

Missouri Census of Technology 2006 Summary Data

Missouri districts complete the Census of Technology during the April Cycle of the Department’s online Core Data Collection system, which includes a district-level report form and a building-level report form for each school in the district. The Core Data Manual provided directions for completing the Census and definitions of key terminology. The effective “Census” date each year is March 1.

Below is a summary of the data reported during the April 2006 Census of Technology. Refer to the entire *2006 Census of Technology Report* for more details, including trend data analyses.

DISTRICT Level Census Form

N=524

- Year district technology plan was last approved by DESE [\[All plans are approved for up to three years\]](#)
Approval cycle: [200 plans due 2007](#) [56 plans due 2008](#) [268 plans due 2009](#)
- Board-approved education technology standards and population(s) that must meet the standards.

Standard Type	# Districts	% Districts
Locally-developed	439	84%
Adopted ISTE National Educational Technology Standards (NETS)	185	35%
Adopted ITEA Standards for Technological Literacy: Content for the Study of Technology	51	9%
Other: 6=Show-Me Standards	25	5%
None	40	7%

Population - Students			Population - Staff		
Grade Level	# Districts	% Districts	Staff Type	# Districts	% Districts
PreK-2	449	86%	Administrators	426	81%
3-5	464	89%	Teachers	434	83%
6-8	473	91%	Support services staff	383	73%
9-12	403	77%	None	89	17%
Area career center	58	100%			
None	41	8%			

Summary: Districts are more likely to have educational technology standards in place for students than for staff (92% versus 83%, respectively). Student standards are most likely in place for students in career centers and upper elementary and middle/junior high schools than in early elementary grades and high school.

- Estimated total FTE of district-level staff directly responsible for technical maintenance and support of hardware.

Employee Type	# Districts	% Districts	Average FTE	Median FTE
District technology staff	493	94%	2.21	1.0
None	31	6%		
Non-Employee Type	# Districts	% Districts	Average Contract	Median Hours
Vendor/Contractor	156	30%	200 hours	55 hours
None	368	70%		

- District-supported administrative systems. (Check ALL that apply) [\[Number and Percent Districts Reporting\]](#)

System Type	# Districts	% Districts	System Type	# Districts	% Districts
Accounting/budgeting/payroll	517	99%	IEP management	401	77%
Classroom website hosting	301	57%	Instructional management	149	28%
Communication/email	489	93%	Inventory	313	60%
Course scheduling	388	74%	Library catalog	491	94%
Discipline	420	80%	School safety	123	24%
Distance education	212	41%	Student attendance	498	95%
Extra curricular scheduling	211	40%	Student fees	243	46%
Food Service	451	86%	Student performance	365	70%
Grade book	431	82%	Teacher evaluations	166	32%
Health Service	402	77%	Technical support	302	58%
Human resources	184	35%	Transportation	235	45%

DISTRICT Level Census Form (Continued)

Summary of administrative systems data: Districts generally support systems related to budgeting and student records. The top five administrative systems supported by districts include: accounting/budgeting/payroll (99%), student attendance (95%), library catalog (94%), communication/email (93%), and food service (86%). A minority of districts also support systems that address school safety (24%), instructional management (28%), teacher evaluation (32%), and human resources (35%).

5. All buildings in district are connected through a wide or local area network.

District Network Status	# Districts	% Districts
Yes	<u>484</u>	<u>92%</u>
No	<u>40</u>	<u>8%</u>

6. Core content area(s) in which technology is integrated. (Check ALL that apply)

Content Area	# Districts	% Districts
Communication Arts	<u>512</u>	<u>98%</u>
Science	<u>494</u>	<u>94%</u>
Social Studies	<u>483</u>	<u>92%</u>
Mathematics	<u>481</u>	<u>92%</u>

7. Estimated percentage of following populations with district-provided email accounts.

Student Grade Level	# Districts	% Districts	Median % Accounts
PreK-2	<u>9</u>	<u>2%</u>	<u>100%</u>
3-5	<u>31</u>	<u>6%</u>	<u>85%</u>
6-8	<u>54</u>	<u>10%</u>	<u>95%</u>
9-12	<u>111</u>	<u>21%</u>	<u>30%</u>
None	<u>397</u>	<u>76%</u>	-

Staff Type	# Districts	% Districts	Median % Accounts
Administrators	<u>508</u>	<u>97%</u>	<u>100%</u>
Teachers	<u>498</u>	<u>95%</u>	<u>100%</u>
Support Services Staff	<u>482</u>	<u>92%</u>	<u>100%</u>
None	<u>16</u>	<u>3%</u>	-

Summary: Districts are more likely to provide email accounts to staff than students (97% and 24%, respectively), with nearly all districts providing email for administrators and teachers (97% and 95%).

8. Estimated percentage of district 8th graders who are technologically literate. Median = 90%
9. Amount budgeted for technology for current year. [N = 524 with 10 districts reporting \$0.00]
Total = \$110,929,735 Average = \$211,980 Median = \$50,000
10. Dollar value of district E-rate discount for current year (per funding commitment decision letters). [N = 404 districts]
Total = \$25,326,100 Average = \$62,688 Median = \$10,631
11. Estimated percentage of E-rate discount used to support education technology. Median = 97%

SCHOOL Building Level Census Form

N = 2229

PLANNING

1. Type of school building technology plan.

Plan Type/Status	# Districts	% Districts
Integrated in district plan	<u>2026</u>	<u>91%</u>
Stand-alone plan	<u>164</u>	<u>7%</u>
Do not have building plan	<u>19</u>	<u>1%</u>

TRAINING

1. Estimated percentage of faculty/staff in school building at each skill level of technology use.

Faculty/Staff	Skill Level		
	Beginner	Intermediate	Advanced
Administrator(s)	<u>8%</u>	<u>67%</u>	<u>25%</u>
Teachers	<u>18%</u>	<u>60%</u>	<u>22%</u>
Support Services Staff	<u>31%</u>	<u>51%</u>	<u>18%</u>

Summary regarding technology skill levels: Over 90% of administrators have intermediate or advanced skills, compared to 82% of teachers and 39% of support services staff.

SCHOOL Building Level Census Form

TRAINING (Continued)

2. Number of teachers in school building participating in education technology-related professional development (including eMINTS).

Hours Professional Development	# Teachers	# Buildings
Completed less than 15 hours	<u>35652</u>	<u>1717</u>
Completed 15 to 30 hours	<u>8557</u>	<u>870</u>
Completed more than 30 hours	<u>3368</u>	<u>622</u>
TOTAL	<u>47577</u>	<u>2229</u>

Summary: Over 47,500 teachers participated in ed-tech professional development in the 2005-06 school year, with 75% of those completing less than 15 hours.

3. Number of eMINTS-trained teachers in school building, by training type.

eMINTS Professional Development Type	Completed Year 1 Only		Completed Years 1 & 2	
	# Teachers	# Buildings	# Teachers	# Buildings
Comprehensive eMINTS for Teachers	<u>423</u>	<u>162</u>	<u>831</u>	<u>297</u>
eMINTS for Education Technology Specialists	<u>71</u>	<u>31</u>	<u>82</u>	<u>57</u>
Other two-year eMINTS programs	<u>179</u>	<u>43</u>	<u>74</u>	<u>30</u>
TOTAL	<u>673</u>		<u>987</u>	

HARDWARE AND SUPPORT

1. Estimated total FTE of school building staff or total hours of others directly responsible for technical maintenance and/or support of hardware. Overall Averages: 1.89 FTE 72 Contract hours

Employee Type	# Buildings	% Buildings
District technology staff	<u>1778</u>	<u>80%</u>
School certificated staff	<u>696</u>	<u>31%</u>
School non-certificated staff	<u>594</u>	<u>27%</u>
None	<u>108</u>	<u>5%</u>

Non-Employee Type	# Buildings	% Buildings
Students	<u>208</u>	<u>9%</u>
Parents/community members	<u>23</u>	<u>1%</u>
Vendors/contractors	<u>596</u>	<u>27%</u>
None	<u>1465</u>	<u>66%</u>

Summary: All but five percent of buildings report having someone overseeing the building's technology, which is generally provided by a district-level technology staff position.

2. Computers by type and location within school building.

Computer Platform	Computer Labs	Classrooms Rooms				ACC	Library Centers	Admin. Offices	Total
		PreK-2	3-5	6-8	9-12				
APPLE/MAC									
LC series and lower	<u>692</u>	<u>713</u>	<u>486</u>	<u>124</u>	<u>119</u>	<u>24</u>	<u>121</u>	<u>16</u>	<u>2295</u>
Power Mac series	<u>558</u>	<u>713</u>	<u>552</u>	<u>429</u>	<u>312</u>	<u>64</u>	<u>153</u>	<u>56</u>	<u>2837</u>
G3	<u>6338</u>	<u>3486</u>	<u>3808</u>	<u>3510</u>	<u>2728</u>	<u>206</u>	<u>1711</u>	<u>692</u>	<u>22479</u>
G4 or later	<u>7600</u>	<u>1862</u>	<u>2702</u>	<u>1632</u>	<u>2509</u>	<u>321</u>	<u>1569</u>	<u>790</u>	<u>18985</u>
Sub-Total	<u>15188</u>	<u>6774</u>	<u>7548</u>	<u>5695</u>	<u>5668</u>	<u>615</u>	<u>3554</u>	<u>1554</u>	<u>46596</u>
PC COMPATIBLE									
486 or earlier	<u>201</u>	<u>345</u>	<u>365</u>	<u>176</u>	<u>317</u>	<u>30</u>	<u>147</u>	<u>81</u>	<u>1662</u>
Pentium I or II	<u>5118</u>	<u>3878</u>	<u>4257</u>	<u>3921</u>	<u>5431</u>	<u>527</u>	<u>2325</u>	<u>1270</u>	<u>26727</u>
Pentium III	<u>15099</u>	<u>5892</u>	<u>8063</u>	<u>7729</u>	<u>10666</u>	<u>1376</u>	<u>4268</u>	<u>3744</u>	<u>56837</u>
Pentium IV or later	<u>45218</u>	<u>10088</u>	<u>16454</u>	<u>12927</u>	<u>22917</u>	<u>3768</u>	<u>9800</u>	<u>11380</u>	<u>132552</u>
Celeron	<u>10364</u>	<u>3610</u>	<u>5277</u>	<u>4601</u>	<u>5479</u>	<u>634</u>	<u>2564</u>	<u>2040</u>	<u>34569</u>
AMD (< 450 MHz)	<u>4374</u>	<u>1017</u>	<u>1970</u>	<u>1130</u>	<u>2563</u>	<u>302</u>	<u>1020</u>	<u>916</u>	<u>13292</u>
AMD (450+ MHz)	<u>751</u>	<u>394</u>	<u>563</u>	<u>456</u>	<u>591</u>	<u>42</u>	<u>272</u>	<u>179</u>	<u>3248</u>
Sub-Total	<u>81125</u>	<u>25224</u>	<u>36949</u>	<u>30940</u>	<u>47964</u>	<u>6679</u>	<u>20396</u>	<u>19610</u>	<u>268887</u>
Total Mac/PC	<u>96313</u>	<u>31998</u>	<u>44497</u>	<u>36635</u>	<u>53632</u>	<u>7294</u>	<u>23950</u>	<u>21164</u>	<u>315483</u>
HANDHELDS									
	<u>899</u>	<u>1155</u>	<u>3912</u>	<u>2222</u>	<u>2375</u>	<u>195</u>	<u>290</u>	<u>1527</u>	<u>12575</u>
TOTAL	<u>97212</u>	<u>33153</u>	<u>48409</u>	<u>38857</u>	<u>56007</u>	<u>7489</u>	<u>24240</u>	<u>22691</u>	<u>328058</u>

SCHOOL Building Level Census Form

HARDWARE AND SUPPORT (Continued)

3. Number of Internet connected computers and multimedia equipped computers by location and type of connection.

Computer and Connection Type	Computer Labs	Classrooms Rooms					ACC	Library Centers	Admin. Offices	Total
		PreK-2	3-5	6-8	9-12					
Multimedia Equipped	<u>92477</u>	<u>28356</u>	<u>41014</u>	<u>32917</u>	<u>47293</u>	<u>5893</u>	<u>21829</u>	<u>19798</u>	<u>289547</u>	
Internet Connected	<u>93313</u>	<u>29029</u>	<u>43228</u>	<u>35760</u>	<u>51025</u>	<u>6532</u>	<u>23330</u>	<u>21183</u>	<u>303400</u>	
Wired Connection										
Desktop	<u>80221</u>	<u>26105</u>	<u>36951</u>	<u>31916</u>	<u>45084</u>	<u>5561</u>	<u>19903</u>	<u>18103</u>	<u>263844</u>	
Laptop	<u>1208</u>	<u>534</u>	<u>1084</u>	<u>707</u>	<u>1518</u>	<u>183</u>	<u>431</u>	<u>1369</u>	<u>7034</u>	
Handheld	<u>93</u>	<u>308</u>	<u>490</u>	<u>323</u>	<u>106</u>	<u>18</u>	<u>15</u>	<u>192</u>	<u>1545</u>	
Wireless Connection										
Desktop	<u>1384</u>	<u>288</u>	<u>947</u>	<u>298</u>	<u>601</u>	<u>230</u>	<u>367</u>	<u>205</u>	<u>4320</u>	
Laptop	<u>8821</u>	<u>924</u>	<u>2213</u>	<u>1948</u>	<u>2578</u>	<u>292</u>	<u>1973</u>	<u>706</u>	<u>19455</u>	
Handheld	<u>148</u>	<u>36</u>	<u>270</u>	<u>229</u>	<u>342</u>	<u>12</u>	<u>125</u>	<u>436</u>	<u>1598</u>	

Summary of computer tables:

All Computer Types (including handheld devices)	Number	Percent	Ratio
Total – all locations	328,058	100.0%	2.74
• Percent computers, non-handhelds		• 96.2%	
• Percent computers (non-handhelds) - PC/PC-compatible		• 85.2%	
Located in all instructional rooms	305,367	93.1%	2.94
Located in classrooms	183,915	56.1%	4.88
Multimedia-equipped Computers			
Total – all locations	289,547	100.0%	3.10
Located in all instructional rooms	269,779	93.2%	3.33
Located in classrooms	155,473	53.7%	5.78
Internet-connected Computers			
Total – all locations	303,400	100.0%	2.96
• Percent all connected computers - desktop computers		• 88.4%	
• Percent all connected computers - wired connection		• 89.8%	
Located in all instructional rooms	282,217	93.0%	3.18
Located in classrooms	165,574	54.6%	5.42
Modern Computers – Pentium 4, G4, equivalent (and higher)			
Total – all locations	200,469	100.0%	4.48
Located in all instructional rooms	186,080	92.8%	4.83
Located in classrooms	107,942	53.8%	8.32
Internet-capable Computers – Pentium 3, G3, equivalent (and higher)			
Total – all locations	260,607	100.0%	3.45
Located in all instructional rooms	241,782	92.8%	3.71
Located in classrooms	136,228	52.3%	6.59

4. Technology by type and location within school building.

Room Technology Status	Comp. Labs	Instructional Rooms					ACC	Library Centers	Admin. Offices	Total
		PreK-2	3-5	6-8	9-12					
Total number of rooms	<u>4305</u>	<u>12877</u>	<u>12988</u>	<u>14200</u>	<u>17231</u>	<u>640</u>	<u>2164</u>	<u>10471</u>	<u>74876</u>	
% with telephone access	<u>58%</u>	<u>57%</u>	<u>57%</u>	<u>56%</u>	<u>65%</u>	<u>75%</u>	<u>84%</u>	<u>95%</u>	<u>65%</u>	
% with Internet access (wired or wireless)	<u>98%</u>	<u>98%</u>	<u>99%</u>	<u>94%</u>	<u>98%</u>	<u>99%</u>	<u>98%</u>	<u>97%</u>	<u>97%</u>	
% with one or more multimedia-equipped computers	<u>95%</u>	<u>93%</u>	<u>94%</u>	<u>85%</u>	<u>92%</u>	<u>94%</u>	<u>93%</u>	<u>89%</u>	<u>91%</u>	
% with one or more multimedia-equipped computers connected to Internet	<u>93%</u>	<u>92%</u>	<u>92%</u>	<u>85%</u>	<u>90%</u>	<u>94%</u>	<u>91%</u>	<u>88%</u>	<u>90%</u>	
% with one or more multimedia-equipped and Internet-connected computers and access to a printer, and a dedicated projection device	<u>59%</u>	<u>26%</u>	<u>35%</u>	<u>26%</u>	<u>30%</u>	<u>38%</u>	<u>44%</u>	<u>12%</u>	<u>29%</u>	

SCHOOL Building Level Census Form

HARDWARE AND SUPPORT (Continued)

Summary of technology table for rooms: Over 94% of instructional rooms, LMCs, and offices have Internet access, and over 90% of all rooms (except in offices and grades 6-8) have at least one multimedia computer connected to the Internet. Administrative offices, library centers, and instructional rooms in career centers are more likely to have telephones than in other instructional rooms. Computer labs and library centers are more likely to have a complete teacher workstation than other instructional rooms and offices. Teacher workstations appear in grades 3-5 more often than in other grades, averaging 35% compared to 30% in high school and 26% in grades PreK-2 and 6-8.

5. Estimated typical (average) timeframe for resolving minor or routine technical problems/repairs.

Repair Timeframe	# Buildings	% Buildings
1 working day	<u>801</u>	<u>36%</u>
2-3 working days	<u>1000</u>	<u>45%</u>
4-6 working days	<u>227</u>	<u>10%</u>
7-10 working days	<u>66</u>	<u>3%</u>
11 working days or more	<u>37</u>	<u>2%</u>

Summary: Over 1800 buildings (81%) report having routine technical problems solved in three or fewer days.

6. Estimated percentage of computers in working order on a typical (average) day Median = 98%.

INTERNET CONNECTIVITY – DISTANCE LEARNING

1. School building Internet connection by bandwidth and delivery mode.

Bandwidth	# Buildings	% Buildings	Delivery Mode	# Buildings	% Buildings
56kb – 384 kb	<u>52</u>	<u>2%</u>	Copper line	<u>778</u>	<u>35%</u>
385kb – 1.5mb (T1)	<u>1255</u>	<u>56%</u>	Fiber	<u>1115</u>	<u>50%</u>
1.6mb – 9.9mb	<u>426</u>	<u>19%</u>	DSL	<u>68</u>	<u>3%</u>
10mb – 45mb	<u>144</u>	<u>6%</u>	Satellite	<u>8</u>	<u><1%</u>
45mb – 100mb	<u>161</u>	<u>7%</u>	Other:	<u>209</u>	<u>9%</u>
>100mb	<u>169</u>	<u>8%</u>	None	<u>33</u>	<u>1%</u>
None	<u>4</u>	<u><1%</u>			

Summary: Nearly all buildings (98%) report having a partial T1 or higher Internet connection, with most connections delivered via fiber or copper wire. Two in five buildings (40%) have connections greater than T1.

2. Estimated percentage of computers connected to school building LAN (or district WAN) Median = 100%

3. Distance learning system(s) available to students in school building. (Check ALL that apply)

Distance Learning System	# Buildings	% Buildings
I-TV: two-way interactive (audio and video) television	<u>434</u>	<u>19%</u>
Desktop video conferencing: two-way interactive	<u>265</u>	<u>12%</u>
Web-based online instruction via Internet: non-interactive	<u>807</u>	<u>36%</u>
Satellite: one-way instructional video	<u>405</u>	<u>18%</u>
Cable TV: one-way instructional video	<u>1191</u>	<u>53%</u>
Other	<u>111</u>	<u>5%</u>
None	<u>510</u>	<u>23%</u>

Summary: The most prevalent distance learning systems include cable TV (53% of buildings) and online instruction (36% of buildings). Fewer than one-fifth of buildings have two-way interactive television or two-way interactive videoconferencing.

TECHNOLOGY USAGE

1. Estimated percentage of administrators, teachers, and students routinely using following applications.

Application	Routine Users		
	Administrators	Teachers	Students
Educational Software	<u>44%</u>	<u>76%</u>	<u>79%</u>
Email	<u>97%</u>	<u>94%</u>	<u>11%</u>
Electronic Resources:			
EBSCO host	<u>16%</u>	<u>23%</u>	<u>22%</u>
Electronic encyclopedia	<u>14%</u>	<u>30%</u>	<u>34%</u>
Gale	<u>3%</u>	<u>6%</u>	<u>6%</u>
Newsbank	<u>5%</u>	<u>7%</u>	<u>7%</u>
ProQuest	<u>2%</u>	<u>3%</u>	<u>3%</u>
SIRS	<u>2%</u>	<u>4%</u>	<u>5%</u>

SCHOOL Building Level Census Form

TECHNOLOGY USAGE (Continued)

2. Estimated percentage of administrators, teachers, and students routinely using computers for following functions.

Function	Routine Users		
	Administrators	Teachers	Students
Produce media, web, or multimedia products to demonstrate learning, make presentations	57%	51%	43%
Produce written or print products to demonstrate learning, make presentations	80%	80%	60%
Communicate with peers, experts, others	95%	88%	21%
Communicate with parents and students	83%	74%	12%
Conduct online research	81%	76%	56%
Participate in online courses (this year)	11%	12%	2%
Manage student records (spreadsheet/database)	85%	76%	-
Track student performance	84%	77%	-
Assess student performance	74%	72%	-
Deliver and present instruction	37%	60%	-
Prepare lesson plan(s)	11%	68%	-

Summary: Nearly all administrators (98%) and teachers (88%) use email to communicate routinely with peers and experts. Four in five administrators and teachers use word processing to produce written/print products. About three in four teachers use technology routinely to conduct online research, manage student records and track student performance. Students are more likely to use technology routinely to produce written/print products and conduct research. Few administrators, teachers, or students participate in online courses.

3. Estimated total FTE of staff or total hours of others directly responsible for integration of technology into curriculum and instruction. [Overall Averages: 1.8 FTE \(4.0 including teachers\) 47 Contract hours](#)

Employee Type	# Buildings	% Buildings
Instructional tech. specialist	767	34%
Library/media specialist	1348	60%
School administrator	1205	54%
Teacher	1219	55%
School technical staff	473	21%
District technical staff	1197	54%
Other	35	2%
None	108	5%
Non-Employee Type		
Students	49	2%
Regional center/RPDC	97	4%
Other (specify)	81	4%
None	1997	90%

Summary: Nearly all buildings (95%) provide instructional technology support, relying most on library media specialists and other teachers, or school administrators (including curriculum specialists and instructional coaches) and district technical staff. About one in three buildings has a designated instructional technology specialist. Little technology integration support is provided by non-employees.

4. Estimated percentage of teaching staff fully integrating technology into curriculum and instruction. [Median = 50%](#)
5. School (or district) supported technology-mediated feedback. (Check ALL that apply)

System	# Buildings	% Buildings
Automated absentee calling system	471	21%
Electronic bulletin board	375	17%
Email	2136	96%
Homework hotline via web	319	14%
Homework hotline via telephone	294	13%
Listserves	360	16%
Voice Mail	1196	54%
Other (specify):	98	4%
None	51	2%

Summary: Nearly all buildings (98%) report using technology to facilitate feedback and interaction between school staff and patrons. The most used technology-mediated systems include email (96%) and voice mail (54%). [Not counted were "other" responses indicating one-way (non-interactive) information provided to patrons via school websites.]