



Public Education Technology

How are Utah schools providing the conditions necessary for improving student learning with technology?

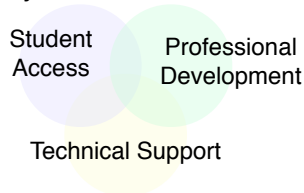
How can we best prepare our students to succeed in the 21st century?

2005-04 Ed Tech Audit

(pp. 1-2) For teachers and students to utilize technology in an efficient and effective manner and to fully take advantage of the benefits of using technology to improve the education of students, three components must be present.

These are:

- Access to technology, i.e., the hardware, software, and infrastructure
- Professional development opportunities for teachers in the use of the technology
- On-going technical support to maintain the systems.



The best practices highlighted in the report include:

1. Provide adequate technology resources (p.7)
2. Provide professional development opportunities, support and time to implement the training (p.9)
3. Provide sufficient technical support to keep the systems operational (p10)
4. Provide stable funding tied to short-term and long-term plans (p.12)
5. Set equipment standards (p.15)
6. Manage computer and printer inventory (p.16)
7. Conduct an annual Total Cost of Ownership (TCO) review (p.18)

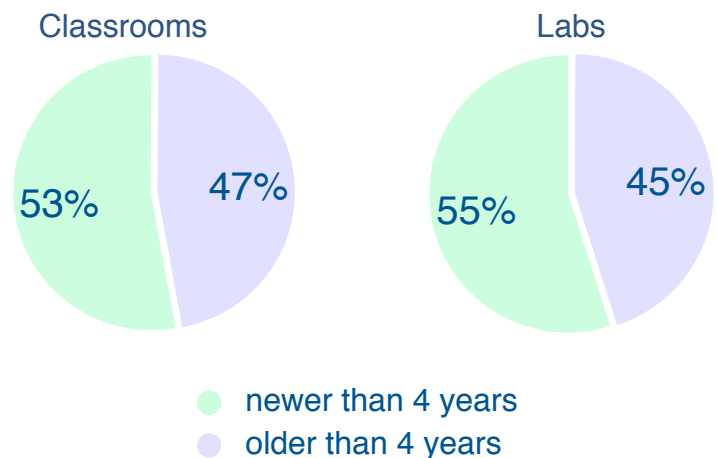
Student Access per Instructional Computer

	2000		2002		2004	
	Utah	U.S.	Utah	U.S.	Utah	U.S.
statewide	5.5	4.9	4.5	3.8	5.1	3.8
poverty schools	4.5	5.3	3.8	4	4	3.9
in classrooms	15.2	11.3	13.9	9.2	14.3	7.6
in labs	12.2	15.3	11.8	13.6	10.6	12.1
in media centers	80.4	78.6	84.7	72	75.8	56.8
multimedia computers	10.1	7.9	8.1	5.9	6.7	4.6
multimedia in poverty schools	8.3	8.8	7.5	6.5	6.3	5

Source: Ed Week - Technology Counts

<http://edcounts.edweek.org/createtable/step1.php?categoryId=55>

Computers in Utah Schools - Aging Infrastructure



Source: Report to the Utah Legislature Number 2005-04 (page 6)

Technical Support

As the infrastructure ages, the complexity of the computing environment increases. These issues were discussed in the 2003 Gartner evaluation of Alpine district's total technology infrastructure: "The Utah district had a very complex technology environment. On the desktop 60 percent of the devices were Macintosh-based, and 40 percent Windows-based. In the server environment Netware, Windows 2000, Windows NT, Linux, Appleshare, Mac OS X, and OS/400 were all present. This complexity tends to create interoperability issues, which drive support costs as well as downtime. In addition, the district loses economies of scale in training of staff and purchasing."

<https://k12tco.gartner.com/home/homepagepromo/files/Utah.pdf>

Computers per technical staff member:

Alpine	Carbon	Daggett	Davis	Granite	Logan	Millard	Provo	San Juan
238:1	83:1	142:1	225:1	230:1	135:1	499:1	104:1	75:1

Utah school districts are conducting TCO evaluations to understand the true overall spending on technology, to manage and assess technology investments and initiatives in the context of organizational goals, to assist in developing budgetary guidelines, and to inform stakeholders of their management practices.

Source: Gartner Total Cost of Ownership 2004/05 K-12 Tool - <https://k12tco.gartner.com/home/default.aspx>

Professional Development

In April 2005, the National Conference of State Legislatures (NCSL) began the Education Technology Foundation Project to investigate the benefits to supporting and funding educational technology at the state level. "There is a lot more to education technology than just ensuring every student has access to a computer. Technology needs to be incorporated into every aspect of education. Teachers need to be adequately trained in computer operations as well as incorporating technology into the daily curriculum and instruction. Students will be better served if they are using technology as an on-going part of the learning process, rather than a separate activity." <http://www.ncsl.org/programs/educ/EducationTech.htm>

Ed Tech Funding Sources

Federal: E-rate, Title II Part D (EETT), Perkins

State: UEN funding, SB 51, local discretionary block grant (p.3)

Local: local education funds

Educational Technology Initiative (ETI) 1991-2001 in millions:

	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
line	0	0	0	1.0	1.01	4.4	4.4	6.4	8.5	8.9	8.9
one	13.4	11.8	9.9	8.9	6.6	9.7	9.6	0	5.5	4.5	0

Utah K-12 Technology Vision

Our state ed-tech plan envisions a 1 to 1 ratio where appropriate. Ideally, K-2 classrooms would have mini labs (a 4-1 ratio); 3-6 classroom would have a 2 to 1 ratio; and secondary students would have 1 to 1 access.

The February 2005 Legislative audit report stresses "there are three components for efficient and effective technology use - student access, technical support, and professional development - each requiring stable funding. Where funding, policy review, and leadership are in place, schools and students benefit from the investment in educational technology."

Source: Report to the Utah Legislature Number 2005-04 (page 20)