246  
 GAMMA = .17814  
 SOMERS'S D (ASYMMETRIC) = .12701 WITH SCHOOL DEPENDENT. = .05246 WITH ITEMS DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .07425  
 ETA = .07675 WITH SCHOOL DEPENDENT.  
 ETA = .14434 WITH ITEMS DEPENDENT.  
 PEARSON'S R = .07675 SIGNIFICANCE = .0462

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF SCHOOL BY ITEM16

CONTROLLING FOR TIME

VALUE 1.

PAGE 1 OF 1

82145

SCHOOL	ITEM16		ROW TOTAL
	COUNT	PERCENT	
111.	79	14	84
	83.3	16.7	100.0
	18.2	21.5	100.0
	15.6	3.1	100.0
117.	107	15	122
	87.7	12.3	100.0
	27.9	23.1	100.0
	23.8	3.3	100.0
126.	42	5	47
	89.4	10.6	100.0
	10.9	7.7	100.0
	9.4	1.1	100.0
131.	165	31	196
	84.2	15.8	100.0
	43.0	47.7	100.0
	36.7	6.9	100.0
COLUMN TOTAL	384	65	449
	85.5	14.5	100.0

RAW CHI SQUARE = 1.63778 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .6599  
 CRAHER'S V = .06040  
 CONTINGENCY COEFFICIENT = .06029  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM16 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00148 WITH SCHOOL DEPENDENT. = .00454 WITH ITEM16 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00224  
 KENDALL'S TAU B = .00955 SIGNIFICANCE = .4137  
 KENDALL'S TAU C = .00790 SIGNIFICANCE = .4137  
 GAMMA = .02334  
 SOMERS'S D (ASYMMETRIC) = .01595 WITH SCHOOL DEPENDENT. = .00573 WITH ITEM16 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .00043  
 ETA = .00741 WITH SCHOOL DEPENDENT.  
 ETA = .06040 WITH ITEM16 DEPENDENT.  
 PEARSON'S R = .00741 SIGNIFICANCE = .4377

D-122

CROSSTABULATION OF  
 BY ITEM16

SCHOOL  
 CONTROLLING FOR..  
 TIME

VALUE 2.

PAGE 1 OF 1

82145

SCHOOL	ITEM16		ROW TOTAL
	COUNT	PCT	
108.	46	10	56
	82.1	17.9	11.6
	12.4	9.1	
	9.5	2.1	
111.	68	11	79
	86.1	13.9	16.4
	18.3	10.0	
	14.1	2.3	
117.	85	17	102
	83.3	16.7	21.2
	22.8	15.5	
	17.6	3.5	
126.	43	3	46
	93.5	6.5	9.5
	11.6	2.7	
	8.9	.6	
131.	130	69	199
	65.3	34.7	41.3
	34.9	62.7	
	27.0	14.3	
COLUMN TOTAL	372	110	482
	77.2	22.8	100.0

D-1213

RAW CHI SQUARE = 29.33706 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0000  
 CRAMER'S V = .24671  
 CONTINGENCY COEFFICIENT = .23953  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM16 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .02150 WITH SCHOOL DEPENDENT. = .05889 WITH ITEM16 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .03160  
 KENDALL'S TAU B = .17439 SIGNIFICANCE = .0003  
 KENDALL'S TAU C = .17751 SIGNIFICANCE = .0003  
 GAMMA = .35347  
 SOMERS'S D (ASYMMETRIC) = .25196 WITH SCHOOL DEPENDENT. = .12071 WITH ITEM16 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .16322  
 ETA = .17932 WITH SCHOOL DEPENDENT.  
 ETA = .24671 WITH ITEM16 DEPENDENT.  
 PEARSON'S R = .17932 SIGNIFICANCE = .0000

389



388

CROSSTABS FOR PRE AND POST

FILE NNAME (CREATION DATE = 22 JUN 83)

CROSS TABULATION OF  
BY ITEM17

82.45

SCHOOL  
CONTROLLING FOR  
TIME

VALUE 1.

PAGE 1 OF 1

ITEM17

COUNT I  
ROW PCT I  
COL PCT I  
TOT PCT I

SCHOOL	1.	2.	TOTAL
111.	40	44	84
	47.6	52.4	100.0
	15.1	23.9	39.0
	8.9	9.8	18.7
117.	81	41	122
	66.4	33.6	100.0
	30.6	22.3	52.9
	18.0	9.1	27.2
126.	25	22	47
	53.2	46.8	100.0
	9.4	12.0	21.4
	5.6	4.9	10.5
131.	119	77	196
	60.7	39.3	100.0
	44.9	41.8	86.7
	26.5	17.1	43.7
COLUMN	265	184	449
TOTAL	59.0	41.0	100.0

BAW CHI SQUARE = 8.14947 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0430  
 CRAMER'S V = .13472  
 CONTINGENCY COEFFICIENT = .13352  
 LAMBDA (ASYMMETRIC) = .0 WITH SCHOOL DEPENDENT. = .02174 WITH ITEM17 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .00915  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00714 WITH SCHOOL DEPENDENT. = .01336 WITH ITEM17 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00931  
 KENDALL'S TAU B = -.09993 SIGNIFICANCE = .1295  
 KENDALL'S TAU C = -.05710 SIGNIFICANCE = .1295  
 GAMMA = -.08473  
 SOMERS'S D (ASYMMETRIC) = -.05902 WITH SCHOOL DEPENDENT. = -.04140 WITH ITEM17 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.09867  
 ETA = .04434 WITH SCHOOL DEPENDENT.  
 ETA = .13472 WITH ITEM17 DEPENDENT.  
 PEARSON'S R = -.04434 SIGNIFICANCE = .1743

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D-124



CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

..... C R O S S T A B U L A T I O N O F .....  
 SCHOOL CONTROLLING FOR.. BY ITEM17  
 TIME VALUE 2.  
 ..... P A G E 1 O F 1

82145

SCHOOL	ITEM17	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		1.1		9.1		
108.		16	40	12.2	11.6	56
		28.6	71.4	8.3	3.3	11.6
111.		30	49	14.9	16.4	79
		38.0	62.0	10.2	6.2	16.4
117.		34	68	20.7	21.2	102
		33.3	66.7	14.1	7.1	21.2
126.		3	43	13.1	9.5	46
		5.5	93.5	8.9	.6	9.5
131.		70	129	39.2	41.3	199
		35.2	64.8	26.8	14.5	41.3
COLUMN		329	153		482	
TOTAL		68.3	31.7		100.0	

RAW CHI SQUARE = 16.38247 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .0025  
 CRAMER'S V = .18436  
 CONTINGENCY COEFFICIENT = .18130  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT, = 0 WITH ITEM17 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01442 WITH SCHOOL DEPENDENT, = .03381 WITH ITEM17 DEPENDENT,  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .02022  
 KENDALL'S TAU B = .00973 SIGNIFICANCE = .4073  
 KENDALL'S TAU C = .01098 SIGNIFICANCE = .4073  
 GAMMA = .01736  
 SOMERS'S D (ASYMMETRIC) = .01267 WITH SCHOOL DEPENDENT, = .00747 WITH ITEM17 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .00940  
 ETA = .01094 WITH SCHOOL DEPENDENT.  
 ETA = .18436 WITH ITEM17 DEPENDENT.  
 S R = -.01094 SIGNIFICANCE = .4053

D-125

CROSSTABULATION OF  
 BY ITEM18

SCHOOL  
 CONTROLLING FOR:  
 TIME

VALUE 1.

PAGE 1 OF 1

182.45

SCHOOL	ITEM18		TOTAL
	1.I	9.I	
111.	23	61	84
	27.4	72.6	100.0
	14.8	20.7	35.5
	5.1	13.6	18.7
117.	47	75	122
	38.5	61.5	100.0
	30.3	25.5	55.8
	10.5	16.7	27.2
126.	16	31	47
	34.0	66.0	100.0
	10.3	10.5	20.8
	3.6	6.9	10.5
131.	69	127	196
	35.2	64.8	100.0
	44.5	43.2	87.7
	15.4	28.3	43.7
COLUMN	155	294	449
TOTAL	34.5	65.5	100.0

RAW CHI SQUARE = 2.80483 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .4227  
 CRAMER'S V = .07904  
 CONTINGENCY COEFFICIENT = .07879  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM18 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00252 WITH SCHOOL DEPENDENT. = .00495 WITH ITEM18 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00354  
 KENDALL'S TAU B = -.03107 SIGNIFICANCE = .2390  
 KENDALL'S TAU C = -.03470 SIGNIFICANCE = .2390  
 GAMMA = -.05573  
 SOMERS'S D (ASYMMETRIC) = -.03838 WITH SCHOOL DEPENDENT. = -.02516 WITH ITEM18 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.03039  
 ETA = .03048 WITH SCHOOL DEPENDENT.  
 ETA = .07904 WITH ITEM18 DEPENDENT.  
 PEARSON'S R = -.03048 SIGNIFICANCE = .2597

394

395



CROSSTABULATION OF  
 BY ITEM18

SCHOOL  
 CONTROLLING FOR:  
 TIME

VALUE 2.

PAGE 1 OF 1

821  
415

D-1127

		ITEM18		
COUNT	I			
ROW PCT	I			ROW
COL PCT	I			TOTAL
TOT PCT	I	1.1	9.1	
SCHOOL				
108.	I	23	33	56
	I	41.1	58.9	11.6
	I	10.5	12.6	
	I	4.8	6.8	
111.	I	35	44	79
	I	44.3	55.7	16.4
	I	15.9	16.8	
	I	7.3	9.1	
117.	I	45	57	102
	I	44.1	55.9	21.2
	I	20.5	21.8	
	I	9.3	11.8	
126.	I	31	15	46
	I	67.4	32.6	9.5
	I	19.1	5.7	
	I	6.4	3.1	
131.	I	86	113	199
	I	43.2	56.8	41.3
	I	39.1	43.1	
	I	17.8	23.4	
COLUMN		220	262	482
TOTAL		45.6	54.4	100.0

RAW CHI SQUARE = 9.86649 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0427  
 CRAMER'S V = .14307  
 CONTINGENCY COEFFICIENT = .14163  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .07273 WITH ITEM18 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .03181  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00703 WITH SCHOOL DEPENDENT. = .01495 WITH ITEM18 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00957  
 KENDALL'S TAU B = -.00831 SIGNIFICANCE = .4206  
 KENDALL'S TAU C = -.01004 SIGNIFICANCE = .4206  
 GAMMA = -.01369  
 SOMERS'S D (ASYMMETRIC) = -.01011 WITH SCHOOL DEPENDENT. = -.00683 WITH ITEM18 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00815  
 ETA = .02373 WITH SCHOOL DEPENDENT.  
 ETA = .14307 WITH ITEM18 DEPENDENT.  
 PEARSON'S R = -.02373 SIGNIFICANCE = .3017

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..... CROSSTABULATION OF .....  
 SCHOOL BY ITEM19  
 CONTROLLING FOR..  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

82.45

D-128

		ITEM19		
SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT
				TOTAL
	111.	21	63	84
		25.0	75.0	18.7
		17.9	19.0	
		4.7	14.0	
	117.	32	90	122
		26.2	73.8	27.2
		27.4	27.1	
		7.1	20.0	
	126.	10	37	47
		21.3	78.7	10.5
		8.5	11.1	
		2.2	8.2	
	131.	54	142	196
		27.6	72.4	43.7
		46.2	42.8	
		12.0	31.6	
COLUMN	117	332	449	
TOTAL	26.1	73.9	100.0	

RAW CHI SQUARE = .83509 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .8411  
 CRAHER'S V = .04313  
 CONTINGENCY COEFFICIENT = .04309  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM19 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00075 WITH SCHOOL DEPENDENT. = .00166 WITH ITEM19 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00104  
 KENDALL'S TAU B = -.01942 SIGNIFICANCE = .3289  
 KENDALL'S TAU C = -.02002 SIGNIFICANCE = .3289  
 GAMMA = -.03793  
 SOMERS'S D (ASYMMETRIC) = -.02590 WITH SCHOOL DEPENDENT. = -.01451 WITH ITEM19 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.01862  
 ETA = .01634 WITH SCHOOL DEPENDENT.  
 ETA = .04313 WITH ITEM19 DEPENDENT.  
 PEARSON'S R = -.01634 SIGNIFICANCE = .3650

399

398



812.45

CROSSTABULATION OF  
 SCHOOL BY ITEM19  
 CONTROLLING FOR..  
 TIME / VALUE 2.  
 PAGE 1 OF 1

LD-129

SCHOOL	ITEM19	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		1.	9.			
108.	1	21	35	10.8	4.4	56
	2	37.5	62.5	10.8	4.4	11.6
	3	10.8	12.2			
	4	4.4	7.3			
111.	1	33	46	16.9	6.8	79
	2	41.8	58.2	16.9	6.8	16.4
	3	16.9	16.0			
	4	6.8	9.5			
117.	1	36	66	18.5	7.5	102
	2	35.3	64.7	18.5	7.5	21.2
	3	18.5	23.0			
	4	7.5	13.7			
126.	1	28	18	14.4	5.8	46
	2	60.9	39.1	14.4	5.8	9.5
	3	14.4	6.3			
	4	5.8	3.7			
131.	1	77	122	38.7	39.5	199
	2	38.7	61.3	39.5	42.5	41.3
	3	39.5	42.5			
	4	16.0	25.3			
COLUMN TOTAL		195	287	40.5	59.5	482
						100.0

RAW CHI SQUARE = 9.63222 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0477  
 CRAKER'S V = .14114  
 CONTINGENCY COEFFICIENT = .13976  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .05128 WITH ITEM19 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .02092  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00668 WITH SCHOOL DEPENDENT. = .01449 WITH ITEM19 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00914  
 KENDALL'S TAU B = -.00500 SIGNIFICANCE = .4520  
 KENDALL'S TAU C = -.00596 SIGNIFICANCE = .4520  
 GAMMA = -.00835  
 SOMERS'S D (ASYMMETRIC) = -.00618 WITH SCHOOL DEPENDENT. = -.00405 WITH ITEM19 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00489  
 ETA = .02048 WITH SCHOOL DEPENDENT.  
 ETA = .14114 WITH ITEM19 DEPENDENT.  
 PEARSON'S R = -.02048 SIGNIFICANCE = .3269

401



CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE - 22 JUN 83)

\*\*\*\*\* CROSSTABULATION OF \*\*\*\*\*  
 SCHOOL BY ITEM20  
 CONTROLLING FOR..  
 TIME VALUE 1.  
 \*\*\*\*\* PAGE 1 OF 1 \*\*\*\*\*

82.45

		ITEM20				
		COUNT	I		ROW	TOTAL
SCHOOL		ROW PCT	I		COL PCT	I
		TOT PCT	I			
		1.1	9.1			
111.	I	31	I	53	I	84
	I	36.9	I	63.1	I	18.7
	I	23.5	I	16.7	I	
	I	16.9	I	11.8	I	
117.	I	39	I	83	I	122
	I	32.0	I	68.0	I	27.2
	I	29.5	I	26.2	I	
	I	8.7	I	18.5	I	
126.	I	14	I	33	I	47
	I	29.8	I	70.2	I	10.5
	I	10.6	I	10.4	I	
	I	3.1	I	7.3	I	
131.	I	48	I	148	I	196
	I	24.5	I	75.5	I	43.7
	I	36.4	I	46.7	I	
	I	10.7	I	33.0	I	
COLUMN		132		317		449
TOTAL		29.4		70.6		100.0

D-1130

RAW CHI SQUARE = 4.94689 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .1757  
 CRAMER'S V = .10496  
 CONTINGENCY COEFFICIENT = .10439  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM20 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00433 WITH SCHOOL DEPENDENT. = .00906 WITH ITEM20 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00586  
 KENDALL'S TAU B = .09701 SIGNIFICANCE = .0134  
 KENDALL'S TAU C = .10381 SIGNIFICANCE = .0134  
 GAMMA = .17797  
 SOMERS'S D (ASYMMETRIC) = .12504 WITH SCHOOL DEPENDENT. = .07526 WITH ITEM20 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .09396  
 ETA = .10315 WITH SCHOOL DEPENDENT.  
 ETA = .10496 WITH ITEM20 DEPENDENT.  
 PEARSON'S R = .10315 SIGNIFICANCE = .0144



82.45

CROSSTABULATION OF

SCHOOL BY ITEM20  
 CONTROLLING FOR TIME VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM20		ROW TOTAL
	COUNT	PCT	
	19	37	56
	33.9	66.1	11.6
	10.7	12.1	
	3.9	7.7	
111.	36	43	79
	45.6	54.4	16.4
	20.3	14.1	
	7.5	8.9	
117.	33	69	102
	32.4	67.6	21.2
	18.6	22.6	
	6.8	14.3	
126.	21	25	46
	95.7	54.3	9.5
	11.9	1.2	
	4.4	5.2	
131.	68	131	199
	34.2	65.8	41.3
	38.4	43.0	
	14.1	27.2	
COLUMN TOTAL	177	305	482
	36.7	63.3	100.0

D-1131

RAW CHI SQUARE = 5.02338 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .2127  
 CRAMER'S V = .10992  
 CONTINGENCY COEFFICIENT = .10926  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM20 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00406 WITH SCHOOL DEPENDENT. = .00904 WITH ITEM20 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00560  
 KENDALL'S TAU B = .03178 SIGNIFICANCE = .2217  
 KENDALL'S TAU C = .03716 SIGNIFICANCE = .2217  
 GAMMA = .05392  
 SOMERS'S D (ASYMMETRIC) = .03997 WITH SCHOOL DEPENDENT. = .02527 WITH ITEM20 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .03096  
 ETA = .02932 WITH SCHOOL DEPENDENT.  
 ETA = .10992 WITH ITEM20 DEPENDENT.  
 V'S R = .02932 SIGNIFICANCE = .2604

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF

SCHOOL BY ITEM21

CONTROLLING FOR:

TIME VALUE 1.

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82:45

D-132

		ITEM21		
COUNT	I			ROW
ROW PCT	I			TOTAL
COL PCT	I			
TOT PCT	I	1.1	9.1	
SCHOOL				
111.	I	25	59	84
	I	29.8	70.2	100.0
	I	16.2	20.0	36.2
	I	5.6	13.1	18.7
117.	I	46	76	122
	I	37.7	62.3	100.0
	I	29.9	25.8	55.7
	I	10.2	16.9	27.2
126.	I	20	27	47
	I	42.6	57.4	100.0
	I	13.0	9.2	22.1
	I	4.5	6.0	10.5
131.	I	63	133	196
	I	32.1	67.9	100.0
	I	40.9	45.1	86.0
	I	14.0	29.6	43.7
COLUMN		154	295	449
TOTAL		34.3	65.7	100.0

RAW CHI SQUARE = 3.22072 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .3588

CRAMER'S V = .08469

CONTINGENCY COEFFICIENT = .08439

LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM21 DEPENDENT.

LAMBDA (SYMMETRIC) = 0

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00281 WITH SCHOOL DEPENDENT. = .00552 WITH ITEM21 DEPENDENT.

UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00372

KENDALL'S TAU B = .00534 SIGNIFICANCE = .4515

KENDALL'S TAU C = .00595 SIGNIFICANCE = .4515

GAMMA = .00951

SOMERS'S D (ASYMMETRIC) = .00660 WITH SCHOOL DEPENDENT. = .00432 WITH ITEM21 DEPENDENT.

SOMERS'S D (SYMMETRIC) = .00522

EIA = .00079 WITH SCHOOL DEPENDENT.

ETA = .08469 WITH ITEM21 DEPENDENT.

PEARSON'S R = .00079 SIGNIFICANCE = .4933

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82.45

CROSS TABULATION OF  
SCHOOL BY ITEM21

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 2.

PAGE 1 OF 1

D-133

SCHOOL	ITEM21	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		1.		9.		
108.	1	27	1	29		56
		48.2	1	51.8		11.6
		13.8	1	10.1		
		5.6	1	6.0		
111.	1	26	1	53		79
		32.9	1	67.1		16.4
		13.3	1	18.5		
		5.4	1	11.0		
117.	1	44	1	58		102
		43.1	1	56.9		21.2
		22.4	1	20.3		
		9.1	1	12.0		
126.	1	26	1	20		46
		56.5	1	43.5		9.5
		13.3	1	7.0		
		5.4	1	4.1		
131.	1	73	1	126		199
		36.7	1	63.3		41.3
		37.2	1	44.1		
		15.1	1	26.1		
COLUMN TOTAL		196		286		482
		40.7		59.3		100.0

RAW CHI SQUARE = 9.65052 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0467  
 CRAHER'S V = .14150  
 CONTINGENCY COEFFICIENT = .14010  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .03061 WITH ITEM21 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01253  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00679 WITH SCHOOL DEPENDENT. = .01472 WITH ITEM21 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00929  
 KENDALL'S TAU B = .03268 SIGNIFICANCE = .2155  
 KENDALL'S TAU C = .03893 SIGNIFICANCE = .2155  
 GAMMA = .05432  
 SOMERS'S D (ASYMMETRIC) = .04033 WITH SCHOOL DEPENDENT. = .02647 WITH ITEM21 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .03196  
 ETA = .02162 WITH SCHOOL DEPENDENT.  
 ETA = .14150 WITH ITEM21 DEPENDENT.  
 PEARSON'S R = .02162 SIGNIFICANCE = .3179

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF  
BY ITEM22

SCHOOL  
CONTROLLING FOR  
TIME

VALUE

PAGE 1 OF 1

82.45

SCHOOL	ITEM22		ROW TOTAL	COL TOTAL
	COUNT	PCT		
111.	39	45	84	18.7
	46.4	53.6	100.0	18.7
	14.3	25.4	39.7	18.7
	8.7	10.0	18.7	18.7
117.	82	40	122	27.2
	67.2	32.8	100.0	27.2
	30.1	22.6	52.7	27.2
	18.3	8.9	24.4	27.2
126.	25	22	47	10.5
	53.2	46.8	100.0	10.5
	9.2	12.4	21.6	10.5
	5.6	4.9	10.5	10.5
131.	126	70	196	43.7
	64.3	35.7	100.0	43.7
	46.3	39.5	85.8	43.7
	28.1	15.6	43.7	43.7
COLUMN TOTAL	272	177	449	100.0

RAW CHI SQUARE = 11.49337 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .093

CRAMER'S V = .15999

CONTINGENCY COEFFICIENT = .15798

LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .03390 WITH ITEM22 DEPENDENT.

LAMBDA (SYMMETRIC) = .01395

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00999 WITH SCHOOL DEPENDENT. = .01885 WITH ITEM22 DEPENDENT.

UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01306

KENDALL'S TAU B = -.08392 SIGNIFICANCE = .0277

KENDALL'S TAU C = -.09633 SIGNIFICANCE = .0277

GAMMA = -.14390

SOMERS'S D (ASYMMETRIC) = -.10084 WITH SCHOOL DEPENDENT. = -.06984 WITH ITEM22 DEPENDENT.

SOMERS'S D (SYMMETRIC) = -.08252

ETA = .07978 WITH SCHOOL DEPENDENT.

ETA = .15999 WITH ITEM22 DEPENDENT.

PEARSON'S R = -.07978 SIGNIFICANCE = .0457

CROSSTABULATION OF

SCHOOL  
 CONTROLLING FOR  
 TIME

BY ITEM22

VALUE 2.

PAGE 1 OF 1

ITEM22

SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL	COL TOTAL
			1.1	9.1		
108.	46	10			56	
	82.1	17.9			11.6	
	12.1	9.9				
	9.5	2.1				
111.	62	17			79	
	78.5	21.5			16.4	
	16.3	16.8				
	12.9	3.5				
117.	76	26			102	
	74.5	25.5			21.2	
	19.9	25.7				
	15.8	5.4				
126.	41	5			46	
	89.1	10.9			9.5	
	10.8	5.0				
	8.5	1.0				
131.	156	43			199	
	78.4	21.6			41.3	
	40.9	42.6				
	32.4	8.9				
COLUMN TOTAL	381	101			482	
TOTAL	79.0	21.0			100.0	

RAW CHI SQUARE = 4.48231 WITH 4 DEGREES OF FREEDOM; SIGNIFICANCE = .3446  
 CRAHER'S V = .09643  
 CONTINGENCY COEFFICIENT = .09599  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM22 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00397 WITH SCHOOL DEPENDENT. = .00989 WITH ITEM22 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00513  
 KENDALL'S TAU B = .00509 SIGNIFICANCE = .4512  
 KENDALL'S TAU C = .00503 SIGNIFICANCE = .4512  
 GAMMA = .01040  
 SOMERS'S D (ASYMMETRIC) = .00759 WITH SCHOOL DEPENDENT. = .00342 WITH ITEM22 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .00471  
 ETA = .00594 WITH SCHOOL DEPENDENT.  
 ETA = .09643 WITH ITEM22 DEPENDENT.  
 PEARSON'S R = -.00594 SIGNIFICANCE = .4482

CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF

SCHOOL CONTROLLING FOR TIME

BY ITEM23

VALUE 1.

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82.45

ITEM23

SCHOOL	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
	111.	14	70	84	18.7
		16.7	83.3		
		13.6	20.2		
		3.1	15.6		
	117.	35	87	122	27.2
		28.7	71.3		
		34.0	25.1		
		7.8	19.4		
	126.	12	35	47	10.5
		25.5	74.5		
		11.7	10.1		
		2.7	7.8		
	131.	42	154	196	43.7
		21.4	78.6		
		40.8	44.5		
		9.4	34.3		
COLUMN TOTAL	103	346	449	100.0	

RAW CHI SQUARE = 4.58250 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .2050  
 CRAHER'S V = .10103  
 CONTINGENCY COEFFICIENT = .10051  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM23 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00405 WITH SCHOOL DEPENDENT. = .00953 WITH ITEM23 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00569  
 KENDALL'S TAU B = -.00143 SIGNIFICANCE = .4870  
 KENDALL'S TAU C = -.00141 SIGNIFICANCE = .4870  
 GAMMA = -.00287  
 SOMERS'S D (ASYMMETRIC) = -.00199 WITH SCHOOL DEPENDENT. = -.00102 WITH ITEM23 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.00135  
 ETA = .00073 WITH SCHOOL DEPENDENT.  
 ETA = .10103 WITH ITEM23 DEPENDENT.  
 PEARSON'S R = -.00073 SIGNIFICANCE = .4939



CROSSTABULATION OF  
 BY ITEM23

SCHOOL  
 CONTROLLING FOR...  
 TIME

VALUE 2.

PAGE 1 OF 1

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		ITEM23		
COUNT	I			ROW TOTAL
ROW PCT	I			
COL PCT	I	6		
TOT PCT	I	1.1	9.1	
SCHOOL				
100.	I	28	28	56
	I	50.0	50.0	11.6
	I	11.2	12.1	
	I	5.8	5.8	
111.	I	41	38	79
	I	51.9	48.1	16.4
	I	16.4	16.4	
	I	8.5	7.9	
117.	I	41	61	102
	I	40.2	59.8	21.2
	I	16.4	26.3	
	I	8.5	12.7	
126.	I	28	18	46
	I	60.9	39.1	9.5
	I	11.2	7.8	
	I	5.8	3.7	
131.	I	112	97	199
	I	56.3	43.7	41.3
	I	44.8	37.5	
	I	23.2	18.0	
COLUMN		250	232	482
TOTAL		51.9	48.1	100.0

RAW CHI SQUARE = 8.69003 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0693  
 CRAMER'S V. = .13427  
 CONTINGENCY COEFFICIENT = .13308  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .08621 WITH ITEM23 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .03883  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00518 WITH SCHOOL DEPENDENT; = .01308 WITH ITEM23 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00840  
 KENDALL'S TAU B = -.06239 SIGNIFICANCE = .0663  
 KENDALL'S TAU C = -.07560 SIGNIFICANCE = .0663  
 GAMMA = -.10233  
 SOMERS'S D (ASYMMETRIC) = -.07571 WITH SCHOOL DEPENDENT. = -.05141 WITH ITEM23 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = -.06124  
 ETA = .07739 WITH SCHOOL DEPENDENT.  
 ETA = .13427 WITH ITEM23 DEPENDENT.  
 PEARSON'S R = -.07739 SIGNIFICANCE = .0448

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CROSSTABS FOR PRE AND POST

FILE NONAME (CREATION DATE = 22 JUN 83)

CROSSTABULATION OF  
BY ITEM24

SCHOOL  
CONTROLLING FOR..  
TIME

VALUE 1.

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SCHOOL

	ITEM24					
COUNT	I				ROW	
ROW PCT	I				TOTAL	
COL PCT	I					
TOT PCT	I	1.1	9.1			
111.	I	29	I	55	I	84
	I	34.5	I	65.5	I	10.7
	I	22.8	I	17.1	I	
	I	6.5	I	12.2	I	
117.	I	33	I	89	I	122
	I	27.0	I	73.0	I	27.2
	I	26.0	I	27.5	I	
	I	7.3	I	19.8	I	
126.	I	11	I	36	I	47
	I	23.4	I	76.6	I	10.5
	I	8.7	I	11.2	I	
	I	2.4	I	8.0	I	
131.	I	54	I	142	I	196
	I	27.6	I	72.4	I	43.7
	I	42.5	I	44.1	I	
	I	12.0	I	31.6	I	
COLUMN		127		322		449
TOTAL		28.3		71.7		100.0

RAW CHI SQUARE = 2.30768 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .5111  
 CRAMER'S V = .07169  
 CONTINGENCY COEFFICIENT = .07151  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM24 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00199 WITH SCHOOL DEPENDENT. = .00424 WITH ITEM24 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00271  
 KENDALL'S TAU B = .03864 SIGNIFICANCE = .1889  
 KENDALL'S TAU C = .04087 SIGNIFICANCE = .1889  
 GAMMA = .07280  
 SOMERS'S D (ASYMMETRIC) = .05037 WITH SCHOOL DEPENDENT. = .02963 WITH ITEM24 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .03731  
 ETA = .04410 WITH SCHOOL DEPENDENT.  
 ETA = .07169 WITH ITEM24 DEPENDENT.  
 PEARSON'S R = .04410 SIGNIFICANCE = .1756

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82.45

CROSSTABULATION OF

SCHOOL CONTROLLING FOR..  
 TIME

BY ITEM24 VALUE 2.

PAGE 1 OF 1

SCHOOL	ITEM24	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
			1.		9.	
108.	1	12	44			56
		21.4	78.6			11.6
		8.3	13.1			
		2.5	9.1			
111.	1	36	43			79
		45.6	54.4			16.4
		24.8	12.8			
		7.5	8.9			
117.	1	23	79			102
		22.5	77.5			21.2
		15.9	23.4			
		4.8	16.4			
126.	1	15	31			46
		32.6	67.4			9.5
		10.3	9.2			
		3.1	6.4			
131.	1	59	140			199
		29.6	70.4			41.3
		40.7	41.5			
		12.2	29.0			
COLUMN		145	337			482
TOTAL		30.1	69.9			100.0

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RAW CHI SQUARE = 13.91235 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0076  
 CRAMER'S V = .16909  
 CONTINGENCY COEFFICIENT = .16749  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM24 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00960 WITH SCHOOL DEPENDENT. = .02300 WITH ITEM24 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01355  
 KENDALL'S TAU B = .01317 SIGNIFICANCE = .3754  
 KENDALL'S TAU C = .01465 SIGNIFICANCE = .3754  
 GAMMA = .02348  
 SOMERS'S D (ASYMMETRIC) = .01742 WITH SCHOOL DEPENDENT. = .00996 WITH ITEM24 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .01268  
 ETA = .01564 WITH SCHOOL DEPENDENT.  
 ETA = .16989 WITH ITEM24 DEPENDENT.  
 R'S R = .01554 SIGNIFICANCE = .3660



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..... CROSS TABULATION OF .....  
 SCHOOL BY ITEM25  
 CONTROLLING FOR..  
 TIME VALUE 1.  
 ..... PAGE 1 OF 1

82.45

SCHOOL	ITEM25	COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
		148		301	449	
		33.0		67.0	100.0	
111.	1	24	16.2	60	84	18.7
	2	20.6	13.9	71.4	18.7	
	3	16.2	10.9	19.9	18.7	
	4	5.3	3.5	13.4	18.7	
117.	1	54	36.5	68	122	27.2
	2	44.3	29.5	55.7	122	
	3	36.5	24.3	22.6	122	
	4	12.0	8.0	15.1	122	
126.	1	15	10.1	32	47	10.5
	2	31.9	20.8	68.1	47	
	3	10.1	6.7	10.6	47	
	4	3.3	2.2	7.1	47	
131.	1	55	37.2	141	196	43.7
	2	28.1	18.9	71.9	196	
	3	37.2	24.7	46.8	196	
	4	12.2	8.1	31.4	196	
COLUMN		148	301	449		
TOTAL		33.0	67.0	100.0		

RAW CHI SQUARE = 9.93671 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .0191  
 CRAMER'S V = .14876  
 CONTINGENCY COEFFICIENT = .14714  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = 0 WITH ITEM25 DEPENDENT.  
 LAMBDA (SYMMETRIC) = 0  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00853 WITH SCHOOL DEPENDENT. = .01703 WITH ITEM25 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01137  
 KENDALL'S TAU B = .05896 SIGNIFICANCE = .0891  
 KENDALL'S TAU C = .06510 SIGNIFICANCE = .0891  
 GAMMA = .10516  
 SOMERS'S D (ASYMMETRIC) = .07365 WITH SCHOOL DEPENDENT. = .04720 WITH ITEM25 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .05753  
 ETA = .06832 WITH SCHOOL DEPENDENT.  
 ETA = .14876 WITH ITEM25 DEPENDENT.  
 PEARSON'S R = .06832 SIGNIFICANCE = .0742

CROSSTABULATION OF  
 BY ITEM25

SCHOOL  
 CONTROLLING FOR  
 TIME

VALUE 2.

PAGE 1 OF 1

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		ITEM25		
COUNT	ROW PCT	COL PCT	TOT PCT	ROW TOTAL
SCHOOL		1.	9.	
108.	31	25		56
	55.4	44.6		11.6
	14.8	9.2		
	6.4	5.2		
111.	32	47		79
	40.5	59.5		16.4
	15.3	17.2		
	6.6	9.8		
117.	46	56		102
	45.1	54.9		21.2
	22.0	20.5		
	9.5	11.6		
126.	24	22		46
	52.2	47.8		9.5
	11.5	8.1		
	5.0	4.6		
131.	76	123		199
	38.2	61.8		41.3
	36.4	45.1		
	15.8	25.5		
COLUMN	209	273		482
TOTAL	43.4	56.6		100.0

RAW CHI SQUARE = 7.28940 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .1214  
 CRAMER'S V = .12298  
 CONTINGENCY COEFFICIENT = .12206  
 LAMBDA (ASYMMETRIC) = 0 WITH SCHOOL DEPENDENT. = .03828 WITH ITEM25 DEPENDENT.  
 LAMBDA (SYMMETRIC) = .01626  
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .00514 WITH SCHOOL DEPENDENT. = .01101 WITH ITEM25 DEPENDENT.  
 UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00701  
 KENDALL'S TAU B = .07389 SIGNIFICANCE = .0375  
 KENDALL'S TAU C = .08881 SIGNIFICANCE = .0375  
 GAMMA = .12186  
 SOMERS'S D (ASYMMETRIC) = .09040 WITH SCHOOL DEPENDENT. = .06039 WITH ITEM25 DEPENDENT.  
 SOMERS'S D (SYMMETRIC) = .07241  
 ETA = .07111 WITH SCHOOL DEPENDENT.  
 ETA = .12298 WITH ITEM25 DEPENDENT.  
 PEARSON'S R = .07111 SIGNIFICANCE = .0595

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Chapter 2--Discretionary

Appendix E

COMPUTER LITERACY STUDENT INTERVIEWS

E-1

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INSTRUMENT DESCRIPTION: Computer Literacy Student Interviews

Brief Description of the instrument:

The Computer Literacy Student Interview was used to gather information about the students' understanding of what a computer is and what it does. The ten-item interview was conducted twice: first, before the students received instruction in Computer Awareness; and then after the students finished the Computer Awareness units.

To whom was the instrument administered?

To 19 randomly selected 3rd and 5th grade students enrolled in Chapter 2 Computer Literacy schools. Two 6th grade students in each of the five K, 4-6 schools were interviewed. Three 3rd grade students were interviewed in each of the three K-3 schools.

How many times was the instrument administered?

Twice.

When was the instrument administered?

April 12-15, 1983 and May 17-25, 1983.

Where was the instrument administered?

Each student was interviewed individually by the interviewer in the library, an empty room or office, or other area the school made available.

Who administered the instrument?

The Chapter 2 evaluation assistant.

What training did the administrators have?

General interview training.

Was the instrument administered under standardized conditions?

No.

Were there problems with the instrument or the administration that might affect the validity of the data?

Students had various levels of computer literacy before they received instruction in Computer Awareness.

Who developed the instrument?

The Office of Research and Evaluation.

What reliability and validity data are available on the instrument?

None.

Are there norm data available for interpreting the results?

No.

## COMPUTER LITERACY STUDENT INTERVIEWS

### Purpose

Information from the Computer Literacy Student Interview was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded, or revised?

Evaluation Question D1-5: How does the understanding of what a computer is and what it does change with instruction in computer literacy?

### Procedure

The sample of students to be interviewed was chosen from the Student Master File. A listing of all third and sixth grade students in the eight Chapter 2 Computer Literacy schools was compiled. From this listing five students were randomly selected from each school. At the third grade level, three students and an alternate were chosen from this group. At the sixth grade level, two students and an alternate were chosen. In choosing the students to be interviewed, an attempt was made not to select more than one student from any one teacher's class.

A memo was sent to principals April 6, 1983 explaining the purpose of the interviews (see Attachment E-1). The names of the students selected and their teachers were listed on this memo. Principals were contacted several days after the memo was sent through the school mail in order to arrange a date and time to interview these students. The initial set of interviews was scheduled between April 12, 1983 and April 15, 1983.

Students were interviewed individually by the evaluation assistant. The interviews were held in a variety of places: the library, the hallway, the principal's office, an empty room, the art room, and the conference room. Interviews generally lasted ten to fifteen minutes. The questions asked during the interview are found in Attachment E-2. A total of 19 students were interviewed.

A memo was sent to principals May 12, 1982 explaining the purpose of the second set of interviews (see Attachment E-3). Principals were contacted several days after the memo was sent in order to arrange a date and time to interview these students. The interviews were scheduled between May 17, 1983 and May 25, 1983.

The nineteen students originally interviewed in April were again interviewed individually by the evaluation assistant. The interviews were held in a similar variety of places. Interviews generally lasted five to ten minutes. The questions asked during the interview are found in Attachment E-4.

## Results

### Third Grade Students

The questions raised in both interviews are discussed below. The notes on which the answers to questions are based can be found in Attachments E-5 and E-6. The reader is encouraged to examine these attachments in order to get a sense of the "flavor" of the responses.

*Have you ever used a computer?*

This question was discussed only in the first interview, before the Computer Awareness Unit was taught. Although formal instruction had not begun, all nine students interviewed had used a computer.

*Do you have a computer at home?*

Again, this question was discussed only during the first interview. Of the nine students, only two reported having a computer at home. A third student said she had used a computer at her cousin's house, but after further discussion, it was apparent that the cousin had a video game.

*Have you studied computers in school?*

This question was also raised only in the first interview, in order to see how much computer instruction had occurred at each of the eight Chapter 2 Computer Literacy schools. Eight of the nine students said they had studied computers in school. The type of activities they described ranged from playing games, to Drill and Practice, to LOGO exercises.

*What is a computer?*

This question, as well as the remaining questions, were discussed in both interviews. During the first interview, most of the students described a computer as a machine that helps you learn. In general, the responses were very similar in the second interview.

*What can it do?*

Again, most of the students described educational uses of the computer during both interviews. However, in the second interview students listed more specific functions. Using the computer to play games was also a frequent response during the first and second interviews.



*What can't it do?*

During both interviews, students responded with a variety of physical activities they felt computers couldn't do:

"It can't cook or walk."

"Can't walk, can't chew gum, can't spit, can't pat its head and rub its stomach at the same time."

"It can't teach someone to swim 'cause it can't get wet."

*Can computers think?*

In the first interview, six of the students agreed that computers can think. However, several of these students made a distinction between the way a computer thinks and the way a human thinks. In the second interview, only four of the students agreed that computers can think. Of the remaining five students, four did not think computers think, while the fifth student said that computers "sort of" think.

*Why are computers so fast?*

During the first interview, most students could not articulate why computers are so fast. Those responding talked about some function of the computer that made it fast. In the second interview, several students gave more sophisticated reasons involving chips or electrical components. However, several students still could not explain why computers are so fast.

*What is inside a computer?*

During both interviews students mentioned wires and chips, as well as listing some of the hardware components. The responses were similar in both interviews. An interesting response given by two students in the first interview dealt with the "red brain":

"Wires hooked up to the red brain. If the brain wears out, you have to buy a new one."

"Wires--little red thing that gives you the messages."

*Could the computer ever be wrong?*

In both interviews, most students agreed that a computer could be wrong. In general, students mentioned some type of mechanical cause. One student in the first interview and two students in the second interview said that a computer could be wrong if a person programmed it wrong or input information incorrectly.

*Are you interested in learning about computers?*

In both interviews all students expressed an interest in learning about computers.

*What will you be able to do after you've learned about computers?*

In the first interview most of the students mentioned using the computer to help them learn or help them with their work. Two of the students said they would like to be programmers. In the second interview, students again mentioned some educational applications. It is interesting to note that in the second interview several students mentioned helping other people use computers.

*What would you like to be able to do with a computer?*

During both interviews, many students said they would like to use the computer to help them learn or to assist them with some task, such as typing or their homework. Only one student in each interview said they wanted to play games on the computer.

#### Sixth Grade Students

The questions raised in both interviews are discussed below. The notes on which the answers to questions are based can be found in Attachment E-7 and E-8.

*Have you ever used a computer?*

This question was discussed only in the first interview, before the Computer Awareness Unit was taught. Although formal instruction had not begun, nine of the ten students interviewed had used a computer.

*Do you have a computer at home?*

Again, this question was discussed only in the first interview. Only one student reported having a computer at home. One student said she used her cousin's computer, and one reported that his family planned to get one. Another student said she had an Atari video game, but said this wasn't a computer.

*Have you studied computers in school?*

This question was also raised only in the first interview, in order to see how much computer instruction had occurred at each of the eight Chapter 2 Computer Literacy schools. Seven of the ten students interviewed said they had studied computers in school. The type of activities they described ranged from playing games, to programming, to graphics. Two of the remaining students said they had seen or talked about computers.

*What is a computer?*

This question, as well as the remaining questions, were discussed in both interviews. In the first interview, most students described a computer as a machine or device that can help with schoolwork, can be used for business, or can solve problems. In the second interview, students described more specific functions that a computer is used for.

*What can it do?*

In both interviews students described a wide range of uses. Because students in some schools had had more exposure to computers, their responses were more developed than other students. However, the responses in the second interview did not differ greatly from those given in the first interview.

*What can't it do?*

Again, students described a wide range of things a computer cannot do. In both interviews, the responses from most students indicated that they were fairly well informed of the limits of computers. However, in the second interview some of the responses indicated that they had learned specific limits of the machines they were using:

"It can't talk without a speech synthesizer."

"It can't memorize over a certain amount of information."

"It can't use another company's program."

*Can computers think?*

In both interviews, most students agreed that computers cannot think. Students who agreed that computers can think qualified their responses by explaining that computers do not think like humans because they have to be told what to do.

*Why are computers so fast?*

In the first interview, most of the responses dealt with some hardware component or with the fact that computers are programmed. In the second interview, the students gave similar responses, although several of them were more advanced:

"They read all the digits in nanoseconds."

"They take a small amount of information (a byte) and solve it quickly through the chip and electrical currents."

"They have an integrated chip that helps them think faster than humans."

*What is inside a computer?*

In the first interview, students most frequently mentioned wires and chips. In the second interview, wires and chips were again frequently mentioned, but most students mentioned additional components, such as the ROM card, vacuum tubes, disk drives, the console, the monitor, and the speech synthesizer.

*Could the computer ever be wrong?*

During both interviews the majority of the students agreed that the computer could be wrong. Most of the students mentioned some type of human error that could cause the computer to make a mistake.

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*Are you interested in learning about computers?*

In both interviews, all ten students expressed an interest in learning about computers.

*What will you be able to do after you have learned about computers?*

Student responses in both interviews covered a wide range of topics. In general, the responses in the second interview were more specific and were often geared to career applications.

*What would you like to be able to do with a computer?*

During both interviews, students mentioned a variety of tasks they would be able to do with a computer. In many cases, students revealed a personal interest, hobby, or career goal that they could envision computer applications for.

In general, the responses from students given in the second interview were similar to those given in the first interview. Although there were differences in the answers given between third and sixth graders and among students from different schools, the responses did not differ substantially after instruction in the Computer Awareness Unit.

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April 6, 1983

TO: Chapter 2 Computer Literacy Principals  
FROM: David Doss  
SUBJECT: Computer Literacy Student Interview

Part of the evaluation of the Chapter 2--Discretionary Computer Literacy program includes student interviews with a sample of randomly selected 3rd and 6th grade students. The purpose of these interviews is to determine if the understanding of what a computer is and what it does changes with instruction in computer literacy. Each interview should take about 15 minutes.

The following students in your school have been selected:

Lauren Moede, the Chapter 2 evaluation assistant, will contact you to arrange a date and time to interview these students during the week of April 11-15, 1983.

Thank you for your cooperation.

Approved: *Sula M. Kelly*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

DD:LHM:1hm

cc: Ann Cunningham  
Yolanda Leo  
Leslie Cohen

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AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

Attachment E-2  
(Page 1 of 2)

COMPUTER LITERACY STUDENT INTERVIEW  
(FIRST INTERVIEW)

STUDENT: \_\_\_\_\_ GRADE: \_\_\_\_\_

TEACHER: \_\_\_\_\_ SCHOOL: \_\_\_\_\_

Have you ever used a computer?

Do you have a computer at home?

Have you studied computers in school?

What is a computer?

What can it do?

What can't it do?

Can computers think?

Why are computers so fast?

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What is inside a computer?

Could the computer ever be wrong?

Are you interested in learning about computers?

What will you be able to do after you've learned about computers?

What would you like to be able to do with a computer?

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

May 12, 1983

TO: Chapter 2 Computer Literacy Principals  
FROM: David Doss  
SUBJECT: Computer Literacy Student Interviews

During the week of April 11 - 15, 1983, interviews were conducted with a sample of 3rd and 6th grade students in Chapter 2 Computer Literacy schools. The purpose of those interviews was to assess before instruction in computer literacy what students thought computers are and what they thought they can do. A second interview is being planned to determine if this understanding changed with computer literacy instruction. This interview should take about 15 minutes.

The following students in your school have been selected:

Lauren Moede will contact you to arrange a time to interview these students during the week of May 18 - 25, 1983. We usually do not conduct interviews this late in the school year; however, the unusually late start of this program has made it necessary this year.

Thank you for your cooperation.

LM:rrf

Approved: *Bruce D. Hollen*  
Director, Office of Research and Evaluation

Approved: *Ruth Mac Allister*  
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Leslie Cohen  
Yolanda Leo

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COMPUTER LITERACY STUDENT INTERVIEW  
(SECOND INTERVIEW)

SCHOOL: \_\_\_\_\_ DATE: \_\_\_\_\_

STUDENT: \_\_\_\_\_ GRADE: \_\_\_\_\_

What is a computer?

What can it do?

What can't it do?

Can computers think?

Why are computers so fast?

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Attachment E-4  
(Page 2 of 2)

What is inside a computer?

Could the computer ever be wrong?

Are you interested in learning about computers?

What will you be able to do after you have learned about computers?

What would you like to be able to do with a computer?

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E-14

Attachment E-5

RESPONSES FROM FIRST COMPUTER LITERACY  
STUDENT INTERVIEW WITH THIRD GRADE STUDENTS

(Page 1 of 6)

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*Have you ever used a computer?*

Yes: (8 responses)

Yes, done a couple of programs (copied out of a book).

*Do you have a computer at home?*

No: (5 responses)

No. I go to my cousin's house--she has one.

Yes, I use a computer to work on my multiplication.

TI Home computer--my dad works at TI.

No response.

*Have you studied computers in school?*

In science--in magnet program.

Sure. In Mr. Moses' class. We made squares and triangles.

Here in Mr. Moses we practiced on one. We tried to make a box.

Yes. I played the games of times table, subtraction, and addition.

We played games on.

Just getting into the subject.

Yes, played math games.

Yes, I worked on my times table.

No:

*What is a computer?*

A keyboard (like a typewriter)--what you type shows up on a screen instead of paper.

A machine that can give you answers. You could learn from it.

A machine.

No response.

It's a machine that helps you learn. You can play things on it.

A machine that helps you learn. You can put information in that you want to keep.

A games that has math problems, has all kinds of keys and floppy disks you put inside.

Something that gives you the right answers to stuff, like  $2 \times 2 = 4$ .

A mini thing with a lot of wires and little computer chips instead of big things that would take up a whole room.

*What can it do?*

You can play games on it. You can write in a sentence and the computer will correct your mistakes.

It has games in it, like the Apple computer.

You push buttons and it writes letter and makes shapes.

Can help you learn. Help you learn spelling and math.

It can tell you things, remember things, and store things.

Math and help you learn.

Can tell you things. It helps you better. You learn more.

Can do pluses, take aways, division.

Can talk, play notes, make a flower open and close, make things move up and down and back and forth.

*What can't it do?*

No response. (2)

Don't know.

It can't cook or walk.

It can't see you. It can't do a lot of things.

It can't take money like video games.

Can't talk. Can't walk. Can't do things by itself.

Can't talk to you. Sometimes it can't give you the right answers.

Can't walk or run. They don't have a mind of their own. You have to program them to do think.

*Can computers think?*

Yes, like the human brain except not as good as the brain. Someone else tells computer what to do.

Yes.

Yes--while they're giving you the sentence they think to bring it up.

Kind of. It thinks like you. Store information and it can give it back to you.

I guess so. Not like humans; they are a machine.

Yes. Not like a human brain.

No, not like a person. We are persons and the computer is a machine.

No.

Not unless you program. Anything a computer knows you put into it.

*Why are computers so fast?*

No response. (2)

You push the keys and it does things fast.

The people who write the stuff give you the messages real fast.

I don't know.

I forgot. We went over that.

It types fast.

They think fast.

Some have chips with wires. It depends on how long the wires are to how long it takes to react.

*What is inside a computer?*

No response.

Wires, batteries.

Wires hooked up to red brain. If the brain wears out, you have to buy a new one.

Wires--little red thing that gives you the messages.

Little chips, a whole bunch of wires. There's a monitor, a keyboard, a plugbar, an expansion box.

Little chips, wires connected to the buttons. Disks and diskettes have to be in there.

She talked about the printer--twice.

Tubes (like in a TV), wires and screws.

Computer chips, wires, minibatteries, the crown-like thing in the TV that draws things.

*Could the computer ever be wrong?*

Sometimes. When it has low batteries.

Yes, if the energy was low it could foul up.

Yes. If you push  $2 \times 3 = 6$  it will go on to 7.

Don't know.

Yes. (4 responses)

Sometimes if you program it wrong if you don't know how to do it.

*Are you interested in learning about computers?*

Yes. (7 responses)

Sort of. I haven't had it, so I don't know what it's like.

Yes. I can write in a math problem and I get the answer. I sometimes cheat on my homework but my mom makes me finish my homework first.

*What will you be able to do after you've learned about computers?*

Be a programmer.

When we get the voice thing I can do LOGO and things I learned from my brother at Gullett.

You can learn more things that you haven't learned.

Buy a computer and work with it. We have an Atari, but not a computer.

Write words as fast as I can without mistakes. Go buy me one and study with it.

Use computers in learning and doing it.

You can learn things on it, store things and "rememberize" it.

I would like to be a programmer.

No response.

*What would you like to be able to do with a computer?*

Teach people how to work them and learn their multiplication.

Play a whole bunch of games.

Put in math problems I don't know and learn what they are.

Type the words I say.

Like typewriting.

Take it around.

Make the computer do songs one after another. We've already programmed "Silent Night."

Like to use it for grammar. To help people learn their math fast.

I would like to get a job. First I would take classes. They have classes here, but I live too far away. The classes start at 2:00 or 2:30.



Attachment E-6

RESPONSES FROM SECOND COMPUTER LITERACY  
STUDENT INTERVIEW WITH THIRD GRADE STUDENTS

(Page 1 of 5)

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E-21

*What is a computer?*

A thing you learn on to help you do business work and stuff.

It's a machine that can help people who do not understand. People can run programs.

It's a kind of machine that helps you learn.

Thing you push numbers and letters and they come on the screen.

A computer is made up of three parts (or two) keyboard, monitor, and p-something.

Machine that can tell you things.

An electric group of wires and stuff that has a brain, but you have to put in what it knows.

A machine that has a lot of buttons on it.

*What can it do?*

You can put TELL TURTLE to walk five steps up.

Add a hundred numbers in a second. It can keep lists of things.

It can give you some answers. It can give you answers to 50 problems in about 10 seconds.

Mathematics, spelling, input, output.

It can play games, it can think faster than we can, can do problems faster than we can. It has a good memory.

Give you answers.

Play games, help you do Math and Spelling.

It can play games and teach and help.

You can type in things and make shapes, play games on it. There is a lot of stuff you can do.

*What can't it do?*

Can't walk, can't chew gum, can't spit, can't pat its head and rub its stomach at the same time.

Dream, eat, and it can't make boxes.

Walk.

Like math?

It can't move around.

It can't run across the street.

It can't teach someone how to swim cause it can't get wet.

*Can computers think?*

Nope. (3 responses)

Yes. (2 responses)

Not really.

Sort of. Not like humans.

Yes, whatever a person tells it.

Yes, not like a human.

*Why are computers so fast?*

Has little chip that has red lines that is a brain just like us.

Because electric things can work real fast.

They have wires and don't have to write things down by hand.

Because of chips, hardware, software, and the information people give to computers.

Don't know. (2 responses)

No response.

They have this little chip that is it give it the stuff to say.

You push the numbers so that.

*What is inside a computer?*

Wires, TV bulbs (round like glass). We talked about it yesterday...

The thing you punch letters and it comes on the screen.

A chip.

Wires, the little chip that makes it work.

Wires, batteries, that's all.

Hardware, software, chips, wires.

Memory chips, a bunch of wires, a disk wire, an expansion system, television.

Microchips, wires and electricity runs through the wires.

Telegrams in it.

*Could the computer ever be wrong?*

If it's broken or somebody was fooling with it.

No. (2 responses)

Yes, if it's broke or something.

Yes, something could go wrong with it.

If you make a mistake on it.

Maybe, if it messes up. Like if something was leaning against the speech synthesizer.

Yes, if the person inputs the wrong thing.

Yes.

*Are you interested in learning about computers?*

Not...yeah.

Yes. (6 responses)

Sort of.

Pretty much.

*What will you be able to do after you have learned about computers?*

Can teach somebody.

Learn a little more and get smarter using computers.

Program fast.

Get one.

I'll be able to help people learn about computers. I won't have problems using the computer.

Help my dad with stabilizing bills on the computer.

Show everyone else what you've learned about computers.

Do stuff on computer.

Go to school and be a computer (technology).

*What would you like to be able to do with a computer?*

Make paper come out--whatever you say on computer comes out on the paper.

Have it do my work--to use it to learn.

Play games on it.

Like to have a robot that could dance and teach people to swim if it could be waterproofed.

I'd like to type in programs.

Learn things from it.

Let it do my homework.

Run programs and play some math games to see what I know.

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Attachment E-7

RESPONSES FROM FIRST COMPUTER LITERACY  
STUDENT INTERVIEW WITH SIXTH GRADE STUDENTS

(Page 1 of 7)

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E-27

*Have you ever used a computer?*

Yes, at school:

Just yesterday:

Played with friend at her house.

Yes. (2 responses)

No.

Yes, here at school--sometimes in homeroom; sometimes in math.

Yes--I've worked on an Apple. We started in 4th grade with first Apple. It had a lot of problems and we got a new Apple last year.

Used Apple and TI.

Yes. We started at beginning of year.

*Do you have a computer at home?*

No. (6 responses)

Cousin has one.

We plan to get one.

TI, it helps me with math.

But we have an Atari.

*Have you studied computers in school?*

We've seen them.

Almost everyday.

Worked on them during class.

Played games and wrote programs in math.

No.

We talked about:

Yes--we did graphics; PRINT statements; GO TO statements.

In math.

In math class.

Yes. We had a computer class. After ITBS, we will have Computer II.

*What is a computer?*

Like a TV with a typewriter connected.

A machine you can use for business and schools. You can put information in it and get information out then or at a later date.

A machine that helps you with schoolwork and business.

A man-made machine.

A machine that can solve any kind of problems.

A device with keyboard and screen. You can play games, study with them, type on it.

A machine that works on electricity. It writes programs for you if you write down what you want it to do.

Sort of like a TV. Has deal like a typewriter connected to TV. Has letters and numbers.

Learning machines that can teach you about anything you want to know with preprogrammed tapes.

Electrical instrument that helps you with problems. It has screen like TV.

*What can it do?*

You can draw graphs, do sentences, work on problems. It's fun.

Can be used as an adding machine or calculator.

It can play games.

Can ask questions, can make out programs, draw pictures. Can tell you what is right or wrong.

Can take data and read it back to you. Can make games and play them on the screen for you.



Play games, study with them, type on it.

Play games, write programs, figure out how long you have been alive in days.

You can do BASIC. You can do LOGO. You type stuff off of a board and you can make shapes. make trucks move and freeze them.

Depends on how much memory and how much information is inside of it.

It can help you with school problems. You can play games with it.

*What can't it do?*

Can't work by itself. It needs someone to do it. It doesn't have a brain of its own.

Tell you to do something without being programmed first.

Programs won't work in another machine.

No response:

Can't remember things a year back. Can't play a game with you.

Talk.

Can't talk, can't move.

These here can't talk. Some computers sound like they can talk.

Can't cook and do housework! Nothing physical!

It can't tell you when to go to bed, when to wake up, when you're going to die, when your parents will get a divorce. It can't help you with family problems. You can't write bad words--it says no, no, no!

*Can computers think?*

No, they don't have brains. They have chips that can do things.

No. (3 responses)

A machine robot can.

Not really:

Not really. You have to tell it what to do.

Yes, but not like humans. You have to write down things for computers to think.

Not really. You have to program them and then they can do what you tell them to.

Not really, the memory can kind of think.

*Why are computers so fast?*

They all have all those wires that make them fast.

Because they are programmed to know more things than we do.

Little chips are like recorders.

More mind than man has.

Answer is already in the computer.

• They are a machine and can do things faster than people.

Don't know. (3 responses)

They've been programmed to do something.

*What is inside a computer?*

Disk drive on the side. There is the monitor, computer, chips, and wires inside.

You can't open it. Don't know.

Hardly anything--just a bunch of little chips that work.

A little chip, electronic things inside.

Disks, wires, different colored wires.

Microchips and wires.

Wires, lightbulb.

Wires and stuff.

Not real sure.

Don't know.

*Could the computer ever be wrong?*

Yes. If you feed it the wrong information.

Not really.

Yes. If you tried to ask it something and someone had put in the wrong information.

Sometimes, press something wrong.

Yes, if you write something down not right.

If you put in wrong information, it will give you wrong information back to you.

If you write down something wrong.

Yes. Someone else could type something wrong.

It could, I guess. Your instructions could be wrong.

Yes if it's programmed wrong.

*Are you interested in learning about computers?*

Yes. (8 responses)

A whole lot!

Yes. If you have enough time you can teach it games and it can play with you. It can help you with your homework.

*What will you be able to do after you've learned about computers?*

Able to learn more on certain subjects and work more with computers.

Work with it without having any problems. Since I know BASIC, I can write Spanish in it.

20 years from now, it will take over jobs, like teachers. It could happen.

Collect baseball cards and I could keep track of them.

Not sure.

Play games, might be able to figure out the weather.

I could work with one. It's easy to work with one.

Make my own program. We are making a graphics program in Math.

Learn how to type better.

In junior high, you will be able to do harder tasks, like writing poems, etc., on computers.

*What would you like to be able to do with a computer?*

Like to copy games--help computer figure out hard mathematical problems.  
Would like to be a computer engineer.

I would like to have a computer around the house to play around with.

Like to be in a business that uses computers.

Like to have one at home. I want to be a kindergarten teacher. I could keep records on it. To remind you of stuff.

To be the teacher.

Maybe be a secretary.

My business and schoolwork.

Help you with all of your needs. I would like to study computers in college.

It would be neat if they could invent a computer that would clean up and do the dishes!

Show people how to use. They're not all that bad. Computers might have more knowledge but humans can do more than computers.

82.45

Attachment E-8

RESPONSES FROM SECOND COMPUTER LITERACY  
STUDENT INTERVIEW WITH SIXTH GRADE STUDENTS

(Page 1 of 6)

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E-35

*What is a computer?*

Something that can help you learn and organize what you put in it.

Some kind of robot that can help you with your work or job.

A machine that can help you with things.

A machine that can be used for learning, business or games (mainly for education). It's made of the keyboard, monitor, and disk drive.

It can help you learn math, keep information you need.

A machine that can solve problems for you, you can put programs on it.

A computer is a scientific instrument designed to help man with the social life and work helps. It makes work easier.

A mechanical device that stores, processes, accepts and gives out processed information.

Like a game or you could learn on it.

A lot of things. It can be a file, it can be a printer, it can play games, it can help you with homework.

*What can it do?*

Could write, draw pictures.

Play games, remind you of things, change things.

It gives you information, it can show you pictures, it can help you with your work.

It can add, subtract, display colors, talk with speech synthesizer.

Answer your question, can ask you questions sometimes, do programs.

It can help you on any subject it's programmed to do.

It can do stuff like multiplication tables, you can put information into it.

Play games, it can add and subtract.

Can be used as a calculator or adding machine, take random names or numbers.

It can play games, it can help you with your homework.

*What can't it do?*

Can't talk (some can), it can't do things alone (it doesn't have a mind).

It can't think unless someone else does its thinking.

It can't use another company's program.

Some computers can't talk.

It can't memorize over a certain amount of information. Nothing physical or for themselves.

Can't think, walk, can't grab things.

It can't think for itself--it can make a mistake if you enter something wrong. It can't talk without speech synthesizer.

It can't tell you who your best friends are, when to buy a car, can't tell you when you're gonna die.

Can't walk! Can't do anything unless man programs it to.

Can't think, can't work by itself, can't turn on itself.

*Can computers think?*

No. (4 responses)

Yes. Not like humans.

Not really--what they have on the screen is what they put together for answers.

If you put information in them they can.

Not really.

Sometimes--not like humans.

No, not really.

*Why are computers so fast?*

I don't know.

The answer is already in the computer.

They have an integrated chip circuit that helps them think faster than humans.

If you work them fast...if you just start, it might go slow.

Because they have all the information and it appears on the screen.

They have all the information. All you have to do is punch a couple of keys to get your information.

They have the equipment to be fast.

I don't really know.

They read all the digits in nanoseconds.

They take a small amount of information (a byte) and solve it quickly through the chip and electrical currents.

*What is inside a computer?*

TV tube, computer chip, wires hooked together to disk drive.

Computer chip, ROM Card, you can have memory cards to add more memory.

Disk-like thing: A lot of things--chips--I can't think of anything.

The chip, instrument, the hardware, keyboard, tape recorder.

Chips, wires, plugs.

Wires, memory, screws and nails and stuff.

Wires, plugs, something when you push the buttons.

Integrated circuit chips, vacuum tubes (in back of keyboard).

Disk, wires, television screen.

A chip, console, monitor, disk drive, speech synthesizer.

*Could the computer ever be wrong?*

It doesn't make the mistake itself--you do.

Only if you put in the wrong information.

It can only be wrong if you give it the wrong information.



Sometimes--if you enter something wrong.

Yes, but it's very rare.

Yes, if man does program it right.

No.

Sometimes--people misusing it could make it wrong or damaged during manufacturing.

Yes, if you type the wrong things.

Yes, if there is a bug in it.

*Are you interested in learning about computers?*

Yes, I've been to 5 classes.

Yes, a lot.

Yes. (8 responses)

*What will you be able to do after you have learned about computers?*

Make programs, use floppy disks and hard disks, run the printer.

Just about anything. Write my own program. Sell computers.

No responses. (2)

Teach a class computer.

Be a computer technician.

Work them pretty good--better than now.

Learn to type better, keep my information in it, get better at the games.

I want to be a secretary--I could learn to type and file things on the computer.

I could use it at home.

*What would you like to be able to do with a computer?*

Use it with my job, like if I was a teacher.

I'd like to make a 3D picture on the screen. Learn FORTRAN and PASCAL--  
already know BASIC and LOGO.

Let it be a maid that could still teach you.

Use it to enter swim times. Use for calculator for homework.

Write--like do LOGO, see how it could be used with other things.

It could help me with my work and income taxes.

Draw out houses and stuff.

Play around with it.

Use it at work and at home.

Keep track of baseball cards.

Chapter 2--Discretionary

Appendix F

COMPUTER LITERACY PURCHASE REQUISITIONS

## INSTRUMENT DESCRIPTION: Computer Literacy Purchase Requisitions

## Brief Description of the instrument:

Copies of purchase requisitions for materials for the Computer Literacy program were examined to determine what hardware, software, supplies, and magazines or periodicals each school requested.

## To whom was the instrument administered?

Information was obtained from the Austin Independent School District Grants Planning Administrator.

## How many times was the instrument administered?

Once.

## When was the instrument administered?

April 25, 1983.

## Where was the instrument administered?

In the Office of the Grants Planning Administrator.

## Who administered the instrument?

The Chapter 2 evaluation assistant.

## What training did the administrators have?

N/A.

## Was the instrument administered under standardized conditions?

Yes.

## Were there problems with the instrument or the administration that might affect the validity of the data?

No.

## Who developed the instrument?

The Office of Research and Evaluation.

## What reliability data are available on the instrument?

None.

## Are there norm data available for interpreting the results?

No.

## COMPUTER LITERACY PURCHASE REQUISITIONS

## Purpose

The purchase requisitions for materials to be used in Chapter 2 Computer Literacy Schools were examined to determine if the materials requested for the program varied from school to school. Because these schools received similar allotments of hardware and software, differences in the types of additional hardware and software requested, supplies ordered, and magazines or periodicals subscribed to were examined.

Information from the Computer Literacy Purchase Requisitions was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary 1982-83 Evaluation Design:

Decision Question D1: Should the Chapter 2--Discretionary Computer Literacy Component be continued, expanded, or revised?

Evaluation Question D1-1: How did the Computer Literacy Component differ from campus to campus with regards to the following:

h: Hardware and software selection.

## Procedure

All purchase requisitions for materials to be used in the Computer Literacy program were due to the Finance Office by April 15, 1983. On April 25, 1983, copies of the purchase requisitions were examined in the Office of the Grants Planning Administrator. A list was compiled for each school including hardware, software, supplies, and magazines or periodicals requested.

## Results

Each K, 4-6 or 5-6 schools (Brooke, Campbell, Gullett, Ortega, and Read) received the following allotment of hardware:

25 Consoles, 99/4A, PHC 004A	\$ 200.00	\$ 5,000.00
25 Monitors, 10", PHA 4100	244.00	6,100.00
11 Disk Drives, PHP 1250	200.00	2,200.00
11 Disk Controller Cards, PHP 1240	143.00	1,573.00
11 Peripheral Expansion Boxes, PHP 1200	143.00	1,573.00
11 Memory Expansion	171.60	1,887.60
1 RS 232 Card, PHP 1220	100.00	100.00
1 Modem, PHP 1600	114.40	114.40
1 Printer, PHP 2500	343.20	343.20
5 Tape Recorders, PHP 2700	40.00	200.00

466 \$ 19,091.20

Each K-3 schools (Govalle, Highland Park, and Sims) received the following allotment of hardware:

17 Consoles, 99/4A, PHC 004A	\$ 200.00	\$ 3,400.00
17 Monitors, 10", PHA 4100	244.00	4,148.00
17 Disk Drives, PHP 1250	200.00	3,400.00
17 Disk Controller Cards, PHP 1240	143.00	2,431.00
17 Peripheral Expansion Boxes, PHP 1200	143.00	2,431.00
17 Memory Expansion Cards, PHP 1260	171.60	2,917.00
1 RS 232 Card, PHP 1220	100.00	100.00
1 Modem, PHP 1600	114.40	114.40
1 Printer, PHP 2500	343.20	<u>343.20</u>
		\$ 19,284.80

The difference in the amount of hardware is related to the grade span in each school. In the primary schools, each school received 17 large systems (48K), which are necessary to run LOGO, the programming language used with K-3 students. In the intermediate schools, each school received 25 small systems (16K), which are capable of running BASIC, the programming language used with students in grades 4-6. The intermediate schools also received hardware to upgrade eleven of the 16K systems to 48K systems.

In addition to the Texas Instruments (TI) hardware each school received, every Chapter 2 Computer Literacy school requested the following hardware:

1 IBM Console	\$1,543.50	\$ 1,543.50
1 IBM Monitor	709.00	709.00
1 IBM Disk System (included)		
1 IBM Printer	532.00	<u>532.00</u>
		\$ 2,784.50

Each school also received one additional tape recorder ordered out of the supplies account.

The following allotment of software was requested by each school:

11 Terminal Emulator II, PHM 3035	\$ 32.50	\$ 357.50
11 Extended Basic, PHM 3026	57.20	<u>629.20</u>
		\$ 986.70

After the purchase of the TI and IBM hardware and the software allotment, each Chapter 2 Computer Literacy school had approximately \$2,200 for buying additional hardware or software, supplies, or magazines or periodicals. Attachment F-1 lists the items each school requested. Unexpended funds can be spent during the 1983-84 school year.

32.45

Attachment F-1

ADDITIONAL SUPPLIES  
PURCHASED-- SCHOOL

(Page 1 of 9)

Brooke (K; 4-6)

Hardware

PR 21768

4 Mobile Stations for Microcomputers Wilson #C2436	\$ 109.00	\$ 436.00
4 Electrical Assemblies Wilson #CTEA4	24.00	<u>96.00</u>
		\$ 532.00

Software

No additional software was ordered.

Supplies

WR 14069		
25 Disks	\$ 1.99	\$ 49.75
30 Cassette tapes	.62	18.60
4 ctns Paper for printer	11.75	47.00
25 Disk holders	1.45	36.25
25 Dust covers	6.00	150.00
		<u>\$ 254.60</u>
PR 2413		
13 Folding tables, D6A	\$ 61.49	\$ 799.37
		<u>\$ 799.37</u>

Magazines/Periodicals

PR 1675		
1 "Electronic Learning"	\$ 17.50	\$ 17.50
		<u>\$ 17.50</u>
PR 1672		
1 "99er Magazine"	\$ 25.00	\$ 25.00
		<u>\$ 25.00</u>
PR 1673		
1 "Teaching and Computers"	\$ 15.95	\$ 15.95
		<u>\$ 15.95</u>
TOTAL		<u><u>\$ 1,644.42</u></u>



Campbell (K. 4-6)

Hardware

PR 21769

4 Mobile Stations for Microcomputers Wilson #C2436	\$ 10.00	\$ 436.00
4 Electrical Assemblies Wilson #CTEA4	96.00	<u>96.00</u>
		\$ 532.00

Software

PR 3675

1 Scholastic Level 3	\$ 69.95	\$ 69.95
1 Scholastic Level 4	69.95	69.95
1 Scholastic Level 5	69.95	69.95
1 Scholastic Level 6	69.95	<u>69.95</u>
		\$ 279.80

Supplies

WR 10440

35 Disks	\$ 1.99	\$ 69.95
3 ctns. Paper for printer	11.75	35.25
60 Cassette tapes	.62	<u>37.20</u>
		\$ 142.10

PR 33351

1 "BASIC: An Introduction to Computer Programming" (4 filmstrips, cassettes, teacher's guide)	\$ 149.50	\$ 149.50
		\$ 149.50

Magazines/Periodicals

PR 33336

"Teaching and Computers"		
1 82-83 subscription	\$ 15.95	\$ 15.95
1 83-84 subscription	15.95	<u>15.95</u>
		\$ 31.90

PR 33336

1 "99er Magazine"	\$ 25.00	\$ 25.00
		\$ 25.00

TOTAL

\$ 1,160.30

Govalle (K-1)

Hardware

PR 21361

2 Mobile Stations for Microcomputers Wilson #C2436	\$ 109.00	\$ 218.00
2 Electrical Assemblies Wilson #CTEA4	24.00	<u>48.00</u>
		\$ 266.00

Software

PR 50565

2 Scott Foresman/TI Addition/Subtraction	22.90	\$ 45.80
2 Scott Foresman/TI Addition/Subtraction	22.90	45.80
2 Scott Foresman/TI Multiplication I	22.90	<u>45.80</u>
		\$ 137.40

PR 50566

4 TI 10 min Typing Tutor	\$ 22.90	\$ <u>91.60</u>
		\$ 91.60

Supplies

WR 12948

25 Disks	\$ 1.99	\$ 49.75
6 Cassette Tapes	.62	3.72
4 Ctns. Paper for printer	11.75	47.00
16 Dust covers	6.00	96.00
40 Boxes (Storage for AV materials)	.34	13.60

WR 12949

40 Disks	1.99	<u>79.60</u>
		\$ 289.67

Magazines/Periodicals

PR 50561

2 "Teaching and Computers"	\$ 15.95	\$ <u>31.90</u>
		\$ 31.90

PR 50562

1 "99er Magazine"	\$ 25.00	\$ <u>25.00</u>
		\$ 25.00

PR 50563

1 "Classroom Computer News"	\$ 19.95	\$ <u>19.95</u>
		\$ 19.95

TOTAL

\$ 861.52

Gullett (K, 4-6)

Hardware

PR 21770

6 Mobile Stations for Microcomputers  
Wilson #C2436  
6 Electrical Assemblies  
Wilson #CTEA4

\$ 109.00	\$ 654.00
24.00	<u>144.00</u>
	\$ <u>798.00</u>

Software

No additional software was ordered.

Supplies

No supplies were ordered.

Magazines/Periodicals

No magazines or periodicals were ordered.

Total

\$ 798.00

## Highland Park (K-3)

Hardware

PR 21362

3 Mobile Stations for Microcomputers Wilson #C2436	\$ 109.00	\$ 327.00
3 Electrical Assemblies Wilson #CTEA4	24.00	72.00
		<u>\$ 399.00</u>

Software

PR 14284

1 "Software And" Compu Serve	\$ 40.00	\$ 40.00
		<u>\$ 40.00</u>

PR 14296

2 Scott Foresman PHM 3015 Early Reading	\$ 22.90	\$ 45.80
2 Scott Foresman PHM Reading Fun	22.90	45.80
4 TI PHM 3003 Beginning Grammar (2-5)	17.20	68.80
Milliken PHM 3091 Subtraction	22.90	91.60
2 TI PHM 3004 Number Magic	11.45	22.90
2 TI PHM 3064 Touch Typing Tutor	22.90	45.80
1 TI Writer/word Processor	57.50	57.50
1 TI Pilot PHD 5066	45.70	45.70
1 TI PHM 3011 Speech Editor	26.00	26.00
		<u>\$ 449.90</u>

Supplies

WR 14314

60 Disks	\$ 1.99	\$ 119.40
2 ctrs. Paper for printer	11.75	23.50
6 Disk holders	1.45	8.70
21 Dust covers	6.00	\$ 126.00
10 Cassette tapes	.62	6.20
		<u>\$ 283.80</u>

Magazines/Periodicals

PR 11773

1 "The Computing Teacher"	14.50	14.50
		<u>\$ 14.50</u>

PR 11775

1 "99er Magazine"	\$ 25.00	\$ 25.00
		<u>\$ 25.00</u>

PR 11771

1 "Electronic Learning"	\$ 17.50	\$ 17.50
		<u>\$ 17.50</u>

PR 11770

1 "Classroom Computer News"	\$ 12.00	\$ 12.00
		<u>\$ 12.00</u>

PR 11970

1 "Creative Computing"	\$ 19.97	\$ 19.97
		<u>\$ 19.97</u>

TOTAL

473

\$ 1,261.67

Ortega (K, 4-6)

Hardware

PR 21363

5 Mobile Stations for Microcomputers

Wilson #C2436

\$ 109.00 \$ 545.00

5 Electrical Assemblies

Wilson #CTEA4

24.00 120.00\$ 665.00Software

No additional software was ordered.

Supplies

PR 24131

12 Folding Tables, D6A

\$ 61.49 \$ 737.88\$ 737.88Magazines/Periodicals

No magazines or periodicals were ordered.

TOTAL

\$ 1,402.88

Read (5-6)

Hardware

PR 21364

8 Mobile Stations for Microcomputers Wilson #C2436	\$ 109.00	\$ .872.00
8 Electrical Assemblies Wilson #CTEA4	24.00	<u>192.00</u>
		\$ 1,064.00

Software

No additional software was ordered.

Supplies

WR 9703

20 Disks	\$ 1.99	\$ 39.80
5 ctns. Paper for printer	11.75	58.75
20 Disk holders	1.45	<u>29.00</u>
		\$ 127.55

Magazines/Periodicals

PR 9

1 "Creative Computing"	\$ 19.97	\$ <u>19.97</u>
		\$ 19.97

PR 8

1 "The Computing Teacher"	\$ 14.50	\$ <u>14.50</u>
		\$ 14.50

PR 10

1 "Classroom Computer News"	\$ 19.95	\$ <u>19.95</u>
		\$ 19.95

PR 15

1 "Electronic Learning"	\$ 17.50	\$ <u>17.50</u>
		\$ 17.50

PR 11

1 "90's Magazine"	\$ 25.00	\$ <u>25.00</u>
		\$ 25.00

Total

\$ 1,278.47

## Sims (K-3)

Hardware

PR 21365

4 Mobile Stations Microcomputer Wilson #C2436		\$ 109.00	\$ 436.00
4 Electrical Assemblies Wilson #C		24.00	96.00
			<u>\$ 532.00</u>

Software

PR 9696

4 Scott Foresman Early Reading	Gr. 1	\$ 22.90	\$ 91.60
4 Scott Foresman Reading Fun	Gr. 2	22.90	91.60
4 Scott Foresman Reading On	Gr. 3	22.90	91.60
4 Scott Foresman Addition/Subtraction	Gr. 1-2	22.90	91.60
4 Scott Foresman Multiplication I	Gr. 3-4	22.90	91.60
1 Scott Foresman Division I	Gr. 3-5	22.90	22.90
			<u>\$ 480.90</u>

PR 9697

3 TI Early Learning Fun	Gr. K-1	\$ 17.20	\$ 51.60
4 TI Beginning Grammar	Gr. 2-5	17.20	68.80
			<u>\$ 120.40</u>

PR 9698

4 Milliken/TI Addition	Gr. 1-6	\$ 22.90	\$ 91.60
4 Milliken/TI Subtraction	Gr. 1-6	22.90	91.60
4 Milliken/TI Multiplication	Gr. 1-6	22.90	91.60
			<u>\$ 274.80</u>

PR 9699

4 Addison/Wesley--TI Computer Math Games II	Gr. 2-6	\$ 22.90	\$ 91.60
			<u>\$ 91.60</u>

Supplies

WR 8846

50 Disks

WR 8847

17 Dust covers

	\$ 1.99	\$ 99.50
	6.00	102.00
		<u>\$ 201.50</u>

Magazines/Periodicals

No magazines or periodicals were ordered.

TOTAL

\$ 1,701.20

Chapter 2--Discretionary

Appendix G

SPANISH AS A FOREIGN LANGUAGE PRINCIPAL INTERVIEW



INSTRUMENT DESCRIPTION: Spanish as a Foreign Language Principal Interview

Brief Description of the Instrument:

The Spanish as a Foreign Language Principal Interview was used to gather information about how the Spanish as a Foreign Language program had been set up at each school and what difficulties were encountered in implementing such a program.

To whom was the instrument administered?

To principals in Chapter 2 Spanish as a Foreign Language schools (Blackshear, Oak Springs, Rosedale, Sanchez).

How many times was the instrument administered?

Twice.

When was the instrument administered?

February 23-25, 1983 and April 5, 1983.

Where was the instrument administered?

The first interview was held in the principal's office. The second interview was conducted by telephone.

Who administered the instrument?

The Chapter 2 evaluation assistant.

What training did the administrators have?

General interview training.

Was the instrument administered under standardized conditions?

No.

Were there problems with the instrument or the administration that might affect the validity of the data?

None were identified.

Who developed the instrument?

The Office of Research and Evaluation.

What reliability and validity data are available on the instrument?

None.

Are there norm data available for interpreting the results?

No.

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## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL INTERVIEW

### Purpose

Information from the Spanish as a Foreign Language (SFL) Principal Interview was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D2: Should the Chapter 2--Discretionary Spanish as a Foreign Language Component be continued, expanded, or revised?

Evaluation Question D2-1: How did the Spanish as a Foreign Language Component differ from campus to campus with regard to the following:

- a. instructional emphasis,
- b. instructional objectives by grade,
- c. relative emphasis on language instruction and multicultural instruction,
- e. instructional organization and scheduling,
- i. amount of Spanish instruction students received,
- j. parental involvement,
- k. student selection procedures.

### Procedure

Interviews were conducted with Chapter 2 Spanish as a Foreign Language principals in order to find out how the program was being implemented at each campus. The Chapter 2 Spanish as a Foreign Language schools were Blackshear, Oak Springs, Rosedale, and Sanchez.

Principals were sent a memo (see Attachment G-1) explaining the purpose of the interviews. The first set of interviews was conducted February 23-25, 1983. Principals were interviewed individually in their offices by the evaluation assistant. Interview questions are included in Attachment G-2.

A second set of interviews was conducted on April 6, 1983. The evaluation assistant interviewed principals by telephone. Interview questions are included in Attachment G-3.

## Results

The questions raised in evaluation question D2-1 are discussed below. The notes on which the answers to questions are based can be found in Attachments G-4 to G-7. Items from the February interview will be discussed first:

*How will instruction be scheduled into the day?*

The schedule varied by campus. Because of differences in the number of bilingual teachers available for SFL instruction, and different grade spans among the four schools, each school had a unique schedule.

*How much time/day will be spent in SFL instruction?*

The amount of time spent in SFL instruction ranged from 15 to 30 minutes, two to five days per week. Total weekly time scheduled for SFL ranged from 45 minutes to 100 minutes per week.

*How were students selected to receive SFL instruction?*

The selection of students to participate varied by campus. At one school all students participated. At another, all students who were not already involved in enrichment or remedial instruction participated. At another school, involvement was limited to 20 students per grade. The students were selected from those indicating an interest. At the final school, all students in grades K-2 were served, but only interested third graders with parent permission were served.

*Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?*

All four principals reported using the Segal guide as a base, but all modified the activities to meet the needs of their students.

*What emphasis will be given to cultural instruction?*

Principals listed a number of cultural activities that would occur throughout the year, such as activities associated with Cinco de Mayo and visits by Ballet Folklorico dancers. Two principals also reported cultural instruction scheduled during social studies units and during music class.

*When will instruction begin?*

The four schools began at various times; however, all started their formal SFL instruction following the January 14-15, 1983 staff development.

*Which teachers were trained in the initial training session (held January 14-15, 1983)?*

At one school, only the bilingual teachers attended the training. At the other three campuses principals reported that all teachers participated in this training.

*How were these teachers selected to participate?*

At the schools where all teachers were reported to have participated, a total staff commitment to the training had been made. At the school where only bilingual teachers participated, the principal felt that monolingual teachers would not benefit from the training, and thus they did not attend.

*What role will monolingual teachers have in SFL instruction?*

In two schools the monolingual teachers taught science or social studies for the bilingual teachers involved in SFL instruction. In the other two schools monolingual teachers supervised the bilingual teachers' students or taught enrichment activities to students not receiving SFL instruction.

*Has there been any parental involvement with this program?*

At the time of the first interview, parental involvement was limited. Two principals reported that parents had observed SFL instruction, and three stated that parents would be involved in cultural activities in the future.

A second interview was conducted April 6, 1983 to get an update on the SFL program at each school. Many of the items were a review of issues discussed in the first interview. The notes on which the answers to questions from this telephone interview are based can be found in Attachments G-8 to G-11.

*How has the SFL instruction been scheduled into the day?*

The schedule remained the same at all schools but one. At this school only one 2nd grade class was receiving SFL instruction because of scheduling problems.

*How much time per day has been spent in SFL instruction?*

The time per day remained the same at all schools but one. At this school the principal stated that students were receiving 15-20 minutes of instruction four times per week, instead of three times a week as reported earlier.

*What emphasis has been given to cultural instruction?*

Principals listed a number of cultural activities that would occur. Most of these centered around Cinco de Mayo festivities.

*What role have monolingual teachers had in SFL activities?*

Principals emphasized the role monolingual teachers had in reinforcing vocabulary words. Some were receiving training in teaching Spanish.

*Has there been any parental involvement with this program?*

Principals again reported that parents had observed SFL instruction, and stated that parents would be involved in Cinco de Mayo activities, such as teaching the children Mexican dances. One principal said that parents had helped their children with SFL At-Home activities.

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

February 14, 1983

TO: Ida Hunt, Ed Leo, Sheila Anderson, Jorge Rodriguez  
FROM: David Doss  
SUBJECT: Spanish as a Foreign Language Principal Interview

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. Part of the evaluation is to conduct a series of interviews with principals to discuss what is happening in their schools.

Later this week Lauren Moede, the Chapter 2 evaluation assistant, will call you to arrange a time for an interview during the week of February 21-25, 1983.

Thank you for your cooperation.

DAD:LHM:ihm

Approved: *David Doss*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

## PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Spanish as a Foreign Language program.

How will the Spanish as a Foreign Language program be set up at your school?

- How will the instruction be scheduled into the day?
- How much time/day will be spent in SFL instruction?
- How were students selected to receive SFL instruction?
- Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?
- What emphasis will be given to cultural instruction?
- When will instruction begin?

What preparation (staff development, faculty meetings) has your staff had for the SFL program?

- Which teachers were trained in the initial training session (held January 14-15, 1983)?
- How were these teachers selected to participate?
- What role will monolingual teachers have in SFL instruction?

Has there been any parental involvement with this program?

SCHOOL: \_\_\_\_\_

PRINCIPAL: \_\_\_\_\_

DATE: \_\_\_\_\_



## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL TELEPHONE INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. During my interview with you in February we discussed how the Spanish as a Foreign Language program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

How has the SFL instruction been scheduled into the day?

How much time per day has been spent in SFL instruction?

What emphasis has been given to cultural instruction?

What role have monolingual teachers had in SFL instruction?

Has there been any parental involvement with this program?

## PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Spanish as a Foreign Language program.

How will the Spanish as a Foreign Language program be set up at your school?

- How will the instruction be scheduled into the day?

*There are two groups - one meets MW, the other TTh. Friday is used for teacher planning, 4th, 5th, 6th - 1:00-1:30; PreK; K - first thing in morning.*

- How much time/day will be spent in SFL instruction?

*30 minutes in 4th, 5th, 6th.  
15 minutes in PreK and K.*

- How were students selected to receive SFL instruction?

*The entire school receives SFL instruction.*

- Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?

*One of our teachers has modified it to meet our needs.*

- What emphasis will be given to cultural instruction?

*There will be festivities on Cinco de Mayo. There will also be some activities during Public School Week.*

- When will instruction begin?

*January 17, 1983.*

What preparation (staff development, faculty meetings) has your staff had for the SFL program?

- Which teachers were trained in the initial training session (held January 14-15, 1983)?

*The entire staff received this training.*

- How were these teachers selected to participate?

*At first, the feeling from Central Administration was that only bilingual teachers would participate. Then, that all teachers should attend, so principal asked for total staff commitment. There was some dissension among the monolingual teachers about this.*

- What role will monolingual teachers have in SFL instruction?

*They will reinforce vocabulary words. At the 5th grade level they take the bilingual teacher's class to art. There is no team teaching, but the monolingual teacher supervises the bilingual teacher's class.*

Has there been any parental involvement with this program?

*Parents have observed the SFL program. Some parents from \_\_\_\_\_  
\_\_\_\_\_ have been to \_\_\_\_\_ to observe the program.*

*The parents have been invited to the school March 7th for Public School Week.*

SCHOOL: \_\_\_\_\_

PRINCIPAL: \_\_\_\_\_

DATE: \_\_\_\_\_

## PRINCIPAL INTERVIEW

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How will the Spanish as a Foreign Language program be set up at your school?

- How will the instruction be scheduled into the day?

*Monday through Friday during DEAR (independent reading), or during free time for learning centers.*

- How much time/day will be spent in SFL instruction?

*20 minutes.*

- How were students selected to receive SFL instruction?

*Since the school year was well under way when SFL began, some students were involved in enrichment activities in Reading, Language, and Math and it was felt that the students needed to continue this.*

- Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?

*Some teachers felt some vocabulary words were inappropriate, in that different meanings are used in different regions. Some definitions of some words were changed to fit the regional dialect. The guide is used as a text, but optional definitions are explained.*

- What emphasis will be given to cultural instruction?

*Cultural instruction will occur during Social Studies time and during local campus activities.*

- When will instruction begin?

*First Monday in February (2-7-83).*

What preparation (staff development, faculty meetings) has your staff had for the SFL program?

- Which teachers were trained in the initial training session (held January 14-15, 1983)?

*All teachers, as well as the music teacher, librarian, and Special Education teacher.*

- How were these teachers selected to participate?

*N/A.*

- What role will monolingual teachers have in SFL instruction?

*They will teach enrichment activities for students not in SFL, such as Reading, Language, and Math enrichment.*

Has there been any parental involvement with this program?

*Several surveys were sent to parents, and SFL was the highest ranked program they felt the school needed.*

SCHOOL: \_\_\_\_\_

PRINCIPAL: \_\_\_\_\_

DATE: \_\_\_\_\_

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## PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Spanish as a Foreign Language program.

How will the Spanish as a Foreign Language program be set up at your school?

- How will the instruction be scheduled into the day?  
*3 days/week from 1:50-2:20.  
At 3rd grade it is offered as one of the mini-courses.  
There was some trouble with scheduling, but all four Chapter 2 schools have managed to accommodate. A major concern now is for continued funding. Next year, this program may have to be an afterschool program.*
- How much time/day will be spent in SFL instruction?  
*30 minutes.*
- How were students selected to receive SFL instruction?  
*20 students/grade were selected. Students filled out an interest card which was signed by parents, and the students in the program were selected by teachers from those returning cards (300 out of 450 sent home).*
- Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?  
*They are basically following the Asher method. The teachers involved are meeting for 4 hours Sunday to discuss SFL activities, because they have had a hard time getting together during school hours.*
- What emphasis will be given to cultural instruction?  
*Cultural activities occur throughout the year: Black History Month in February, Cowboys in March/April, Spanish culture in April/May. 2nd graders are going to the Ballet Folklorico and Dobie's Folklorico dancers are coming to \_\_\_\_\_ . Students sing Spanish songs in music class.*
- When will instruction begin?  
*January 31, 1983*

What preparation (staff development, faculty meetings) has your staff had for the SFL program?

- Which teachers were trained in the initial training session (held January 14-15, 1983)?

*All the bilingual teachers - there is one at each grade level. These teachers are planning a training session for all faculty members.*

- How were these teachers selected to participate?

*It was felt that monolingual teachers would not benefit from this training so only the bilingual teachers were asked to attend.*

- What role will monolingual teachers have in SFL instruction?

*They teach social studies or science to the bilingual teachers' students. At the third grade level they teach the other mini-courses.*

*Teachers who are monolingual have expressed an interest in learning Spanish, and would like to see a course at Region XIII.*

Has there been any parental involvement with this program?

*Parents have observed in the SFL classrooms and have had conferences with teachers about the program. They will help make costumes for the Cinco de Mayo festivities.*

*Public recognition is needed for this program.*

SCHOOL: \_\_\_\_\_

PRINCIPAL: \_\_\_\_\_

DATE: \_\_\_\_\_

## . PRINCIPAL INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. This interview is one of a series to be held with principals in Chapter 2 schools during the first year of the Spanish as a Foreign Language program.

How will the Spanish as a Foreign Language program be set up at your school?

*There has been an informal SFL program at \_\_\_\_\_ for some time. Principal came to \_\_\_\_\_ after plans for the Chapter 2 SFL program were begun.*

- How will the instruction be scheduled into the day?  
*PreK - instruction in both English and Spanish throughout the day.  
K - before lunch.  
1st - after lunch.  
2nd and 3rd - afternoon.*
- How much time/day will be spent in SFL instruction?  
*K-2nd grade: 15-20 minutes 3 times/week.  
3rd grade: about 20 minutes 3 times/week (began 1/week, working up to 2/week, then 3/week).*
- How were students selected to receive SFL instruction?  
*PreK - all students.  
K-2 - all students.  
3rd - students with interest were identified by teachers and permission slips were sent home for parental permission.*
- Have you modified the instructional objectives designed by the instructional coordinators or the activities outlined in Segal's guide?  
*Since \_\_\_\_\_ had already established an SFL program, teachers have modified the activities to meet their needs. The Segal guide is used as a base and can be effective for a new program, but can become boring for students that have studied SFL previously.*
- What emphasis will be given to cultural instruction?  
*Consultants for cultural activities have been identified. Cinco de Mayo will be celebrated and students will see a performance of the Ballet Folklorico. Second graders are studying a Mexico unit in Social Studies.*
- When will instruction begin?  
*Instruction began after the January 14-15 inservice.*



What preparation (staff development, faculty meetings) has your staff had for the SFL program?

*During faculty meetings the staff has looked at various materials. Each grade level has chosen materials to order (each grade had approximately \$1,000 to spend).*

- Which teachers were trained in the initial training session (held January 14-15, 1983)?

*All teachers participated. Some teachers attended Richard Santos' presentation.*

- How were these teachers selected to participate?

*There was a commitment made by the total faculty (prior to principal's arrival at \_\_\_\_\_). The counselor also participated in the training and will be teaching a 2nd grade class SFL.*

- What role will monolingual teachers have in SFL instruction?

*They will be team teaching with bilingual teachers. The monolingual teachers will teach social studies in both classes.*

Has there been any parental involvement with this program?

*A notice went home with all children in grades K-2. In grade 3 this notice went home only to students selected to receive instruction.*

*Parents will be invited to all festivities.*

SCHOOL: \_\_\_\_\_

PRINCIPAL: \_\_\_\_\_

DATE: \_\_\_\_\_

## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL TELEPHONE INTERVIEW

The purpose of the evaluation of the Chapter 2—Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. During my interview with you in February we discussed how the Spanish as a Foreign Language program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

How has the SFL instruction been scheduled into the day?

*During DEAR or free time.*

How much time per day has been spent in SFL instruction?

*20-25 minutes.*

What emphasis has been given to cultural instruction?

*Activities are planned on a monthly basis. Resource speakers and special assemblies are planned for Cinco de Mayo.*

What role have monolingual teachers had in SFL instruction?

*Their most important role is to be verbally supportive. They attend staff development on weekends and after school and do not receive stipends for comp. time. Some monolingual teachers take bilingual teachers' classes for small group enrichment.*

Has there been any parental involvement with this program?

*Some parents have sat in on lessons. Parents will be invited to the special assemblies in May.*

## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL TELEPHONE INTERVIEW

The purpose of the evaluation of the Chapter 2—Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. During my interview with you in February we discussed how the Spanish as a Foreign Language program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

How has the SFL instruction been scheduled into the day?

*3 days/week (M, T, Th) from 1:50-2:20.*

How much time per day has been spent in SFL instruction?

*30 minutes 3 days per week in school and about 10-20 minutes/day with At-Home activities.*

What emphasis has been given to cultural instruction?

*There will be a schoolwide Mexican-American cultural unit this month. April 21st there will be a guest speaker to teach Mexican-American cuisine. A mariachi band will be here May 5th. Second graders will see the Ballet Folklorico. April 17th there will be time for Art Projects. A consultant will give a program on Mexican tales and traditions.*

What role have monolingual teachers had in SFL instruction?

*They do not have direct teaching responsibilities. They reinforce the Spanish vocabulary and assist in taking children to bilingual teachers.*

Has there been any parental involvement with this program?

*Some parents have observed. Next year parents will be able to check out recorders and cassettes to work with their children. This year they can help with the At-Home activities.*

## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL TELEPHONE INTERVIEW

The purpose of the evaluation of the Chapter 2 ← Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. During my interview with you in February we discussed how the Spanish as a Foreign Language program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

How has the SFL instruction been scheduled into the day?

*There are two groups: one meets MW, the other TTh. 4th, 5th, and 6th grades meet from 1:00-1:30, PreK and K meet first thing in the morning.*

How much time per day has been spent in SFL instruction?

*4th, 5th, 6th grades: 30 minutes/twice a week.  
PreK and K: 15 minutes/day.*

What emphasis has been given to cultural instruction?

*The whole month of May will be devoted to cultural instruction as part of the Cinco de Mayo celebration.*

What role have monolingual teachers had in SFL instruction?

*They reinforce the work of the bilingual teachers. They are receiving training twice/month from Julia Mellenbruch.*

Has there been any parental involvement with this program?

*During May they will take part in the Cinco de Mayo activities.*

## SPANISH AS A FOREIGN LANGUAGE PRINCIPAL TELEPHONE INTERVIEW

The purpose of the evaluation of the Chapter 2--Discretionary Spanish as a Foreign Language Component is to find out how the program has been set up at each campus and what difficulties have been encountered in implementing such a program. During my interview with you in February we discussed how the Spanish as a Foreign Language program would be set up at your school. I would like to review what we discussed and get an update on your school's program.

How has the SFL instruction been scheduled into the day?

*The schedule has remained the same; however, only one 2nd grade class is receiving SFL because of scheduling problems.*

How much time per day has been spent in SFL instruction?

*15-20 minutes 4 times/week.*

What emphasis has been given to cultural instruction?

*A great deal. Teachers are planning for the week of Cinco de Mayo. An art contest is scheduled and the work will be exhibited in May. Some teachers went to Richard Santos' workshop, and an art workshop.*

What role have monolingual teachers had in SFL instruction?

*They have helped plan the Cinco de Mayo activities. They are doing some teaching at the 1st grade level. Some have participated in art workshops.*

Has there been any parental involvement with this program?

*They will be teaching children dancing. On May 6th transportation will be provided by parents to a Mexican covered dish dinner.*

Chapter 2--Discretionary

Appendix H

TEACHER QUESTIONNAIRE--SPANISH AS A FOREIGN LANGUAGE PROGRAM

INSTRUMENT DESCRIPTION: Teacher Questionnaire--Spanish as a Foreign Language Program

Brief Description of the instrument:

The Spanish as a Foreign Language (SFL) Teacher Questionnaire was used to gather information about the SFL staff development sessions and SFL instruction in the classroom.

To whom was the instrument administered?

To teachers who attended the Spanish as a Foreign Language staff development sessions. Bilingual teachers received an additional questionnaire that included items concerning SFL instruction in their classroom.

How many times was the instrument administered?

Once.

When was the instrument administered?

The questionnaires were sent to teachers April 25, 1983.

Where was the instrument administered?

To teachers in their schools.

Who administered the instrument?

Self-administered.

What training did the administrators have?

Instructions for completing the questionnaire were provided.

Was the instrument administered under standardized conditions?

No.

Were there problems with the instrument or the administration that might affect the validity of the data?

None were identified.

Who developed the instrument?

The Office of Research and Evaluation.

What reliability and validity data are available on the instrument?

None.

Are there norm data available for interpreting the results?

No.

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## TEACHER QUESTIONNAIRE--SPANISH AS A FOREIGN LANGUAGE PROGRAM

### Purpose

Information from the Spanish as a Foreign Language (SFL) Teacher Questionnaire was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D2: Should the Chapter 2--Discretionary Spanish as a Foreign Language Component be continued, expanded, or revised?

Evaluation Question D2-1: How did the Spanish as a Foreign Language Component differ from campus to campus with regard to the following:

- c. Relative emphasis on language instruction and multicultural instruction,
- d. Number of students served,
- e. Instructional organization and scheduling,
- g. Organization and content of teacher training,
- i. Amount of Spanish instruction students received,
- j. Parental involvement.

Evaluation Question D2-2: How do the teachers evaluate the training they received?

### Procedure

Two versions of the Spanish as a Foreign Language (SFL) Teacher Questionnaire were developed. The first version, called the Spanish as a Foreign Language Teacher Questionnaire, was created to survey bilingual teachers to see how they had organized SFL instruction in their classrooms (see Attachment H-1). The second version, called the Spanish as a Foreign Language Staff Development Questionnaire, was created to survey individuals who participated in staff development activities to assess their opinions of the training they received (see Attachment H-2). Bilingual teachers received a copy of both questionnaires, and monolingual classroom teachers and special area personnel who attended the staff development received a copy of the SFL Staff Development Questionnaire only.

Because of the different versions being sent to teachers, and because a service report was included with the questionnaires, a separate memo was written for each group involved in the program. Principals received a memo explaining who would be receiving questionnaires in their schools (see Attachment H-3). Bilingual teachers received both questionnaires, a service report, and a cover memo (see Attachment H-4). Special area personnel, such as counselors, librarians, music teachers, P.E. teachers,



Chapter 1 teachers, and some Special Education teachers, received the SFL Staff Development Questionnaire and a cover memo (see Attachment H-5). Monolingual classroom teachers at all SFL schools but Oak Springs received the SFL Staff Development Questionnaire, a service report, and a cover memo (see Attachment H-6). At Oak Springs, monolingual teachers received only a service report and a cover memo. They were not sent an SFL Staff Development Questionnaire because none of them attended the SFL staff development sessions.

When the questionnaires were returned, they were separated into three groups: the SFL Teacher Questionnaires, the SFL Staff Development Questionnaires completed by bilingual participants, and the SFL Staff Development Questionnaires completed by monolingual participants. The results were compiled by these categories.

## Results

### Spanish as a Foreign Language Teacher Questionnaire

The teachers surveyed were asked to provide the following information about the groups of students who received SFL instruction:

- Grade.
- Group size.
- Number of SFL instructional periods per week.
- Number of minutes per SFL instructional period.

A total of 22 questionnaires were returned, for a return rate of 100%. The 22 teachers returning the questionnaire taught a total of 37 groups. The average number of groups taught by one teacher was 1.7 groups. The number of classes per grade varied by grade. The table below shows the number of classes per grade reported by teachers.

<u>Grade</u>	<u>No. of Classes</u>
Prekindergarten	3
Kindergarten	7
First	4
Second	3
Third	2
Fourth	6
Fifth	8
Sixth	4

The average number of classes per grade was 4.6.

A total of 764 students were reported to have received SFL instruction. The average group size was 20.6.

Teachers reported between two and five instructional periods per week. The average number of SFL periods per week was 3.3. Teachers reported between 15 and 30 minutes per instructional period, for an average of 23.1 minutes per period. An average of 69.5 minutes per week was spent in SFL instruction.

The bilingual teachers receiving this questionnaire were also surveyed to determine how they had organized SFL instruction in their classrooms. The results are summarized in Figure H-1. When asked if they had modified the instructional activities outlined in the Segal teacher's manual, 73% reported that they had. Most frequently, teachers reported adding activities or modifying vocabulary words to the vocabulary used in this community. The reader is referred to Attachment H-7 for a list of the responses to this item.

When asked if they had extended SFL-related activities throughout the day, 90% of the teachers surveyed reported that they had. Teachers mentioned activities such as vocabulary reinforcement, cultural events, and giving directions in Spanish. Attachment H-8 lists the responses to this item.

The bilingual teachers were asked if the monolingual teachers had implemented any SFL-related activities in their classrooms. Of the teachers answering this item, 72% reported that the monolingual teachers had implemented activities. The activities mentioned included cultural events and vocabulary reinforcement. Attachment H-9 lists the responses to this item.

The final question in the survey concerned parental involvement in the Spanish as a Foreign Language program. Only 20% of the teachers surveyed reported any parental involvement. Parental involvement cited included vocabulary reinforcement, observation of SFL instruction, and help with games, crafts, and field trips. Attachment H-10 lists the responses to this item.

#### Spanish as a Foreign Language Staff Development Questionnaire

Individuals who participated in the January 14-15, 1983 SFL staff development sessions were surveyed to assess their opinions of the training they received. Of the 68 questionnaires distributed, 62 were returned, for a return rate of 91%. At the request of the instructional coordinator involved in this program, results from the survey were separated into two groups: bilingual participants, and monolingual participants.

#### Bilingual Participants

Of the individuals returning the staff development questionnaire, 24 were bilingual. The results from the surveys they returned are found in Figures H-2, H-3, H-4, and H-5.

When asked about the pace of the sessions, half (50%) of the bilingual participants reported that the pace was just right. Over a third (37.5%)

felt that the pace was too slow, while only 12.5% reported that the pace was too fast.

Participants were asked how beneficial their attendance at the staff development had proved to be. Over half (54.2%) of the bilingual participants reported that their attendance at the sessions had proved to be beneficial. An equal percentage (20.8%) reported that they either felt neutral about this subject or felt their attendance at the sessions had proved to be of little benefit. Only one bilingual participant (4.2%) reported that their attendance had proved to be very beneficial.

When asked about the organization of the staff development sessions, 41.7% of the bilingual participants stated that the organization was adequate, while 16.7% reported that the organization was poor. Over a third (37.5%) felt that the organization had been good while only one participant (4.2%) reported that the organization at the sessions was excellent.

Participants were also surveyed about the interest level of the ideas and activities presented at the sessions. Almost half (45.8%) of the bilingual participants reported that they had found the ideas and activities to be interesting. An equal percentage (16.7%) of the persons responding felt that the ideas and activities presented were either dull or very interesting. The remaining participants (20.8%) were neutral about this item.

Participants completing the questionnaire were given an opportunity to make additional comments about the staff development sessions. Comments included suggestions for improving the training, as well as a number of miscellaneous remarks. The comments were overwhelmingly negative. See Attachment H-11 for a complete listing of comments.

#### Monolingual Participants

Of the individuals returning the staff development questionnaire, 38 were monolingual. The results from the surveys they returned can be found in Figures H-2, H-3, H-4, and H-5.

When asked about the pace of the sessions, almost half (45.9%) of the participants felt the pace was just right. Almost a third (32.4%) reported that the pace was slow. Of the remaining respondents, 10.8% felt the pace was too slow, 8.1% felt the pace was fast, and 2.7% felt the pace was too fast.

Participants were asked how beneficial their attendance at the staff development sessions had proved to be. Of the monolingual participants responding, 40.5% felt that their attendance was beneficial. Over a fifth (21.6%) felt neutral about this item. Over a third (35.1%) reported that their attendance had been of little benefit (29.7%) or of no benefit (5.4%). Only one participant (2.7%) felt that attendance at the sessions had been very beneficial.

When asked about the organization of the staff development sessions, 41.7% of the monolingual participants felt it had been good, while 36.1% reported it had been adequate. Of the remaining respondents, 13.9% felt the organization was poor, 5.5% felt the organization was excellent, and 2.7% felt the organization was very poor.

Participants were also surveyed about the interest level of the ideas and activities presented at the sessions. Half (50.0%) of the monolingual participants found the ideas and activities interesting, while 22.2% found them dull. Of the remaining participants, 16.7% felt neutral about the ideas and activities and 11.1% reported that they were very interesting.

Participants completing the questionnaire were given an opportunity to make additional comments about the staff development sessions. Remarks were categorized into negative and positive comments, as well as a number of miscellaneous comments. Again, the comments were overwhelmingly negative. See Attachment H-12 for a complete listing of comments.

#### Combined Results

A chi square test (see Glass and Stanley, 1970, p. 329) was used to determine whether the staff development ratings given by the monolingual and bilingual teachers differed significantly. The results presented in Figures H-2 through H-5 indicate that there was no meaningful difference between the groups in their responses to the staff development.

#### Reference

Glass, G. V. & Stanley, J. C. Statistical methods in education and psychology. Englewood Cliffs, New Jersey: Prentice-Hall, 1970.

ITEM	YES		NO	
	NUMBER	%	NUMBER	%
Have you modified the instructional activities outlined in the Segal teacher's manual?	16	73	6	27
Have you extended SFL-related activities (such as vocabulary reinforcement or cultural activities) throughout the day?	19	90	2	10
Have the monolingual teachers implemented any SFL-related activities (such as vocabulary reinforcement or cultural activities) in their classrooms?	13	72	5	38
Has there been any parental involvement in this program?	4	20	16	80

Figure H-1. RESPONSES TO ITEMS ON SFL TEACHER QUESTIONNAIRE.

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ITEM	GROUP	TOO SLOW		SLOW		JUST RIGHT		FAST		TOO FAST	
		NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
The pace of the sessions was:	Bilingual (N=24)	0	0.0	9	37.5	12	50.0	3	12.5	0	0.0
	Monolingual (N=37)	4	10.8	12	32.4	17	45.9	3	8.1	1	2.7
		$\chi^2=4.05$									
		$p < .70$									

Figure II-2. RESPONSES TO ITEM CONCERNING PACE OF SESSIONS.

ITEM	GROUP	OF NO BENEFIT		OF LITTLE BENEFIT		NEUTRAL		BENEFICIAL		VERY BENEFICIAL	
		NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
My attendance at this staff development proved:	Bilingual (N=24)	0	0.0	5	20.8	5	20.8	13	54.2	1	4.2
	Monolingual (N=37)	2	5.4	11	29.7	8	21.6	15	40.5	1	2.7
		$\chi^2=2.42$									
		$p < .80$									

Figure II-3. RESPONSES TO ITEM CONCERNING BENEFIT OF ATTENDING SESSIONS.

ITEM	GROUP	VERY POOR		POOR		ADEQUATE		GOOD		EXCELLENT	
		NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
The organization of the staff development was:	Bilingual (N=24)	0	0.0	4	16.7	10	41.7	9	37.5	1	4.2
	Monolingual (N=36)	1	2.7	5	13.9	13	36.1	15	41.7	2	5.5
$\chi^2 = .9747$											
$p < .95$											

Figure II-4. RESPONSES TO ITEM CONCERNING STAFF DEVELOPMENT ORGANIZATION.

ITEM	GROUP	VERY DULL		DULL		NEUTRAL		INTERESTING		VERY INTERESTING	
		NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
The ideas and activities presented were:	Bilingual (N=24)	0	0.0	4	16.7	5	20.8	11	45.8	4	16.7
	Monolingual (N=36)	0	0.0	8	22.2	6	16.7	18	50.0	4	11.1
$\chi^2 = .7436$											
$p < .95$											

Figure II-5. RESPONSES TO ITEM CONCERNING IDEAS AND ACTIVITIES PRESENTED.

H-10

The purpose of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) component is to see how the program is being implemented at each campus. Part of the evaluation is to survey the bilingual teachers involved in the program to determine how they have organized SFL instruction in their classrooms. Please complete the following table and circle the most appropriate response to the questions below.

For each group that received SFL instruction from you, complete the following information:

GRADE	GROUP SIZE	NO. OF SFL INSTRUCTIONAL PERIODS PER WEEK	NO. OF MINUTES PER SFL INSTRUCTIONAL PERIOD

1. Have you modified the instructional activities outlined in the Segal teacher's manual?

YES NO

If YES, how was it modified, and why?

2. Have you extended SFL-related activities (such as vocabulary reinforcement or cultural activities) throughout the day?

YES NO

If YES, what have you done?

511



3. Have the monolingual teachers implemented any SFL-related activities (such as vocabulary reinforcement or cultural activities) in their classrooms?

YES

NO

If YES, what activities were implemented?

4. Has there been any parental involvement in this program?

YES

NO

If YES, describe how parents were involved in this program.

512

Part of the evaluation of the Chapter 2 Spanish as a Foreign Language program is to survey individuals who participated in staff development activities to assess their opinions of the training they received. The following statements concern the staff development sessions on the Asher method held January 14-15, 1983 at Baker. Please read the statements and circle the most appropriate response.

Are you bilingual?                      YES                      NO

If you did not attend these staff development sessions, check the box and return this form incomplete.

		<u>Very Poor</u>	<u>Poor</u>	<u>Adequate</u>	<u>Good</u>	<u>Excellent</u>
1.	The organization of the staff development was:	1	2	3	4	5
		<u>Very Dull</u>	<u>Dull</u>	<u>Neutral</u>	<u>Interesting</u>	<u>Very Interesting</u>
2.	The ideas and activities presented were:	1	2	3	4	5
		<u>Too Slow</u>	<u>Slow</u>	<u>Just Right</u>	<u>Fast</u>	<u>Too Fast</u>
3.	The pace of the sessions was:	1	2	3	4	5
		<u>Of No Benefit</u>	<u>Of Little Benefit</u>	<u>Neutral</u>	<u>Beneficial</u>	<u>Very Beneficial</u>
4.	My attendance at this staff development proved:	1	2	3	4	5

Please use the space below to make any additional comments you have about this staff development session.

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April 25, 1983

TO: Principals Addressed

FROM: David Doss

SUBJECT: Spanish as a Foreign Language Teacher Questionnaires and Service Report

Part of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to survey individuals who participated in the January 14-15, 1983 staff development on the Asher method to assess their opinions of the training they received. Bilingual teachers will also receive questions concerning SFL instruction in their classrooms.

In addition to the questionnaire, all classroom teachers will receive a service report to be used to identify those students receiving SFL instruction. This computer-generated printout will list all students in each teacher's classroom.

Teachers in your school will be receiving a copy of the questionnaire and service report during the week of April 25-29, 1983. A copy of each of the forms is enclosed. If you have any questions concerning these forms, give me a call at 458-1227.

Approved: *Freda M. Hillyer*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Paola Zinnecker  
Ana Salinas

DAD:LHM:ihm

514

H-14

April 25, 1983

TO: Teachers Addressed  
FROM: David Doss *DD*  
SUBJECT: Spanish as a Foreign Language Teacher Questionnaire and  
Service Report

The purpose of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to find out how the program is being implemented at each campus. Part of the evaluation is to survey the bilingual teachers involved in the program to see how they have organized SFL instruction in their classrooms. The questionnaire also includes items concerning the staff development on the Asher method you participated in January 14-15, 1983 at Baker.

The evaluation of the SFL program also includes a service report which is used to identify those students receiving SFL instruction. Following the questionnaire is a printout to be used to identify the students in your class who have received SFL instruction.

Please complete the questionnaire and service report and return them through the school mail as soon as possible to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

Approved: *Frederic M. Holley*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

DAD:LHM:ihm

515

April 25, 1983

TO: Persons Addressed  
FROM: David Doss *DD*  
SUBJECT: Spanish as a Foreign Language Staff Development Questionnaire

Part of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to survey individuals who participated in staff development activities to assess their opinions of the training they received. The items on the attached questionnaire concern the staff development on the Asher method you participated in January 14-15, 1983 at Baker.

Please complete the questionnaire and return it through the school mail as soon as possible to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

Approved: *Frederick M. Hollen*  
Director, Office of Research and Evaluation

Approved: *Ruth Mae Allister*  
Assistant Superintendent, Elementary Education

DAD:LHM:lim

516

April 25, 1983

TO: Teachers Addressed  
FROM: David Doss *DD*  
SUBJECT: Spanish as a Foreign Language Teacher Questionnaire and Service Report

Part of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to survey teachers who participated in staff development activities to assess their opinions of the training they received. The items on the attached questionnaire concern the staff development on the Asher method you participated in January 14-15, 1983 at Baker.

Also part of the evaluation is a service report which is used to identify those students receiving SFL instruction. Following the questionnaire is a printout to be used to identify the students in your class who have received SFL instruction (either from you or another teacher).

Please complete the questionnaire and service report and return them through the school mail as soon as possible to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

Approved: *Frank M. Holley*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

DAD:LHM:lhm

82.45

Attachment H-7.

RESPONSES TO ITEM ONE OF THE  
SFL TEACHER QUESTIONNAIRE

(Page 1 of 3)

518

H-19

Have you modified the instructional activities outlined in the Segal teacher's manual?

If YES, how was it modified, and why?

Response	Number Responding
CHANGES IN VOCABULARY	6
1. I have changed some of the vocabulary words to fit the Spanish terms that are used in this area. Example (mejilla-cachete, barriga-estomago, etc.).	4
2. I took the basic vocabulary and added more sentence patterns.	
VARIED PACE	3
1. I went slower with the lessons, and did more repetition. I extended the action only lessons.	1
2. We took our time, we introduced new words (verbs), we have learned songs, read folktales and enjoyed ourselves.	1
3. We used a variety of methods within each lesson. This keeps the pace quick and interesting but informative.	1
INCLUDED MANIPULATIVE OBJECTS	2
1. I had to use manipulatives to make the lesson more meaningful and enjoyable to the children. Ex. I used the small plastic bears from one of our games and asked the children to help the bears do the commands. Therefore, each child would hold a plastic bear and would touch the part of the body that I asked. (They enjoyed this activity and I got better results.)	1
2. Included more manipulative objects--to increase vocab. (labels) for some children who were ready to do more (go faster).	1

519



## MISCELLANEOUS

5

1. Changed some instructions because they were too dangerous for fourth graders. 1
2. Sometimes I ask students to "tell" instead of do when props are not available--also some students are shy and don't want to act out a command--they prefer to "say" it. 1
3. I introduced cultural aspects such as songs, stories to "spice" up and add interest. 1
4. One day a week is devoted to other activities, games like bingo, color games, etc. 1
5. Not using the Segal manual. Using the manual designed for early childhood (Asher method): Format is much easier to follow and preferred the long structure. 1

TOTAL RESPONSES

16

SURVEYS WITH NO RESPONSE

6

520

Attachment H-8.

RESPONSES TO ITEM TWO OF THE  
SFL TEACHER QUESTIONNAIRE

(Page 1 of 4)

521

H-23

*Have you extended SFL-related activities (such as vocabulary reinforcement or cultural activities) throughout the day?*

*If YES, what have you done?*

Response	Number Responding
<b>CULTURAL ACTIVITIES</b>	
	10
1. I have taught children songs, dances, had food tasting parties, etc.	2
2. Music, social studies activities, field trips-- El Taller, Eclectic exhibit, Cinco de Mayo. Lang. arts--using vocabulary knowledge coupled with English skills to read Spanish words and sentences.	1
3. I did dancing and units on Mexican culture.	1
4. Cinco de Mayo y 16 de Septiembre.	1
5. Added games, stories, art.	1
6. Taught them songs by Carol Perkins: 1. Las Manzanas, 2. La Luz Roja, 3. Cinco Elefantitos, 4. Cascabels, 5. Naranja dulce. Taught them to dance "La raspa".	1
7. Cultural activities are on-going. We have a first grade level cultural arts fair in April. I do SFL instruction with the whole class when there is time.	1
8. Cultural unit of Mexico, herbs, using Spanish whenever possible for object names, using dichos (proverbs) and translating them to an applicable classroom situation. Using Spanish with my Spanish dominant children.	1
9. At Blackshear we have our own cultural festival in honor of Cinco de Mayo. In my classes I have taught Spanish songs, played Spanish games, presented bilingual plays and read Mexican folklore.	1

## VOCABULARY

6

1. Used All-Purpose Photo Library pics to build Spanish vocabulary. Labeled areas/objects in room in Spanish (Spanish words on sentence strips). Routinely done days of the week in Spanish. Used Eddie Cano's "A Taste of Education" album as vocabulary enrichment/reward. 1
2. I have taught the alphabet, their sounds and reading of simple words, phrases. We have also had the school participate in cultural activities that include cooking, dancing, Mexican arts and crafts. 1
3. Alphabet sounds, Mexican mini unit, vocabulary such as shapes, colors, numbers, objects. 1
4. Simple Spanish vocabulary is up on boards. 1
5. Numbers, years, months, oral repetition, games, alphabet, blending sounds. 1
6. Vocabulary reinforcement. For instance, when getting ready to recite the pledge of Allegiance, I would say in Spanish, "Pónganse de pie. Pónganse la mano derecha en el pecho." I also improvised situations to reinforce the vocabulary they had difficulty with. (But only with my classroom children, not with the other two K and Pre-K children). I also included simple nursery rhymes in Spanish. Ex: (Brother John's Melody)  
"Martinillo, Martinillo, duermes tú, duermes tú?  
Suena la campana, suena la campana, din, don, din,  
don, din, don."  
(I gave jingle bells to the children to ring upon heavy the words "suena la campana..."). We also had cultural activities. The most outstanding ones were the "5 de Mayo" activities. The children learned the song "De Colores," made a Mexican flag and marched with it in a parade inside and outside of school singing the song "De Colores" while waving a streamer of different colors. They also saw filmstrips about Mexican costumes and traditions, arts and crafts, etc. Whenever Mexican food was being served in the cafeteria (such as tacos, burritos, etc.) we talked about Mexican foods. 1

---

DIRECTIONS AND COMMANDS

---

2

1. I have tried to continue to give directions in Spanish throughout the day during non-instructional times, such as when we lined up to go somewhere, lunchtime, etc. 1
2. The commands are reinforced in my class. I have a bilingual class and Spanish is a part of my regular education. Cultural activities are reinforced through art, and science and social studies units. 1

---

MISCELLANEOUS

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1

1. We played once a week a Spanish game called "Loteria." 1

TOTAL RESPONSES

19

SURVEYS WITH NO RESPONSE

3

521

Attachment H-9.

RESPONSES TO ITEM THREE OF THE  
SFL TEACHER QUESTIONNAIRE

(Page 1 of 3)

525

H-27

*Have the monolingual teachers implemented any SFL-related activities (such as vocabulary reinforcement or cultural activities) in their classrooms?*

*If YES, what activities were implemented?*

Response	Number Responding
<b>CULTURAL ACTIVITIES</b>	<b>8</b>
1. Cinco de Mayo and 16 de Septiembre.	2
2. Teachers were given a packet of cultural activities, including holidays, outstanding Mexican-Americans, etc.	1
3. Studied Mexico, sang songs at resthomes for elderly, cooked foods of Mexico, went to a tortilla factory.	1
4. They participated in the cultural activities mentioned and extended teaching about the "Cinco de Mayo" celebration.	1
5. There are cultural units in social studies.	1
6. Cultural activities, but in kindergarten the monolingual teachers use the Asher Method in English.	1
7. The cultural festival was presented by many teachers who were not bilingual.	1
<b>VOCABULARY REINFORCEMENT</b>	<b>3</b>
1. Vocabulary, Mexico unit, schoolwide cultural activities.	1
2. Vocabulary was displayed, Cinco de Mayo activities.	1
3. Vocabulary lists displayed; cultural bulletin boards. Oral language reinforcements.	1
<b>MISCELLANEOUS</b>	<b>3</b>
1. They showed filmstrips and played the songs that we selected (on record player and/or tape recorder).	1

- |   |   |
|---|---|
| 2. I am self contained.                             | 1 |
| 3. Don't know, they're filling out their own forms. | 1 |

TOTAL RESPONSES	14
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SURVEYS WITH NO RESPONSE	8
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82.45

Attachment H-10.

RESPONSES TO ITEM FOUR OF THE  
SFL TEACHER QUESTIONNAIRE

(Page 1 of 2)

528

H-31

*Has there been any parental involvement in this program?*

*If YES, describe how parents were involved in this program.*

<u>Response</u>	<u>Number Responding</u>
REINFORCE LESSONS	2
1. Have made and played games. Reinforced lessons.	1
2. Parents are made aware and help reinforce language.	1
MISCELLANEOUS	2
1. Observed Spanish being taught. Parents would ask questions so they would know what is happening in the classroom. Helped with field trips.	1
2. Making Mexican flowers.	1
TOTAL RESPONSES	4
SURVEYS WITH NO RESPONSE	18

529

Attachment H-11.

COMMENTS ABOUT STAFF DEVELOPMENT  
SESSION FROM BILINGUAL TEACHERS

(Page 1 of 3)

530

H-33

Response	Number Responding
SUGGESTIONS	7

1. I felt that two days of the staff development for SFL was too long. All the activities and presentations should have been combined into one day. Why was our entire faculty required to go? It sat very poorly with many thus starting our program off on a sour note!! 1
2. I would have liked to have seen a continuation of some kind of meeting of all schools who participated and have been able to share among us all ideas and lessons that worked for each one. "A Sharing Session." 1
3. The Bilingual and Monolingual should all meet together (at all times) so that all are made aware of each person's role. 1
4. I would rather we had time to develop measurement instruments and checklists to go along with a scope and sequence. We could have also begun work on developing techniques for transferring English readers to beginning Spanish reading. 1
5. The participants' needs were not met. Goals and objectives were never presented. A high frustration level of the participants was caused by the lack of leadership in the program. Questions were never answered. I believe that this is a good program but as implementers we need support. We need to get information as to materials, structure, role/behavior, etc. 1
6. I think AISD personnel in charge of these sessions should be thoroughly familiar with materials (guide) to be used and not just have an "idea" of what it's like based on other TPR programs.  
  
Need more in-depth discussion of lessons with analysis and possible modifications that may be needed with different groups. All schools should be doing the same thing; however, your ethnic/language ratios won't be alike--we need alternatives/suggestions for things to do with these different groups. 1
7. The use of a needs assessment tool could have been useful. Not all participants were at the same knowledge and skill level. The sessions were weakly designed with inadequate objectives. There were no

practice and evaluation components. The most effective tool of the session was viewing the film. This is what presented the actual instructional element. I found the session to be very lacking and unprofessional.

1

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 INFORMATION ALREADY IMPLEMENTED
 

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2

- 1: It's very tedious to attend these workshops when I have taught for several years and the same things are told to us. This is like teaching a child addition with regrouping in the 2nd, 3rd, 4th, 5th, and 6th--soon he will tune us out. This happens to me at workshops. Where are the ideas this progressive school district has to offer? 1
- 2: Most of the information given me already had been implemented in our classrooms. Not enough individualization took place between schools. We all listened to the same "stuff" for the most part. Whether or not it applied! 1

---

 MISCELLANEOUS
 

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5

- 1: I did not do the SSOL instruction. One teacher from our grade level was selected. 1
- 2: It's a long time; I forgot the details. 1
- 3: I thought the staff development sessions were very good. 1
- 4: It was just fine. 1
- 5: One session (developing oral language) was very useful to me. 1

TOTAL RESPONSES

14

SURVEYS WITH NO RESPONSE

10

Attachment H-12.

COMMENTS ABOUT STAFF DEVELOPMENT  
SESSIONS FROM MONOLINGUAL TEACHERS

(Page 1 of 4)

Response	Number Responding
<hr/>	
NEGATIVE COMMENTS ABOUT SESSIONS	7
<hr/>	
1. We should have been able to make activities or centers for our class. Sitting and listening to someone talk about the text that we cannot even use is a big waste of time.	1
2. I was there only on January 15 (Saturday) a.m. Okay but best I remember seems the afternoon fizzled--wasn't this the day each school got together in the p.m. to discuss what we were going to do and for some of us--what it was all about.	1
3. The activities were too advanced and fast for a non-Spanish speaker.	1
4. Develop materials at sessions. Let teachers make preparations!! <u>and materials</u> . Lectures are DULL and worthless!	1
5. Friday's session was very dull. Saturday's sessions were very interesting. Both presentors were excellent and beneficial.	1
6. The payment was very slow and I am <u>very</u> reluctant to go to any more training sessions.	1
7. Poor communication as to who was to attend prior to meeting. Non-bilingual teachers omitted from prior information and then "told" to attend. Biased opinions expressed throughout. Manuals were not given to all in attendance. Very poorly coordinated--Most effective was the session explaining the actual teaching of Spanish.	1
<hr/>	
FELT SESSIONS WERE TOO LONG	4
<hr/>	
1. Did not feel it needed to be a two-day workshop. The ½ day to check out materials from the center was a complete waste of time. The other things presented for the monolingual teacher could have been condensed into a 3-hour workshop. The man who talked from UT could have said what he had to say in ½ hour. The Asher method could have been presented for a shorter time. I was almost turned against the program because those days were basically wasted.	1

2. Everything presented in those two days could have been condensed into  $\frac{1}{2}$  day. I was very disappointed in having to go and it turned out to be a waste of time. It is unfair that we must wait until May to get paid for something we took time to do in January. 1
3. The entire instruction could have been presented in  $\frac{1}{2}$  day. 1
4. Two days was too much. One and one-half was planned. One-half day was wasted (the last  $\frac{1}{2}$  day). The lady (former language teacher at Austin high) was superior. 1

## POSITIVE COMMENTS ABOUT SESSIONS

2

1. I only attended on Saturday because I had to fulfill my Special Education requirement on Friday. I felt that the young man who taught us Spanish on Saturday did an excellent job and I wish we could have more training like this. 1
2. The two parts I thought were of value were the first session when we were put in a classroom atmosphere. The other session I felt was of value was when we were taught a short course in Spanish. 1

## INFORMATION ALREADY PRESENTED

2

1. It was my experience that many of the ideas presented have been a part of my instruction for at least ten (10) years or more, we could benefit more if another session would follow shortly so we would not lose new ideas gained. 1
2. The staff development sessions were very good. I felt I did not learn anything however, because I had taken summer school courses in the same subject area. These courses were offered by AISD and Southwest Texas State University and I was disappointed that I had to sit through a repeat of this instruction.

## MISCELLANEOUS

1

1. I was only able to attend the first day. 1



82.45

Attachment H-12  
(Page 4 of 4)

TOTAL RESPONSES

16

SURVEYS WITH NO RESPONSE

22

536

H-40

Chapter 2--Discretionary

Appendix I

SPANISH AS A FOREIGN LANGUAGE STAFF DEVELOPMENT SIGN-IN SHEET

**INSTRUMENT DESCRIPTION: SFL Staff Development Sign-In Sheet****Brief Description of the instrument:**

The staff development sign-in sheet provided a space for the participant's name, school, grade or special area taught, and whether the participant is bilingual or has bilingual certification.

**To whom was the instrument administered?**

To teachers attending the Spanish as a Foreign Language staff development sessions.

**How many times was the instrument administered?**

Twice.

**When was the instrument administered?**

January 14-15, 1983 and January 22, 1983.

**Where was the instrument administered?**

Baker Learning Resource Center.

**Who administered the instrument?**

Self-administered.

**What training did the administrators have?**

N/A.

**Was the instrument administered under standardized conditions?**

N/A.

**Were there problems with the instrument or the administration that might affect the validity of the data?**

None that were identified.

**Who developed the instrument?**

The Office of Research and Evaluation.

**What reliability and validity data are available on the instrument?**

None.

**Are there norm data available for interpreting the results?**

None.

SPANISH AS A FOREIGN LANGUAGE STAFF  
DEVELOPMENT SIGN-IN SHEET

Purpose

Information from the Spanish as a Foreign Language (SFL) Staff Development Sign-In Sheet was used to answer the following decision and evaluation questions from the Chapter 2 -- Discretionary Evaluation Design for 1982-83.

Decision Question D2: Should the Chapter 2 -- Discretionary Spanish as a Foreign Language Component be continued, expanded, or revised?

Evaluation Question D2-1: How did the Spanish as a Foreign Language Component differ from campus to campus with regards to the following:

- f. Teachers receiving Spanish as a Foreign Language training.
- h. Number of teachers trained.

Procedure

A sign-in sheet was created to collect the following information from the teachers attending the SFL staff development:

- Date of staff development.
- Name.
- School.
- Grade or Special Area.
- Bilingual status.
- Bilingual certification status.

Teachers attending the January 14, 1983 and January 15, 1983 staff development sessions were asked to sign in as they arrived for each session (see Attachment I-1). An optional half-day workshop was held January 22, 1983. Staff from Chapter 2 SFL schools attending this session completed a sign-in sheet developed by an instructional coordinator (see Attachment I-2).

From the sign-in sheets, the following information was collected:

- Number of teachers present at each session (see Figure I-1).
- Number of teachers from each school present at each session (see Figure I-1).
- Number of teachers in each grade or special area attending sessions (see Figure I-2).

- Number of teachers in each grade or special area from each school attending sessions (see Figures I-3, I-4, and I-5).
- Number of bilingual teachers present at each session (see Figure I-6).
- Number of teachers with bilingual certification present at each session (see Figure I-7).

Participants at the January 22, 1983 staff development session were not asked if they were bilingual or if they had bilingual certification.

### Results

The number and type of teachers attending the staff development sessions held January 14-15, 1983 varied by campus. Almost every teacher (98.4%) from Blackshear attended, while only 10.3% of the teachers from Oak Springs were present. Two-thirds (66.7%) of the teachers from Rosedale and more than three-fourths (77.1%) of the teachers from Sanchez attended. The difference in attendance rates was due in part to a difference in understanding of which teachers should participate in staff development activities. Principals at Blackshear, Rosedale, and Sanchez asked for a total staff commitment because of the understanding that all teachers should attend. At Oak Springs, the principal asked only the bilingual teachers to attend, because she believed the monolingual teachers would not benefit from the training. Differences in attendance rates for January 14, 1983 and January 15, 1983 occurred because teachers were required to attend a different staff development session, or had previous commitments.

From Oak Springs, one first grade teacher, one second grade teacher, and one third grade teacher attended the January 14-15, 1983 sessions. Classroom teachers, as well as Music, Physical Education, Special Education, and Chapter I teachers from Blackshear, Rosedale, and Sanchez attended one or both of these sessions. In addition to these special area teachers, the counselor and librarian from Blackshear attended both sessions. The Sanchez librarian attended the January 15, 1983 session.

Of the participants attending the January 14, 1983 session 39% were bilingual, while 61% were not bilingual. Of the bilingual participants attending this session, 23% had bilingual certification, 74% did not have bilingual certification, and 3% did not supply this information. At the January 15, 1983 session, 40% of the participants were bilingual, and 60% were not bilingual. Of the bilingual participants attending this session, 25% had bilingual certification, 73% did not, and 2% did not supply this information. Staff attending the January 22, 1983 session were not asked if they were bilingual or if they had bilingual certification.

A fourth grade teacher from Graham, which is not a Chapter 2 Spanish as a Foreign Language school, attended the January 14-15, 1983 sessions. At a meeting held December 8, 1982, third grade teachers from Sanchez (which is paired with Graham) expressed concern about the lack of follow-up SFL instruction at Graham. As a result, the principal at Graham was contacted, and the fourth grade teacher was invited to participate in the SFL staff development sessions.

The January 22, 1983 staff development session was an optional activity for Chapter 2 SFL school staff. The half day session was a presentation by Richard Santos on the history of Tejano music. The number and type of teachers attending this session varied by campus (see Figure I-5). Participants included classroom teachers, music teachers, Chapter I and Migrant Chapter I teachers, a speech pathologist, three aides, and a secretary.







SCHOOL	NO. ATTENDING 1-14-83 SESSION	NO. ATTENDING 1-15-83 SESSION	NO. ATTENDING 1-22-83 SESSION
Blackshear	31	32	0
Oak Springs	3	3	4
Rosedale	11	9	8
Sanchez	16	22	7
Graham	1	1	0
TOTAL	62	67	19

Figure I-1. NUMBER OF TEACHERS ATTENDING STAFF DEVELOPMENT SESSIONS.

82.45

GRADE OR SPECIAL AREA	NO. ATTENDING 1-14-83 SESSION	NO. ATTENDING 1-15-83 SESSION	NO. ATTENDING 1-22-83 SESSION
Prekindergarten	2	2	-
Kindergarten	9	9	2
First Grade	5	5	2
Second Grade	4	4	1
2nd/3rd Grade	1	1	-
Third Grade	2	4	2
Fourth Grade	8	8	1
Fifth Grade	7	8	1
5th/6th Grade		1	-
Sixth Grade		6	-
Music	3	2	2
Physical Education	1	1	-
Special Education	5	6	-
Chapter 1	5	7	2
Counselor	1	1	-
Librarian	1	2	-
Migrant Chapter 1	-	-	1
Speech Pathologist	-	-	1
Aide	-	-	2
Aide (K)	-	-	1
Secretary	-	-	1
TOTAL	62	67	19

Figure I-2. NUMBER OF TEACHERS IN EACH GRADE OR SPECIAL AREA ATTENDING STAFF DEVELOPMENT SESSIONS.

GRADE OR SPECIAL AREA	NO. OF TEACHERS ATTENDING 1-14-83 SESSION				
	BLACKSHEAR	OAK SPRINGS	ROSEDALE	SANCHEZ	GRAHAM
Prekindergarten	1	-	-	1	-
Kindergarten	3	-	2	4	-
First Grade	-	1	-	4	-
Second Grade	-	1	-	3	-
2nd/3rd Grade	-	-	-	1	-
Third Grade	-	1	-	1	-
Fourth Grade	5	-	2	-	1
Fifth Grade	5	-	2	-	-
5th/6th Grade	-	-	1	-	-
Sixth Grade	5	-	2	-	-
Music	1	-	1	1	-
Physical Education	1	-	-	-	-
Special Education	5	-	-	-	-
Chapter 1	3	-	1	1	-
Counselor	1	-	-	-	-
Librarian	1	-	-	-	-
TOTAL	31	3	11	16	1

Figure I-3. NUMBER OF TEACHERS ATTENDING JANUARY 14, 1983 SESSION  
BY GRADE OR SPECIAL AREA.

GRADE OR SPECIAL AREA	NO. OF TEACHERS ATTENDING 1-15-83 SESSION				
	BLACKSHEAR	OAK SPRINGS	ROSEDALE	SANCHEZ	GRAHAM
Prekindergarten	1	-	-	1	-
Kindergarten	3	-	2	4	-
First Grade	-	1	-	4	-
Second Grade	-	1	-	3	-
2nd/3rd Grade	-	-	-	1	-
Third Grade	-	1	-	3	-
Fourth Grade	5	-	2	-	1
Fifth Grade	6	-	2	-	-
5th/6th Grade	-	-	1	-	-
Sixth Grade	5	-	1	-	-
Music	1	-	-	1	-
Physical Education	1	-	-	-	-
Special Education	5	-	-	1	-
Chapter 1	3	-	1	3	-
Counselor	1	-	-	-	-
Librarian	1	-	-	1	-
TOTAL	32	3	9	22	1

Figure I-4: NUMBER OF TEACHERS ATTENDING JANUARY 15, 1983 SESSION  
BY GRADE OR SPECIAL AREA.

GRADE OR SPECIAL AREA	NO. OF TEACHERS ATTENDING 1-22-83 SESSION				
	BLACKSHEAR	OAK SPRINGS	ROSEDALE	SANCHEZ	GRAHAM
Kindergarten	-	-	-	2	-
First Grade	-	1	-	1	-
Second Grade	-	1	-	-	-
Third Grade	-	1	-	1	-
Fourth Grade	-	-	1	-	-
Fifth Grade	-	-	1	-	-
Music	-	-	1	1	-
Chapter 1	-	-	1	1	-
Migrant Chapter 1	-	-	-	1	-
Speech Pathologist	-	1	-	-	-
Aide	-	-	2	-	-
Aide (K)	-	-	1	-	-
Secretary	-	-	1	-	-
TOTAL	0	4	8	7	0

Figure I-5. NUMBER OF TEACHERS ATTENDING JANUARY 22, 1983 SESSION BY GRADE OR SPECIAL AREA.

ARE YOU BILINGUAL?	NO. ATTENDING 1-14-83 SESSION	NO. ATTENDING 1-15-83 SESSION
Bilingual	24 (39%)	27 (40%)
Not Bilingual	38 (61%)	40 (60%)

Figure I-6. NUMBER OF BILINGUAL TEACHERS AND NON-BILINGUAL TEACHERS ATTENDING STAFF DEVELOPMENT SESSIONS.

DO YOU HAVE BILINGUAL CERTIFICATION?	NO. ATTENDING 1-14-83 SESSION	NO. ATTENDING 1-15-83 SESSION
YES	14 (23%)	17 (25%)
NO	46 (74%)	49 (73%)
UNKNOWN	2 (3%)	1 (2%)

Figure I-7. NUMBER OF TEACHERS WITH BILINGUAL CERTIFICATION ATTENDING STAFF DEVELOPMENT SESSIONS.

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Chapter 2--Discretionary

Appendix J

SPANISH AS A FOREIGN LANGUAGE SERVICE REPORT

**INSTRUMENT DESCRIPTION: Spanish as a Foreign Language Service Report**

**Brief Description of the instrument:**

The Spanish as a Foreign Language (SFL) Service Reports were computer-generated class rosters for each classroom teacher in the four Chapter 2 SFL schools. They were used to indicate if a student received SFL instruction. If a student did not receive SFL instruction, five codes were furnished to indicate the reason SFL instruction was not provided.

**To whom was the instrument administered?**

All classroom teachers in Chapter 2 Spanish as a Foreign Language schools (Blackshear, Oak Springs, Rosedale, and Sanchez).

**How many times was the instrument administered?**

Once.

**When was the instrument administered?**

The service reports were sent to teachers April 25, 1983.

**Where was the instrument administered?**

To teachers in their schools.

**Who administered the instrument?**

Self-administered.

**What training did the administrators have?**

Instructions for completing the report were provided.

**Was the instrument administered under standardized conditions?**

No.

**Were there problems with the instrument or the administration that might affect the validity of the data?**

None were identified.

**Who developed the instrument?**

The Office of Research and Evaluation.

**What reliability and validity data are available on the instrument?**

None.

**Are there norm data available for interpreting the results?**

No.

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## SPANISH AS A FOREIGN LANGUAGE SERVICE REPORT

### Purpose

Information from the Spanish as a Foreign Language (SFL) Service Report was used to answer the following decision and evaluation questions from the Chapter 2--Discretionary Evaluation Design for 1982-83.

Decision Question D2: Should the Chapter 2--Discretionary Spanish as a Foreign Language Component be continued, expanded, or revised?

Evaluation Question D2-1: How did the Spanish as a Foreign Language Component differ from campus to campus with regard to the following:

- d. Number of students served.

### Procedure

A computer-generated class roster was produced for each classroom teacher in the Chapter 2 Spanish as a Foreign Language (SFL) schools (see Attachment J-1). This service report was designed to be used to indicate the following:

- student received SFL instruction.
- student did not receive SFL instruction.
- reason student did not receive SFL instruction.

If a student did not receive SFL instruction, the teacher was asked to indicate the reason. The following codes were used:

- 1: Scheduling conflict (Band, Orchestra, etc.).
- 2: Need for remedial instruction.
- 3: Spanish speaking in a bilingual class.
- 4: Not enough bilingual teachers.
- 5: Other \_\_\_\_\_.

The service reports were sent to teachers through the school mail on April 25, 1983. They were mailed with the SFL Teacher Questionnaire. Since bilingual and monolingual teachers received different questionnaires, a separate memo was written to be sent with each questionnaire. Attachment J-2 is the memo sent to bilingual teachers. Monolingual teachers received the memo found in Attachment J-3.

A reminder was sent May 9, 1983 to teachers who had not returned a service report (see Attachment J-4). By May 20, 1983 all but one teacher had returned their service report. A phone call was made to that teacher's principal, and the service report was completed and returned.

The results were compiled by school for each of the categories (see Figure J-1). If a teacher did not specify why a student did not receive SFL instruction, that student was coded as "reason unknown." If a student was given a code 5 (Other), but a reason was not given, that student was coded as "reason unknown." A list of reasons given for not receiving SFL instruction (Code 5, Other) can be found in Figure J-2.

### Results

The number of students receiving Spanish as a Foreign Language instruction varied from a high of 96% at Blackshear to a low of 13% at Oak Springs. Rosedale teachers reported serving 54% of their students, and at Sanchez 52% of the students were served. Altogether, 55% of the students in the four schools were served.

The two factors which appeared to work most strongly toward limiting the number of students served were a shortage of bilingual teachers (Oak Springs) and the fact that many students were Spanish speakers in bilingual classes (Rosedale and Sanchez).

At Oak Springs only three bilingual teachers were available to teach SFL. It should be noted that the project proposal called for all students to be instructed in Spanish. However, the program was implemented to serve only nonspeakers. Other reasons for not providing SFL instruction to students can be found in Figures J-1 and J-2.

At Sanchez, only six third grade students received SFL instruction. In a note from a third grade teacher from Sanchez, it was reported that because of scheduling conflicts, student assignments, and instructional priority needs, the third grade teachers had decided not to start SFL instruction until Fall, 1983.

CATEGORY	NUMBER AND PERCENTAGE OF STUDENTS IN EACH CATEGORY									
	BLACKSHEAR		OAK SPRINGS		ROSEDALE		SANCHEZ		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Received SFL instruction	473	96	55	13	108	54	205	52	841	55
Did not receive SFL instruction because of...	19	4	381	87	92	46	189	48	681	45
Scheduling conflict	4	1	27	6	0	0	1	<1	32	2
Need for remedial instruction	4	1	48	11	17	9	31	8	100	7
Spanish speaking in a bilingual class	1	<1	59	14	50	25	84	21	194	13
Not enough bilingual teachers	0	0	246	56	11	6	22	6	279	18
Other	7	1	1	<1	8	4	25	6	41	3
Reason unknown	3	1	0	0	6	3	26	7	35	2
TOTAL	492	100	436	100	200	101*	394	100	1,522	100

\*Does not total 100 percent due to rounding error.

Figure J-1. NUMBER AND PERCENTAGE OF STUDENTS IN EACH CATEGORY BY SCHOOL.

REASON FOR NOT RECEIVING SFL INSTRUCTION*	NUMBER RESPONDING
Scheduling conflict/not enough bilingual teachers.	21
Hearing impaired.	8
Parents didn't want them to take it.	4
LEP/tutor.	3
LEP/teacher aide.	1
Bilingual/tutor.	1
Bilingual/teacher aide.	1
Absent most of the time.	1
Was in Special Science.	1
TOTAL	41

\*Reasons are listed as provided by teachers. Meanings may be unclear.

Figure J-2. REASONS GIVEN FOR NOT RECEIVING SFL INSTRUCTION.

AUSTIN INDEPENDENT SCHOOL DISTRICT  
OFFICE OF RESEARCH AND EVALUATION

SFL SERVICE REPORT

SCHOOL:

TEACHER:

LISTED BELOW ARE THE NAMES OF YOUR STUDENTS. IF A STUDENT IS NOT IN YOUR CLASS, MAKE A LINE THROUGH THAT STUDENT'S NAME. ADD THE NAMES OF OBTAINED STUDENTS AT THE BOTTOM OF THE LIST. TO THE RIGHT OF EACH NAME CHECK "RECEIVED SFL INSTRUCTION" IF A STUDENT RECEIVED ANY SFL INSTRUCTION FROM YOU OR ANOTHER TEACHER. IF A STUDENT NEVER RECEIVED SFL INSTRUCTION CHECK "DID NOT RECEIVE SFL INSTRUCTION." THEN CHOOSE THE CODE FROM THE LIST BELOW THAT BEST DESCRIBES THE REASON SFL WAS NOT PROVIDED. WRITE THAT CODE IN THE COLUMN UNDER "REASON STUDENT DID NOT RECEIVE SFL INSTRUCTION."

CODE	REASON
1	SCHEDULING CONFLICT (CAMP, ORCHESTRA, ETC.)
2	BEEN FOR REMEDIAL INSTRUCTION
3	SPANISH SPEAKING OR IN A BILINGUAL CLASS.
4	NOT ENOUGH INTELLIGENT TEACHERS.
5	OTHER

STUDENT NAME	ID#	RECEIVED SFL INSTRUCTION	DID NOT RECEIVE SFL INSTRUCTION	REASON STUDENT DID NOT RECEIVE SFL INSTRUCTION

Attachment U-1



April 25, 1983

TO: Teachers Addressed  
FROM: David Doss *DD*  
SUBJECT: Spanish as a Foreign Language Teacher Questionnaire and Service Report

The purpose of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to find out how the program is being implemented at each campus. Part of the evaluation is to survey the bilingual teachers involved in the program to see how they have organized SFL instruction in their classrooms. The questionnaire also includes items concerning the staff development on the Asher method you participated in January 14-15, 1983 at Baker.

The evaluation of the SFL program also includes a service report which is used to identify those students receiving SFL instruction. Following the questionnaire is a printout to be used to identify the students in your class who have received SFL instruction.

Please complete the questionnaire and service report and return them through the school mail as soon as possible to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

Approved: *Lauren M. Moede*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

DAD:LHM:1hm

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April 25, 1983

TO: Teachers Addressed

FROM: David Lass *DL*

SUBJECT: Spanish as a Foreign Language Teacher Questionnaire and Service Report

Part of the evaluation of the Chapter 2 Spanish as a Foreign Language (SFL) program is to survey teachers who participated in staff development activities to assess their opinions of the training they received. The items on the attached questionnaire concern the staff development on the Asher method you participated in January 14-15, 1983 at Baker.

Also part of the evaluation is a service report which is used to identify those students receiving SFL instruction. Following the questionnaire is a printout to be used to identify the students in your class who have received SFL instruction (either from you or another teacher).

Please complete the questionnaire and service report and return them through the school mail as soon as possible to:

Lauren Moede, ORE  
Adm. Bldg., Box 79

Thank you for your cooperation.

Approved: *Frank M. Holley*  
Director, Office of Research and Evaluation

Approved: *Ruth MacAllister*  
Assistant Superintendent, Elementary Education

DAD:LHM:1hm

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J-9

AUSTIN INDEPENDENT SCHOOL DISTRICT  
Office of Research and Evaluation

May 9, 1983

TO: Teachers Addressed  
FROM: David Doss *DD*  
SUBJECT: Spanish as a Foreign Language Service Report

During the week of April 25, 1983, you were sent a computer-generated service report listing the students in your class. This list was to be used to identify the students in your class who have received Spanish as a Foreign Language instruction. We have not received this information from you, as of today. Please complete the service report and return it as soon as possible through the school mail to:

Lauren Moede, ORE  
Administration Building, Box 79

If you have any questions about this report, or need an additional copy, call Lauren Moede at 458-1227.

Approved: *Paula Doss Hilly*  
Director, Office of Research and Evaluation

Approved: *Ruth Mae Allister*  
Assistant Superintendent, Elementary Education

cc: Ann Cunningham  
Ana Salinas  
Paola Zinnecker  
Chapter 2 Spanish as a Foreign Language Principals

DAD:LHM:lhm