

K-12 Technology Survey—20004

Survey creation:

The 2004 Technology Survey was created by Tim Harms of math education and Peggy Rittenhouse of elementary education. The target population of the survey was technology coordinators in districts hiring our students. The survey was designed to cover all K-12 technology use by teachers and students in the district.

Selection procedure:

With assistance from Teri Walseth, 18 districts that regularly hire our students were identified. In 16 of those districts, the technology coordinator responded favorably to an email request to participate in the survey. 2 districts did not reply to email and phone requests. Of the 16 questionnaires sent out 10 were returned. Respondents include Moorhead, St. Paul, Rothsay, Detroit Lakes, Central Cass, Norman County East, Norman County West, Fergus Falls, Alexandria, and Hawley (elementary only). So, for the table below, a total of 10 responses were possible, except for middle and high school levels, which were left blank for Hawley, and several categories left blank by the Rothsay respondent, who skipped a page. Gaps in data are indicated by (– 1) in the appropriate rows and columns.

Compilation criteria for grade level data:

There are two sets of information for each technology item: extent of use and perception of importance. Extent of use is broken down by grade level (elementary, middle level, and high school). For ease of analysis, “significant participation” means participation either by students or faculty. If 10% or more was recorded for either group, the response for this district, grade level, and technology item was scored 1; otherwise, 0. Comments are included in the compilation. Original survey returns are available on request for further analysis.

Item	Significant participation by grade level			Importance for future teachers		
	P/El.	Middle (– 1)	High (– 1)	Very	Somewhat	Not
Platforms						
Windows	5	6	7	8	1	0
Macs	6	5	5	6	1	0
Hardware						
Scanners	8	7	7	3	7	0
PRU	0	1	1	1	1	2
PDA	2	2	2	1	6	0
Sci/math. probes	1	3	5	1	4	2
<i>Comments:</i> PDA use expected to grow.						
Adaptive Hardware						
Switches	Responses unclear. Some omitted this, some didn't			Responses indicated need for awareness of these resources, but in-		
Keyboards						

Trackball	know, some misinterpreted “keyboards.”			depth knowledge was needed only by specialists.		
Output dev.						
<i>Comments:</i> Occupational therapist specializes in a.h. Regular ed. teachers can be made aware of these items. Special ed. teachers need more in-depth knowledge.						
Adaptive software						
Via Voice	1	2	3	Same as for hardware.		
Dragon Naturally Spkg.	2	4	5			
Clicker	2	2	2			
Word Bar	0	0	0			
Intellikeys	4	3	3			
<i>Comment:</i> We need to become more active in these products. Special ed. Teachers need higher training than regular teachers on this software.						
Video						
Digital camera (– 1)	8	8	8	9	0	0
DV camcorder (– 1)	6	8	7	7	1	1
Networks						
LAN Server (– 1)	9	8	8	9	0	0
Secure Internet site (– 1)	8	7	7	7	1	1
Word Processing						
MS Word (– 1)	7	8	8	8	1	0
Appleworks (– 1)	6	4	4	5	1	0
Spreadsheets						
MS Excel (– 1)	6	7	7	4	5	0
Appleworks (– 1)	3	4	4	2	4	0
<i>Comments:</i> Teachers need awareness of what spreadsheets can do—but in-depth knowledge not needed.						
Databases						
MS Access	0	2	4	1	4	5
Appleworks	3	3	3	0	3	3
<i>Other:</i> Filemaker, SAS-1 (attendance).						
<i>Comment:</i> Awareness is good, but in-depth skills not needed. We use databases to search for info, but we don’t create them.						
Graphing						
Graphing calculator	2	3	8	2	6	1

Photo imaging						
Photoshop	3	5	8	2	6	0
Any photo imaging	4	8	9	6	4	0
<i>Other:</i> Appleworks, Adobe PhotoDeluxe, Kodak/Canon packaged software, Photoshop Elements II, Photoshop Pro						
<i>Comment:</i> Some type of skills with photo editing are very important. Any program is OK.						
Presentation software						
KidPix	7	1	1	2	5	1
PowerPoint	5	8	8	2	6	0
Keynote	2	2	2	2	2	4
Hyperstudio	3	1	0	1	3	4
iMovie	4	4	4	5	1	1
Appleworks Slide Show	5	1	1	2	3	2
<i>Other:</i> Ezedia MX.						
<i>Comment:</i> Very important skill—not just techie side either—need to know design, layout, etc.						
Desktop publishing						
MS Word	4	5	7	6	3	0
PageMaker	0	1	5	3	4	2
Any desktop pub.	6	7	9	7	2	0
<i>Other:</i> Appleworks, Print Shop, Quark.						
Web Page Development						
Front Page	0	0	3	1	1	5
Dreamweaver	1	1	5	3	3	1
Any web page creator	3	2	9	5	4	1
Adobe acrobat	3	3	4	3	2	3
<i>Other:</i> Claris Home Page, Flash, U.P.						
<i>Comment:</i> If you continue to make it an assignment for the student teachers to create a web page portfolio type thing you need to provide them with the skills & resources—we get too many out here that want/need our help.						
Simulations						
Sim City	1	3	1	1	2	1
Frog Dissection	0	3	1	1	2	0
Telecommunication						
Email	10	9	9	10	0	0
Instant Messaging	5	5	5	5	2	1
<i>Comments:</i> Extremely important. Not usually a problem with this generation.						

We don't allow students to IM at school. Instant Messaging forbidden. Weblogs used.						
Drill/Practice software						
Drill/Practice software	8	5	4	0	6	2
<i>Comments:</i> Trying to eliminate this except in remedial instances. Elementary uses mostly free software from the internet. They have at least 20-25 to choose from in all subject areas. Used: Math Blaster, Munchers, Reading Blaster. Not our highest priority.						
Teacher tools						
Accelerated Reader	7	5	2	4	4	0
Gradebook	10	9	9	10	0	0
Lesson planning	3	3	3	3	2	1
Record keeping	6	6	6	4	4	0
Online quizzes/surveys	4	3	4	3	3	1
<i>Others:</i> CCC, Star, Reading Counts, Reads 180 (reading). JMC Gradebook, Worksheet generators (including web-based), EasyGrade Pro, Teacher Timesavers.						

Narrative comments

Teacher-tool software in use:

- We don't have a standard teacher-tool product other than Microsoft Office.
- Power Grade.
- JMC Gradebook, Microsoft Office.
- Microsoft Office, JMC (Student Records), Reading Counts, Lightspan, Online lesson plans, Online attendance, Online gradebook.
- District is looking into a district-wide grading package—but not yet.
- Accelerated reader is a must—but don't stop with the software—get the training they offer and implement it correctly or don't use it!!
- SASA-XP, Integrate Pro
- Campus, Teacher timesavers, Urban Planet
- Appleworks, Quickmail, Safari, iLife Suite, Filemaker, Powerschool, Hyperstudio, Inspiration, Kidspiration. Also textbook-specific applications.

What teachers should know about district's appropriate software use policies:

- Ethical use, understand price of bandwidth and lost productivity, understand professional vs. personal use, supervising student use.
- Knowledge of office, Integrate Pro, SASI, and Email, Norton Antivirus.
- How software can be integrated into the curriculum.
- Copyright issues are big problem.

- How it can increase both student and teacher productivity. How it can add or enhance curriculum.
- Licensing is a big issue, always have legal copies of software and don't load home copies of software. Understand their district's network use policies & procedures regarding email & data storage.

Other hardware/software recommendations:

- On-line courseware.
- Streaming video/audio, weblogs, webquests, research skills, digital storytelling, LCD projector use, Inspiration, subscription databases.
- Projection equipment for PowerPoint, simple trouble-shooting why a printer didn't print.
- Keyboarding programs. Photoworking software.
- I would focus more on the idea of *integrating* a variety of technology into the curriculum *first* and then hardware and software will come next.
- Photo Editing—Email. Printer setup.
- Multimedia in the digital world is becoming very popular now. Any program that deals with digital video, pictures, and sounds.

Other suggestions for teacher preparation:

- Emerging technologies, using sites like Atomic Learning to teach teachers to train tms, inquiry model, scoring rubrics, how to uncover plagiarism.
- The more they can use before the classroom the better!!!
- Be prepared to log in to networks—save work on servers—manipulate your own digital photos—create your own presentations. Imovie in Mac labs becoming very popular. Maintaining your own classroom website is a plus.
- Bring students to visit area schools with excellent use of tech that is *integrated* throughout the curriculum.
- Proper moral use.
- Know how to backup data. How to protect computers from viruses. How to clean and maintain computers. Temp files. Cookies. Temp Internet files.
- Keep open mind. Don't be afraid of it. Try it/learn from it. How can things improve the next time it's used. Share experiences on how it increased learning or enhanced an activity.
- Be prepared for constant change!
- Learn to multitask in having students doing different things. Not all students learn the same way, so with technology there are many ways to accomplish the same task. Be flexible.