ABSTRACT
        Designed to assist those involved with planning,
organizing, and implementing computer use in schools, this checklist
can be applied to: (1) assess the present state of instructional
computer use in the district; (2) assist with the development of
plans or guidelines for computer use; (3) support a start-up phase;
and (4) monitor the implementation or progress of an on-going
program. Based on the need for coherency, rationality, and
coordination between buildings and districts, the guidelines are
designed from the district point of view. The main areas of
assessment include: methods of computer use (computer assisted
instruction, software application, programming); hardware and
software currently in use; funding sources; computer brands being
utilized; availability and types of teacher inservice training;
equity in computer access; district computer planning activities and
guidelines; and problems and impediments to successful computer
implementation and development. (JB)

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DISTRICT COMPUTER CONCERNS:
Checklist for Monitoring Instructional
Use of Computers

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DISTRICT COMPUTER CONCERNS
CHECKLIST FOR MONITORING INSTRUCTIONAL USE OF COMPUTERS

This packet of materials will be useful to those involved with planning, organizing and implementing computer use in schools. This packet can be applied (1) to assess the present state of instructional computer use in the district, (2) to assist with the development of plans or guidelines for computer use, (3) to support a start-up phase, and (4) to monitor the implementation or progress of an on-going program. Careful monitoring of current practice is essential if decision-makers are to understand and appreciate the instructional use of computers.

This packet is organized around key issues for decision-making about computer use programs. Any useful computer plan, guideline, or policy will need to address these key issues. This checklist is designed from the district's perspective and based on the need for coherency, rationality and coordination between buildings and districts.

MAIN AREAS

1) How is a computer to be used? (CAI, word processing, programming) What hardware and software are currently used?

2) Cost - What can be budgeted? Who is paying?

3) Inservice training - who, what area, compensation?

4) Equity - What are the patterns or present use? Is equal access assured?

5) Computer use plan - Is there one? Is it implemented?

I. Decision About Use

Within instructional use, there are three categories: (1) computer assisted instruction (CAI), (2) computer programming, (3) software application. The questions on the following page are based on this categorization. Please add any other uses that occur in your district in this space.

Check each of the following curriculum areas if computers are now being used and will in 2 years be used on a regularly scheduled basis: Use one of the following marks for magnitude: 0, /, or //. 0 = none, / = some, // = lots.

	Elementary		Middle/Jr.		High	
	Now	In 2 Yrs	Now	In 2 Yrs	Now	In 2 Yrs
1.1 CAI: Are there classes using CAI?	___	___	___	___	___	___
1.2 Programming: Are there classes in:						
Programming - BASIC	___	___	___	___	___	___
Programming - PASCAL	___	___	___	___	___	___
Programming - LOGO	___	___	___	___	___	___
Programming - Other	___	___	___	___	___	___
Software Applications (W/P)	___	___	___	___	___	___
Other Computer Literacy	___	___	___	___	___	___
1.3 Integrated Usage: Is computer applied software being used to supplement classes and texts in:						
Business Education	___	___	___	___	___	___
Composition	___	___	___	___	___	___
Reading	___	___	___	___	___	___
Language Arts	___	___	___	___	___	___
Journalism	___	___	___	___	___	___
Foreign Language	___	___	___	___	___	___
Mathematics	___	___	___	___	___	___
Science	___	___	___	___	___	___
Social Science	___	___	___	___	___	___
Health	___	___	___	___	___	___
Career Education	___	___	___	___	___	___
Library Skills	___	___	___	___	___	___
Agriculture & Forestry	___	___	___	___	___	___
Drafting	___	___	___	___	___	___
Electronics	___	___	___	___	___	___
Industrial Arts	___	___	___	___	___	___
Home Economics	___	___	___	___	___	___
Music	___	___	___	___	___	___
Art	___	___	___	___	___	___
Physical Education	___	___	___	___	___	___
Keyboarding - typing	___	___	___	___	___	___

	Elementary Needed:		Middle/Jr. Needed:		High Needed:	
	Now	in 2 Yrs	Now	in 2 Yrs	Now	in 2 Yrs

1.4 Audiences Served: Are computers being used in programs for

Education/Handicapped	___	___	___	___	___	___
Education/Gifted	___	___	___	___	___	___
Career Information System	___	___	___	___	___	___
Teachers	___	___	___	___	___	___
Other	___	___	___	___	___	___

1.5 Time on the Terminal: Provide rough estimates (or percent) of average student time per activity, even if subsumed within another course.

Level

Activity	Elementary	Middle/Jr. High	High School
Total weekly time spent in:			
Drill and practice	___	___	___
Tutorial	___	___	___
Simulation	___	___	___
Instructional games	___	___	___
Other instructional tasks	___	___	___
Recreational games	___	___	___
Library	___	___	___
Utilities	___	___	___
Computer application instruction (learn about word processing)	___	___	___
Computer application for other subject matter instruction	___	___	___
Communications	___	___	___
Computer programming	___	___	___
Other	___	___	___

1.6 Requirements: What computer courses or competencies are/will be required in:

	Elementary School	Middle/Jr. High School	High School
Now	_____	_____	_____
	_____	_____	_____
In 2 years	_____	_____	_____
	_____	_____	_____

1.7 <u>Extent of Usage</u>: What percentage of students are actually using these stations and will be using them in 2 years:

	Percent Now	Percent in 2 Years
Elementary	_____	_____
Middle/Jr. High	_____	_____
High School	_____	_____

II. <u>Decisions About Equipment: Brands and Funding.</u>

2.1 <u>Computer Types</u>: List the number and brands of computer hardware this district has at the following levels:

Terminals	Elementary	Middle/Jr. High	High School
Apple II's	_____	_____	_____
Apple Macintosh	_____	_____	_____
Commodore 64	_____	_____	_____
Radio Shack color-computer	_____	_____	_____
Radio Shack I, III, 4	_____	_____	_____
IBM PC	_____	_____	_____
IBM PC Jr.	_____	_____	_____
Acorn	_____	_____	_____
Texas Instruments	_____	_____	_____
Apple II Compatible	_____	_____	_____
IBM Compatible	_____	_____	_____
Other	_____	_____	_____

2.2 <u>Special Provisions</u>: Maintenance....security....room space....student carrels--any other special site provisions (wiring), lighting, air conditioning)--any special provisions for staff (computer room personnel, computer coordinators at building or district levels).

2.3 Students/Terminals: What is the ratio of number of students to work stations?

	# f Schools	# of Students	Stations	Ratio
Elementary	__ __	_____	_____	____
Middle/Jr. High	_____	_____	_____	____
High School	_____	_____	_____	____

2.4 Distribution of Hardware: Where are the student stations located in the school? How many are

	Elementary	Middle/Jr. High	High School
in classrooms	_____	_____	_____
in library/media centers	_____	_____	_____
in "computer room"	_____	_____	_____
mobile "floaters"	_____	_____	_____
other	_____	__ __	_____

2.5 Funding Sources: What percent of funding for hardware and software came from:

	Percent
Federal Funds - Chapter 1, Title I	__ __
Federal Funds - Chapter 2	_____
Other Federal Funds	_____
Private Foundations	_____
State Funds	_____
Business/Industry Donations	_____
District Funds	_____
School Funds	_____
Parent-Teacher Associations	_____
Other Funding	_____

2.6 Other Sources: What current budgets are being used for the computer program?

_____	Library Media Fund
_____	Textbook Adaption Fund
_____	Discretionary Building Fund
_____	Computer Program Funds
_____	Other

2.7 <u>Allocation of Funds</u>: What percent of these funds is allocated to:

<div style="text-align:right">Percent</div>

Hardware: New purchases   _____

             Replacement   _____

             Maintenance   _____

Software: New purchases   _____

             Replacement   _____

             Maintenance   _____

Training   _____

Staff   _____

2.8 <u>Purchasing Policies</u>: Decisions for obtaining:

Hardware: Uniform supplies

             Bid

             Other

Software: Consortium (e.g, Oregon Ed. Computer Consortium)

             Vendor: Mail order/Retail

             Other

2.9 <u>Insurance</u>: Does your district have separate insurance for your computer hardware and/or software?   Y/N _____   If yes, does it cover the following:

<div style="text-align:center">Y/N</div>

    Theft   _____

    Fire   _____

    Vandalism   _____

    Off-site uses _____

    Liability   _____

    Other   _____

2.10 Is there a designated district computer coordinator: Y/N _____

     If yes, what budgeted FTE is provided for this position? _____ FTE

     To whom (position) does the district computer coordinator report?

2.11 Name a school that exemplifies the most successful pattern of computer adoption.

_____

2.12 District Variability:

     Very wide _____   Somewhat _____   Uniform _____

III **Decisions About Inservice.** Inservice is <u>the</u> key to successful program implementation. Staff commitment and training is essential for "cadre' model" adapted by most schools. In this model a few teachers are trained and are responsible for training other teachers. The question of setting priorities may be addressed by a few (e.g., steering committee), some, or many (e.g., total staff). A priority may be that many students have a small amount of computer time, or a few students having a lot of time. A district must identify what criteria will be used to determine which students will use the computer and for what reasons. The relationship between equipment, curriculum development, and successful implementation pivots on the issue of inservice.

3.1 Does your district provide classes in any of the following:

Ares of Inservice Training	Y/N
Introductory Computer class (10 hr.)	____
Basic Programming (30 hr.)	____
Software Review (25 hr.), how to select software	____
Integrating Software in Classroom Activities (20 hr.)	____

Application of Different Software (45 hr.)
    Indepth knowledge of: electronic spreadsheets, data base
    management, word processing, grade books, test development
	____

Authoring CAI (30 hr.), basic principles of instructional software design	____

Information Retrieval course (25 hrs), utilization of major
    national data base, such as those of the New York Times,
    SOURCE, or Career Information System
	____

3.2 Over the last 12 months, what computer-related topics have been covered by:

District-Sponsored Inservice Programs

Building-Sponsored Inservice Programs

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3.3 What percent of your teachers have now completed some inservice training for instructional computing and will have in 2 years? Inservice training in this question refers to training that has taken at least a day to deliver.

	Now	In 2 Years
Elementary School	_____	_____
Middle/Jr. High	_____	_____
High School	_____	_____

3.4 How is inservice preparation for computer uses provided? Of all inservice thus far provided, (about) what percent comes from:

Source	Percent
District Resource Person	_____
Training/Tuition Reimbursement	_____
District-Sponsored Inservice Train.ng	_____
School-Sponsored Inservice Training	_____
Building-Level Resource Person	_____
Individual Initiative	_____

3.5 What percent of your instructional computing inservice training is provided by:

	Percent
District Computer Coordinators	_____
School Computer Coordinators	_____
Classroom Teachers	_____
School Administrators	_____
District Administrators	_____
Other District Staff	_____
Educational District Staff	_____
College/University Faculty/Staff	_____
Commercial Providers	_____
Other Non-District Personnel	_____

3.6 What percent of your teachers have taken instructional computing inservice training at the following times:

	Percent
After school	_____
Release time	_____
Weekends	_____
Summer school	_____

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3.7 What is the average amount of time (during last school year) a teacher spent on instructional computing inservice training?

_____

3.8 What incentives or compensations are provided for development of computer capabilities by teachers, resource people, and/or administrators?

3.9 Which building has utilized a particularly effective training program?

IV __Decision on Equity.__ Equity is defined as accessibility - by whom and when.

4.1 When are student stations (or computer lab) available?

All day = 8 hours every school day   Y/N _____

Other arrangement   _____

4.2 Is there a prerequisite for access?   __Y/N__ _____
If yes, indicate which of the following is a prerequisite:

GPA   _____

Class standing   _____

Class enrollment   _____

Study hall   _____

Computer License*   _____

Job (office attendance)   _____

* Some districts have a voluntary introductory program on computer use; completion and certification (license) is required before a student can use a computer.

4.3 In classes that consistently use computers, what percent of enrollment are boys and girls?

	% Boys	% Girls
Computer Classes (Computer I, II, III, Computer Applications)	_____	_____
Mathematics	_____	_____
Business Classes	_____	_____
English Composition	_____	_____

4.4 What techniques have been attempted to address the problem of differential utilization?

4.5 Which ones have been successful?

4.6 How is the hardware distributed?

 _____   Equal number to each building

 _____   Based on enrollment proportions

 _____   Designated by steering committee

 _____   Other

4.7 Is there a scheduling procedure?   Y/N _____
Please provide a description of how it is organized.*

* Many districts have reported that scheduling is a key element: "maintaining
  a scheduling system that allows for the greatest possible use is our main
  challenge."

V Guidelines - Plan. Successful use of computers to assist learning will not
occur without careful planning. A plan should include guidelines on: objectives
of computer use, curriculum areas, equipment (hardware and software) selection and
evaluation, facilities plan, staff training, equity and resources. A steering
committee is useful and should be a representative group who have a commitment to
computers, willing to work on learning strategies and evaluations. They will be
charged with identifying the criteria which determine which students will use the
computer and for what reasons.

5.1 In planning for instructional computer use, does the district use

                                                        Y/N

   District Administrative Use Committee   ____

   District Instructional Use Committee   ____

   Combination of the Above   ____

   Community Committee   ____

   Secondary Committee   ____

   Elementary Committee   ____

   Principals' Committee   ____

   Teachers' Committee   ____

   Administrator and Key Staff   ____

   Administrator   ____

   Individual Staff Members   ____

   Ad Hoc Committee   ____

5.2 Does the district have written guidelines for instructional uses of computers?

Y/N _____

	Y/N
If yes, does it address:	
Hardware Purchasing	__
Software Purchainsg	__
Hardware Evaluation	__
Software Evaluation	.
Maintenance Requirements	
Inventory Control	__ __
Required/Desired Teacher Competencies	. __ __
Required/Desired Administrator Competencies	. __
Required/Desired Student Competencies	__
Community/Home Coordination	__
Provisions for Staff Development	__
Personnel Requirements	__
Funding Sources	__
Space and Site Preparation	__
Copyright Protection	__
.nformation Security or Protection	__
Incentives for Individual Development	__
Incentives for School Development	__
Plans for Growth for next 2-3 years	__
Plans for Growth for next 4-6 years	__
Plans for Growth for next 7+ years	__
Curricular Use	__
Extra Curricular Use	__
A method for easily identifying computer-related expenditures	__

5.3 Are all these guidelines being followed?   Y/N _____
If no, wnich are not being followed:

5.4 "ow do you rate the following possible problems as impediments to plan development and implementation of instructional computing in your district?

	Minor	Moderate	Major
Financial constraints	_____	_____	_____
Cost of Staff Development	_____	_____	_____
Lack of Staff Incentives	_____	_____	_____
Software: Poor Quality	_____	_____	_____
Hardware: Lack of Power	_____	_____	_____
Absence of District Plans	_____	_____	_____
Inappropriateness of District Plans	_____	_____	_____
Inappropriate School-Level Plans	_____	_____	_____
Administrator Attitudes	_____	_____	_____
School Board Attitudes	_____	_____	_____
Teacher Attitudes	_____	_____	_____
Student Attitudes	_____	_____	_____
Parent Attitudes	_____	_____	_____
Community Attitudes	_____	_____	_____
Lack of Physical Space	_____	_____	_____
Administrator Competencies	_____	_____	_____
Teacher Competencies	_____	_____	_____
Student Competencies	_____	_____	_____
(Others???)			

5.5 Of the possible impediments listed in the above questions, which three present the most difficult problem?

     most difficult:

     next most difficult:

     third most difficult:

5.6 Is there an impediment not listed that you feel should be in the top three?

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