

HB

107



Alaska State Legislature  
 House of Representatives  
 COMMITTEE ON HEALTH, EDUCATION  
 AND SOCIAL SERVICES

DATE: MARCH 10, 1993

PLACE: Capitol Room 106

SUBJECT OF MEETING:  
 \*HB 106: EDUCATION TECHNOLOGY PROGRAM  
 \*HB 107: APPROP: EDUCATION TECHNOLOGY PRGR  
 STUDENT PRESENTATION ON COMPUTERS IN SCHOOLS

NAME	REPRESENTING	BUSINESS/PERSONAL MAILING ADDRESS	ZIP	(H) PHONE	(W) PHONE	DO YOU WANT TO TESTIFY?	WHAT SUBJECT/ WHICH BILL?
Karen Jordan	Tuneau Public School	AK. Society for Tech in Ed. 11575 Mendocino Hill Rd	99801	789-1803	463-1967	(Y) N	HB 106/107
Jason Ohler	Gov of Alaska	1100 Glacier Hwy Tuneau AK	99801	463-5655	789-4414	(Y) N	HB 106/107
Jack Detzel	Delta/Greely School District	Pouch 1 Delta Junction AK	99737	895-4939	895-4896	(Y) N	HB 106/107
Pam Rude	Delta/Greely School Dist	Box 597 Delta, AK	99737	895-4766	895-4657	(Y) N	HB 106/107
						Y N	
Sharon Macklin	Anch. School District	315 5th St T-2700	99501		561-9518	(Y) N	HB 106/107
Karen Crane	DOE Revenue				465-2910	(Y) N	HB 106/107
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	
						Y N	

LTN1106-R01

LEGISLATIVE TELECONFERENCE NETWORK

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03/11/93

09:25:00

TCN: 00524

DATE & TIME: 03/10/93 15:00 TO 17:00

STATUS:7 STATS. IN

\*\*\*\* ORDER SUMMARY \*\*\*\*

SPONSOR: HRES HOUSE HEALTH, EDUCATION AND SOCIAL SERVI CHAIRS: TOCNEY  
 BUNDE  
 PURPOSE: PUB PUBLIC HEARING  
 CONTACT: LYNN SMITH TEL#: (907)485-6825  
 CHAIRING SITE: JUNEAU CAPITOL CAP106

SPONSOR REMARKS(PUB): TESTIMONY:Y ALLOWED 5 MINUTE LIMIT  
 TCN REQUESTED ON 03/10/93 AND HAS 5 UPDATES

\*\*\*\* AGENDA \*\*\*\*

- 1 HB 106 EDUCATION TECHNOLOGY PROGRAM
- 2 HB 107 APPROP: EDUCATION TECHNOLOGY PROGRAMS

\*\*\*\* PARTICIPATING LIDS \*\*\*\*

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* JNU JUNEAU	CAPITOL CAP106	LOCATION STAFF
SOL KEN/SOL	34824 KALIFONSKY	LOCATION STAFF
TOK TOK LIO	MP 1314 AK. HWY	LOCATION STAFF

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University of Alaska Southeast  
Juneau • Ketchikan • Sitka

School of Education, Liberal Arts and Science  
Juneau Campus

March 10, 1993

To: Representative Kay Brown

From: Jason Ohler  
Director, Educational Technology Program  
University of Alaska Southeast

Re: HB 106, Education Technology and HB 107, Bonds for  
Educational Technology

Dear Representative Brown:

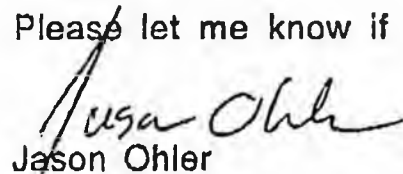
For seven years I have been directing a program whose primary mission is to empower teachers and students with technology in effective, creative, educationally sound, and culturally appropriate ways. In seven years I have watched as a fascination with Apple IIe computers and VHS players on the part of a few educators has grown into a desire by many to use advanced computers, telecommunications, multi-media, and other technologies to make education more meaningful, relevant, and responsive to the age in which they live.

Seven years ago Alaska had an edge in educational technology. It is my observation that Alaska has lost that edge and that teachers are frustrated with the lack of technology that they need in order to teach the skills that they know their students need to enter today's work force. It is also my observation that most educators believe that technological proficiency needs to be a basic component of a well-rounded education and that the tools needed to make this happen are, by and large, simply not there.

Your proposal offers a real chance to regain lost time and lost ground. It offers a real opportunity not only to replenish classrooms with much

needed learning technology, but also to draw educators into the process of planning for technology and examining the best ways to use it to serve their students, school districts, and ultimately the public. I commend you on your foresight in this area and urge legislators to support your proposal.

Please let me know if I can be of further assistance.



Jason Ohler

Director, Educational Technology Program

University of Alaska Southeast

Phone: 463-5685, Fax: 586-1699, UACN: JFJBC

Rep. Kay Brown

Talking notes/education technology

House HESS Committee

3-10-93

- **Introduction**

Thank you for hearing HB 106 and HB 107, which would establish an education technology program for the state.

- **Overview**

An infusion of technology in Alaska schools will provide benefits to students, teachers, and society.

Nationally, we are moving toward a consensus that -- as the Congressional Office of Technology Assessment put it -- "appropriate assignment of new technologies within effectively organized schools could make a big difference in academic performance."

It is being widely recognized that the power of the computer is needed in every classroom in order to **free teachers to spend more quality time teaching students to improve student performance** by allowing intensive, individual electronic instruction for each student, and to **prepare students to work in the electronic global work place.**

Mastery at using computers is now required in virtually every service, profession, science, and art. Students must get a fundamental grounding in how to find out what they need to know and how to perform their work in the context of an electronic world.

Recommendations for **Alaska 2000** included a comprehensive technology program; however, these elements are not included in the Governor's bills. (reference Association of Alaska School Boards, letter of Feb. 23, which recommends a program like the one that would be established by these bills.)

Major concerns: **cost and equity.**

We know that equipping high-tech schools will be expensive, and high costs to date have greatly limited the number of students who can participate and benefit. In the Lower 48 much of the new technology is concentrated in affluent suburban schools systems, where educational opportunities are already greater than in many urban and rural districts.

A majority of Alaska students get no opportunity to work with computers at school, and only a small fraction, about one-tenth of them, work with a computer every day.

This is frustrating in that for several years I and a number of other legislators have been **working to increase state support** for technology in schools in our districts.

Substantial direct grants for Anchorage schools have now been vetoed by two governors. Former Gov. Cowper suggested that it was **unconstitutional** to fund computers for only some schools. That is what led me to develop a statewide approach to the problem.

HB 106/HB 107 would establish a comprehensive education technology program on an equitable basis for all schools in the state.

- **Benefits**

Benefits of education technology are discussed at length in *How to Shape Up Our Nation's Schools: Three Crucial Steps for Renewing American Education*, by Terrel H. Bell and Donna L. Elmquist, and in *Power On: New Tools for Teaching and Learning*, by the congressional Office of Technology Assessment.

I'd like to say a few words about Dr. Bell, who came to Juneau in 1991 to testify in favor of HB 203/204, which I sponsored in the 17th legislature. He was U.S. Secretary of Education from 1981-85 under President Reagan, and has been a leading advocate of education reform. His book is the best articulation I have seen of the benefits of education technology.

Bell and Elmquist write that "electronic instruction is the future of education." They say that technology should be the catalyst for restructuring education. "Schools must be modernized and pushed into the level of effectiveness that other aspects of business and industry have attained."

Interactive technologies have been used in American schools on a limited basis for more than 30 years, and a body of research has been accumulated about the results. The OTA said in its 1988 report that studies conducted to look at the effectiveness of Computer-Aided Instruction (CAI) show that elementary level students who received brief daily CAI lessons as a supplement to instruction showed gains equivalent to 1 to 8 months of instruction over their peers who received traditional instruction only. Other

findings show that CAI is **more effective at raising achievement among low-achieving students** than for average or high-achieving students.

Students **complete material faster** with CAI than with traditional instruction, sometimes as much as 40 percent faster. Increases in student **attendance, motivation, and attention span** have also been reported in most studies.

Major benefits include:

**\* improve student achievement.** Effective learning requires that a student actively participates, engages in serious independent work, and receives regular and frequent feedback, instead of passively receiving instruction. Modern technology can help free students from the cycle of passivity. This assumes high-quality software that incorporates effective teaching practices and organization of the curriculum.

**Student benefits and how technology is used in schools:**

- \*drill and practice to master basic skills** (traditional application, used successfully for many years -- reading and math)
- \* individualized instruction.** Students move at own pace. intelligent tutoring systems. keep exact records of student progress.
- \*simulation** in science, mathematics and social studies
- \*enhancing problem-solving** abilities
- \*understanding abstract math and science concepts** (microcomputer-based laboratories, graphing)
- \* manipulation of data** (ability to create, search and use databases for individual and class projects)
- \*writing skills**

- \* **computer skills for general purposes, and for business and vocational training** -- prepare students to function in an increasingly technological world
- \* **increase student awareness of the outside world** (E-mail, databases).
- \* **cooperative learning.** telecommunications technology makes new ways of communicating and sharing possible. potential to work in small teams in the classroom.
- \* **distance learning** has many possibilities to improve the quality of education in Alaska due to telecommunications advances.
- \* **access and communication for traditionally unserved populations** of students (such as special education), especially in **rural areas**, and for people with **disabilities** (such as speech synthesizers and other devices).

Technology is **not meant to replace the teacher but to place more responsibility on the student** for independent learning under the teacher's guidance and observation.

The professionally trained **teacher is indispensable** in attaining the outcomes described, and only a skilled teacher can integrate and orchestrate all the learning activities into a well-executed program of teaching and learning. (Bell/Elmqvist)

\* **improve teacher efficiency.** In addition to test scoring, recording progress, communicating with parents, and preparing lessons, teachers have many mandated administrative and clerical responsibilities. Computer systems can enhance teachers' abilities to do their jobs more effectively. Computers and appropriate software can **simplify routine paperwork, complete report forms, monitor each student's progress, track learning deficiencies and strengths, as well as tutor students.** These capabilities enhance the quantity and quality of interaction between teachers and students.

Technology also can enable them to share information with other educators, interact with the outside world and bring that world into the classroom.

Can't over emphasize the importance of **teacher training**. Unless teachers understand the tools and how to use them, the potential of technology will not be realized.

- **Why technology hasn't taken hold in our schools**

Bell and Elmquist:

- \*expensive and difficult to acquire
- \*technology used only in small-scale ways or as an afterthought, rather than as part of a plan to enhance productivity and transform school practices.
- \***training of teachers frequently neglected**
- \*necessary changes in management have not been made
- \*many advocates of technology have failed to realize that teaching is a human, complex activity requiring a great deal of interaction with students.

### **Summary of bills**

During several years of work with teachers, educators, parents, DOE personnel, school districts, technology specialists and others, I've developed the proposals in HB 106/HB 107. (Draft CS for HB 106, Ford 2-16, makes minor changes, mostly related to libraries; new language is marked.)

Briefly, these bills would:

- establish the **Alaska Education Technology Program** in the Department of Education. The program must include

- (1) **technical assistance** to districts, schools and libraries for the purpose of planning for, purchasing, using and evaluating the results of education technology;
- (2) **training** for teachers and other employees in the use of education technology;
- (3) a plan for **coordinating and expanding existing networks** for educational uses.

- establish the **Alaska Education Technology Fund**; the commissioner of Revenue is the treasurer of the fund.

The **purpose of the fund** is to (1) enhance the quality and equity of education at public elementary and secondary schools by **providing a portion of the money needed to purchase and maintain education technology** in classrooms; (2) provide training in the use of education technology to help students achieve student performance standards; and (3) provide **access to networks** for public schools.

- require a **local match for funding**; the sliding scale formula proposed in the Governor's HB 82 (local match for construction and major maintenance grants) is proposed for the education technology fund.

The requirements for an application are outlined in detail (beginning at page 4, line 20).

Before a grant is awarded a school **must prepare a comprehensive plan** explaining how it will use the technology to improve student performance, how it will train teachers and other instructional personnel in curriculum application and implementation, and how it will evaluate program.

- establish an **Education Technology Committee**, consisting of the director of the division of libraries, archive and museums and seven members appointed by the Governor.

The seven include four educators with demonstrated education technology experience from districts of varying sizes; one university and one DOE employee with demonstrated experience; and one employee of the Department of Administration with telecommunications expertise.

- require the committee to develop appropriate guidelines to ensure an **equitable distribution of funds** over a five-year period. (page 8, line 18)
  
- amend the "school report card" requirement to include a report on "uses of education technology by classroom teachers that have improved student performance and the results of periodic evaluations of education technology" acquired under the Alaska Education Technology Fund program. (page 2, line 30)
  
- require the DOE to conduct, before accepting applications for funds
  - (1) a **survey of education technology resources** in public schools and libraries in the state; and
  - (2) **statewide planning and grant writing seminars** available to all public schools, districts and libraries. (page 9, line 20)

## **Funding**

I recommend that the State spend about **\$10 million a year for five years (\$50 million total)** to implement a statewide technology program:

- \*\$40 million from G.O. bonds, and
- \*\$10 million from the General Fund to cover non-bondable costs such as teacher training (\$2 million GF per year).

While a G.O. bond approach is incorporated in HB 107, the program could be funded with cash.

### **Fiscal notes**

#### HB 106

- DOE, libraries -- 74.0 in first year for support for State Library.
- DOE, program support -- 132.8 in first year for program support.

#### HB 107

- Revenue, Treasury Management -- 256.5 to support GO bond issuance.

The additional General Fund costs that I mentioned could be funded through a fiscal note to the bill establishing the program.

### **Why bond?**

\*difficult to get all General Funds in one year. continuing appropriations are legally questionable and clearly not binding.

\* knowing the amount up front helps ensure an equitable distribution

\* let the people decide. I think it is appropriate to ask the public whether they wish to borrow money to make this opportunity possible. Based on the reaction I've received from students, parents, teachers, school board members and administrators around the state, I'm optimistic about the chances for passage. Anchorage voters approved bonds for school library technology in 1991. reference polls, DOE statewide survey supporting education technology.

\* the state's debt service obligations are declining rapidly; this amount of debt can be issued responsibly. Note at page 1, lines 11-13 of HB 107, the bonds may not be issued in amounts that will cause the debt service on the bonds to exceed five percent of projected unrestricted GF in the years when the bonds are repaid.

We have an **opportunity to be leaders** in the effort to bring technology into the classroom. **Because of our small population**, it is within our ability to provide this opportunity equitably for all our children. I welcome your support, and I'd be happy to provide any additional information.

Feb. 1, 1993

## SECTIONAL ANALYSIS

### HB 107

**An Act providing for the issuance of general obligation bonds in the amount of \$40,000,000 for the acquisition of classroom instructional equipment and materials and library computer automation and resource sharing systems**

#### Section 1

Contingent on the enactment of HB 106, the sum of \$40 million in general obligation bonds will be sold for purchasing and installing education technology in Alaska public schools and computer automation and resource sharing systems in public libraries.

The bonds may not be issued in amounts that will cause the debt service on the bonds to exceed five percent of projected unrestricted general fund receipts in the years when the bonds are repaid.

#### Section 2

Contingent on voter authorization of the general obligation bond issue, the "1994 Education and Library Technology Fund" will be established. Proceeds of the bond sale will be credited to the fund.

#### Section 3

Specifies that \$37 million of the bond proceeds will be appropriated from the 1994 Education and Library Technology Fund to the Alaska Education Technology Fund, created by HB 106, for classroom instructional equipment and materials.

#### Section 4

Specifies that \$3 million of the bond proceeds will be appropriated from the 1994 Education and Library Technology Fund to the Alaska Educational Technology Fund for library computer automation and resource sharing systems for publicly funded libraries.

*Sectional Analysis*

Section 5

Appropriates up to \$140,000 from the general fund to the state bond committee to pay expenses of the bond sale. Specifies that the general fund will be reimbursed for the amount of the expenses from the proceeds of the bond sale.

Section 6

Any unspent or unobligated balance of the \$40 million in bond proceeds will be used by the state bond committee to redeem bonds.

Section 7

Provides for wording of the bond proposition to appear on the ballot of the next general election.

Section 8

Effective date will be on the date that the Alaska Educational Technology Fund, HB 106, is enacted.

# FISCAL NOTE

STATE OF ALASKA  
1993 LEGISLATIVE SESSION

BILL NO. HB 107

Revision Date: \_\_\_\_\_ Dept. Affected: Revenue  
 Title: Issuance of GO Bonds for Equipment, Material and Computers... BRU: Revenue Operations  
 Component: Treasury Management  
 Sponsor: Rep. Brown State Bond Committee  
 Revisor: Hs HES COMPONENT SERIAL NO. 121

Expenditures/Revenues: (Thousands of Dollars)

	FY94	FY95	FY96	FY97	FY98	FY99
OPERATING						
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL	256.5					
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
<b>TOTAL OPERATING</b>	<b>256.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

CAPITAL						
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REVENUE FUND SOURCE:						
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FUNDING: (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	256.5					
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
<b>TOTAL</b>	<b>256.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year (FY93) impact: \$ \_\_\_\_\_

ANALYSIS: (Attach a separate page if necessary)  
 See Attached

Prepared by: Tomas H. Boutin Phone: 465-3750  
 Division: Treasury Date: 3/2/93  
 Approved by Commissioner: Darrel J. Rexwinkel Date: 3/2/93  
 Agency: Revenue

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ANALYSIS:

Contractual costs for the issuance of one series of State of Alaska general obligation debt in the amount of \$40,000,000 would be as follows:

<u>Contractual Service</u>	<u>Amount</u>
Financial advisor <sup>1/</sup>	\$ 70,000
Printing	15,000
Paying agent/registrar <sup>2/</sup>	17,500
Credit ratings	250,000
Bond counsel <sup>2/</sup>	<u>44,000</u>
 TOTAL	 \$396,500
 Less amount for issuance Sec.5	 <u>140,000</u>
 Amount required	 \$256,500

The underwriter spread is not shown. The amount of bond proceeds would be adjusted to compensate underwriter(s) awarded the bond sale. That amount might be \$12.50 per thousand dollars of issuance.

<sup>1/</sup> The existing contract provides for hourly rates. The amount shown is based on that contract.

<sup>2/</sup> Rates fixed by existing contracts for this size of issuance.