

APPENDIX A: CEO FORUM STaR CHART MAPPING OF SURVEYS

The CEO Forum on Education and Technology was established in 1996 to help ensure that America's schools effectively prepare all students to be contributing citizens and productive workers in the 21st century. The forum issues regular assessments of the nation's progress toward integrating technology into K-12 classrooms.

As part of this effort, the CEO Forum has created self-assessment tools and the School Technology and Readiness (STaR) Chart. This chart provides benchmarks of low, mid, high, and target technology readiness across a variety of indicators, including hardware, connectivity, content, professional development, technology access and use, and integration. The integration section of the chart was used to analyze survey responses on technology use by students, teachers, and administrators. The survey responses are present here, sorted by the STaR chart coding assigned. A summary of the integration and use section of the STaR chart is found below.

Technology Readiness	Role of Teacher	Pattern of Student Technology Use	Class Length	Educational Benefits
Low	Teacher-centered, teacher as lecturer of whole group	Irregular individual use	Short	Master basic skills through older drill and tutorial software
Mid	Teacher directed, whole group learning	Regular individual use for some students	Short	<p>Improve higher-order critical thinking with access to multimedia content</p> <p>Master basic skills through drill and tutorial software</p> <p>Greater information resources available for research and education from Internet and CD-ROM but constricted due to lack of access</p>
High	Teacher facilitated	Irregular group use for short collaborative activities; regular individual use for most students	Extended	<p>Improve higher-order thinking and research skills</p> <p>Greater information resources available for research and education from Internet and CD-ROM</p> <p>Most students / teachers able to communicate with parents, experts, other students and teachers outside the school</p>
Target	Teacher as guide, student-centered learning	Regular individual and group use of technology as tools when needed	Extended	<p>Student-centered authentic project-based learning</p> <p>Improve higher-order thinking and research skills</p> <p>Universal access to greater information resources available for research and education from Internet and CD-ROM</p> <p>Collaborative learning that allows students to develop teamwork / communication / problem-solving skills</p> <p>All students / teachers able to communicate with parents, experts, other students and teachers outside of school</p>

TEACHER SURVEY RESULTS

STUDENT USE OF TECHNOLOGY (PERCENT OF TEACHER RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
Low	5.02 Organize and store information	15.1%	17.4%	33.5%	34.0%	100%
Low	5.08 Plan, draft, proofread, revise and publish written text	16.2%	24.6%	33.8%	25.4%	100%
Low	5.09 Create graphics or visuals (e.g., diagrams, pictures, figures)	9.4%	15.9%	34.0%	40.7%	100%
Low	5.14 Connect auditory language to the written word and/or graphic representations (for the emerging reader)	8.8%	13.2%	22.1%	55.9%	100%
Low	5.18 Remediate for basic skills	20.2%	26.5%	31.7%	21.6%	100%
Low	5.21 Conduct drill and practice exercises	18.3%	23.7%	31.1%	26.9%	100%
Mid	5.01 Gather information from a variety of sources (e.g., Internet, CD-ROMs)	11.7%	21.0%	47.0%	20.3%	100%
Mid	5.06 Display data/information (e.g., charts, graphs, maps)	9.8%	12.2%	37.1%	40.9%	100%
Mid	5.10 Plan, refine, and produce audio/visual presentations	5.4%	7.3%	24.3%	63.1%	100%
Mid	5.12 Perform calculations	12.2%	14.7%	24.8%	48.3%	100%
Mid	5.22 Utilize Internet standardized test preparation materials	6.3%	8.2%	26.8%	58.7%	100%
High	5.03 Perform measurements and collect data in investigations or lab experiments	6.1%	11.3%	21.4%	61.2%	100%
High	5.07 Demonstrate classroom interactive sessions on the Internet (e.g., use of email, bulletin boards, home pages)	5.2%	8.8%	25.4%	60.6%	100%
High	5.11 Generate original pieces of visual art and/or musical composition	3.4%	4.6%	21.0%	70.9%	100%
High	5.13 Develop understanding of complex materials or abstract concepts (e.g., through visual models, animations, simulations)	5.7%	10.3%	20.2%	63.7%	100%
High	5.15 Design and produce a product (computer-aided manufacturing)	5.2%	5.7%	15.3%	73.9%	100%
High	5.16 Control other devices (robotics)	2.3%	0.6%	4.0%	93.1%	100%
High	5.17 Support individualized learning or tutoring	21.6%	23.3%	34.7%	20.4%	100%
High	5.19 Accommodate for a disability or limitation	10.9%	11.9%	22.9%	54.3%	100%
High	5.20 Produce local video shows	5.2%	3.8%	7.3%	83.7%	100%
Target	5.04 Manipulate / analyze / interpret information or data to discover relationships, generate questions, and/or reach conclusions	9.2%	14.7%	30.7%	45.4%	100%
Target	5.05 Communicate/report information, conclusions or results of investigations	9.7%	13.9%	37.6%	38.7%	100%

TEACHER ADMINISTRATIVE USE OF TECHNOLOGY (PERCENT OF TEACHER RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
Low	6.06 Diagnose and place students	10.5%	5.7%	17.9%	65.8%	100%
Low	6.07 Maintain attendance	11.1%	5.9%	12.4%	70.6%	100%
Low	6.08 Maintain grades	21.8%	19.7%	21.0%	37.5%	100%
Low	6.11 Maintain student data	20.8%	20.8%	27.5%	30.9%	100%
Low	6.13 Create instructional materials, visuals and/or presentations	31.7%	31.3%	26.3%	10.7%	100%
Mid	6.09 Generate and administer tests	22.1%	30.7%	25.6%	21.6%	100%
Mid	6.10 Calculate grades and generate progress reports	20.1%	20.8%	23.9%	35.2%	100%
Mid	6.15 Use DISCUS	6.9%	6.5%	15.5%	71.1%	100%
Mid	6.16 Research educational topics or interest	25.6%	30.2%	34.2%	10.1%	100%
Mid	6.17 Handle inventory	7.5%	5.2%	15.9%	71.5%	100%
High	6.01 Communicate with staff members and colleagues	22.9%	26.5%	35.3%	15.3%	100%
High	6.02 Communicate with parents/guardians of students	11.3%	17.0%	37.5%	34.2%	100%
High	6.03 Post/view/access school/district announcements or information	17.4%	17.0%	40.2%	25.4%	100%
High	6.04 Participate in on-line discussion groups or collaborative projects	8.0%	7.6%	17.8%	66.5%	100%
High	6.05 Utilize the Internet to electronically share information (lesson plans, common interests)	17.2%	19.8%	35.9%	27.1%	100%
High	6.12 Analyze and/or report students/school improvement data	12.0%	10.1%	22.7%	55.2%	100%
High	6.14 Use Internet to access curriculum/school improvement material	21.8%	22.7%	33.2%	22.3%	100%
High	6.18 Access on-line library media center	11.5%	10.3%	32.4%	45.8%	100%
High	6.19 Access on-line teacher certification forms, information	7.8%	6.1%	46.9%	39.1%	100%

PRINCIPAL

STUDENT USE OF TECHNOLOGY (PERCENT OF PRINCIPAL RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
Low	5.02 Organize and store information	15.8%	25.8%	50.8%	7.5%	100%
Low	5.08 Plan, draft, proofread, revise and publish written text	25.0%	40.8%	29.2%	5.0%	100%
Low	5.09 Create graphics or visuals (e.g., diagrams, pictures, figures)	9.2%	22.5%	51.7%	16.7%	100%
Low	5.14 Connect auditory language to the written word and/or graphic representations (for the emerging reader)	13.3%	16.7%	39.2%	30.8%	100%
Low	5.18 Remediate for basic skills	42.5%	33.3%	19.2%	5.0%	100%
Low	5.21 Conduct drill and practice exercises	31.7%	33.3%	25.0%	10.0%	100%
Mid	5.01 Gather information from a variety of sources (e.g., Internet, CD-ROMs)	20.8%	30.8%	46.7%	1.7%	100%
Mid	5.06 Display data/information (e.g., charts, graphs, maps)	10.0%	19.2%	53.3%	17.5%	100%
Mid	5.10 Plan, refine, and produce audio/visual presentations	6.7%	10.8%	48.3%	34.2%	100%
Mid	5.12 Perform calculations	20.0%	17.5%	42.5%	20.0%	100%
Mid	5.22 Utilize Internet standardized test preparation materials	10.0%	15.0%	41.7%	33.3%	100%
High	5.03 Perform measurements and collect data in investigations or lab experiments	10.0%	21.7%	48.3%	20.0%	100%
High	5.07 Demonstrate classroom interactive sessions on the Internet (e.g., use of email, bulletin boards, home pages)	7.5%	11.7%	49.2%	31.7%	100%
High	5.11 Generate original pieces of visual art and/or musical composition	3.3%	5.0%	37.5%	54.2%	100%
High	5.13 Develop understanding of complex materials or abstract concepts (e.g., through visual models, animations, simulations)	5.8%	12.5%	35.0%	46.7%	100%
High	5.15 Design and produce a product (computer-aided manufacturing)	3.3%	9.2%	32.5%	55.0%	100%
High	5.16 Control other devices (robotics)	1.7%	3.3%	16.7%	78.3%	100%
High	5.17 Support individualized learning or tutoring	38.3%	33.3%	22.5%	5.8%	100%
High	5.19 Accommodate for a disability or limitation	16.7%	14.2%	29.2%	40.0%	100%
High	5.20 Produce local video shows	14.2%	13.3%	24.2%	48.3%	100%
Target	5.04 Manipulate / analyze / interpret information or data to discover relationships, generate questions, and/or reach conclusions	9.2%	20.0%	54.2%	16.7%	100%
Target	5.05 Communicate/report information, conclusions or results of investigations	12.5%	20.8%	50.0%	16.7%	100%

TEACHER ADMINISTRATIVE USE OF TECHNOLOGY (PERCENT OF PRINCIPAL RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
Low	6.06 Diagnose and place students	10.0%	16.7%	33.3%	40.0%	100%
Low	6.07 Maintain attendance	30.0%	9.2%	15.8%	45.0%	100%
Low	6.08 Maintain grades	26.7%	30.8%	27.5%	15.0%	100%
Low	6.11 Maintain student data	30.8%	25.0%	34.2%	10.0%	100%
Low	6.13 Create instructional materials, visuals and/or presentations	17.5%	41.7%	37.5%	3.3%	100%
Mid	6.09 Generate and administer tests	18.3%	44.2%	28.3%	9.2%	100%
Mid	6.10 Calculate grades and generate progress reports	22.5%	30.0%	35.0%	12.5%	100%
Mid	6.15 Use DISCUS	8.3%	7.5%	39.2%	45.0%	100%
Mid	6.16 Research educational topics or interest	22.5%	33.3%	42.5%	1.7%	100%
Mid	6.17 Handle inventory	11.7%	6.7%	30.8%	50.8%	100%
High	6.01 Communicate with staff members and colleagues	28.3%	23.3%	43.3%	5.0%	100%
High	6.02 Communicate with parents/guardians of students	12.5%	15.0%	49.2%	23.3%	100%
High	6.03 Post/view/access school/district announcements or information	20.8%	20.8%	35.0%	23.3%	100%
High	6.04 Participate in on-line discussion groups or collaborative projects	4.2%	15.0%	43.3%	37.5%	100%
High	6.05 Utilize the Internet to electronically share information (lesson plans, common interests)	13.3%	25.0%	40.8%	20.8%	100%
High	6.12 Analyze and/or report students/school improvement data	12.5%	20.8%	40.8%	25.8%	100%
High	6.14 Use Internet to access curriculum/school improvement material	17.5%	32.5%	43.3%	6.7%	100%
High	6.18 Access on-line library media center	12.5%	20.0%	42.5%	25.0%	100%
High	6.19 Access on-line teacher certification forms, information	3.3%	15.8%	66.7%	14.2%	100%

ADMINISTRATOR USE OF TECHNOLOGY (PERCENT OF PRINCIPAL RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
L	7.06 Diagnose and place students	10.8%	18.3%	24.2%	46.7%	100%
L	7.07 Maintain attendance	62.5%	9.2%	12.5%	15.8%	100%
L	7.08 Maintain grades	32.5%	20.0%	19.2%	28.3%	100%
L	7.11 Maintain student data	60.8%	23.3%	9.2%	6.7%	100%
L	7.13 Create instructional materials, visuals and/or presentations	13.3%	20.0%	43.3%	23.3%	100%
M	7.09 Generate and administer tests	7.5%	9.2%	28.3%	55.0%	100%
M	7.10 Calculate grades and generate progress reports	22.5%	15.8%	23.3%	38.3%	100%
M	7.15 Use DISCUS	5.8%	7.5%	21.7%	65.0%	100%
M	7.16 Research educational topics or interest	19.2%	32.5%	40.0%	8.3%	100%
M	7.17 Handle inventory	18.3%	15.0%	45.0%	21.7%	100%
H	7.01 Communicate with staff members and colleagues	39.2%	27.5%	30.8%	2.5%	100%
H	7.02 Communicate with parents/guardians of students	13.3%	20.0%	40.0%	26.7%	100%
H	7.03 Post/view/access school/district announcements or information	25.0%	26.7%	30.8%	17.5%	100%
H	7.04 Participate in on-line discussion groups or collaborative projects	6.7%	10.8%	34.2%	48.3%	100%
H	7.05 Utilize the Internet to electronically share information (lesson plans, common interests)	13.3%	17.5%	35.8%	33.3%	100%
H	7.12 Analyze and/or report students/school improvement data	23.3%	28.3%	31.7%	16.7%	100%
H	7.14 Use Internet to access curriculum/school improvement material	21.7%	30.8%	35.8%	11.7%	100%
H	7.18 Access on-line library media center	8.3%	12.5%	35.0%	44.2%	100%

MEDIA SPECIALISTS

STUDENT USE OF TECHNOLOGY (PERCENT OF MEDIA SPECIALIST RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
Low	17.02 Organize and store information	22.6%	20.0%	41.7%	15.7%	100%
Low	17.08 Plan, draft, proofread, revise and publish written text	33.9%	25.2%	37.4%	3.5%	100%
Low	17.09 Create graphics or visuals (e.g., diagrams, pictures, figures)	16.5%	18.3%	51.3%	13.9%	100%
Low	17.14 Connect auditory language to the written word and/or graphic representations (for the emerging reader)	15.7%	17.4%	33.9%	33.0%	100%
Low	17.18 Remediate for basic skills	40.9%	25.2%	27.8%	6.1%	100%
Low	17.21 Conduct drill and practice exercises	32.2%	25.2%	32.2%	10.4%	100%
Mid	17.01 Gather information from a variety of sources (e.g., Internet, CD-ROMs)	28.7%	25.2%	44.3%	1.7%	100%
Mid	17.06 Display data/information (e.g., charts, graphs, maps)	12.2%	14.8%	54.8%	18.3%	100%
Mid	17.10 Plan, refine, and produce audio/visual presentations	16.5%	7.0%	41.7%	34.8%	100%
Mid	17.12 Perform calculations	18.3%	24.3%	33.9%	23.5%	100%
Mid	17.22 Utilize Internet standardized test preparation materials	20.0%	13.0%	21.7%	45.2%	100%
High	17.03 Perform measurements and collect data in investigations or lab experiments	8.7%	16.5%	36.5%	38.3%	100%
High	17.07 Demonstrate classroom interactive sessions on the Internet (e.g., use of email, bulletin boards, home pages)	7.8%	9.6%	33.9%	48.7%	100%
High	17.11 Generate original pieces of visual art and/or musical composition	9.6%	9.6%	32.2%	48.7%	100%
High	17.13 Develop understanding of complex materials or abstract concepts (e.g., through visual models, animations, simulations)	9.6%	17.4%	28.7%	44.3%	100%
High	17.15 Design and produce a product (computer-aided manufacturing)	9.6%	7.0%	21.7%	61.7%	100%
High	17.16 Control other devices (robotics)	6.1%	1.7%	11.3%	80.9%	100%
High	17.17 Support individualized learning or tutoring	34.8%	23.5%	30.4%	11.3%	100%
High	17.19 Accommodate for a disability or limitation	20.0%	18.3%	31.3%	30.4%	100%
High	17.20 Produce local video shows	20.0%	13.9%	18.3%	47.8%	100%
Target	17.04 Manipulate / analyze / interpret information or data to discover relationships, generate questions, and/or reach conclusions	12.2%	16.5%	43.5%	27.8%	100%
Target	17.05 Communicate/report information, conclusions or results of investigations	12.2%	22.6%	45.2%	20.0%	100%

TEACHER ADMINISTRATIVE USE OF TECHNOLOGY (PERCENT OF MEDIA SPECIALIST RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
High	18.01 Communicate with staff members and colleagues	28.7%	32.2%	33.0%	6.1%	100%
High	18.02 Communicate with parents/guardians of students	11.3%	19.1%	40.0%	29.6%	100%
High	18.03 Post/view/access school/district announcements or information	16.5%	26.1%	40.9%	16.5%	100%
High	18.04 Participate in on-line discussion groups or collaborative projects	5.2%	15.7%	45.2%	33.9%	100%
High	18.05 Utilize the Internet to electronically share information (lesson plans, common interests)	18.3%	25.2%	41.7%	14.8%	100%
Low	18.06 Diagnose and place students	17.4%	11.3%	34.8%	36.5%	100%
Low	18.07 Maintain attendance	27.0%	10.4%	10.4%	52.2%	100%
Low	18.08 Maintain grades	27.0%	36.5%	21.7%	14.8%	100%
Mid	18.09 Generate and administer tests	28.7%	38.3%	26.1%	7.0%	100%
Mid	18.10 Calculate grades and generate progress reports	22.6%	40.0%	24.3%	13.0%	100%
Low	18.11 Maintain student data	25.2%	34.8%	27.0%	13.0%	100%
High	18.12 Analyze and/or report students/school improvement data	13.9%	22.6%	36.5%	27.0%	100%
Low	18.13 Create instructional materials, visuals and/or presentations	29.6%	38.3%	26.1%	6.1%	100%
High	18.14 Use Internet to access curriculum/school improvement material	20.9%	33.0%	38.3%	7.8%	100%
Mid	18.15 Use DISCUS	18.3%	21.7%	44.3%	15.7%	100%
Mid	18.16 Research educational topics or interest	30.4%	38.3%	27.8%	3.5%	100%
Mid	18.17 Handle inventory	15.7%	10.4%	28.7%	45.2%	100%
High	18.18 Access on-line library media center	19.1%	20.0%	39.1%	21.7%	100%
High	18.19 Access on-line teacher certification forms, information	5.2%	13.9%	65.2%	15.7%	100%

ADMINISTRATOR USE OF TECHNOLOGY (PERCENT OF MEDIA SPECIALIST RESPONDENTS)

CEO Code	Activity	Over 2 hr/wk	1 to 2 hrs/wk	<1 hr/wk	Not at all	Total
L	19.06 Diagnose and place students	21.7%	19.1%	20.9%	38.3%	100%
L	19.07 Maintain attendance	60.0%	18.3%	7.8%	13.9%	100%
L	19.08 Maintain grades	41.7%	15.7%	15.7%	27.0%	100%
L	19.11 Maintain student data	64.3%	17.4%	11.3%	7.0%	100%
L	19.13 Create instructional materials, visuals and/or presentations	16.5%	18.3%	32.2%	33.0%	100%
M	19.09 Generate and administer tests	11.3%	9.6%	17.4%	61.7%	100%
M	19.10 Calculate grades and generate progress reports	29.6%	16.5%	19.1%	34.8%	100%
M	19.15 Use DISCUS	10.4%	5.2%	33.9%	50.4%	100%
M	19.16 Research educational topics or interest	22.6%	24.3%	44.3%	8.7%	100%
M	19.17 Handle inventory	18.3%	18.3%	32.2%	31.3%	100%
H	19.01 Communicate with staff members and colleagues	34.8%	26.1%	29.6%	9.6%	100%
H	19.02 Communicate with parents/guardians of students	16.5%	21.7%	27.0%	34.8%	100%
H	19.03 Post/view/access school/district announcements or information	20.9%	32.2%	26.1%	20.9%	100%
H	19.04 Participate in on-line discussion groups or collaborative projects	7.8%	11.3%	28.7%	52.2%	100%
H	19.05 Utilize the Internet to electronically share information (lesson plans, common interests)	11.3%	21.7%	32.2%	34.8%	100%
H	19.12 Analyze and/or report students/school improvement data	29.6%	30.4%	23.5%	16.5%	100%
H	19.14 Use Internet to access curriculum/school improvement material	23.5%	22.6%	40.9%	13.0%	100%
H	19.18 Access on-line library media center	9.6%	8.7%	30.4%	51.3%	100%