

S

B

7

/

9

COMMITTEE REPORT

HOUSE

FURTHER: FINANCE

(5)

5/8/82

Date: _____

Mr. Speaker:

The Committee on HEALTH, EDUCATION & SOCIAL SERVICES has had SB 719

"An Act providing that the Department of Education conduct a computer network study; and providing for an effective date."

under consideration and reports it back as follows:

- do pass do not pass
- do pass with attached amendments(s)
- replace with CS for _____ same title
 new title
- and recommends _____
- AND attaches a "Letter of Intent" New Fiscal Note
- reports it back without recommendation *with attached*
- referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

[Signature]

[Signature]
CHAIRMAN

TO: Senate HESS

DATE: March 22, 1982

FILE NO:

TELEPHONE NO:

EJO

FROM: Ed Obie
Manager
ETA ProgramSUBJECT: Computer Hardware
Cost Projections

Here is a recap of the figures used for computer costs in SB 721. These figures are based on an average of twenty (20) students per classroom.

- 4500 classrooms statewide
- 1 computer per classroom
- 500 computers currently in classrooms

This would require the purchase of some 4,000 units @ \$1,700.00 average per unit. Total cost for these units would be \$6,800,000.00. On a 50/50 local match the figure is reduced to \$3,400,000.00. If we spread this over three years, we have \$1,133,333.00 per year. Given some 30 Adult Basic Education regional sites exist, we round the figure off at \$1,275,000.00 per year.

EO/dh

Computers in Education

Rationale for Use

- . 50% of jobs today are in computer-related industry
- . 1990 -- 5 of 6 occupations with most openings will be in computer-related jobs
- . Vast majority of Alaskan educators and students have little or no exposure to computers

Uses in Education

- . Computer Science, study of how the computer works, programming, and computer systems
- . Computer-assisted instruction (CAI) an instructional tool for teachers, an instructional aid for students.

CAI Research Findings

- . Higher student achievement with CAI over traditional instruction alone
- . Less student time required to complete CAI learning tasks
- . Improved attitude toward subject matter
- . Retention consistent with traditional approaches

Basic Pre-requisites for Use of Computers in Schools

- . Computer budget must include planning, courseware purchase, training costs, and equipment costs to insure a successful application.
- . Computers do not replace teachers, however, they greatly enhance teacher effectiveness, and efficient use of teacher time.
- . School districts need in-service training from outside sources -- computer technology is advancing rapidly and educators have not had an opportunity to learn about computers through their pre-service preparation.

ETA INDIVIDUALIZED STUDY BY TECHNOLOGY
COURSE STATUS FY'82

(A) 6 COURSES DEVELOPED AND TESTED:

- ALASKA HISTORY
- ENGLISH
- DEVELOPMENTAL READING
- GENERAL MATH

. 84 SITES. 1,450 STUDENTS CURRENTLY USE THESE COURSES

(B) 2 COURSES DEVELOPED AND IN PILOT TESTING:

- GENERAL SCIENCE
- U.S. HISTORY

. 8 SITES. 75 STUDENTS ARE PILOT TESTING THESE COURSES

(C) 2 COURSES UNDER PRODUCTION:

- CONSUMER EDUCATION
- HEALTH EDUCATION

• . PROJECTED FOR RELEASE SEPT. 1. 1982

• SINGLE DISK DRIVE PRESENTATION ONLY

ETA INSERVICE TRAINING
FY '82 STATUS

I. THREE PHASE INSERVICE TRAINING APPROACH

1. STATE-WIDE INSERVICE FOR KEY DISTRICT LIASON
-- (35 PARTICIPANTS)
2. DISTRICT-WIDE INSERVICE FOR TEACHERS AND
ADMINISTRATORS
(27 DISTRICTS, 600 STAFF)
3. AUDIO-TELECONFERENCE FOLLOW-UP ON REGIONAL
BASIS (3 CONFERENCES EACH REGION)

II. DISTRICT-WIDE PLANNING

1. DISTRICT-WIDE POLICY
2. 1-3 YEAR IMPLEMENTATION PLANS
(6 DISTRICTS)

III. ETA NEWSLETTER (BI-MONTHLY, 1,000 SUBSCRIBERS)

IV. CO-SPONSOR ALASKA ASSOCIATION FOR COMPUTERS IN
EDUCATION CONFERENCE

ETA SPONSORED MINNESOTA EDUCATIONAL
COMPUTING CONSORTIUM (MECC) MATERIALS
FY '82 STATUS

(A) INSTITUTIONAL LICENSE AGREEMENT

- 1) 50% USER COST REDUCTION
- 2) 250 SUPPLEMENTAL PROGRAMS

(B) MECC Use STATUS

- 1) 186 SITES
- 2) 20.000 STUDENTS

(C) ALASKA INDEX OF MECC MATERIALS

Number of
microcomputers
available
for instruction
in public
schools

1800

1500

1200

900

600

300

NUMBER
OF
COMPUTERS

1500
(estimated)

600

50

15

78-79

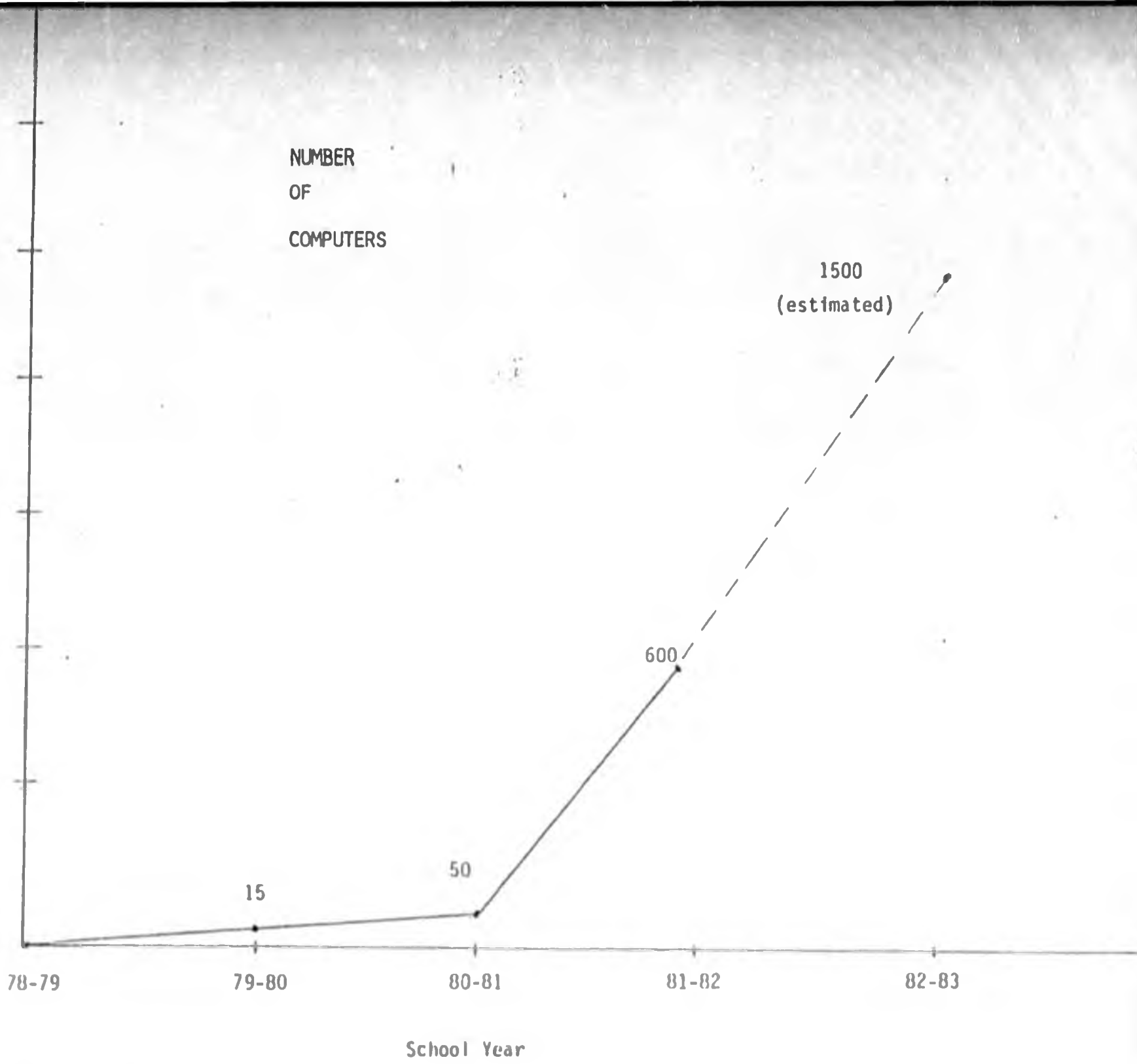
79-80

80-81

81-82

82-83

School Year



TEACHER TRAINING

Number
of Teachers
Completing
Microcomputer
Workshops
Provided
by DOE

1800

1500

1200

900

600

300

78-79

79-80

80-81

81-82

82-83

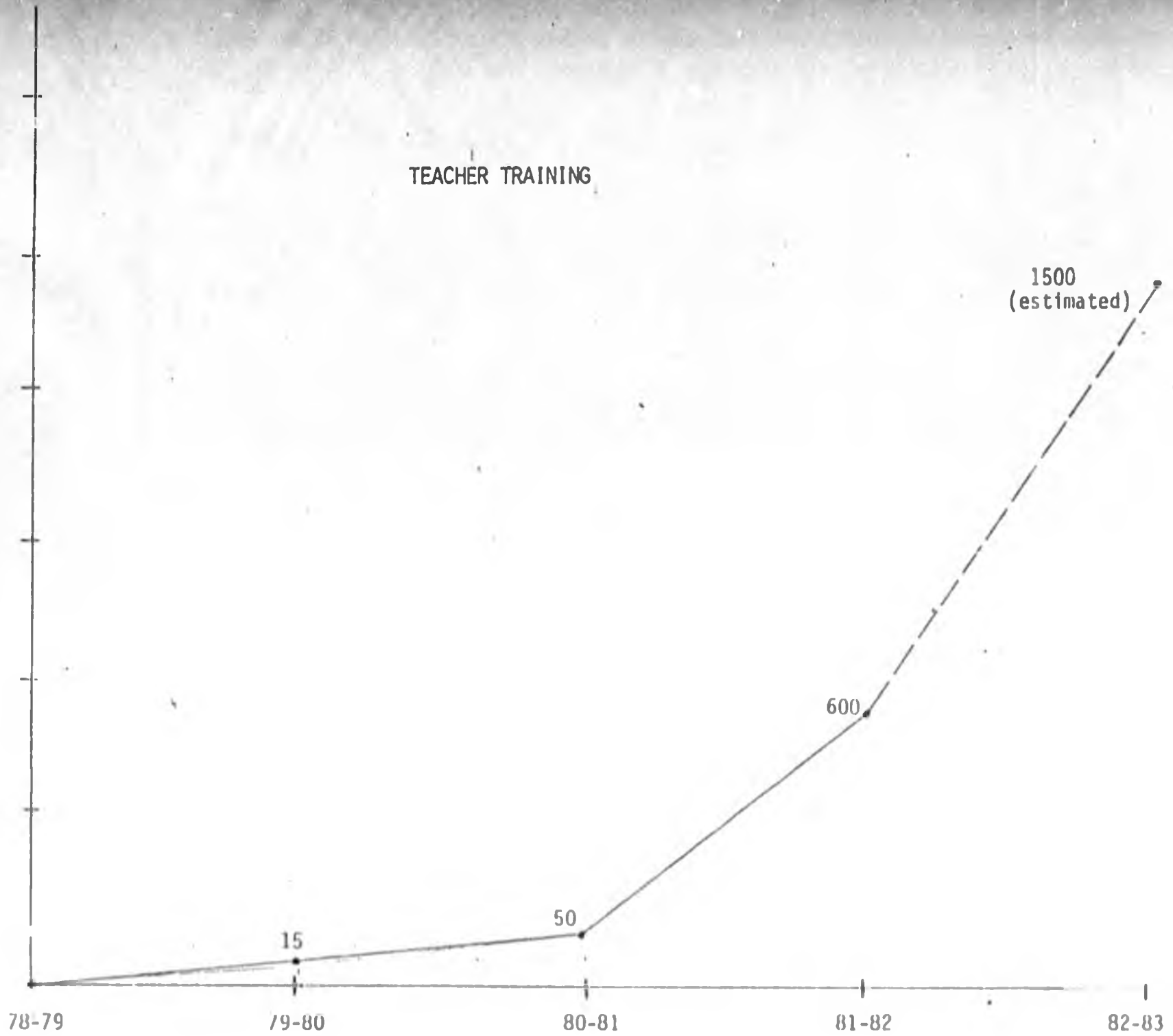
School Year

15

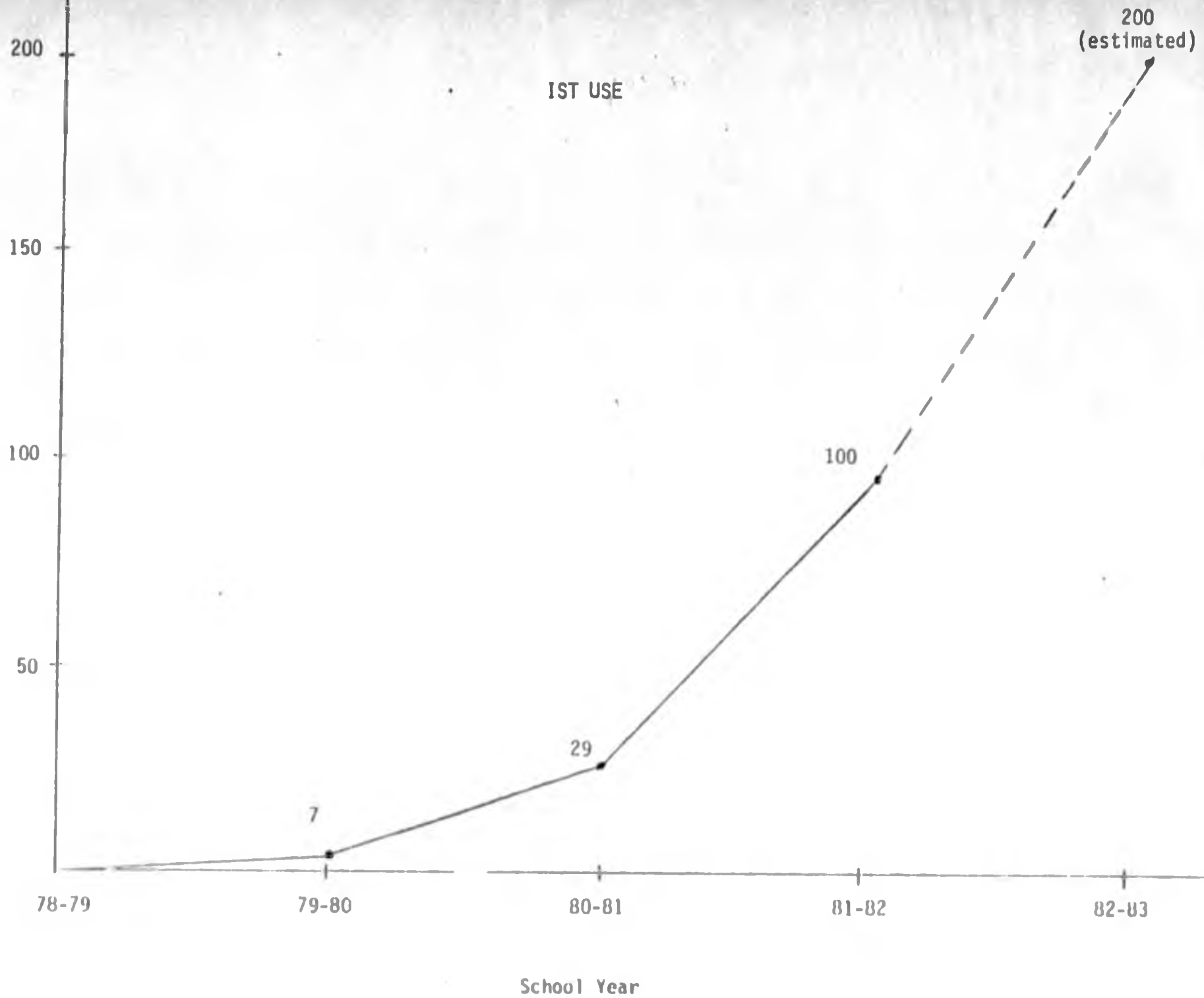
50

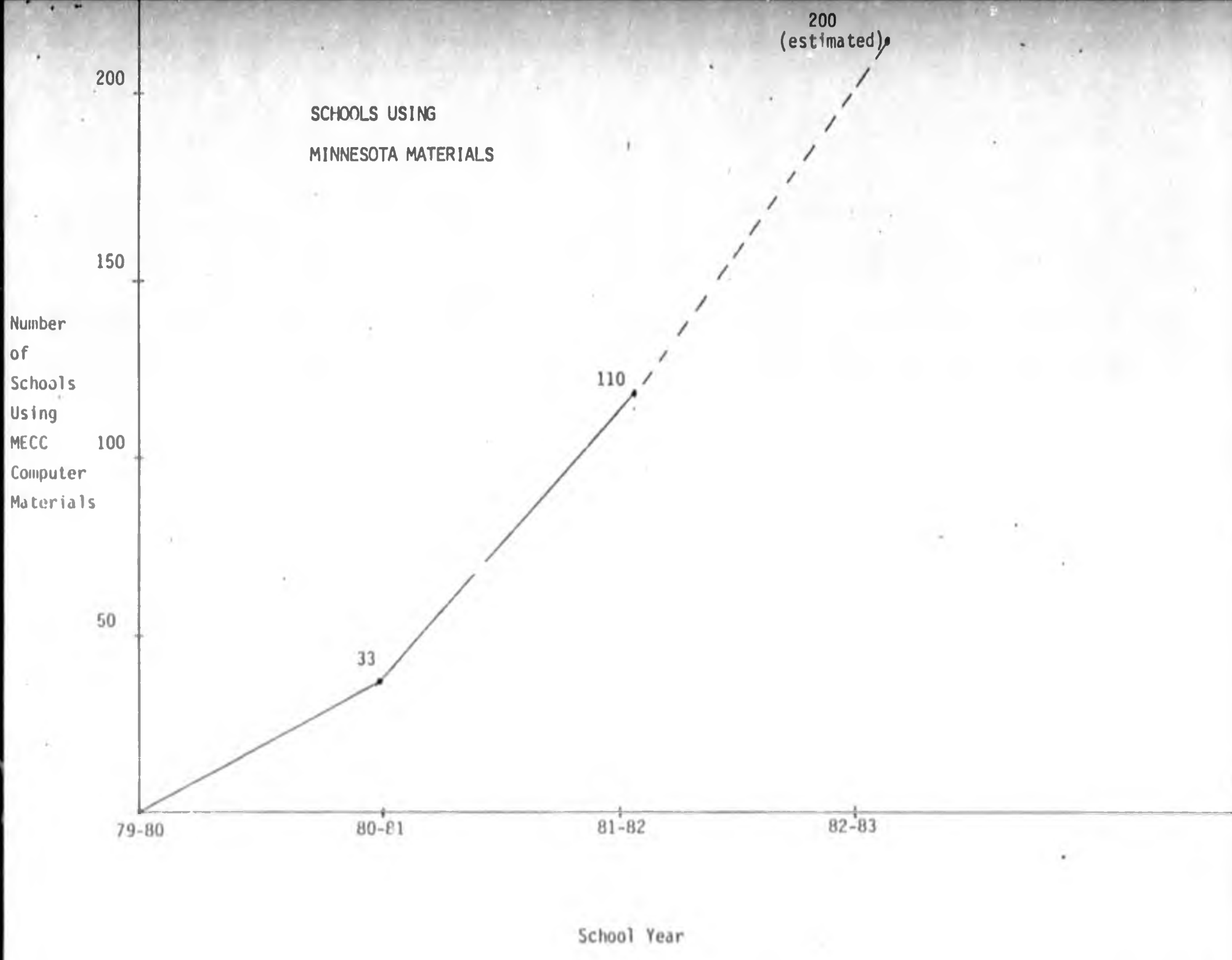
600

1500
(estimated)



Number
of
Schools
Using
IST





Alaska Department of Education
 Individualized Study By Technology
 Use Status 2/1/82

School District	IST				No. of Teachers	No. of Students	No. of Schools	Sites
	H	R	E	M				
1. Adak				x	3	135	2	Adak Jr High
2. Alaska C teway	x	x	x	x	3	16		
3. Bering Straits	x	x	x	x	13	122	11	Brevig Mission Elim Gambell Golovin Koyuk Shaktoolik Shismaref St. Michael Teller Unalakleet White Mountain
4. Chatham	x	x	x	x	5	72	5	Angoon Eight Fathom Bight Freshwater Bay Gustavus Tenakee
5. Chugach	x			x	1	10	1	Whittier
6. Craig	x	x	x	x	4	40	1	Craig
7. Delta Greely	x				1	40	1	Delta Junction
8. Haines				x	1	8	1	Haines Jr High
9. Hoonah	x	x	x		1	21	1	Hoonah
10. Iditarod	x	x	x	x	4	60	4	McGrath Nikolai Lime Village Holy Cross
11. Kake	x				2	48	1	Kake
12. Kenai	x				1	15	1	Soldotna
13. Klawock	x			x	1	3	1	Klawock
14. Kodiak	x			x	3	30	3	Kodiak Old Harbor Port Lions

School District	IST				No. of Teachers	No. of Students	No. of Schools	Sites
	H	R	E	M				
5. Lake and Peninsula	x	x	x	x	8	140	8	Chignik Bay Chignik Lake Igiugig Kokhanuk Illiama Nondalton Perryville Port Heiden
6. Lower Kosokwim	x		x		1	10	8	Akiak Eek Kosigluk Kipnik Nunapichuk Platinum Quinnagak Toksook Bay
7. Lower Yukon		x	x		1	20	1	Pilot Station
8. Mat-Su	x				1	5	1	Glacierview
9. Nenana		x	x	x	2	25	1	Nenana
10. North Slope	x				9	175	9	Atgasuk Barrow Elementary Barrow High Point Lay Kaktovik Auatuvuk Pass Nuiqsut Point Hope Wainwright
11. Northwest Arctic	x				1	60	1	Kotzebue High
12. Pribilof	x		x		3	20	1	St. Paul
13. Railbelt	x		x		3	32		Anderson Cantwell Tri Valley Correspondence
14. Skagway					4	40		Skagway
15. S.E. Island	x	x		x	5	25	5	El Capitan Gildersleeve Naukatic Thorne Bay Whale Pass

School District	IST				No. of Teachers	No. of Students	No. of Schools	Sites
	H	R	E	M				
6.S.W. REAA	x	x	x	x	14	75	9	Aleknagik Clarks Point Koligannek Levelock Manokotak New Stuyahok Togiak Twin Hills Ekwok
7.Wrangell	x	x	x	x	3	25	1	Wrangell
8.Yukon Flats	x			x	1	12	1	Fort Yukon
9.Yukon Koyukuk	x			x	2	20	1	Bettles

Alaska Department of Education
Sponsored Minnesota Educational
Computing Consortium Use Status 2/1/82

School District	No. of Sites	No. of Teachers	No. of Students	Sites
1. Alaska Gateway	5	15	50	Dot Lake Metasta Lake Northway Tanacross Tok
2. Anchorage	70	250	16000	All Elementary Schools
3. Bering Straits	9	13	122	Breving Mission Elium Gambell Golovin Hoyuk Shaktoolik Shismoref St. Michael Teeler Unalakleet White Mountain
4. Bristol Bay	2	8	20	Naknek Naknek H.S.
5. Chatham	5	5	180	Angoon Eight Fathom Bight Freshwater Bay Gustavus Tenakee
6. Cordova	1	7	30	Cordova
7. Craig	1	1	30	Craig H.S.
8. Dillingham	1	2	20	Dillingham
9. Fairbanks	6	6	800	Elementary Schools
10. Galena	2	8	100	Galena
11. Haines	1	4	45	Haines Elementary
12. Hoonah	2	3	35	Hoonah
13. Iditarod	3	3	50	McGrath Nikolai Holy Cross
14. Juneau	2	3	290	Capitol Elementary J.D. High

School District	No. of Sites	No. of Teachers	No. of Students	Sites	(2)
15.Kake	1	1	108	Kake	
16.Kenai	12	12	275	Soldotna Elementary Seldovia Nikiski Kenai Jr High Kenai Elementary Soldotna Jr High Soldotna Elementary Redoubt Elementary Paul Banks Elementa Homer Middle	
16A. Ketchikan	3	3	100		
17.Klawock	1	1	18	Klawock	
18.Kodiak	4	4	70	Kodiak Port Lions Old Harbor Larson Bay	
19.Lake & Peninsula	14	40	319	All District Sites	
20.Lower Kuskokwim					
21.Lower Yukon	1	1	20	Pilot Station	
22.Mat-Su	1	6	120	Palmer	
23.Nenana	1	1	12	Nenana	
24.North Slope	9	80	1199	All District Sites	
25.Northwest Arctic					
26.Pribilof	1	10	100	St. Paul	
27.Railbelt	4	9	85	Anderson Cantwell Tri Valley Correspondence	
28.Sand Point	1	5	20	Sand Point	
29.Sitka	1	2	70	Baranof Elementary	
30.S.E. Island	6	6	60	El Capitan Gildersleeve Naukati Thorne Bay White Pass	

School District	No. of Sites	No. of Teachers	No. of Students	Sites
31. Southwest REAA	14	14	75	All Sites except Portage Creek
32. Wrangell	2	10	120	Wrangell Elementary & High School
33. Yakutat	1	4	31	Yakutat Elementary
34. Yukon Koyukuk	1	1	10	Bettles

MAIL 18-Mar-82 14:46
FROM: SAND POINT
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLF
MSG #: 27945
DATE: 18-Mar-82
TIME: 12:43

DEAR STEVE,

HERE IN SAND POINT WE ARE NOT INVOLVED WITH THE STATE FINANCED 1ST COURSES. HOWEVER, WE HAVE 2 APPLE COMPUTERS WHICH ARE USED VERY MUCH WITH A GREAT DE BY B OTH ELEMENTARY AND HIGH SNTS. IN HIGH SCHOOL, W USE THE COMPUTERS MOSTLY IN MATH CLASSES. THE ELEMENTARY SCHOOL HAS BEEN USING THE MILLIKEN MATH CAI SOFTWARE FOR THE PAST 2 YEARS. IT HAS PROVED TO BE HIGHLY MOTIVATING, AND STUDENTS DEFINITELY SHOW IMPROVEMENT AFTER USING THE COMPUTERS. WE HAVE RECENTLY PURCHASED SPELLING AND READING COMPREHENSION SOFTWARE. STUDENTS WILL BE USING THESE PROGRAMS SHORTLY. MECC MATERIALS HAVE BEEN USED IN A LIMITED WAY, BUT WE HOPE TO USE THEM MORE AS TIME GOES ON.

THE STATE OF ALASKA HAS BEEN A LEADER AMONG STATES IN ITS SUPPORT FOR EDUCATION. I WOULD HATE TO SEE THE STATE GO BACKWARDS BY CUTTING FUNDS FOR THE MOST IMPORTANT EDUCATIONAL TOOL OF RECENT TIMES, THE COMPUTER. (FRANCE HAS DECIDED TO INSTALL COMPUTERS IN EVERY HIGH SCHOOL IN THE COUNTRY.)

MOST SCHOOL DISTRICTS PAY DEARLY FOR COMPUTING SERVICES FROM PRIVATE FIRMS TO HANDLE ADMINISTRATIVE WORK. MICROCOMPUTERS COULD PERFORM THESE SAME SERVICES FAR MORE CHEAPLY AND AT THE SAME TIME BE AVAILABLE FOR STUDENT USE. THE STATE COULD ACTUALLY SAVE MONEY BY PROVIDING MICROS FOR SCHOOLS.

SINCERELY,
JOHN BRUDER, COMPUTER INSTRUCTOR
CC: SAND POINT

MAIL 18-Mar-82 14:47
FROM: NORTH SLOPE
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLF
MSG #: 27921
DATE: 18-Mar-82
TIME: 11:02

THE NORTH SLOPE BOROUGH SCHOOL DISTRICT SUPPORTS SB 720 AND 721. COMPUTER ASSISTED INSTRUCTION IS BECOMING AN INTEGRAL PART OF OUR CURRICULUM. IT IS MAKING IT POSSIBLE TO EXPAND AND ENRICH OFFERINGS TO STUDENTS IN ALL OF OUR VILLAGES. COMPUTER ASSISTED INSTRUCTION IS PROVIDING US WITH THE TECHNOLOGY TO INDIVIDUALIZE PROGRAMS, MOTIVATE LOW ACADEMIC STUDENTS, AND STIMULATE AND CHALLENGE TALENTED AND GIFTED STAFF IN THE USE OF COMPUTERS. WE ARE COMMITTED TO UTILIZING THIS APPROACH AS A PART OF OUR INSTRUCTIONAL PROGRAM ON THE NORTH SLOPE.

SINCERELY,
DON RENFROE
SUPERINTENDENT
CC: NORTH SLOPE

MAIL 18-Mar-82 07:43
FROM: LOWER KUSKOKWIM
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLP
MSG #: 27782
DATE: 17-Mar-82
TIME: 12:41

THE LOWER KUSKOKWIM SCHOOL DISTRICT WISHES TO VOICE STRONG SUPPORT FOR SB 719, 720, 721, AND 722. WE ARE COMMITTED TO THE EFFECTIVE USE OF COMPUTERS IN OUR EDUCATIONAL PROGRAMMING AND FOR ADMINISTRATIVE PURPOSES. THE GOVERNOR'S TASK FORCE ON EFFECTIVE SCHOOLING LENDS SUPPORT TO OUR VIEW THAT TRADITIONAL INSTRUCTION SUPPLEMENTED BY COMPUTER-ASSISTED INSTRUCTION CAN LEAD TO HIGHER ACHIEVEMENT. IT LIKEWISE IS ESPECIALLY IMPORTANT FOR SMALL SCHOOLS IN RURAL AREAS SUCH AS OURS FOR WHERE IT IS DIFFICULT TO OFFER FULL SCHEDULES OF CLASSES. WE HAVE JUST ESTABLISHED A COMPUTER-ASSISTED INSTRUCTION SPECIALIST POSITION TO OVERSEE THE DISTRICT'S EFFORTS.
MARY FRANCIS, CURRICULUM DIRECTOR, LKSD
CC: LOWER KUSKOKWIM

MAIL 18-Mar-82 07:41
FROM: VALDEZ
ATTN: STEVE HOLE
SUBJ: RESPONSE MSG #27654

FOR: DOE/MLP
MSG #: 27880
DATE: 17-Mar-82
TIME: 15:48

VALDEZ CITY SCHOOLS SUPPORTS FUNDING FOR COMPUTER ASSISTED INSTRUCTION; HOWEVER, DUE TO THE IMPLEMENTATION IN VALDEZ CITY SCHOOLS OF THE IBM SYSTEM 34, WE WOULD NOT BE AFFECTED BY THE POSSIBLE FUNDING CUTS.

GEORGE MAYROWSKI
SUPERINTENDENT
VALDEZ CITY SCHOOLS
CC: VALDEZ

MAIL 18-Mar-82 07:42
FROM: VALDEZ
ATTN: STEVE HOLE
SUBJ: RESPONSE MSG. #27654

FOR: DOE/MLF
MSG #: 27876
DATE: 17-Mar-82
TIME: 15:31

VALDEZ CITY SCHOOLS SUPPORTS FUNDING FOR COMPUTER ASSISTED INSTRUCTION; HOWEVER, DUE TO THE IMPLEMENTATION IN VALDEZ CITY SCHOOLS OF THE IBM SYSTEM 34, W BE AFFECTED BY THE POSSIBLE FUNDING CUTS.

GEORGE MAYKOWSKYJ
SUPERINTENDENT
VALDEZ CITY SCHOOLS
CC: VALDEZ

MAIL 18-Mar-82 07:42
FROM: SW REGION
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLF
MSG #: 27873
DATE: 17-Mar-82
TIME: 15:27

SOUTHWEST REGION SCHOOL DISTRICT HAS IMPLEMENTED THE 1ST PROGRAM AT ALL OF ITS SMALL HIGH SCHOOLS THIS PAST YEAR. WE HAVE UTILIZED PERSONNEL PROVIDED BY THE DEPARTMENT OF EDUCATION FOR THE PURPOSE OF INSERVICING OUR STAFF IN THIS AREA. WE ARE ALSO PILOTING PROGRAMS IN THE SPECIAL EDUCATION AND BUSINESS AREAS. WE HAVE FOUND THE 1ST PROGRAM AND THE APPLI* COMPUTER TO BE VERY HELPFUL TO OUR TEACHERS, ESPECIALLY IN THE SMALL HIGH SCHOOL SITUATION. THE DISTRICT HAS INCREASED THE NUMBER OF COMPUTERS FROM NINE TO TWENTY-FOUR THIS PAST YEAR, THEREFORE, MAKING A DEFINITE COMMITMENT TO THE USE OF MICRO COMPUTERS IN EDUCATIONAL PROGRAMS.

I STRONGLY SUPPORT SB 719, 720, 721 AND 722. IT IS IMPORTANT THAT THE FINANCIAL ASSISTANCE IS PROVIDED TO SCHOOL DISTRICTS THAT IMPLEMENT PROGRAMS THAT HAVE BEEN DEVELOPED AND ENCOURAGED BY THE DEPARTMENT OF EDUCATION.

SINCERELY,

NELS NICHOLS,
AREA PRINCIPAL

P.S. PLEASE DISTRIBUTE TO APPROPRIATE INDIVIDUALS.

CC: SW REGION

MAIL 18-Mar-82 07:37
FROM: KENAI PENINSULA
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY - COMPUTERS

FOR: DOE/MLP
MSG #: 27894
DATE: 17-Mar-82
TIME: 17:29

WITHIN OUR PROGRAM ON THE KENAI, COMPUTERS ARE EMERGING AS ONE OF THE KEY DEVELOPING ISSUES FOR THE 80'S. PERHAPS THE FIRST APPLICATION MADE OF THEM IN ALL ORGANIZATIONS IS IN THE ACCOUNTING/PURCHASING/BUDGETING/INVENTORY AREAS. THIS HAS BEEN TRUE FOR US AND WE ARE CURRENTLY DEVELOPING A DEPARTMENT WITHIN DISTRICT ADMINISTRATION THAT DEALS WITH THESE ADMINISTRATIVE APPLICATIONS OF COMPUTER SERVICES.

PREVIOUS TO THIS YEAR, MOST COMPUTER SERVICES HAVE BEEN CONTRACTED OUT OF ANCHORAGE BUT RECENT UPGRADING OF THE BOROUGH'S SYSTEM OFFERED US THE OPPORTUNITY TO SHARE TIME ON THEIR MAIN FRAME COMPUTER. PLANS ARE TO EXTEND CONSOLE COVERAGE WITHIN CENTRAL OFFICE OPERATIONS AND FOUR MAJOR HIGH SCHOOLS AT THE BEGINNING, EXPANDING TO OTHER SCHOOL SITES IN THE NEXT THREE TO FIVE YEARS. IN EFFECT, THE GOAL IS TO PROVIDE BUILDING SITE COMPUTER SERVICES IN THREE MAJOR AREAS - THE BUSINESS FUNCTIONS PREVIOUSLY MENTIONED; STUDENT SERVICES SUCH AS SCHEDULING, ATTENDANCE ACCOUNTING, AND GRADE REPORTING; AND CURRICULUM MANAGEMENT SERVICES THAT WOULD PLACE ON COMPUTER THE FOLLOWING SERVICES:

1. ALL K-12 CURRICULUM DOCUMENTS INCLUDING TEACHING GOALS AND RELATED PERFORMANCE OBJECTIVES.
2. SUGGESTED TEACHING ACTIVITIES, TECHNIQUES, METHODS RELATED TO PERFORMANCE OBJECTIVES. THIS IS VIEWED AS AN INTER-ACTIVE SEGMENT OF THE SERVICE. TEACHERS COULD CALL UP THE SYSTEM FOR IDEAS OR ADD SUCCESSFUL CLASSROOM ACTIVITIES TO A BANK AVAILALBE TO ALL.
3. INSTRUCTIONAL MEDIA RELATED TO TEACHING AC TIVITIES LISTING WHERE THEY ARE LOCATED - IN THE SCHOOL, AT NEARBY SCHOOLS OR IN THE DISTRICT MEDIA CENTER.
4. ASSESSMENT ACTIVITIES - PRE AND POST ASSESSMENT INSTRUMENTS AND TECHNIQUES RELATED TO PERFORMANCE OBJECTIVES.

WITHIN THE REGULAR FIVE YEAR CYCLE OF CURRICULUM REVIEW, COMPUTERIZATION OF CURRICULUM DOCUMENTS WILL PERMIT REVISION TO EXISTING CURRICULUM THROUGH FOUR BASIC INSTRUCTIONS - ADD, DELET., MODIFY, SHIFT TO ANOTHER GRADE LEVEL OR AREA. COMBINATIONS OF THESE FOUR ARE ALSO POSSIBLE.

AT THE CLASSROOM LEVEL, COMPUTER ASSISTED INSTRUCTION IS EXPANDING AT AN INCREASING RATE. OVER \$160,000 IN HARDWARE REQUESTS WERE REVIEWED FOR THE FY83 BUDGET. AT THIS TIME, WE ARE ENCOURAGING THIS EXPANSION AS IT IS COMPATIBLE WITH TRAINED STAFF AND AVAILABLE COURSEWARE AND SOFTWARE THAT COMPLIMENTS DISTRICT CURRICULUM. THE DISTRICT IS PLANNING A SHORT COURSE FOR PROGRAM MANAGERS TO PROVIDE THEM WITH THE INFORMATION THEY WILL NEED TO MAKE DECISIONS REGARDING EXPANDING COMPUTER APPLICATIONS IN THE CLASSROOM. AT THIS POINT, ALL CLASSROOM APPLICATIONS OF THE CAI ARE BEING ACCOMPLISHED ON MICRO-COMPUTERS, PRIMARILY THE APPLE OR THE BLACK APPLE.

A MAJOR DISCUSSION POINT WITHIN THE DISTRICT DEALS WITH THE NATURE OF AVAILABLE SOFTWARE AND COURSEWARE THAT SEEMS DESIGNED AS REINFORCEMENT OR DRILL FOR IN-CLASS INSTRUCTION. BECAUSE OF THIS, SEVERAL LINES OF INVESTIGATION ARE UNDER WAY:

1. WHAT MATERIALS ARE AVAILABLE THAT GO BEYOND DRILL AND REINFORCEMENT TO TEACHING THROUGH SIMULATION, ETC.
2. WHAT SYSTEMS ARE AVAILABLE THAT CAN BE MODIFIED TO MATCH DISTRICT CURRICULUM THAT WOULD PROVIDE SYSTEMATIC REINFORCEMENT WITH SUITABLE MONITORING OF STUDENT PROGRESS.
3. WHAT SYSTEMS ARE AVAILABLE AT THE INTERMEDIATE SIZED COMPUTER (TURN-KEY) LEVEL THAT WILL COMPLEMENT OR ENHANCE THE PLANNED MAIN FRAME APPLICATIONS AND THE EXISTING OR PLANNED MINI-MICRO APPLICATIONS.

SEVERAL MAJOR TASKS REMAIN AHEAD OF US.

1. DEVISE, DESIGN AND DELIVER APPROPRIATE TEACHER INSERVICES REGARDING CLASSROOM APPLICATIONS OF CAI.
2. DETERMINE, DESIGN AND DELIVER APPROPRIATE CLASSROOM COMPUTER LITERACY COURSES TO STUDENTS.
3. DEVELOP MANAGEMENT LEVEL SKILLS AND UNDERSTANDINGS OF COMPUTER APPLICATIONS TO EDUCATIONAL SETTINGS.
4. DEVELOP AND PLAN FOR LONG RANGE NEEDS AT ALL LEVELS FOR COMPUTER USE.
5. MAINTAIN A MANAGEMENT POSITION THAT LEADS STAFF IN APPLICATION OF COMPUTERS TO ALL ASPECTS OF DISTRICT OPERATIONS WITHOUT JUMPING ON SOME COURSE OF ACTION THAT WILL END UP DOWN SOME BLIND ALLEY IN THIS RAPIDLY DEVELOPING AND CHANGING FIELD.

IF YOU READ IN ALL THIS OBVIOUS ENTHUSIASM REGARDING EDUCATION APPLICATIONS OF COMPUTERS A CERTAIN LEVEL OF CONSERVATIVE CAUTION, THEN YOU HAVE PERCEIVED THE DISTRICT POSITION. WITH THE PLOSION OF COMPUTER APPLICATIONS THROUGHOUT THE DAILY LIFE OF ANY COMMUNITY, WE WOULD BE GUILTY OF GROSS MISMANAGEMENT IF WE WERE NOT CAREFULLY CONSIDERING WHEN, WHERE, WHY, AND HOW TO IMPROVE EDUCATIONAL SEDRVICES THROUGH THE USE OF COMPUTERS. IT IS OUR INTENT TO HAVE THEM SERVE OUR EDUCATIONAL GOALS.

DENNIS DAGGETT
ASSISTANT SUPERINTENDENT
OF INSTRUCTIONAL SERVICEDS
LAH
CC: KENAI PENINSULA

MAIL	18-Mar-82	07:40	FOR:	DOE/MLF
FROM:	FAIRBANKS		MSG #:	27890
ATTN:	STEVE HOLE		DATE:	17-Mar-82
SUBJ:	LEGISLATIVE INQUIRY		TIME:	17:02

THE FAIRBANKS NORTH STAR BOROUGH SCHOOL DISTRICT WOULD LIKE TO ENCOURAGE YOU TO SUPPORT SENATE BILLS 719-721. THESE BILLS PROVIDE MATCHING FUNDS TO SUPPORT THE ACQUISITION OF MICROCOMPUTERS BY LOCAL SCHOOL DISTRICTS AND PROVIDE FUNDS FOR A FEASIBILITY STUDY OF A STATE-WIDE COMPUTING NETWORK.

FAIRBANKS IS CONCERNED ABOUT EHE IMPROVEMENT OF COMPUTER AWARENESS AND INSTRUCTION IN ITS SCHOOLS. ASSISTANCE IN PURCHASING THE NECESSARY EQUIPMENT WOULD BE VERY HELPFUL DUE TO THE LARGE BUDGET AMOUNT NEEDED TO INTRODUCE COMPUTERS IN THE CLASSROOM CURRICULUM. THIS LEGISLATION SEEMS APPROPRIATE IN THAT IT ENCOURAGES LOCAL COMMITMENT AS WELL AS OFFERING FINANCIAL SUPPORT. FAIRBANKS HAS COMMITTED FUNDS IN THE REGULAR BUDGET FOR THE COMPUTER PROGRAM AND THIS WOULD ENABLE US TO STRENGTHEN THAT EFFORT.

WE WOULD APPRECIATE ANY SUPPORT YOU CAN GIVE TO ENCOURAGE THE PASSAGE OF THESE IMPORTANT BILLS.

SINCERELY,

KENNETH S. BURNLEY, SUPERINTENDENT
FAIRBANKS NORTH STAR BOROUGH SCHOOL DISTRICT
CC: FAIRBANKS

MAIL 18-Mar-82 07:47
FROM: KING COVE
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLP
MSG #: 27730
DATE: 16-Mar-82
TIME: 17:40

DEAR DR. HOLE:

REFERENCE MESSAGE # 27654

COMPUTER ED IS PART OF OUR VOC. EC. PROGRAM. WE WOULD LIKE TO EXTEND THIS TO THE ELEMENTARY CULUM. KING COVE CONSIDERS COMPUTER ED A NEEDED INNOVATION IN EDUCATION. WE ARE STRONG ADVOCATES OF THIS ENTITY.

CORDIALLY,

BEN C. KIRKER
SUPERINTENDENT
CC: KING COVE

MAIL 18-Mar-82 07:47
FROM: KODIAK ISLAND
ATTN: STEVE HOLE
SUBJ: COMPUTER EDUCATION LEGISLATION

FOR: DOE/MLP
MSG #: 27717
DATE: 16-Mar-82
TIME: 16:53

THE COMPUTER ASSISTED INSTRUCTION (IST) PROGRAMS HAVE BEEN SUCCESSFULLY IMPLEMENTED AT 4 OF OUR 5 SECONDARY VILLAGE SITES. (READING, MATH, ALASKA HISTORY). THE ALASKA HISTORY COMPONENT IS ALSO BEING PILOTTED AT THE SENIOR HIGH IN KODIAK PROPER.

WE WOULD LIKE TO ENCOURAGE LEGISLATION WHICH WOULD ALLOW FOR THE DEVELOPMENT OF SCIENCE, SOCIAL STUDY AND MATH ELECTIVES AT THE 11TH AND 12TH GRADE LEVEL TO ASSIST US IN OUR SECONDARY VILLAGE PROGRAM EFFORTS. BASIC SKILLS REQUIRED COURSES ARE NOT AS USEFUL IN IST FORMAT AS UNIQUE ELECTIVES WHICH ARE OFTEN NECESSARY FOR A SMALL HANDFUL OF SECONDARY STUDENTS AND MAY BE DIFFICULT FOR TEACHERS TO ADDRESS, BECAUSE OF THE WIDE VARIETY OF OFFERINGS THAT SECONDARY VILLAGE TEACHERS ARE RESPONSIBLE FOR. WE THEREFORE SEE THE IST PROGRAM FORMAT AS CAPABLE OF HANDLING THIS NEED FOR HIGHER LEVEL ELECTIVES TO "ROUND OUT" SECONDARY VILLAGE PROGRAMS.

WE ENCOURAGE THE LEGISLATURE TO SUPPORT THE IST PILOT PROJECT, IN PARTICULAR THE TEACHER TRAINING COMPONENT AND DEVELOPMENT OF SECONDARY ELECTIVE COURSES.

MARY ANNE KENDALL, DIR OF INSTRUCTIONAL SUPPORT
KODIAK ISLAND BOROUGH SCHOOL DISTRICT
CC: KODIAK ISLAND

MAIL 18-Mar-82 14:48
FROM: PETERSBURG
ATTN: STEVE HOLE
SUBJ: COMPUTER LEGISLATION

FOR: DOE/MLF
MSG #: 27913
DATE: 18-Mar-82
TIME: 09:21

IN ANSWER TO YOUR EMS WE ARE NOW FINDING OURSELVES IN THE COMPUTER BUSINESS AND ARE ENJOYING IT. I THINK ONE OF THE FACTS WE NEED TO RECOGNIZE IS THE ROLE OF THE COMPUTER IN THE FUTURE AND TO MAKE SURE THAT SCHOOL SYSTEMS PREPARE TO MEET THIS NEED. COMPUTER INVOLVEMENT IS EXPENSIVE AND SCHOOL SYSTEMS NEED FINANCIAL SUPPORT IF THE COMPUTER PROGRAM IS TO EVOLVE LIKE IT SHOULD.

WE PRESENTLY HAVE FIVE APPLE COMPUTERS IN OUR SCHOOL. WE HAVE MANAGED TO USE THESE QUITE EXTENSIVELY TO BUILD A BASIC PROGRAM THAT WE PLAN TO CONTINUE IN GROWTH. WE ARE SEEING DAILY THE APPLICATION POSSIBILITIES OF THE COMPUTER TO EDUCATION. WE HAVE FOUND THAT COMPUTERS ARE NOT JUST FOR SOME BUT FOR ALL. OUR PRIMARY EMPHASIS HAS BEEN ON THE ELEMENTARY LEVEL - GRADES K - 7, BUSINESS EDUCATION CLASSES AND PARENT AND ADULT EDUCATION. WE PLAN TO EXPAND THIS PRESENT PROGRAM AND TO GIVE GREATER EMPHASIS TO THE HIGH SCHOOL LEVEL. EXPANSION IS GENERALLY BASED UPON ABILITY TO FINANCE A PROGRAM AND BILLS THAT SUPPORT COMPUTER EDUCATION WOULD ENABLE SUCH EXPANSION.

MEL STOCKTON, PRINCIPAL, PETERSBURG
CC: PETERSBURG

PLANNING FOR COMPUTERS IN THE CLASSROOM

Written by Ed Obie

To ensure that initial experiences with the computer are positive, consider the following points based on ETA experience over the past four years.

1. Plan instructional applications rather than technological applications. Begin by identifying a need, realizing that computer technology may or may not be the solution. Given the ever increasing capabilities of a technology and the lure of another "new approach," we often purchase a solution, then begin looking for a suitable problem to solve. For small classes, a teacher doesn't need a computerized student management system. A mimeographed test or quiz may be more appropriate than a computer-based application. If the initial computer technology experience is not relevant or positive to the user, expensive gear may be relegated to limited use or the nearest closet.

2. Equipment cost is only one part of a proposed application. Too often money appropriated for a computer application is spent solely for equipment, drastically reducing chances for a successful computer application. Sad commentaries have been written about computers being left in their original packing cartons for a full school year due to lack of training in equipment operation or classroom application. Generally speaking, expect to spend about as much on planning time, courseware purchasing, inservice training, equipment maintenance and follow-up support as on equipment.

3. Factors to consider when selecting equipment. A prime consideration in the purchase of equipment should be the availability of programs that meet identified needs. Although a particular computer may have many more features than another and the cost may be less, instructional courseware for that computer may not be readily available. Local support and maintenance should also be major considerations. Discount house purchases can result in being the most expensive alternative.

4. Be wary of exaggerated computer courseware claims. The development of computer courseware for education is still in its infancy. It is best to preview a demonstration program (if available). As a minimum prerequisite to purchase, review evaluations of the program's technical and instructional qualities as well as its content. Due to the current state of the art of courseware production, be prepared to find errors in content and format.

5. Buy now - Wait later. Except in rare circumstances, don't hesitate to buy state of the art equipment now because you think something newer and better is coming tomorrow. The same decision will face you if you wait. Although technology will continue to advance, your unit will be a wise investment, providing you with 3-5 years of good service. It can take 1-3 years for design, development and distribution of quality computer classroom programs for new "advanced" microcomputers.

6. Change is a central concept in implementing computer applications successfully. "Implementing change" might be more appropriate terminology than "implementing a computer application." Human nature often implies a resistance to change unless the amount of gain is equal to or greater than the amount of effort required. You can greatly increase your chances for a successful computer application if you involve users in planning, proceed in manageable progressive steps, and provide adequate inservice training and follow-up activities.

7. Plan a broad-based approach to computer implementation. Historically, computers have been introduced into the school setting by an enthusiastic teacher with interest and expertise in computer science and/or programming. Programs introduced through this approach will often flourish for the duration of the teacher's assignment but then be jeopardized when the teacher leaves or changes roles. For long term success, it is crucial to integrate a computer application into the curriculum in a formal sense to prevent "person dependency." Planning in a formal sense should include allocation of resources, assignment of staff, scheduling, and inservice training of large segments of the total staff.

8. Purchase existing computer products as opposed to developing programs in-house. Many successful low-cost computer programs have been developed "in-house" by existing staff. However, it takes 1-2 years of dedicated training to master a programming language, plus 2-3 years of programming experience to produce a quality program comparable to those produced by major commercial firms. These companies have a full range of staff including instructional designers, content experts, system analysts and programmers whose skills are difficult to duplicate locally. Estimates of programmer time range from 20 to 200 hours to develop one hour of classroom instruction. For selected applications, authoring programs currently available may offer alternatives to existing products.

9. Computers do not replace teachers. Computers can serve as topics of study (computer science, computer literacy, programming) or as classroom tools to aid instruction (drill and practice, tutorial, simulation, testing, problem solving, student management). Combined with a teacher, the computer becomes a powerful instructional tool in the classroom.

10. Introduction of computers requires additional financial resources. As with implementation of any new approach or program, equipment costs, inservice training, supporting materials, and maintenance are additional expense items. These costs are offset, however, by reduced requirements for teacher time to conduct drill and practice activities, increased numbers of students served by existing staff, improved quality of instructional programs, and expanded opportunities for students to acquire new employable skills.

Computers are an essential part of today's schooling, both as objects of study and as instructional tools. Successful implementation of this technology, however, is dependent upon such factors as planning, careful selection of hardware and courseware, adequate inservice training, integration into existing curriculum, staff allocation, and follow-up support.

Educational Technology for Alaska Program
Office of Educational Technology & Telecommunications
Alaska Department of Education

The Educational Technology for Alaska (ETA) Program has the responsibility for providing general technical assistance to Alaska schools in the area of computer assisted instruction at all grade levels.

Services available from the ETA include:

(A) Inservice Training

ETA offers 1-3 workshop for educators including the following topics:

- . Introduction to CAI
- . Introduction to the microcomputer
- . Introduction to ETA developed materials
- . Introduction to MECC materials
- . Selection & Evaluation of computer courseware
- . Microcomputer maintenance
- . Introduction to BASIC programming
- . Techniques for integrating computers into the curriculum

(B) Planning Assistance

ETA has developed an instrument to help school districts plan the implementation of computers into their existing curriculum. ETA provides on-site assistance for school district planners.

(C) Information Dissemination

ETA produces and distributes a monthly newsletter for educators on microcomputers topics including:

- . Current techniques in computer assisted instruction
- . Computer courseware reviews
- . Promising practices of computers in Alaskan schools
- . Advances in computer hardware
- . Future trends for computers in education
- . Notices of up-coming meetings/events for computer users

(D) Product Development

ETA produces computer assisted courses of study custom-designed for Alaska schools. Current courses include:

- . Alaska History
- . English
- . General Math
- . Developmental Reading
- . U.S. History
- . General Science
- . Health Education
- . Consumer Education

(E) Computer Courseware Library

ETA maintains a current collection of courseware from commercial and public domain sources. Alaska educators can access library items for review prior to local purchase.

**Educational Technology for Alaska sponsored
Minnesota Educational Computing Consortium Courseware**

The Educational Technology for Alaska (ETA) Program, through an annual institutional license agreement with the Minnesota Educational Computing Consortium (MECC), makes a major collection of computer programs available to Alaska educators at markedly reduced prices. This courseware includes both classroom-tested programs, teacher training materials, and administrative applications. The classroom programs are designed to supplement existing classroom instruction grades K-12. Content areas include:

- . Social Studies
- . Business
- . Math
- . Science
- . Language Arts
- . Spelling
- . Special Needs

INDIVIDUALIZED STUDY BY TECHNOLOGY (IST)

Alaska is the largest state, more than twice the size of Texas, and is also the most sparsely populated of the 50 states, averaging less than one person per square mile. Thus, Alaska faces unique problems in providing quality secondary education to its children in the many small, isolated rural communities located throughout the state. Prior to 1975 many rural Alaskan children had to attend boarding schools in the larger Alaskan cities or the lower forty-eight states in order to obtain a secondary school education. This situation was unsatisfactory to parents. Furthermore, many of these children were not able to complete their secondary education due to the homesickness and culture-shock they experienced when they left their homes and families.

In 1975 two events occurred which changed the course of Alaskan secondary education. First, the state-operated school system in Alaska was disbanded by state law, and replaced with 21 Regional Education Attendance Areas (REAA's). These REAA's received virtually 100 percent of their funding from state taxes, but each had its own locally elected board with full policy-making powers. The second event in 1975 was the settlement of a lawsuit (Hootch vs. Lind) that established the right of Alaskan children to an education through twelfth grade in their own community. As a result of these two events, rural Alaskan children would no longer have to leave their homes and families to receive a secondary school education.

Presently, about 180 small Alaskan communities have high school programs. However, about 60 of these communities have programs with 10 or fewer students, and another 95 or so have programs with fewer than 50

students. In these small communities it is not feasible to hire a large number of teachers with specialized knowledge to offer a comprehensive array of high school courses. Innovative uses of resources and creative ways to satisfy curriculum needs are essential if these communities are to provide their children with a quality secondary level education. Several approaches now being used to enhance high school instruction in Alaska are student exchanges, itinerant teachers, mobile labs, televised (or videotaped) instruction, correspondence courses, and educational student trips. Individualized Study by Technology (IST) is another such approach utilizing the microcomputer, and is the focus of this paper. Individualized courses developed in the IST program permit the small, isolated, rural schools to provide a more complete high school curriculum, and have the advantages of reducing the workloads of the teachers and allowing students to work at their own pace.



A typical rural community in Alaska

TABLE 5

ALASKA STATEWIDE ACHIEVEMENT TEST (ASAT) RESULTS

		ASAT MEAN SCORES (% CORRECT)		
		ASAT 1979 STANDARDIZATION GROUP		
		ALL STUDENTS	RURAL STUDENTS	IST STUDENTS
NUMBER OF STUDENTS		1440	158	296
MATH COMPUTATION	36	64	42	50
MATH APPLICATION	66	61	44	50
READING COMPREHENSION	45	67	42	53
READING WORD IDENTIFICATION	39	74	62	72



A typical IST classroom setting in a small rural Alaskan school showing the location of each IST component of instruction: the printed materials (on which the students are working at their desks), the microcomputer, the audio cassette tape equipment, and the teacher.

TABLE 3

PILOT TEST TEACHERS' ATTITUDES TOWARDS IST

(NUMBER OF TEACHERS = 39)

	PERCENT OF TEACHERS IN AGREEMENT
The IST courses are well designed to be used and managed in a classroom like mine.	74
Amount of work required of an IST teacher:	
a) too much	0
b) more than a traditional course	35
c) less than a traditional course	65
d) not worth the bother	0
I would prefer to use the whole IST courses as they now exist.	59
Of those teachers who would prefer to use only parts of the IST courses, the parts they preferred to use were:	
a) computerized instruction	100
b) IST workbook and exercises	100
c) audio cassette tapes	57
d) published materials	43
e) outside readings	7
IST components compatible with teaching styles:	
MOST COMPATIBLE	Computer Exercises
LEAST COMPATIBLE	Audio Cassette Tapes
IST components producing the greatest interest for students as viewed by the teachers:	
MOST INTERESTING	Computer Exercises
LEAST INTERESTING	Supplementary Activities

WHAT WERE THE STUDENTS' ATTITUDES TOWARDS IST?

Table 7 indicates that nearly all students considered the microcomputer exercises interesting; about 59 percent found the reading and written components of the IST courses interesting; and 49 percent considered the audio cassette tapes interesting. The audio cassette tapes were the only IST media component considered boring by a significant percent of the students. Most students reported the difficulty level of the courses to be "about right" for them. Also, half of the

students indicated they almost always understood what needed to be done and could work by themselves on their courses; no students indicated they rarely or never knew what to do and almost always had to get help from their teacher. These data suggest that: a) most students find learning using the IST media components of instruction an interesting experience and b) the instructions and procedures in the IST courses are sufficient for most students to have confidence in their ability to progress through the courses on their own.

TABLE 7
PILOT TEST STUDENT ATTITUDES TOWARDS IST
(NUMBER OF STUDENTS = 49)

	PERCENT
The Computer exercises in the IST courses are:	
(a) interesting	92
(b) of little interest	0
(c) boring	0
The audio cassette tapes in the IST courses are:	
(a) interesting	49
(b) of little interest	24
(c) boring	27
The reading and written work in the IST courses are:	
(a) interesting	59
(b) of little interest	15
(c) boring	6
Clarity of IST course instructions and need for teacher assistance:	
(a) almost always understand what needs to be done and can work by myself	50
(b) sometimes do not understand what needs to be done and need my teacher's help	50
(c) rarely or never know what needs to be done and must get my teacher's help	0
IST course difficulty:	
(a) easy	22
(b) about right	73
(c) difficult	5

HOW MUCH DID THE STUDENTS LEARN?

Student learning in the IST courses was assessed using unit, section, and chapter computer tests and post-course paper-and-pencil tests.

Computer Tests - As indicated in Figure 1, the mean performance of

students was at least 60 percent on all computer tests completed by at least 25 students, except Unit V in the English course and Chapter III in the General Math course. The students performed at an 85 percent mastery level on the Alaska History Unit I - Parts 1 and 2 and Developmental Reading Section I computer tests.

FIGURE 1

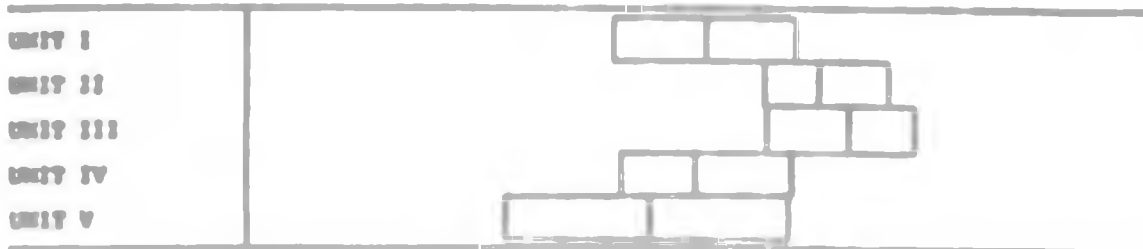
COMPUTER TEST PERFORMANCE RESULTS

0 10 20 30 40 50 60 70 80 90 100 Percent

ALASKA HISTORY



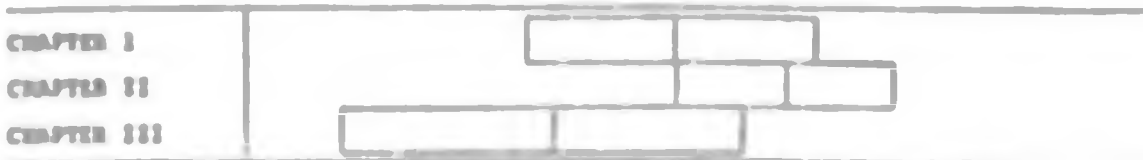
ENGLISH



DEVELOPMENTAL READING



GENERAL MATH



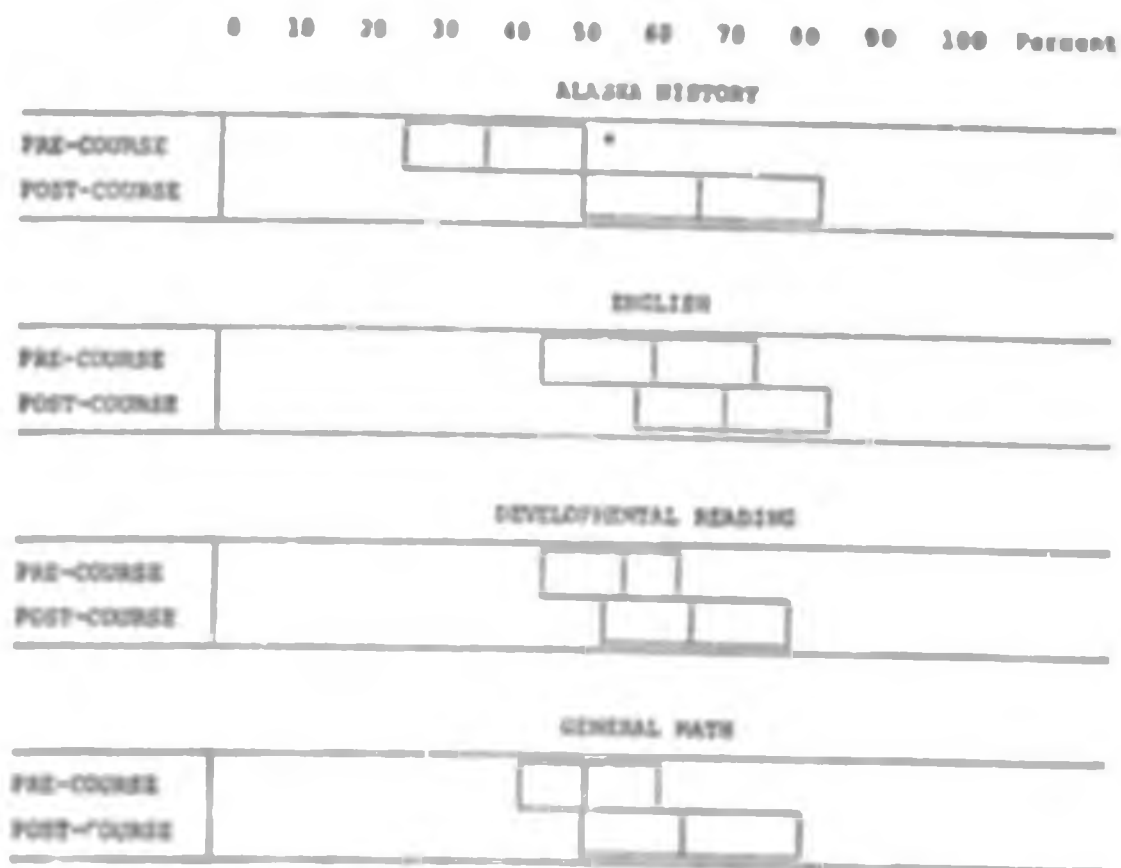
* The bar represents the range of scores for the middle 50 percent of students. The dark line within the bar represents the mean score for all students.

Post-course Tests - The students' pre-course and post-course knowledge of course content was measured by paper-and-pencil tests. The students' test scores were based only on those items related to the portions of the courses they completed. However, items on the Developmental Reading test were not related to any particular portion of the course, thus students' test scores were based on all questions on this test. As indicated in Figure 2, the students, on the average, were generally unfamiliar with the content of the Alaska History course, and somewhat familiar with the content of the English, Developmental Reading, and General Math courses prior to their enrollment in these courses. At the end of the school year, the

mean test scores increased to between 60 percent and 70 percent in all four courses.

The most significant factor in overall student performance in all four IST courses was the students' prior knowledge of the course content. After taking into consideration this pre-course knowledge, students' pre-course math and reading skills (as measured by the subtests of the Alaska Statewide Achievement Test) were also significantly related to student performance in all four courses. Student age and grade level did not significantly relate to student performance in any of the IST courses.

FIGURE 2
PRE-COURSE AND POST-COURSE TEST PERFORMANCE RESULTS



* The bar represents the range of scores for the middle 10 percent of students. The short line within the bar represents the mean score for all students.

WHAT ARE THE COSTS FOR THE IST COURSES?

As shown in Table 8, the total cost per-student in the 1980-1981 pilot testing averaged \$1620 for each complete course. The per-student cost to the Alaska Department of Education made up the majority of the total costs, averaging \$1470 per course. The average per-student cost to the sites was \$150 per course. These costs include all print, audio cassette tapes, and microcomputer materials and equipment.

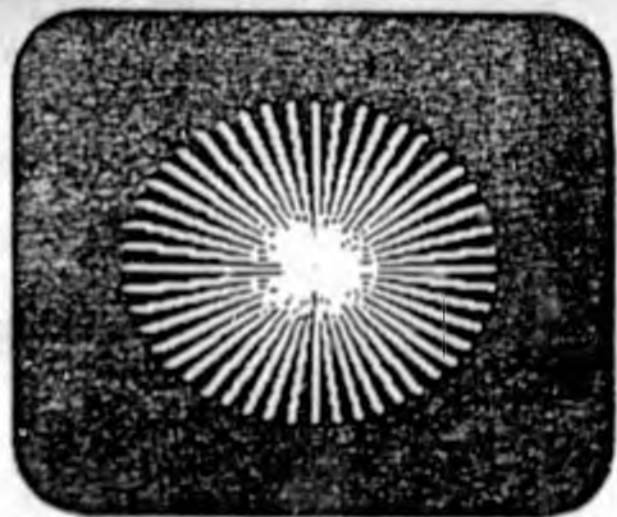
Most of the DOE per-student costs in the 1980-1981 pilot testing were for course development. These are one-time costs, thus as the number of students using the IST courses increases the per-student costs to

DOE substantially decreases, while the per-student costs to the sites increase minimally. An example of the effect on costs as enrollment in the courses increases is also presented in Table 8. The DOE per-student cost estimates, based on six students per course at each of 100 sites, reduce to an average of \$207 per course while the average site per-student cost estimates increase to only \$209 per course. DOE costs should continue to decline. The costs to sites, however, will probably rise somewhat due to inflationary increases in costs for equipment and printing. The teacher training costs to sites will likely decrease in the future, however, due to more efficient training procedures and a reduction in the number of teachers needing training.

TABLE 8
PER-STUDENT COSTS FOR EACH COMPLETE IST COURSE
(Based on 1980-1981 costs)

COURSE	NUMBER ENROLLED	COST TO DOE*	COST TO SITE	TOTALS
COST FOR 1980-1981 ENROLLEES				
ALASKA HISTORY	75	1,751	202	1,953
ENGLISH	59	2,027	130	2,157
DEVELOPMENTAL READING	117	1,047	141	1,188
GENERAL PATH	116	1,054	127	1,181
COST ESTIMATES FOR 100 SITES WITH 6 STUDENTS PER SITE				
ALASKA HISTORY	600	219	259	478
ENGLISH	600	199	182	382
DEVELOPMENTAL READING	600	204	201	405
GENERAL PATH	600	204	193	397

* Alaska Department of Education



ETA Newsletter

VOLUME 2

NUMBER 4

JANUARY/FEBRUARY 1982

*A Publication of the Office of Educational Technology and Telecommunications
Alaska Department of Education*

FOREWORD

Again, a reminder: the Alaska Association for Computers in Education's annual conference will be at the Sheraton Hotel in Anchorage. You can register the evening of April 1 with major conference events taking place April 2-3.

To ensure that initial experiences with the computer are positive, consider the following points based on ETA experience over the past four years.

1. Plan instructional applications rather than technological applications. Begin by identifying a need, realizing that computer technology may or may not be the solution. Given the ever increasing capabilities of a technology and the lure of another "new approach," we often purchase a solution, then begin looking for a suitable problem to solve. For small classes, a teacher doesn't need a computerized student management system. A mimeographed test or quiz may be more appropriate than a computer-based application. If the initial computer technology experience is not relevant or positive to the user, expensive gear may be relegated to limited use or the nearest closet.

2. Equipment cost is only one part of a proposed application. Too often money appropriated for a computer application is spent solely for equipment, drastically reducing chances for a successful computer application. Sad commentaries have been written about computers being left in their original packing cartons for a full school year due to lack of training in equipment operation or classroom application. Generally speaking, expect to spend about as much on planning time, courseware purchasing, inservice training, equipment maintenance and follow-up support as on equipment.

3. Factors to consider when selecting equipment. A prime consideration in the purchase of equipment should be the availability of programs that meet identified needs. Although a particular computer may have many more features than another and the cost may be less, instructional courseware for that computer may not be readily available. Local support and maintenance should also be major considerations. Discount house purchases can result in being the most expensive alternative.

4. Be wary of exaggerated computer courseware claims. The development of computer courseware for education is still in its infancy. It is best to preview a demonstration program (if available). As a minimum prerequisite to purchase, review evaluations of the program's technical and instructional qualities as well as its content. Due to the current state of the art of courseware production, be prepared to find errors in content and format.

5. Buy now - Wait later. Except in rare circumstances, don't hesitate to buy state of the art equipment now because you think something newer and better is coming tomorrow. The same decision will face you if you wait. Although technology will continue to advance, your unit will be a wise investment, providing you with 3-5 years of good service. It can take 1-3 years for design, development and distribution of quality computer classroom programs for new "advanced" microcomputers.

6. Change is a central concept in implementing computer applications successfully. "Implementing change" might be more appropriate terminology than "implementing a computer application." Human nature often implies a resistance to change unless the amount of gain is equal to or greater than the amount of effort required. You can greatly increase your chances for a successful computer application if you involve users in planning, proceed in manageable progressive steps, and provide adequate inservice training and follow-up activities.

7. Plan a broad-based approach to computer implementation. Historically, computers have been introduced into the school setting by an enthusiastic teacher with interest and expertise in computer science and/or programming. Programs introduced through this approach will often flourish for the duration of the teacher's assignment but then be jeopardized when the teacher leaves or changes roles. For long term success, it is crucial to integrate a computer application into the curriculum in a formal sense to prevent "person dependency." Planning in a formal sense should include allocation of resources, assignment of staff, scheduling, and inservice training of large segments of the total staff.

THE JOURNAL OF COURSEWARE REVIEW

8. Purchase existing computer products as opposed to developing programs in-house. Many successful low-cost computer programs have been developed "in-house" by existing staff. However, it takes 1-2 years of dedicated training to master a programming language, plus 2-3 years of programming experience to produce a quality program comparable to those produced by major commercial firms. These companies have a full range of staff including instructional designers, content experts, system analysts and programmers whose skills are difficult to duplicate locally. Estimates of programmer time range from 20 to 200 hours to develop one hour of classroom instruction. For selected applications, authoring programs currently available may offer alternatives to existing products.

9. Computers do not replace teachers. Computers can serve as topics of study (computer science, computer literacy, programming) or as classroom tools to aid instruction (drill and practice, tutorial, simulation, testing, problem solving, student management). Combined with a teacher, the computer becomes a powerful instructional tool in the classroom.

10. Introduction of computers requires additional financial resources. As with implementation of any new approach or program, equipment costs, inservice training, supporting materials, and maintenance are additional expense items. These costs are offset, however, by reduced requirements for teacher time to conduct drill and practice activities, increased numbers of students served by existing staff, improved quality of instructional programs, and expanded opportunities for students to acquire new employable skills.

Computers are an essential part of today's schooling, both as objects of study and as instructional tools. Successful implementation of this technology, however, is dependent upon such factors as planning, careful selection of hardware and courseware, adequate inservice training, integration into existing curriculum, staff allocation, and follow-up support.

The Journal of Courseware Review (edited by Carolyn Stauffer) is the latest publication of the Foundation for the Advancement of Computer-aided Education. The quarterly *Journal* will review microcomputer programs for content, use, and educational validity.

Individual copies can be ordered from the Foundation's Evaluation Center for \$6.95 (check or money order), which includes postage and handling:

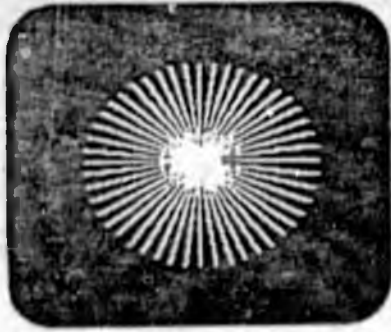
Foundation for the Advancement
of Computer-aided Education
P.O. Box 28426
San Jose, CA 95159

A REMINDER

Have you applied for membership in
the Alaska Association for
Computers in Education?

For applications or information contact:

Chuck Williams
AACE Membership Chairman
1602 Hillcrest Drive
Anchorage, AK 99503
Phone: (907) 276-3305



Individualized Study by Technology

- Complete, self-contained multimedia secondary-level courses
- Courses developed in Alaska for Alaskan needs
 - Self-paced, individualized courses that foster student independence and require minimal teacher preparation time

Why use computers to teach?

Students interact personally and intensively with subject matter. They learn actively.

Students receive immediate responses. Correct answers are immediately reinforced, errors are immediately corrected.

The computer is tireless. Students may repeat activities as often as necessary; they may progress when they are ready to.

Students can't just memorize correct answers. Questions are presented in a different random order each time an activity is carried on.

Mistakes corrected by the computer are not embarrassing or threatening, as they might be in oral class work.

Students progress automatically through a course sequence, yet the teacher can modify the sequence as needed.

Students learn to use computers quickly and eagerly, yet they don't lose interest because of the infinite variety that can be offered.



IST course packages available

Alaska History and Geography
English
Developmental Reading
General Mathematics
General Science (available fall 1982)
U.S. History (available fall 1982)

Like many secondary textbooks, IST courses are written at approximately 7th grade reading level. Some optional readings are at higher levels.

IST courses are appropriate for high school students, average junior high students, advanced upper elementary students, and some special education students.

IST programs monitor student progress

Student progress in an IST course is recorded on a disk which is the computer's permanent memory storage. At any time the teacher may call up these records on the screen and may intervene if desired, skipping a student forward or back in the sequence. Individual test scores are recorded showing percent correct. In many cases, any lesson objectives not mastered are listed for the student and the teacher to see, and additional study activities are provided in the course package.

Procedures for enrolling or deleting students, accessing records or changing student assignments on the computer are simple and fast.

Basic equipment required for IST courses

- 1 Apple II-Plus microcomputer
- 2 Three disk drives
- 3 Clock card
- 4 Video monitor
- 5 Power protection unit (optional)
- 6 Audiocassette player and headphones

Each APPLE microcomputer can serve five IST students per hour. Schools wishing to serve greater numbers of students can arrange flexible scheduling or use additional microcomputer terminals.

IST course packages include

- Student manual including detailed lesson sequences and readings
- Student packet of student-maintained progress charts
- Printed worksheets, listening guides, lab guides and tests
- Computer exercises and tests on diskettes
- Audiocassette activities
- Teacher guide including student materials, answer keys, teacher notes, and scripts of all computer and audiocassette activities
- Teacher packet with individual and class progress charts
- IST operation manual
- Texts and reference books (commercially printed)

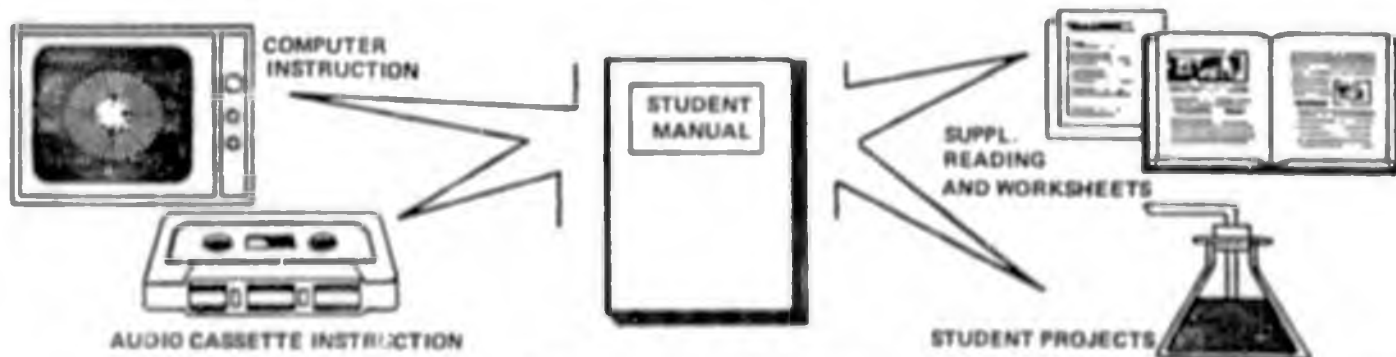
Sample instructional sequence

An IST lesson is composed of a carefully planned sequence of activities that introduce and build concepts, then provide practice and review. Each sequence is clearly listed on a color-coded page in the student manual, and on the student's progress chart, on which each activity is dated as completed.

Typically, a student might first listen to a 15-minute audio cassette, while completing an accompanying work

page according to directions given on the cassette. Next the student might practice new vocabulary or concepts on the computer, after which a reading might be assigned. Following the reading the student might complete a printed worksheet devised to help him organize and apply what he has learned. Another activity on the computer then may give practice or review of the key points in the lessons.

Lessons might also include a laboratory exercise in math or science, or a student project. A review precedes each test, which may be on the computer, or written, or both.



IST courses — developed for Alaska

IST courses were developed through the Northwest Regional Educational Laboratory as part of the Educational Technology for Alaska project at the Alaska Department of Education. Most courses were written or reviewed by experienced Alaska teachers, and all courses were pilot tested in rural Alaskan schools. The IST project was funded by a grant from the National Institute for Education, matched by a grant from the Alaska legislature.

Teacher training is important

It is important that teachers receive instruction in using the APPLE II computer and in IST teaching techniques

before starting. A number of preservice and inservice training opportunities are available through the ETA Project and the University of Alaska. Contact address below for details.

Costs and further information

IST courses are available for public education in Alaska at reasonable cost. For full information contact:

Project ETA
Alaska Department of Education
Pouch F
Juneau, Alaska 99811
(907) 465-2887

Using the 1980-1981 pilot test costs, the costs of offering the IST courses can be compared with offering similar courses taught by teachers qualified to teach in the appropriate secondary level content areas and using the IST print materials. Conservatively, the hiring of 20 additional teachers would have been necessary to offer similar courses to the 1980-1981 pilot test students, if the IST courses were not available. Taking into consideration the costs for 20 additional teachers, offering the complete IST courses was nearly one-half the cost of offering similar courses with just the print materials and the additional teachers. This estimate cannot be applied to any particular site since some sites would not require additional teachers, while others would need two or more. However, the overall reduction in costs from implementation of the IST courses would probably be real at most sites.

WHAT CAN BE CONCLUDED ABOUT THE IST PROGRAM?

Major conclusions drawn from the evaluation of the 1980-1981 pilot testing of the IST program are:

1. The IST courses can be successfully implemented in settings quite different from each other, comprised of students with different cultural backgrounds, and staffed by professionals who differ in educational background, training, and philosophy.
2. The microcomputer equipment is very reliable considering the relative lack of computer expertise of the teachers and students using the equipment, and the environmental conditions under which it was used in the pilot test.
3. The IST program is quite versatile. The courses can effectively be adapted to serve several different functions in a school and can be successfully implemented in several different ways.
4. Teachers are important to the successful implementation of the IST courses. They are needed to oversee student progress and provide assistance when needed. Teachers, however, need not provide constant supervision to the IST students. They can typically engage in other activities, such as assisting non-IST students or record-keeping, during an IST class period.
5. Some special training and assistance is needed for teachers to supervise the IST courses. The required training and assistance, however, is not considered excessive, with teachers able to successfully implement the IST courses after a single three-day workshop and a personal visit by a supervisor early in the school year.
6. The teachers generally reported a positive attitude toward the IST courses. No teacher considered the courses "too much work" or "not worth the bother".
7. Each of the four IST courses constitutes more than one full academic year of instruction for most students, although very fast students may finish within one year. On the average, about 53 percent of the English and Developmental Reading courses could be completed in one academic year, while 64 percent of the Alaska History course and 47 percent of the General Math course could typically be completed in one year.

8. The IST students generally reported a positive attitude towards the IST courses, particularly the microcomputer component of instruction.
9. The IST students showed significant gains in performance on the concepts and skills studied in the courses.
10. The total per-student cost of developing and implementing the IST courses in the 1980-1981 pilot testing was about one-half the cost of offering comparable courses taught by teachers certified in the course content areas. This imbalance in per-student cost will grow even larger in the future as more student use the IST program.
11. Although not directly evaluated, a reasonable assumption is that, not only are the teachers and students directly involved in the IST courses benefiting from their use, but non-IST students are also benefiting from the added personal attention the teachers are able to provide them.

WHAT IS THE FUTURE OF THE IST PROGRAM?

The pilot testing of the IST courses has demonstrated the efficacy of the IST approach to secondary education in Alaska. Currently about 90 rural Alaskan schools are using at least one of the four pilot tested IST courses. It is expected that the number of schools will increase to more than 100 during the 1982-1983 school year.

In addition to the four pilot tested courses, two full-year IST

courses, General Science and U.S. History, have been developed and are being pilot tested during the 1981-1982 school year in about 10 rural Alaskan schools. The General Science course was developed around the Holt text, General Science. It consists of five units: I. Matter, Atoms, and Chemical Changes; II. How Does Energy Affect Matter?; III. How Do We Make and Use Energy?; IV. How Is Our Planet Changing?; and V. What Makes Up Our Living World?. The aims of this course are to help students: a) understand the basic principles and vocabulary of science; and b) learn the basic ideas and scientific discoveries that explain many everyday occurrences.

The U.S. History course was developed around the Scott, Foresman text, America! America!. It consists of 13 units: the first five units cover U.S. History from the first American through 1850; the last eight units cover the period immediately preceding the Civil War through the 1970's. The aim of this course is to help students learn about America's past, present, and future by studying the events, issues, and people of the past.

Besides the six full-year IST courses currently available, two one-semester courses, Consumer Education and Health Education, are now being developed. They are expected to be available for the 1982-1983 school year. Both courses will be developed in a stand-alone modular format. The primary focus of the Consumer Education course is the development of a variety of skills and attitudes for successful management of personal and financial resources. The Health Education course will stress the inter-relationship of physical, emotional, and environmental health.

Department of Education
May 12, 1982

INFORMATION SHEET
REF.: SENATE BILL NO. 719
NETWORKING OF MICROCOMPUTERS

Microcomputers have become an important factor in Alaskan education. The Office of Educational Technology and Telecommunications estimates that there are over 600 microcomputers in Alaskan schools. The majority of these machines are configured to deliver computer assisted instruction to students.

With the addition of an inexpensive device called a micromodem, microcomputers are capable of rapidly transmitting electronic messages from one computer to another over telephone lines. This capability creates the potential for networking educational microcomputers throughout the state. Possible educational uses for microcomputer networking include:

Student Usage

1. Accessing computerized information resources.
2. Communicating with students from other schools.

Teacher Usage

1. Sharing professional information between schools.
2. Accessing information from educational resources such as ERIC and RICE through information utilities.
3. Communicating with content area specialists.
4. Sharing teacher produced educational software.

Administrator Usage

1. Expediting communications within school districts through:
 - a. immediate transmission of meeting schedules, announcements, policies, employee work hours, etc ;
 - b. transmission of student records; and
 - c. transmission of budgetary information.
2. Gaining access to department's DTS system from schools.
3. Ability to retrieve and down load information from Department of Education's DEC computer, state IBM computer and the university's Honeywell computer.

The feasibility study proposed by Senate Bill No. 719 has a potential for benefit in the following areas:

1. Potential educational uses of microcomputer networking would be identified.
2. The compatibility of various hardware and software systems would be examined.
3. Equipment reliability and operating costs could be assessed.
4. A feasibility study would result in a plan for implementing educational networking on a statewide basis. The plan would provide a blueprint for the development of a functional statewide educational networking system.

FWD 19-Mar-82 15:31
FROM: COMMISSIONER
ATTN: STEVE HOLE
SUBJ: COMPUTER ASSISTED INSTR.

FOR: DOE/MLF
MSG #: 28035
DATE: 19-Mar-82
TIME: 13:38

WITHOUT A DOUBT, THE COMPUTER SERVICES THAT WE HAVE RECEIVED DURING THE PAST TWO YEARS HAS BEEN ONE OF THE MOST EFFECTIVE EDUCATIONAL INNOVATIONS THAT OUR SCHOOL HAVE BEEN INVOLVED WITH DURING MY TENURE. I URGE THE HESS COMMITTEE TO FIND THE SENATE BILLS UNDER CONSIDERATION FOR COMPUTER-ASSISTED INSTRUCTION.

CC: BILL BRAMBLE
BO GREENE

NYAL WORSHAM
SKAGWAY SCHOOL
SUPERINTENDENT

CC: SKAGWAY

MAIL 19-Mar-82 15:31
FROM: MAT-SU
ATTN: STEVE HOLE, ED. ADMIN.
SUBJ: EMS MESSAGE #27654

FOR: DOE/MLF
MSG #: 28031
DATE: 19-Mar-82
TIME: 12:38

OUR DISTRICT HAS UTILIZED THE SERVICES OF THE EDUCATIONAL TECHNOLOGY ASSISTANCE AND HAVE FOUND IT TO BE EXTREMELY VALUABLE. THEY HAVE GREATLY HELPED OUR DISTRICT IN PLANNING AND IMPLEMENTING OUR COMPUTER ASSISTED INSTRUCTIONAL PROGRAM. WE ARE LOOKING FOR ETA TO ASSIST US IN INSERVICING THE STAFF AND TEACHERS ON THE USE OF COMPUTERS IN INSTRUCTION.

WE FEEL THIS IS A NEEDED SERVICE AND SHOULD NOT BE CUT FROM THE OPERATING BUDGET. ADDITIONALLY, WE STRONGLY SUPPORT SB 721 THAT APPROPRIATES MONEY FOR DISTRICTS ON A MATCHING BASIS TO PURCHASE COMPUTERS.

SINCERELY,

BRUCE P. DEMOND
ASSISTANT SUPERINTENDENT
CC: MAT-SU

MAIL 22-Mar-82 12:24
FROM: KETCHIKAN
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLF
MSG #: 28100
DATE: 22-Mar-82
TIME: 10:11

I HAVE REVIEWED SENATE BILLS 719, 720, 721, AND 722 INTRODUCED BY SENATOR STIMSON. THESE BILLS RELATE TO THE NEED FOR ALASKAN EDUCATION TO BECOME MORE INVOLVED WITH COMPUTERS IN THE SCHOOL CURRICULUM.

THE CURRICULUM IN ALASKAN SCHOOLS NEEDS TO BEGIN TAKING INTO ACCOUNT THE CAPABILITIES OF COMPUTERS AND THE ROLE THEY WILL PLAY IN THE LIVES OF ADULTS IN OUR SOCIETY OF TOMORROW. MOST STUDENTS GRADUATING FROM OUR SCHOOLS ARE COMPUTER ILLITERATES. IN A VERY FEW SHORT YEARS IT IS PREDICTED THAT THESE SAME STUDENTS WILL BE HANDICAPPED MUCH AS THE NON-READER OF PAST GENERATIONS. THE CURRICULUM IN OUR SCHOOLS NEEDS TO CHANGE TO REFLECT THE ROLE THE COMPUTER CAN PLAY IN PROBLEM SOLVING. COMPUTERS IN THE CURRICULUM CAN HELP PLACE AN INCREASED EMPHASIS UPON HIGHER LEVEL SKILLS OF UNDERSTANDING. THEY CAN HELP STUDENTS FIGURE OUT HOW TO SOLVE PROBLEMS AND UNDERSTAND THE MEANING OF RESULTS PRODUCED WHEN PLANS ARE CARRIED OUT.

THERE IS EVERY INDICATION THAT COMPUTERS ARE RAPIDLY BECOMING EVERYDAY TOOLS OF MOST ADULTS WORKING IN BUSINESS, GOVERNMENT AND INDUSTRY. COMPUTERS WILL PLAY MORE OF A PERSONAL ROLE AS MORE AND MORE HOME COMPUTERS ARE AVAILABLE. COMPUTER LITERACY MUST BE A GOAL OF OUR SCHOOLS IF STUDENTS ARE TO FUNCTION CAPABLY IN THE SOCIETY OF TOMORROW.

THERE IS A CERTAIN URGENCY ABOUT IMPLEMENTING COMPUTER PROGRAMS INTO OUR PUBLIC SCHOOLS. THE URGENCY REQUIRES THAT THE STATE TAKE THE INITIATIVE AND PURSUE AN ACTIVE ROLE IN HELPING SCHOOLS TO GET GEARED UP TO MEET THE CHALLENGE.

I BELIEVE THAT S.B. 719, 720, 721, AND 722 IS A GOOD START AND I HOPE THAT EVERY ATTENTION IS GIVEN TO THE FINAL PASSAGE OF THESE BILLS SO THAT SCHOOL DISTRICTS CAN RECEIVE THE HELP WHICH IS NEEDED AS THEY PURCHASE THE HARDWARE, SOFTWARE AND IMPLEMENT COMPUTER PROGRAMS INTO THEIR CURRICULUM. YOUR SUPPORT OF THESE BILLS WILL HELP INSURE THE FUTURE FOR THE STUDENTS IN OUR SCHOOLS.

DARROLL MARGRAVES, SUPERINTENDENT OF SCHOOLS
KETCHIKAN GATEWAY BOROUGH SCHOOL DISTRICT
CC: KETCHIKAN

ONE "ONE" PLEASE...

22-Mar-82 07:56
FROM: NENANA
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY

FOR: DOE/MLF
MSG #: 28059
DATE: 19-Mar-82
TIME: 15:29

COMPUTER ASSISTED INSTRUCTION HAS BEEN A SUCCESS IN OUR SCHOOL AS A SUPPLEMENTAL CLASS IN OUR BILINGUAL/BICULTURAL TUTOR PROGRAM AND REMEDIAL PROGRAMS. FROM THAT START WE HAVE OUR OWN COMPUTER PROGRAM CLASS AND ADVANCED COMPUTER PROGRAM CLASS. IT HAS BEEN ONE OF THE MORE SUCCESSFUL PROGRAMS THAT HAVE BEEN FUNDED. WE WOULD URGE THE LEGISLATURE TO CONTINUE TO FUND THIS PROGRAM.

WAYNE E. TAYLOR, SUPERINTENDENT
NENANA CITY PUBLIC SCHOOLS
CC: NENANA

OPTION:

LIST OF ALL MESSAGES FOR DOE/MLF

22-Mar-82 07:56

TYPE MSG #	DATE	TIME	LINES	FROM	ATTENTION
NEW RCPT 27906 SUPERINTENDENT	18-Mar-82	07:54	16	YUKON FLATS	
NEW RCPT 27906 SUPERINTENDENT	18-Mar-82	07:54	16	YUKON FLATS	
NEW RCPT 27906 SUPERINTENDENT	18-Mar-82	07:54	16	CHATHAM	
NEW RCPT 27906 SUPERINTENDENT	18-Mar-82	07:54	16	LOWER YUKON	
NEW RCPT 27906 SUPERINTENDENT	18-Mar-82	07:54	16	BERING STRAIT	
MAIL 28059	19-Mar-82	15:29	15	NENANA	STEVE

SUBJECT: LEGISLATIVE INQUIRY

(Y OR N):

MAIL 19-Mar-82 15:28
FROM: RAILBELT
ATTN: STEVE HOLE
SUBJ: SENATE REVIEW OF COMPUTERS IN ED

FOR: DOE/MLF
MSG #: 28050
DATE: 19-Mar-82
TIME: 14:46

IN RESPONSE TO YOUR RECENT EMS REGARDING SENATE HESS COMMITTEE
CONSIDERATION OF SB 719,720,721, AND 722. :

WE ARE WRITING TO EXPRESS OUR GRAVE CONCERN OVER REPORTS THAT THE
CUT-BACKS IN FUNDING FOR COMPUTER ASSISTED INSTRUCTION ARE BEING
CONSIDERED. WE WILL ENDEAVOR TO DESCRIBE OUR USE OF COMPUTERS IN
THE SCHOOL SYSTEM IN ORDER TO HIGHLIGHT THEIR INTEGRAL PART OF OUR
SCHOOL PROGRAM.

BEFORE DETAILING OUR DISTRICT'S USE OF COMPUTERS IN EDUCATION, TWO
IMPORTANT ITEMS SHOULD BE NOTED:

1. OUR DISTRICT HAS ONLY ADVANCED TO THE LEVEL OF INCORPORATING
COMPUTER ASSISTED INSTRUCTION THAT IT HAS, THROUGH THE LEADER-
SHIP PROVIDED BY THE DEPARTMENT OF EDUCATION PARTICULARLY THE
EDUCATIONAL TECHNOLOGY FOR ALASKA (ETA) DIVISION. THROUGH
INSERVICE TRAINING AND MATERIALS DEVELOPMENT, THEY HAVE ENABLED
DISTRICTS TO INCLUDE COMPUTER EDUCATION AND INSTRUCTION IN A
VARIETY OF WAYS IN THE SCHOOLS. THIS HAS BEEN A DIRECT BENEFIT
TO STUDENTS.
2. THE EFFECTIVE SCHOOLING REPORT HAS LISTED COMPUTER ASSISTED
INSTRUCTION AS A RESEARCH BASED PRACTICE WHICH CAN SIGNIFICANTLY
IMPROVE THE PERFORMANCE OF STUDENTS. UNDER THIS RESEARCH FINDING
IS AN IMPORTANT NOTE OF INTEREST THAT COMPUTER ASSISTED INSTRU-
TION IS "PARTICULARLY APPROPRIATE WHERE ENROLLMENT IN A GIVEN
CONTENT OR SKILL AREA IS INSUFFICIENT TO WARRANT THE PROVIDING
OF A TEACHER WHO IS A SPECIALIST IN THE AREA OF STUDY, WITH THE
TEACHER HAVING RESPONSIBILITY BEING A GENERALIST, AS IN THE CASE
IN MANY SMALL RURAL SCHOOLS". SINCE IMPLEMENTATION OF THIS
EFFECTIVE SCHOOLING PRACTICE HAS ALREADY BEGUN, IT WOULD SEEM
LEGISLATIVE SUPPORT SHOULD CONTINUE IN ORDER TO FURTHER THIS END.

THE INDIVIDUALIZED STUDY BY TELECOMMUNICATIONS (IST) COURSES DEVELOPED
BY THE DEPARTMENT OF EDUCATION ARE USED EXTENSIVELY IN THE DISTRICT.
THE COURSES USED ARE DEVELOPMENTAL READING, GENERAL MATH, ENGLISH, AND
WE ARE CURRENTLY PILOTING THE U.S. HISTORY AND GENERAL SCIENCE COURSES.
THESE COURSES ARE USED ON AN INDIVIDUAL BASIS OR IN SMALL GROUPS

ESPECIALLY WHEN THERE ARE NOT ENOUGH STUDENTS TO WARRANT A FULL CLASS, BUT YET STUDENTS NEED THE COURSES. WE HAVE USED THE 1ST ALASKA HISTORY COURSE FOR LARGE CLASSES (25 STUDENTS PER CLASS) SINCE THESE ARE THE ONLY ALASKA HISTORY MATERIALS WE FOUND THAT WERE AVAILABLE AND APPROPRIATE FOR USE WITH HIGH SCHOOL STUDENTS. WHEN THE 1ST HEALTH AND CONSUMER EDUCATION COURSES BECOME AVAILABLE, WE ALSO PLAN TO USE THEM WITH LARGE CLASS GROUPS. WE HAVE NOT ONLY USED THE 1ST COURSES WITH THE HIGH SCHOOL STUDENTS BUT HAVE FOUND THEM APPROPRIATE TO USE WITH ACCELERATED JUNIOR HIGH STUDENTS. THE COURSES ARE HIGHLY MOTIVATING AND STUDENTS ENJOY THE VARIETY PROVIDED BY THE COMPUTER ASSISTED INSTRUCTION. THE DEVELOPMENT OF THE 1ST COURSES HAVE BEEN EXTREMELY VALUABLE FOR THE RURAL SCHOOLS. IT HAS ENABLED US TO EXPAND OUR CURRICULUM WITHOUT HIRING ADDITIONAL STAFF.

THE MINNESOTA EDUCATIONAL COMPUTING CONSORTIUM (MECC) MATERIALS, OBTAINED AT DISCOUNT PRICES THROUGH AN AGREEMENT BETWEEN MECC AND THE DEPARTMENT OF EDUCATION, PROVIDE PROGRAMS THAT ARE USED AT ALL GRADES. THERE ARE MANY MECC PROGRAMS AVAILABLE FOR THE ELEMENTARY LEVEL THAT SERVE AS SUPPLEMENTS TO REGULAR INSTRUCTION.

BOTH THE MECC AND 1ST MATERIALS HAVE BEEN USED IN THE DISTRICT CORRESPONDENCE PROGRAM. IT HAS BEEN A DYNAMIC CHANGE FOR HOME STUDY AND BOTH PARENTS AND STUDENTS ARE PLEASED WITH THE RESULTS.

COMPUTERS ARE USED IN BUSINESS EDUCATION CLASSES FOR WORD PROCESSING, ACCOUNTING AND TAXES. STUDENTS ALSO USE COMPUTER PROGRAMS TO STUDY FOR COLLEGE ENTRANCE TESTS.

WE ALSO USE COMPUTERS TO TEACH BASIC COMPUTER PROGRAMMING TO HIGH SCHOOL AND JUNIOR HIGH STUDENTS. STUDENTS HAVE FORMED COMPUTER CLUBS AND THEY COME IN AFTER SCHOOL TO WORK ON PROGRAMMING ON THEIR OWN. THE COMPUTERS ARE AVAILABLE TO STUDENTS DURING LUNCH AND RECESS AS WELL.

COMPUTERS HAVE BEEN PURCHASED JOINTLY BY THE SCHOOL AND COMMUNITY LIBRARY BOARDS TO BE PLACED IN THE SCHOOL LIBRARIES. THESE COMPUTERS ARE USED BY STUDENTS DURING THE SCHOOL DAY AND AVAILABLE TO COMMUNITY MEMBERS IN THE EVENINGS AND ON SATURDAYS. WE HAVE CONDUCTED WEEKEND COMPUTER TRAINING SESSIONS FOR PARENTS THAT HAVE BEEN FULL.

WE DO NOT KNOW OF ANY CASE WHERE COMPUTER USE HAS NOT ENHANCED INSTRUCTION AND INCREASED STUDENT MOTIVATION. WE CONTINUE TO NEED SUPPORT AND LEADERSHIP AS HAS BEEN GIVEN IN THE PAST BY THE LEGISLATURE AND THE DEPARTMENT OF EDUCATION.

IF YOU HAVE ANY QUESTIONS, DO NOT HESITATE TO CONTACT US OR VISIT ANY OF OUR SCHOOLS TO SEE OUR COMPUTER PROGRAMS.

SINCERELY,

KATHLEEN FORMELLA
CURRICULUM COORDINATOR
CC: RAILBELT

MAIL 19-Mar-82 15:34
FROM: IDITAROD
ATTN: STEVE HOLE
SUBJ: G/T COUNT

FOR: DOE/MLF
MSG #: 27999
DATE: 18-Mar-82
TIME: 16:16

WE HAVE 14 G/T STUDENTS IN THE IDITAROD AREA SCHOOL DISTRICT.

MALCOM FLEMING
CC: IDITAROD

MAIL 19-Mar-82 15:34
FROM: CHATHAM
ATTN:
SUBJ: 1932 DIRECTORY

FOR: DOE/MLF
MSG #: 27989
DATE: 18-Mar-82
TIME: 16:00

PLEASE FORWARD TWO COPIES OF THE 1982 ALASKA EDUCATION DIRECTORY, IF POSSIBLE, TO CHATHAM SCHOOL DISTRICT, P O BOX 109, ANGOON ALASKA 99820. THANK YOU!

EUNICE JAMES
SECRETARY
CC: CHATHAM

MAIL 19-Mar-82 15:35
FROM: HOONAH
ATTN: STEVE HOLE
SUBJ: LEGISLATIVE INQUIRY -

FOR: DOE/MLF
MSG #: 27978
DATE: 18-Mar-82
TIME: 15:55

COMPUTER ASSISTED INSTRUCTION IS AN EDUCATIONAL FRONTIER THAT DESERVES FULL EXPLORATION. SINCE THE ADVENT OF THE MICRO-CHIP, COMPUTER TECHNOLOGY HAS INCREASED A THOUSAND FOLD. COMPUTERS ARE BECOMING AND WILL BECOME BY THE END OF THE '80S AS COMMON A HOUSEHOLD ITEM AS THE MICROWAVE OVEN. ITS CAPACITY FOR STORING KNOWLEDGE AND GIVING INFORMATION IS BOUNDLESS. ITS USEFULNESS AS A TEACHING TOOL IS LIMITED TO THE INSTRUCTORS KNOWLEDGE OF THE MACHINE. TEACHING AND FAMILIARITY WITH COMPUTERS IN THIS DECADE IS AS NECESSARY TO EDUCATION IN GENERAL AS THE SOVIET UNION'S SPUTNIK WAS TO AMERICAN SCIENCE PROGRAMS IN THE 50'S.

TOM BUDD, HIGH SCHOOL PRINCIPAL
HOONAH PUBLIC SCHOOLS.

FISCAL NOTE

I. REQUEST

Bill/Resolution No. SB 719

Title An Act providing that the DOE conduct a computer network study

Requested by Senate Hess Date April 1, 1982

II. FISCAL DETAIL

Agency Affected Education

Program Category Affected Elementary and Secondary

BRU, Program, Or Subprogram(s) Affected Education Design and Delivery

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL		50.0				
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL	-0-	50.0	-0-	-0-	-0-	-0-

FUNDING (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
GENERAL FUND	-0-	50.0	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
FULL TIME						
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

IV. DATE April 1, 1982

PREPARED BY Steve Hole

AGENCY Education

PHONE 65-2890

Original: Legislative Finance

cc: Budget and Management

Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/81)

