

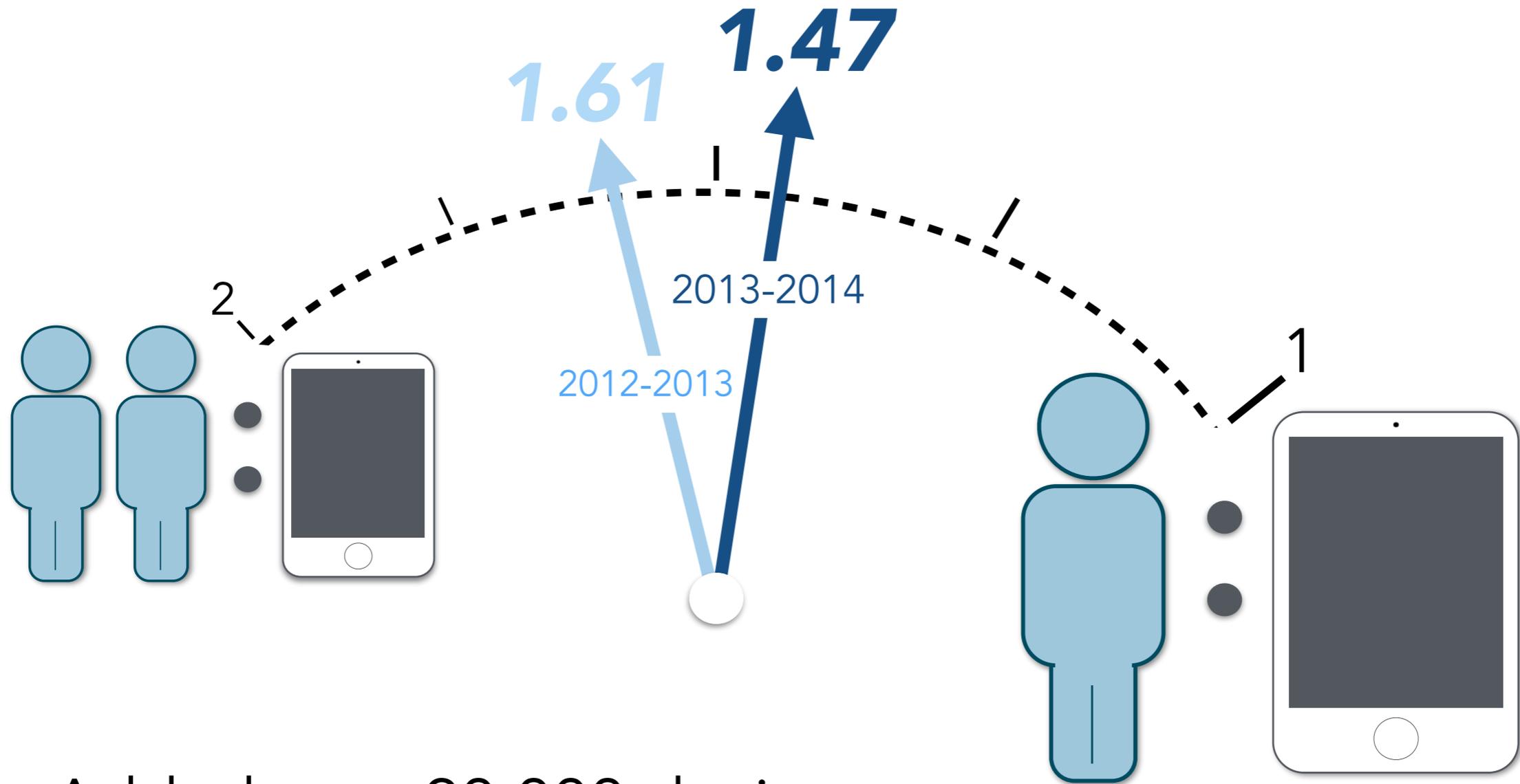
Nebraska
Department of
Education

2014

***Technology
Report***

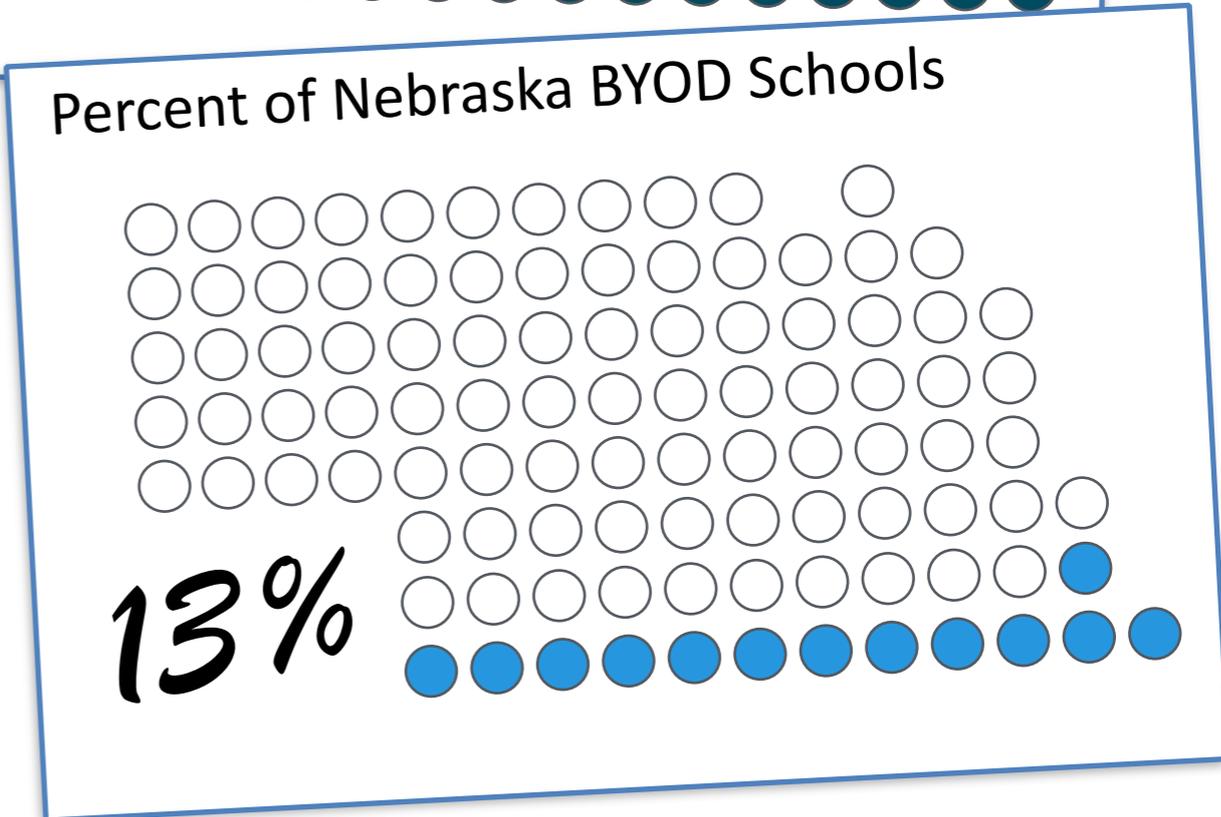
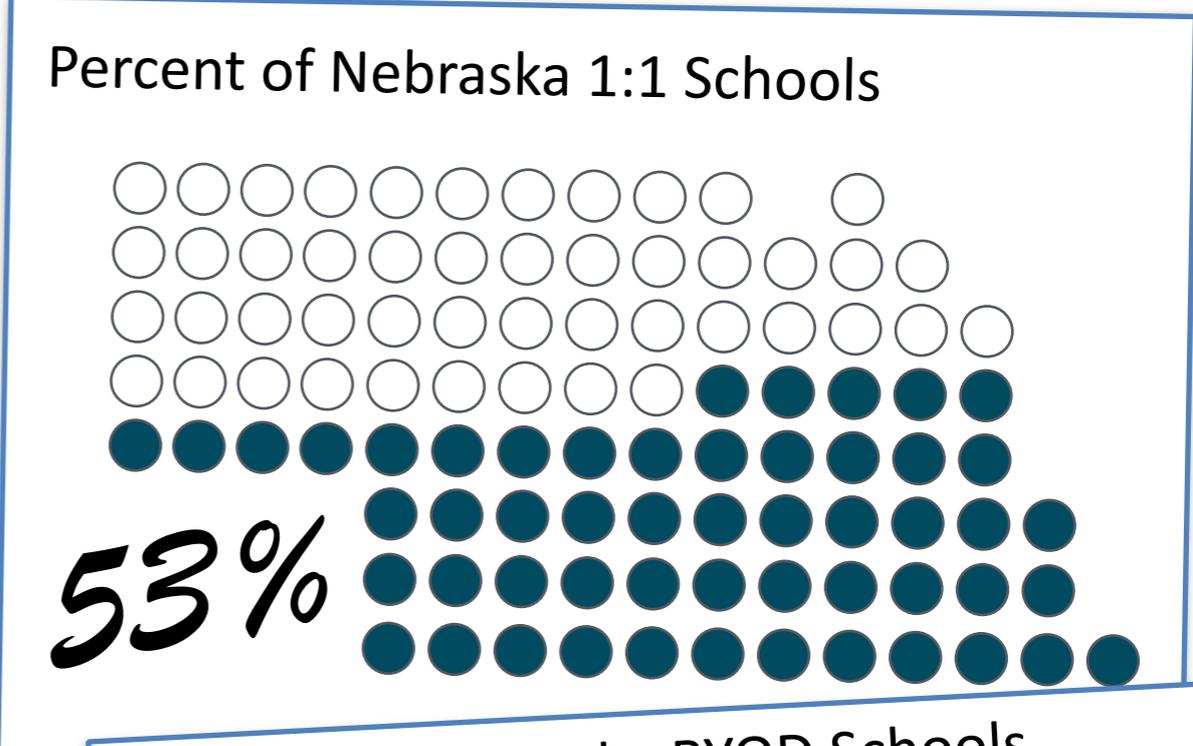
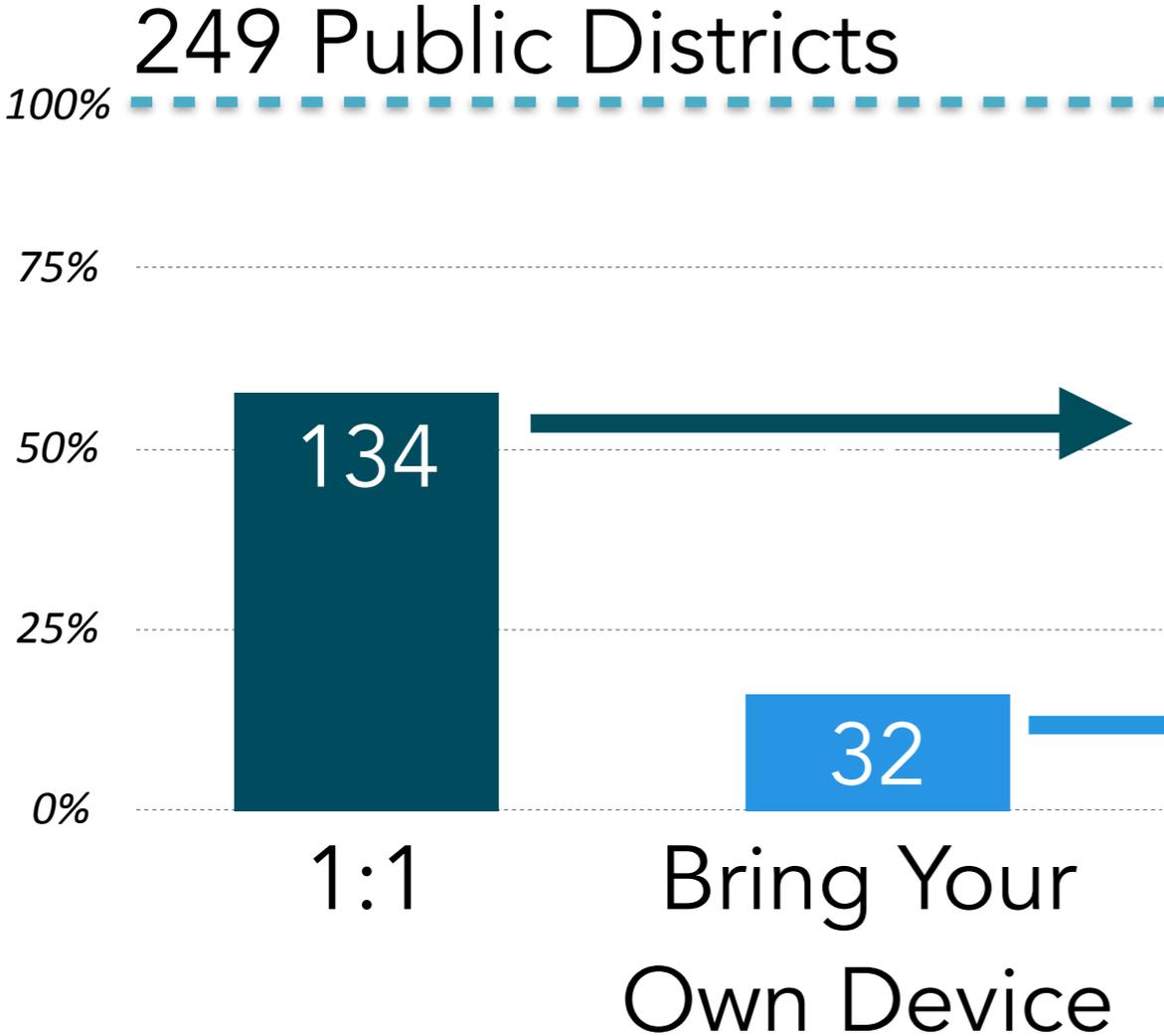


Students per Instructional Device



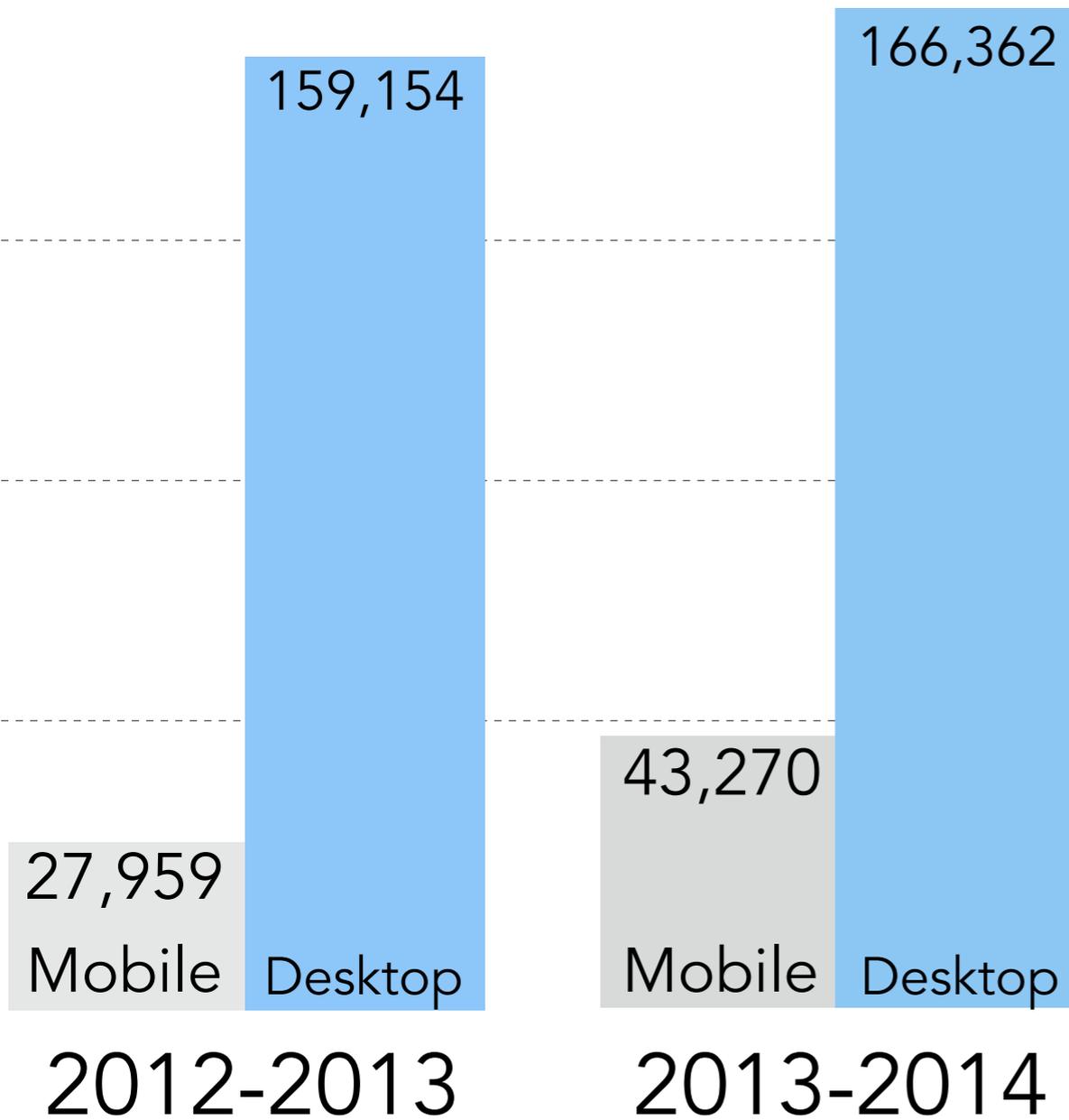
- Added over 20,000 devices
- 134 Districts with at least one grade 1:1
- All 249 Public School Districts Reported

One to One and Bring Your Own Device

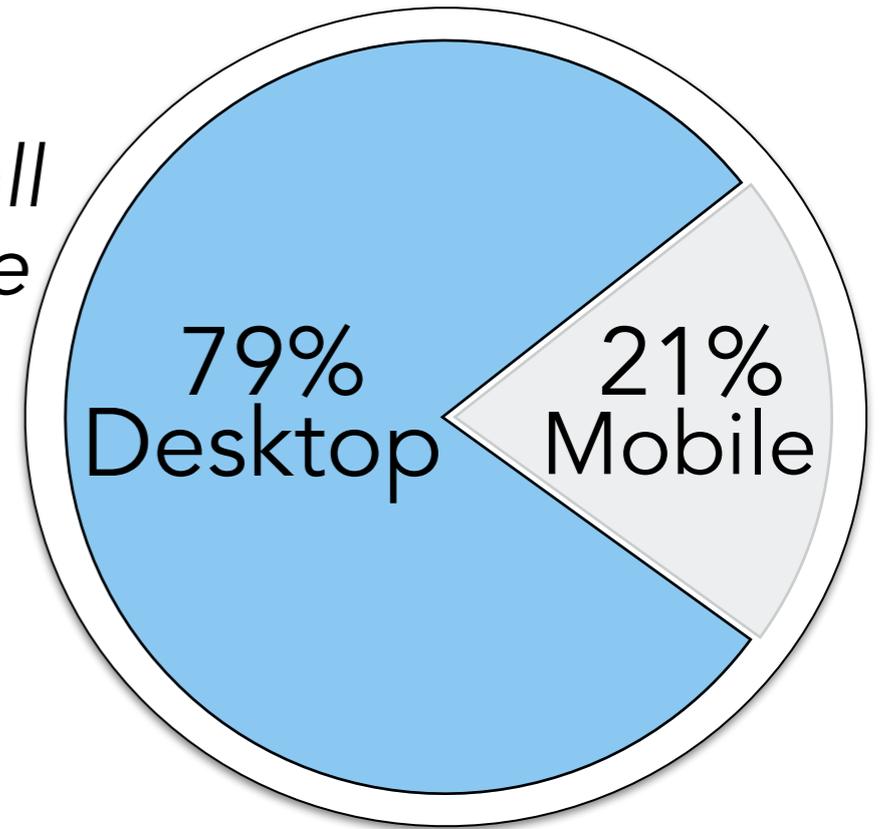


Instructional Technology Growth

Total number by years



Overall Percentage

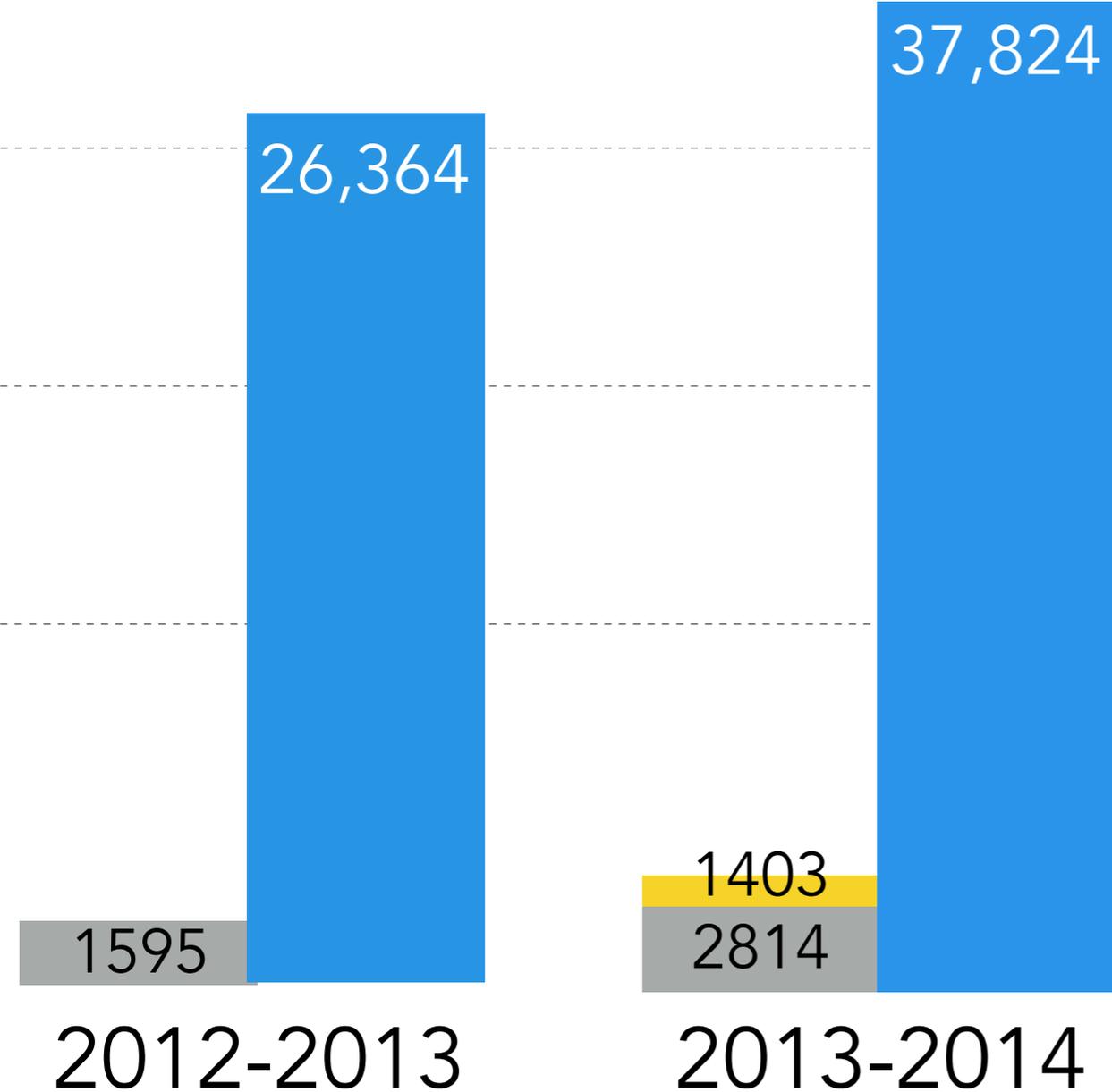


- Over 15,000 more mobile devices
- Over 7,000 more desktop computers
- One out of every five computers is mobile

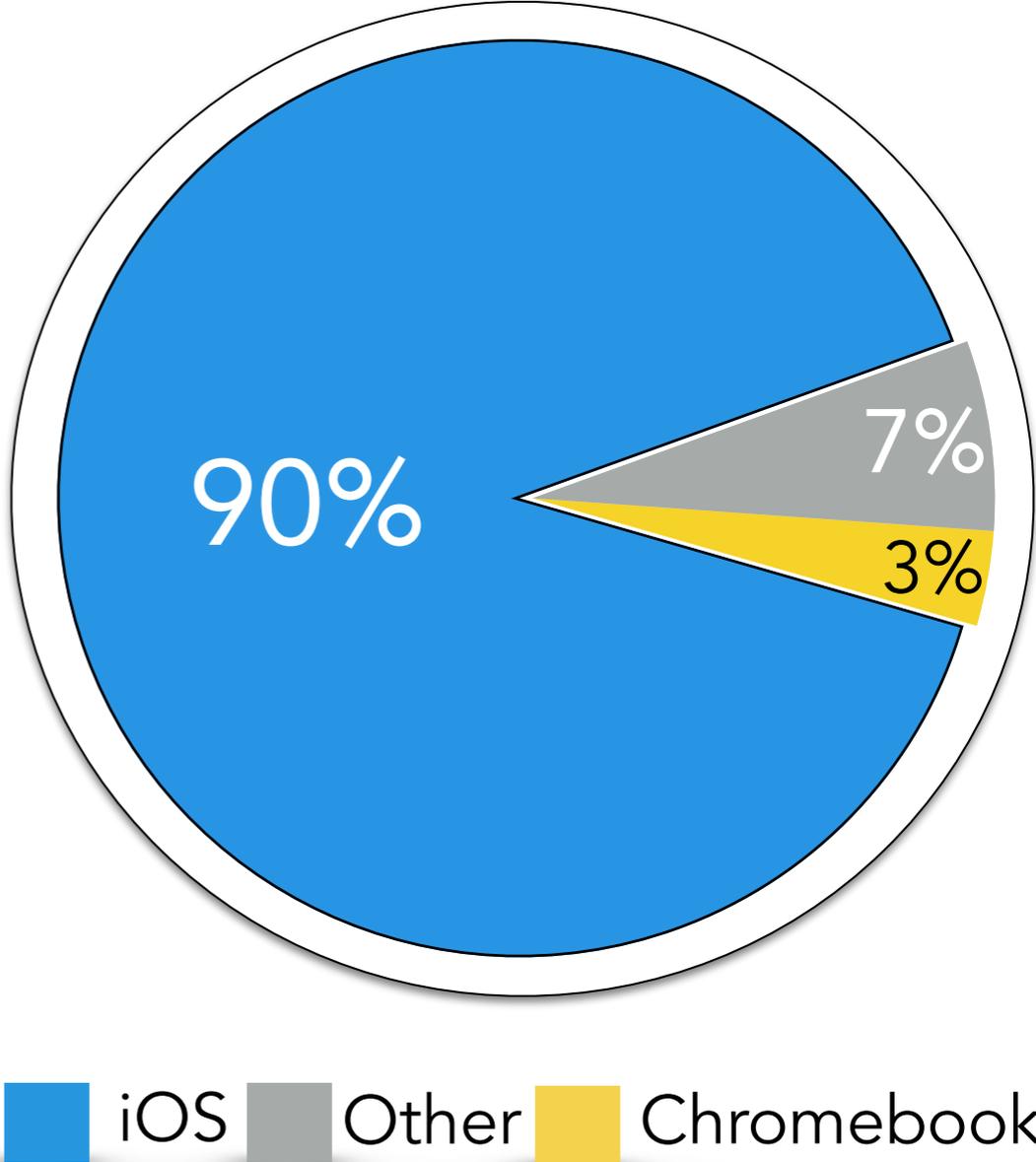


Mobile Devices

Total Devices by Year

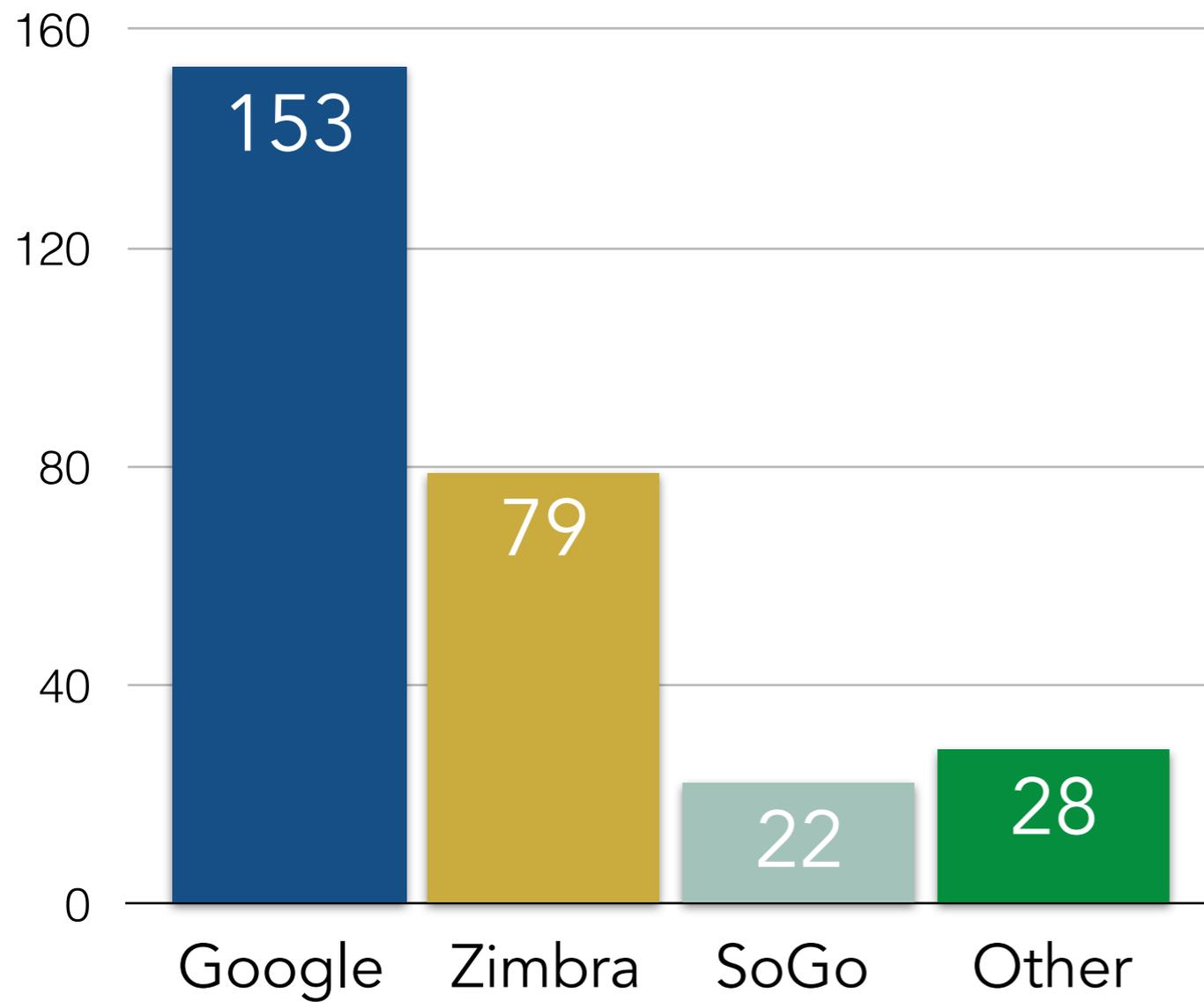


Overall Percentage

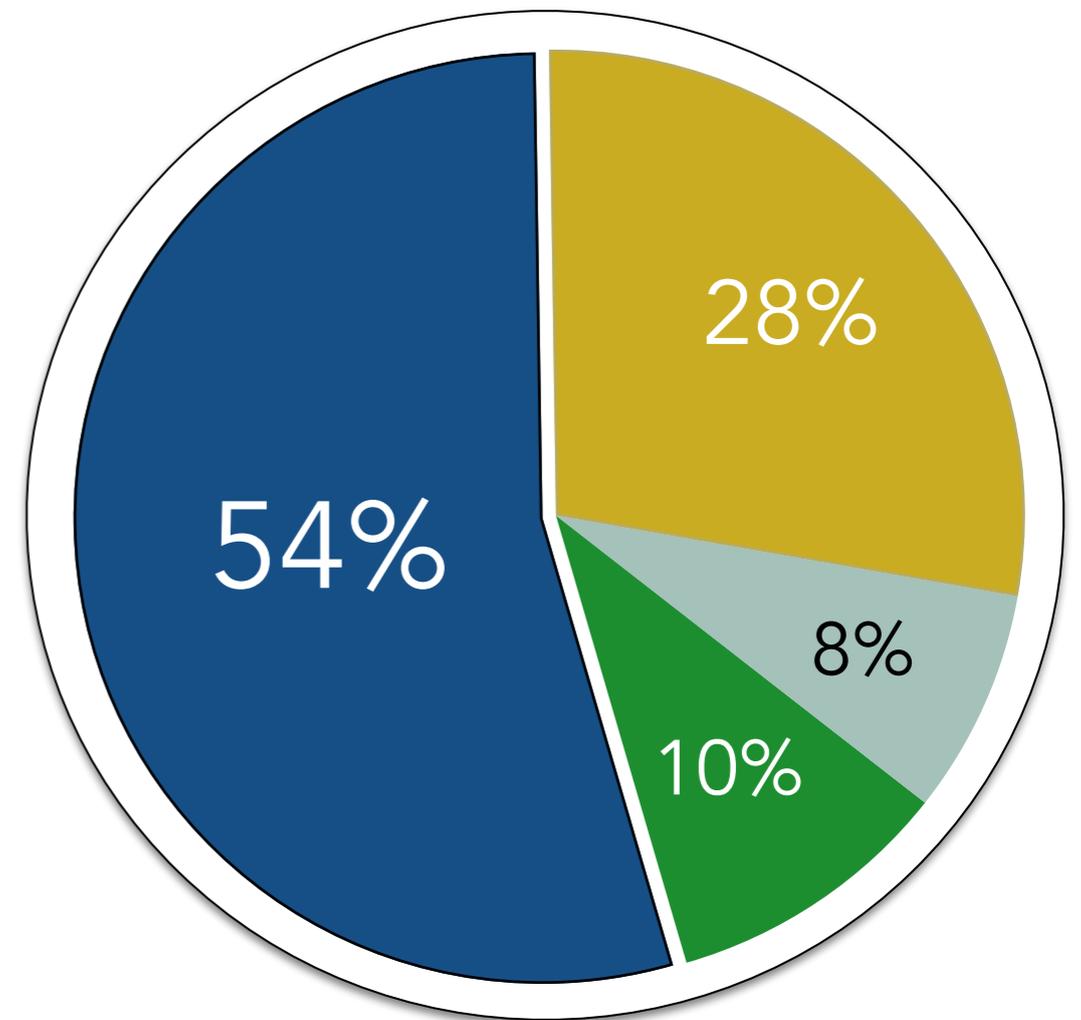


Email

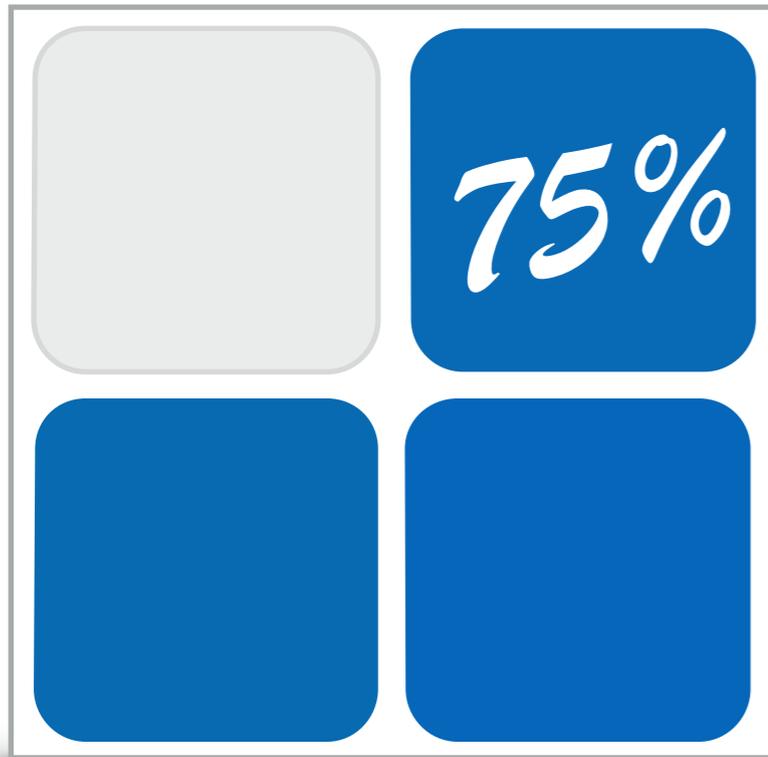
Total Devices by Year



Overall Percentage

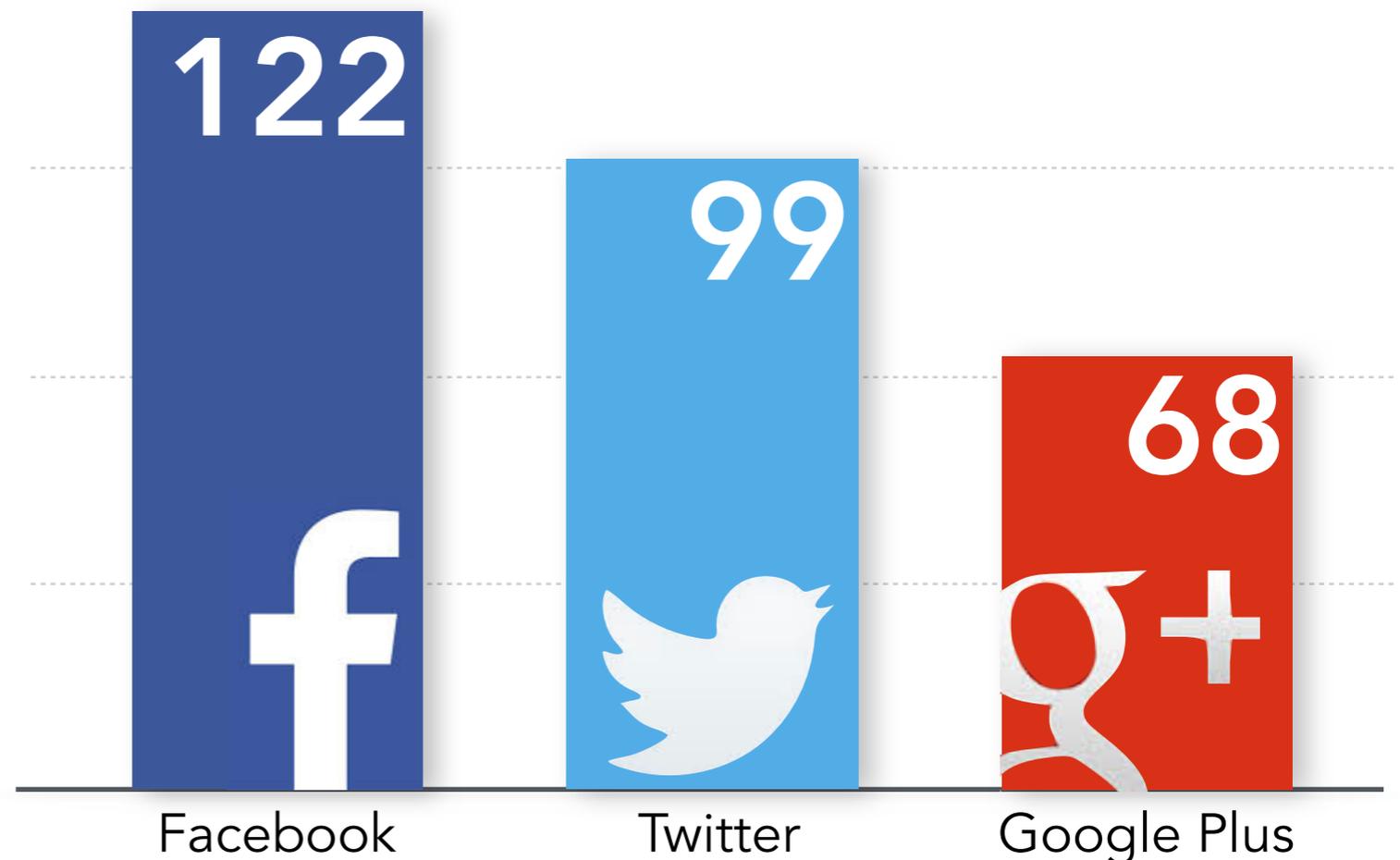


Social Media in Nebraska Schools

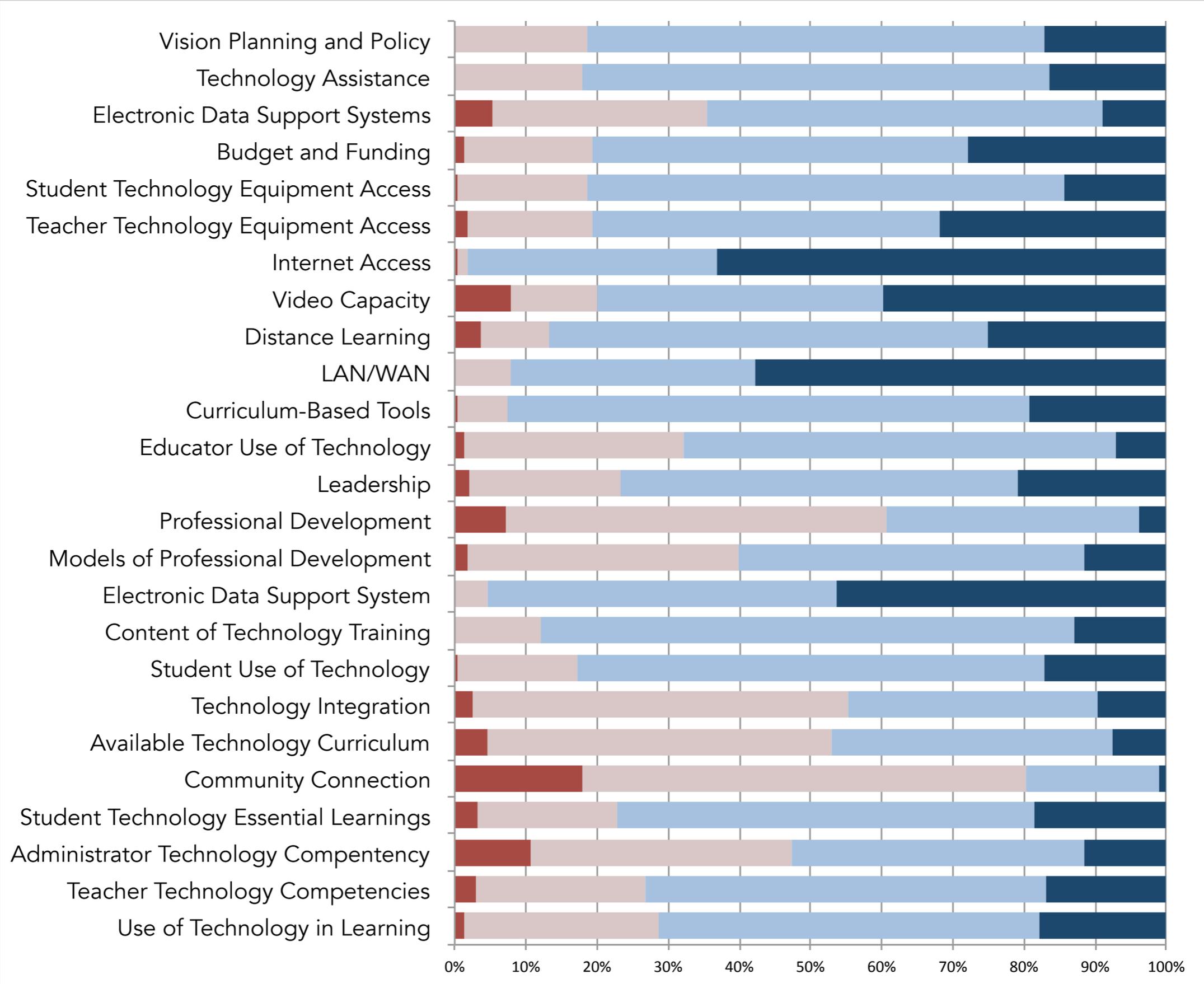


Three out of four public school districts in Nebraska report using a form of social media

Most frequently reported social networks



Rubric of Essential Technology Conditions



Rubric of Essential Technology Conditions

	1	2	3	4
Vision Planning and Policy			2.96	2.99
Technology Assistance			2.92	2.99
Electronic Data Support Systems		2.63	2.68	
Budget and Funding			2.98	3.07
Student Technology Equipment Access		2.84	2.95	
Teacher Technology Equipment Access			3.00	3.11
Internet Access				3.54
Video Capacity			3.01	3.12
Distance Learning			3.03	3.08
LAN/WAN				3.40
Curriculum-Based Tools			3.02	3.11
Educator Use of Technology		2.69	2.73	
Leadership		2.90	2.95	
Professional Development		2.29	2.36	
Models of Professional Development		2.64	2.70	
Electronic Data Support System				3.34
Content of Technology Training			2.95	3.01
Student Use of Technology			2.89	3.00
Technology Integration		2.44	2.52	
Available Technology Curriculum		2.41	2.50	
Community Connection	1.98	2.03		
Student Technology Essential Learnings			2.84	2.92
Administrator Technology Competency		2.48	2.53	
Teacher Technology Competencies			2.77	2.87
Use of Technology in Learning			2.75	2.88

◆ 2012-2013 ◆ 2013-2014

Educator
Competencies

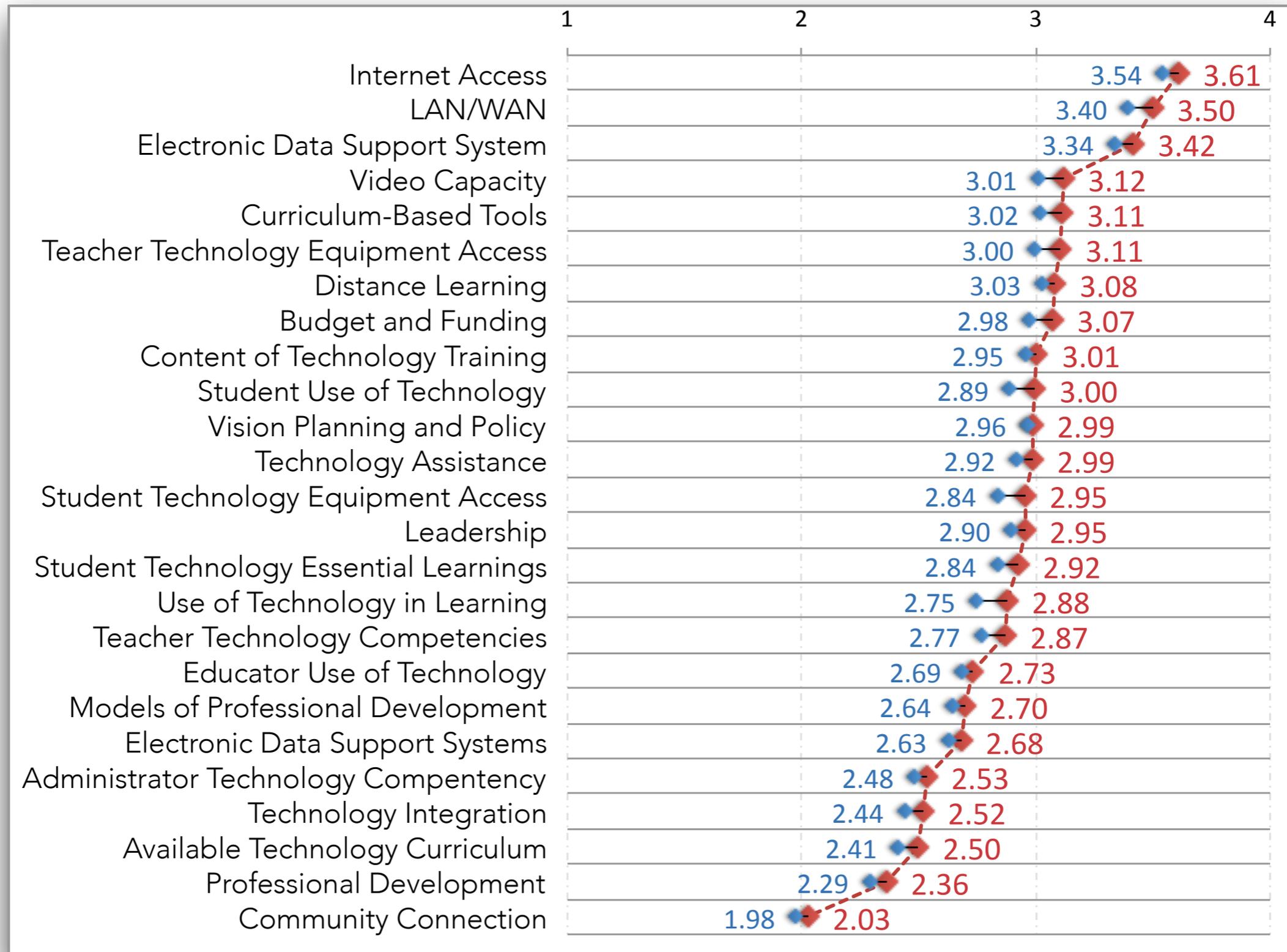
Technology
Capacity

Curriculum
Based Tools

Learners &
Learning

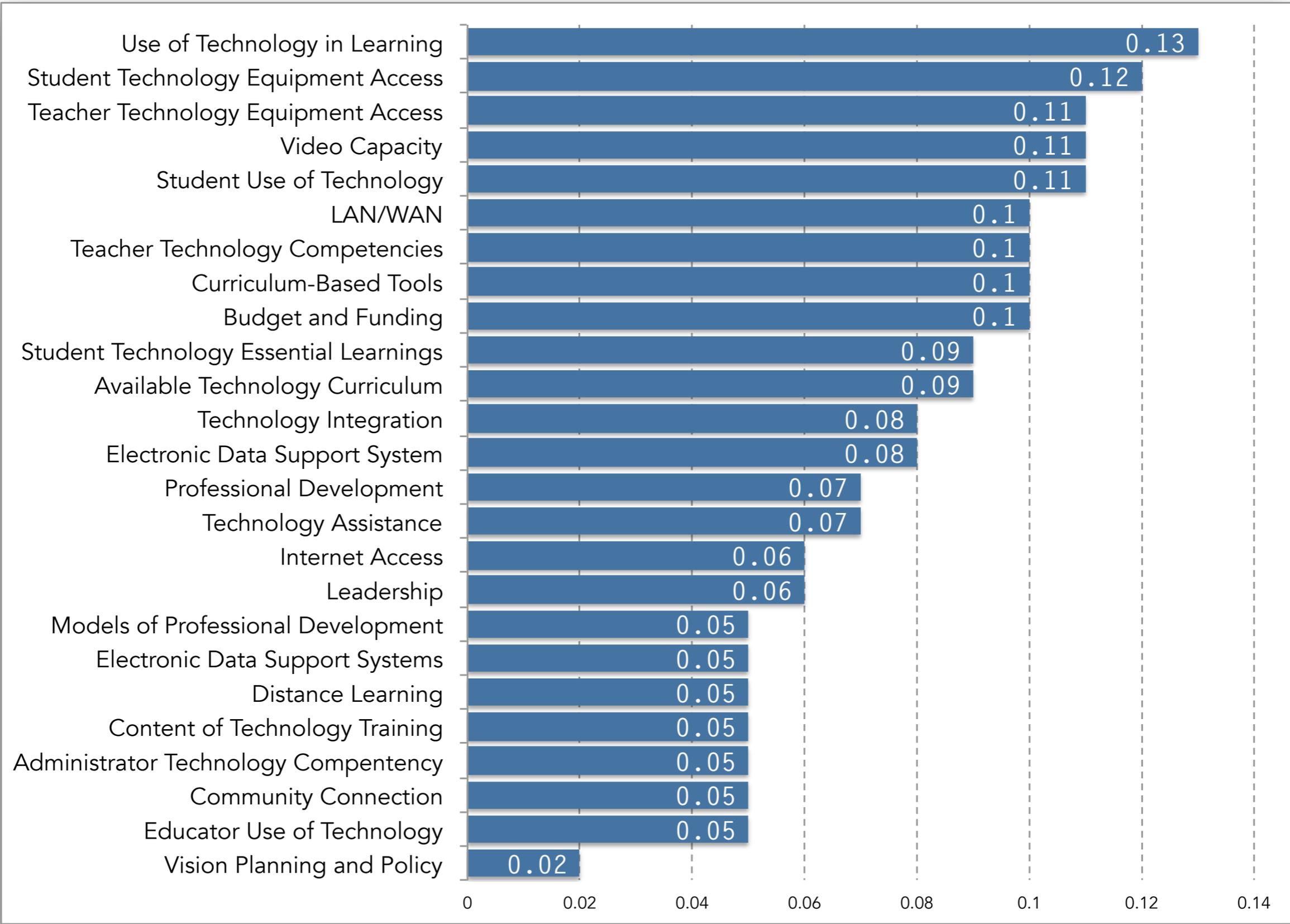
Accountability

Rubric of Essential Technology Conditions

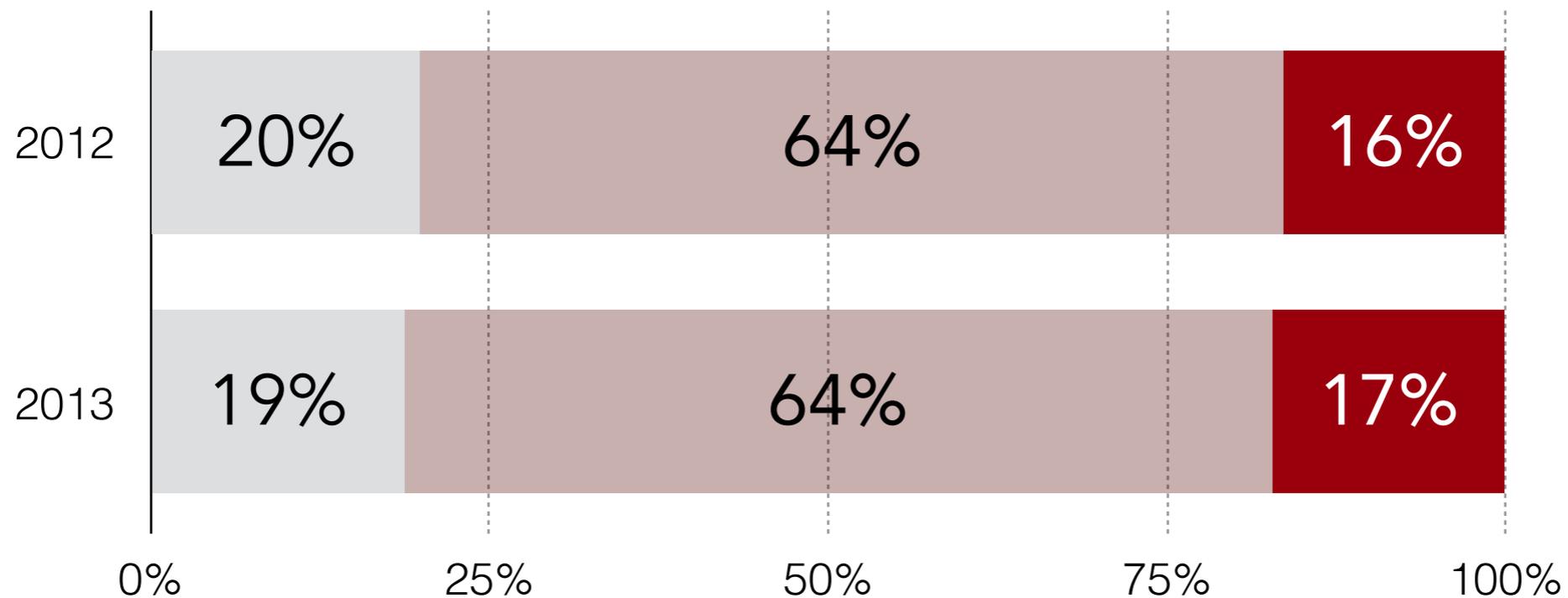


◆ 2012-2013 ◆ 2013-2014

Growth Shown on Reported Rubric Data from 12-13 to 13-14



Vision Planning and Policy



Initiates

- Technological vision does not exist.
- Technological planning is not evident.
- Policies do not include technological concerns/uses.

Approaches

- Technological vision and planning aligns with organization and state plans.
- Technological policies protect learners and provide access to learners while aligning with organization and state vision and plan.

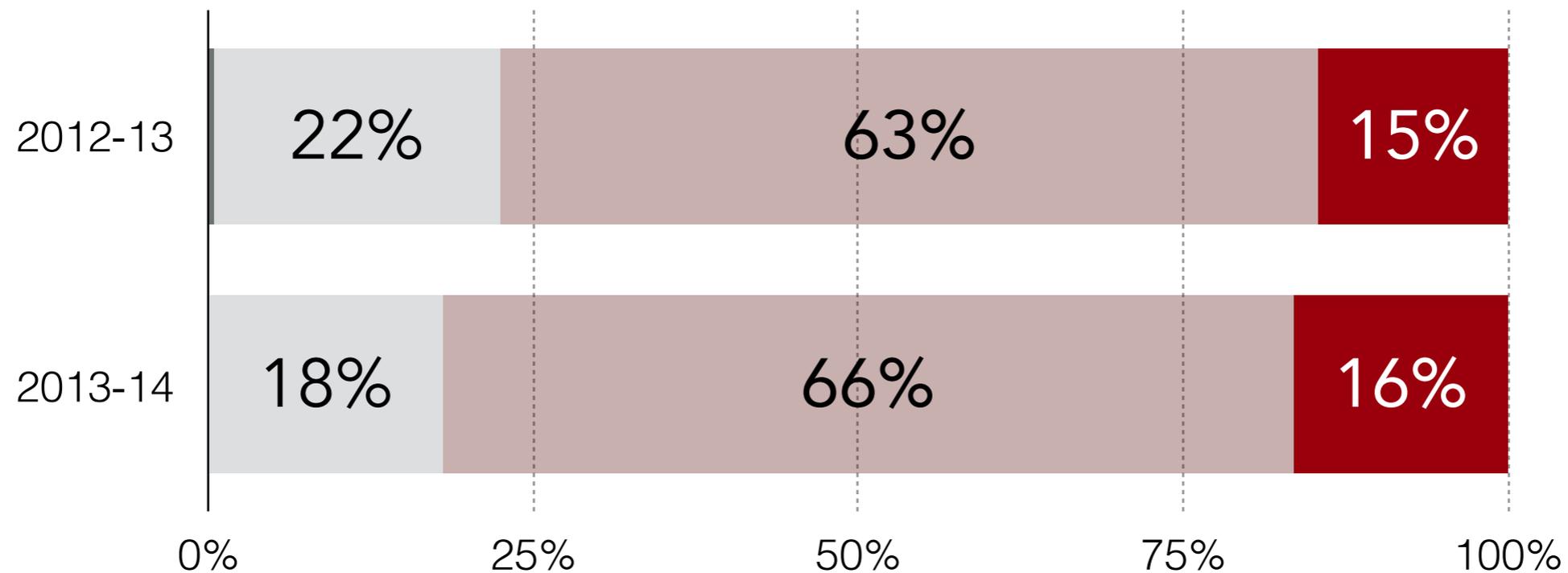
Meets

- Technological vision and technology plan align with organization and state plan and integrate into the school's SIP process.
- Policies align with technological vision and plan and support equitable access for all learners.
- A well-articulated implementation plan has been collaboratively designed and proactively supported by the leadership.

Exceeds

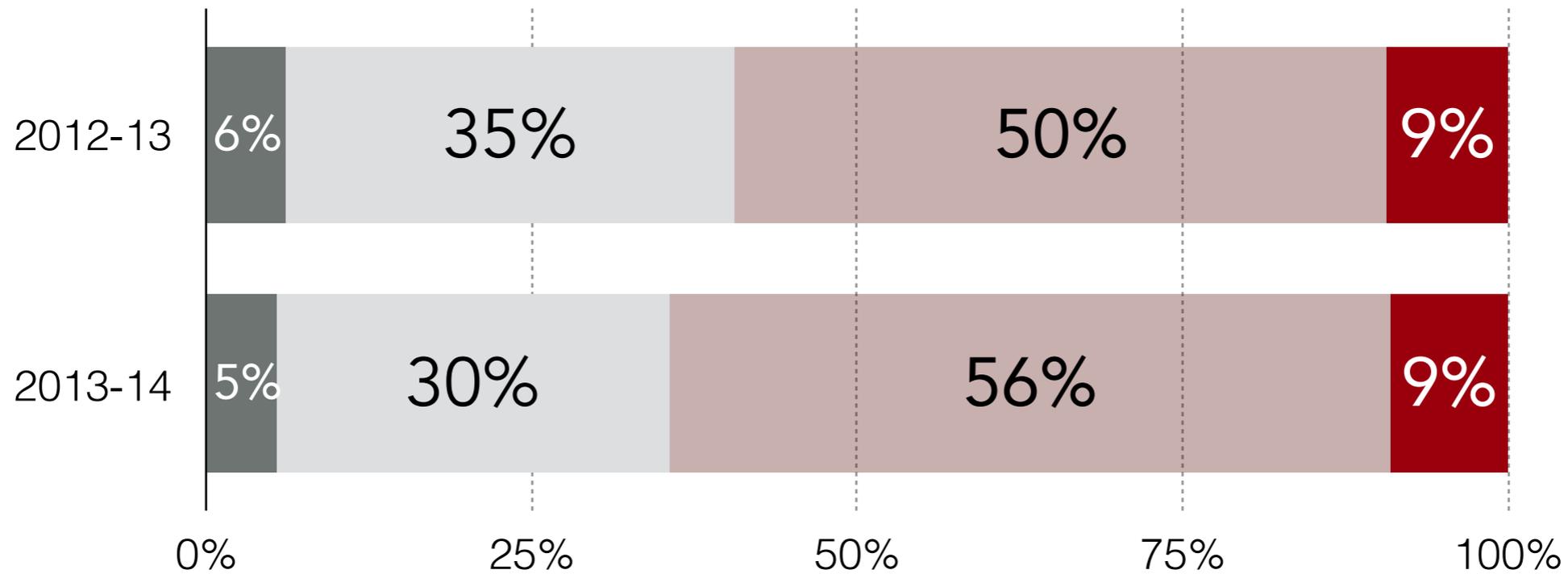
- Technology vision and plans are regularly reviewed and updated with staff.
- Policies align with technological vision and plan.
- The implementation plan reflects not only shared vision but also a collaborative atmosphere for the sharing of resources to bring the vision to life.

Technology Assistance



<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> ■ Limited technical support. ■ Technical support response time greater than 24 hours ■ Technical support does not include assistive technologies or web accessibility. ■ Issues of assess and quality are unresolved 	<ul style="list-style-type: none"> ■ Part-time school-based or agency support. ■ Most technical support response time is less than 24 hours. ■ Resources for support of Assistive Technology and web accessibility are access (i.e., WebAIM accessibility guidelines, Accessibility Rubric, A. T. consultation) ■ Technical assistance for supporting teaching and learning is not a clearly defined role or is understaffed and, therefore, not useful. 	<p>(In addition to Stage 2)</p> <ul style="list-style-type: none"> ■ Full-time school-based or agency support capable of trouble shooting basic network and hardware repair including assistive technologies. ■ Technical support response time is less than 8 hours. ■ Technical assistance for supporting teaching and learning is a clearly defined role for a staff member in the organization but not individual school building. Person in position does not hold a Technology Leadership 	<p>(In addition to Stage 3)</p> <ul style="list-style-type: none"> ■ Full-time school-based or agency support with additional staff (including faculty) to support network and production of accessible web sites as per Accessibility Rubric. ■ Most technical support response time is less than 4 hours. ■ Technical assistance for supporting teaching and learning is a clearly defined role for a staff member in individual school building. Person in position does hold a Technology Leadership Endorsement. (Available 2012).

Electronic Data Support Systems



Initiates

- A student information system is not in place or limited to tracking attendance, lunch and grading.
- Budget system exists.
- Data is dealt with using various manual and technical means with no centralization or integration.

Approaches

- (In addition to Stage 1)
- An assessment system is included in the data management system.
 - Budget system is in place that automates the purchasing and inventory process.
 - Some data is maintained in an enterprise-wide system and the system is used for selected task or reports.

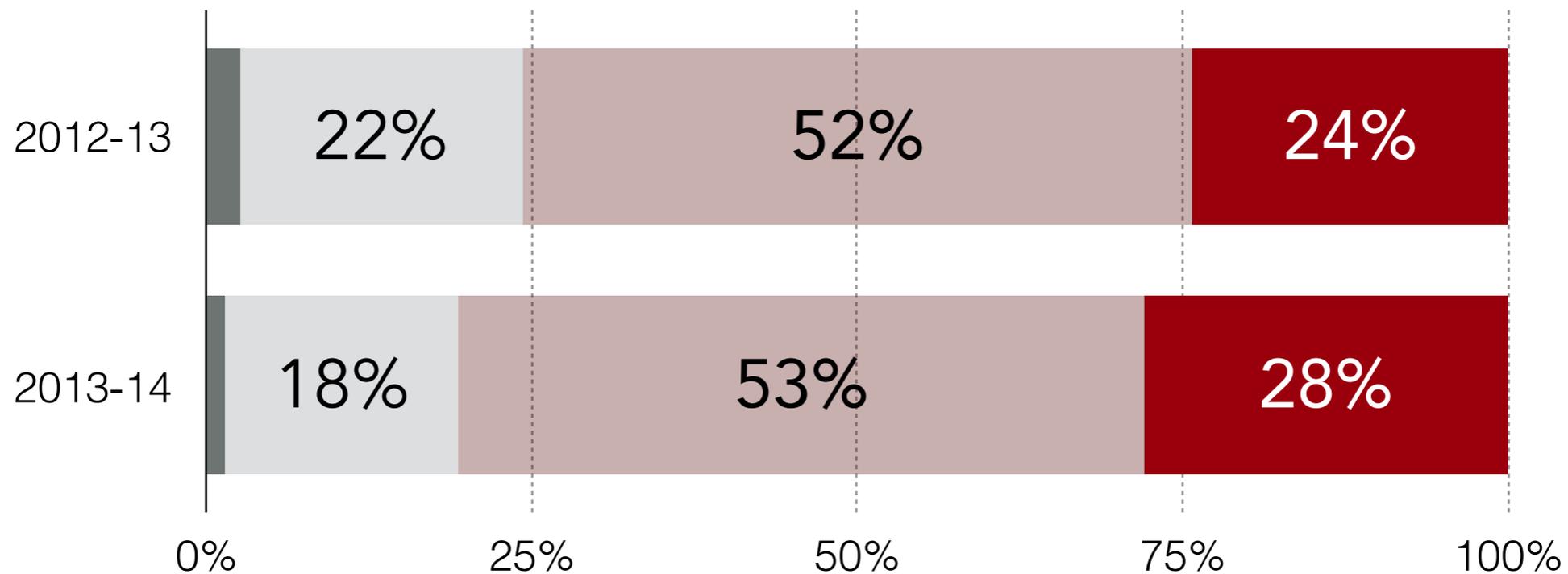
Meets

- (In addition to Stage 2)
- Add curriculum and lesson planning.
 - Budget system tracks the cash flow to school populations validating equitable access for all learners.
 - A comprehensive data management system is in place but only used for selected levels of improvement needs.

Exceeds

- (In addition to Stage 3)
- Add curriculum and lesson planning.
 - Budget system tracks the cash flow to individual learners validating equitable access for all learners.
 - Data warehouse and analysis systems are in place and used regularly as part of ongoing evaluation and improvement.
 - The systems are capable of and are being used for all levels of improvement tasks and reporting school organization and state.

Budget and Funding



Initiates

- District, state and federal technology allotments only.
- Line item budget does not exist for hardware/software purchases and professional development.

Approaches

- In addition to allotments, the district/school seeks grants and other funding sources such as bond funds, business partnerships, donations, foundations, and other local funds designated for technology facilitating the ability to meet enhanced technology needs and minimal instructional technology needs.
- Line item budget exists for maintenance and new purchases of hardware and software with professional development support and opportunities.

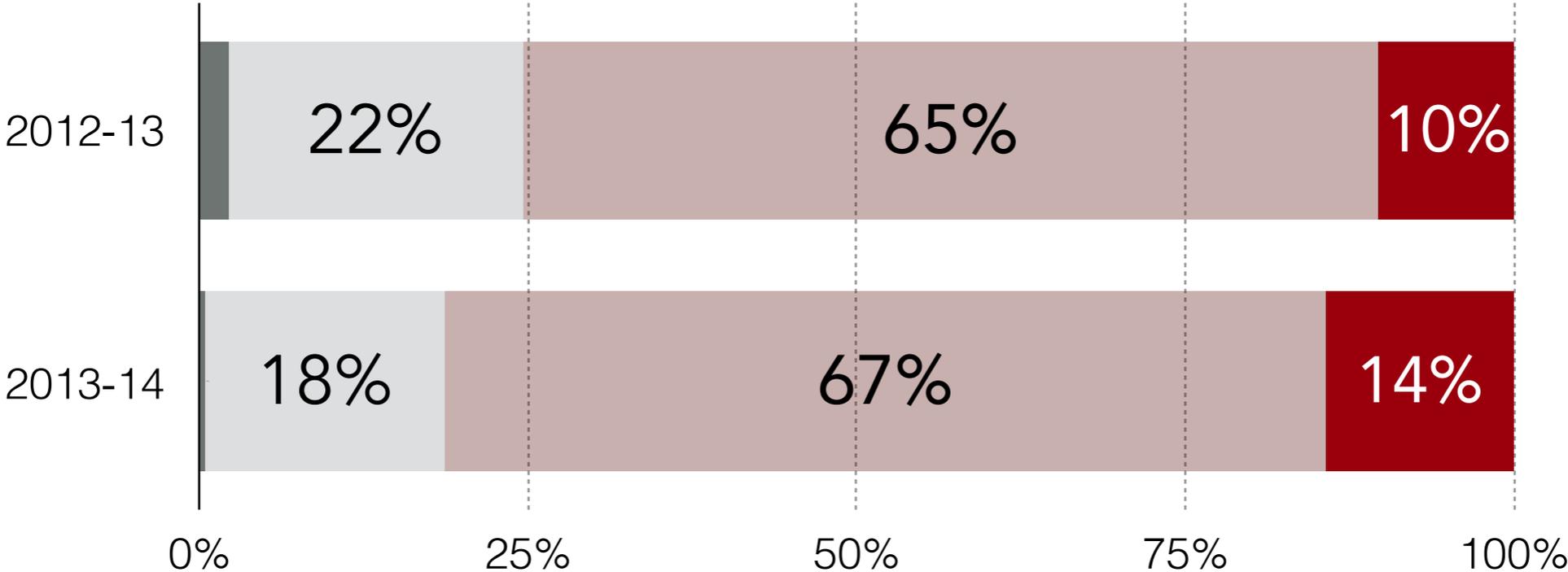
Meets

- (In addition to Stage 2)
- Budget for hardware and software makes technology accessible to all student, professional development adequate staffing support, and ongoing costs.
 - Successfully obtains funding from one source other than their allotment.

Exceeds

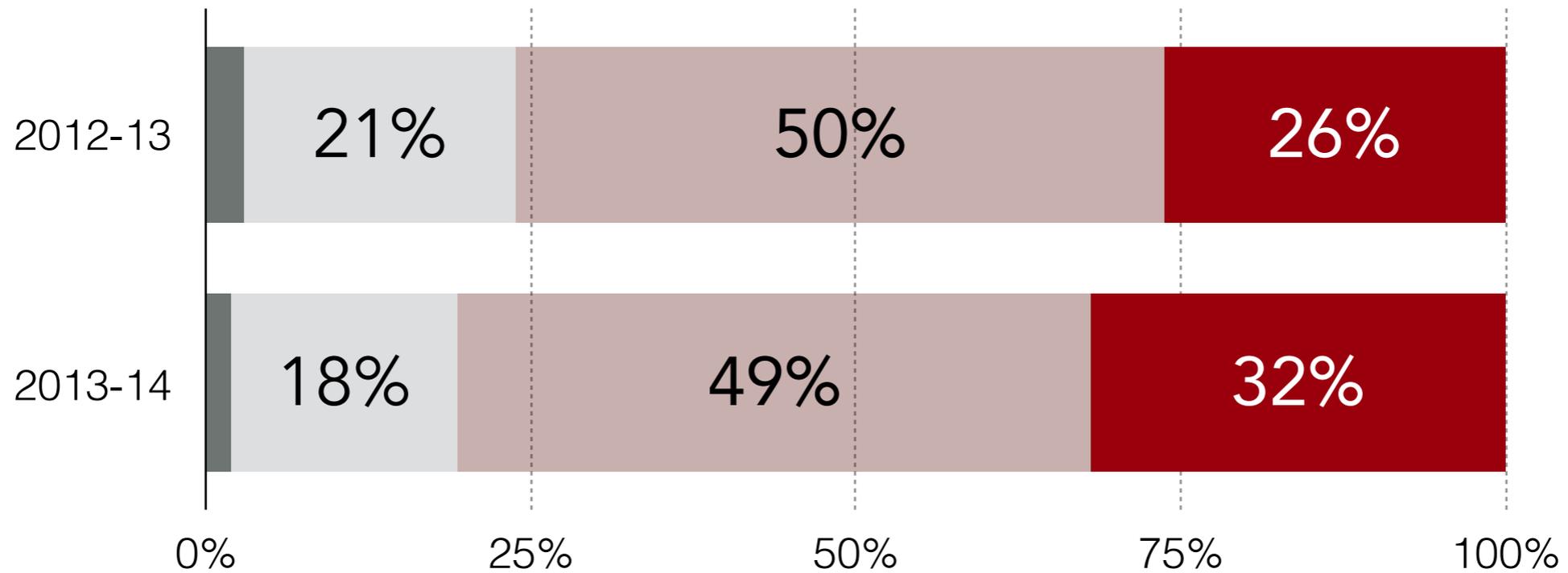
- (In addition to Stage 3)
- Add curriculum and lesson planning.
 - Budget system tracks the cash flow to individual learners validating equitable access for all learners.
 - Data warehouse and analysis systems are in place and used regularly as part of ongoing evaluation and improvement.
 - The systems are capable of and are being used for all levels of improvement tasks and reporting school organization and state.

Student Technology Equipment Access



<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> ■ 10:1 ratio or more of students to computer equipment five years old or less. ■ No Universal Access Stations (computer stations equipped with necessary hardware and software to meet the special needs of students with disabilities). ■ No student access to computers after school 	<ul style="list-style-type: none"> ■ Less than 10:1 ratio of students to computer equipment five years old or less ■ Universal Access technologies in place. ■ Student access to computers for after-school care students or by special arrangement. ■ Organization identifies current universal access technology inventory and needs. 	<ul style="list-style-type: none"> ■ Less than 5:1 ratio of students to computer equipment four years old or less. ■ Universal Access integrated throughout organization. ■ Open after-school access to computers for all students 1-5 hours per week. 	<ul style="list-style-type: none"> ■ Every student has computer equipment three years old or less ■ Universal Access Stations available in all classrooms and student work areas. ■ Open after-school access to computer equipment for all students over 5 hours per week.

Teacher Technology Equipment Access



Initiates

■ Dedicated, up-to-date teacher computer equipment, one set per 2 or more teachers; no refresh cycle.

Approaches

■ Dedicated, up-to-date computer equipment for each teacher; refresh cycle every 5 years.

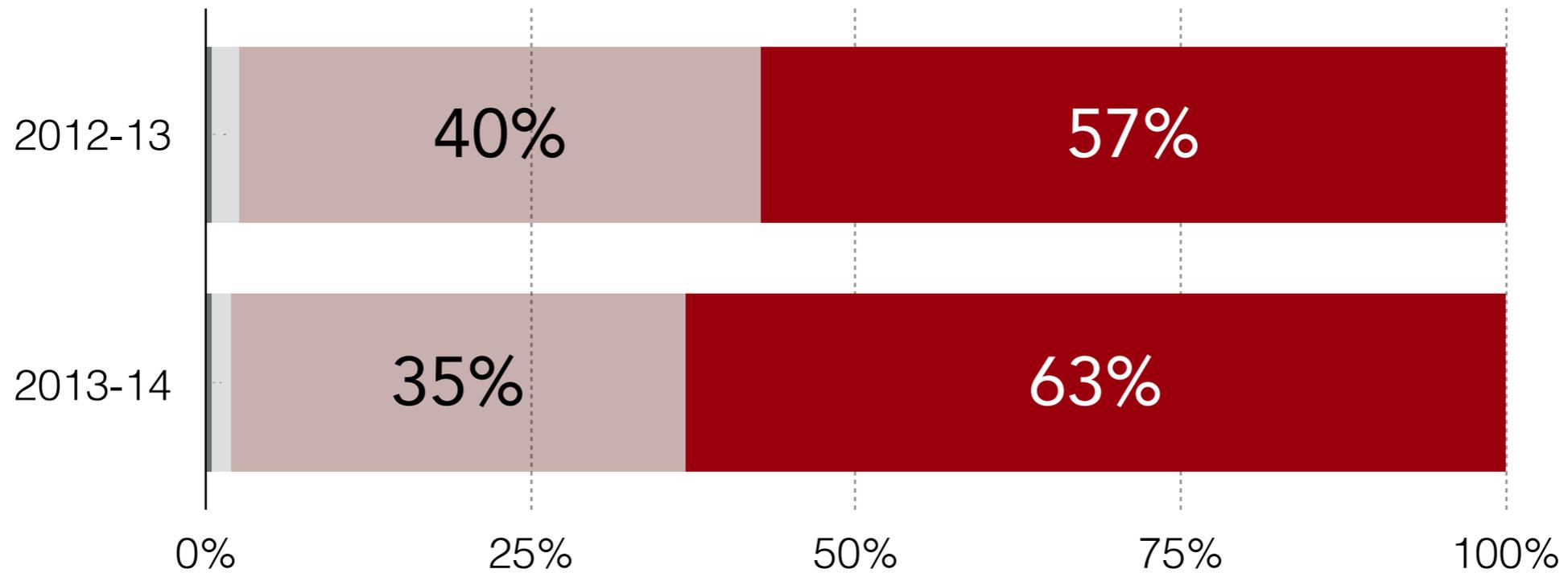
Meets

■ Dedicated, up-to-date computer equipment for each teacher; refresh cycle every 4 years.

Exceeds

■ Dedicated, up-to-date computer equipment for each teacher; refresh cycle every 3 or fewer years.

Internet Access



Initiates

- Adequate connectivity to the Internet available to support web-based applications only on a few computers.

Approaches

- Direct connectivity to the Internet at the school and accessible in some rooms.
- Adequate distribution of bandwidth to the school to avoid most delays.

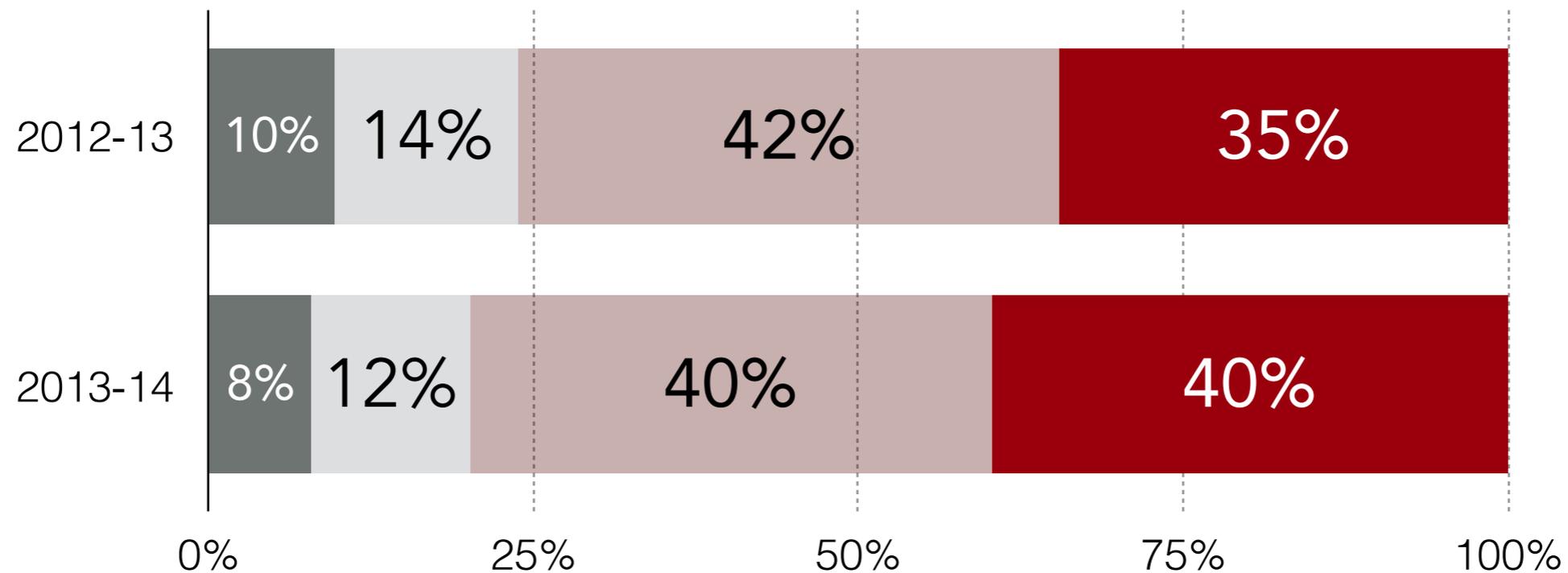
Meets

- (In addition to Stage 2)
- Direct connectivity to the Internet at the school and accessible in all rooms.
 - Adequate bandwidth to each classroom over the LAN to avoid most delays.

Exceeds

- Anywhere, anytime direct access to the Internet for any educationally relevant application.

Video Capacity



Initiates

- Video available in the classroom on magnetic or optical media.
- Media is available via classroom devices such as VCR, or DVD player.

Approaches

- Capacity to schedule and distribute video over school network to the classroom.
- Capacity to receive via satellite or other devices specific to curriculum content and distribute programming to the classroom.

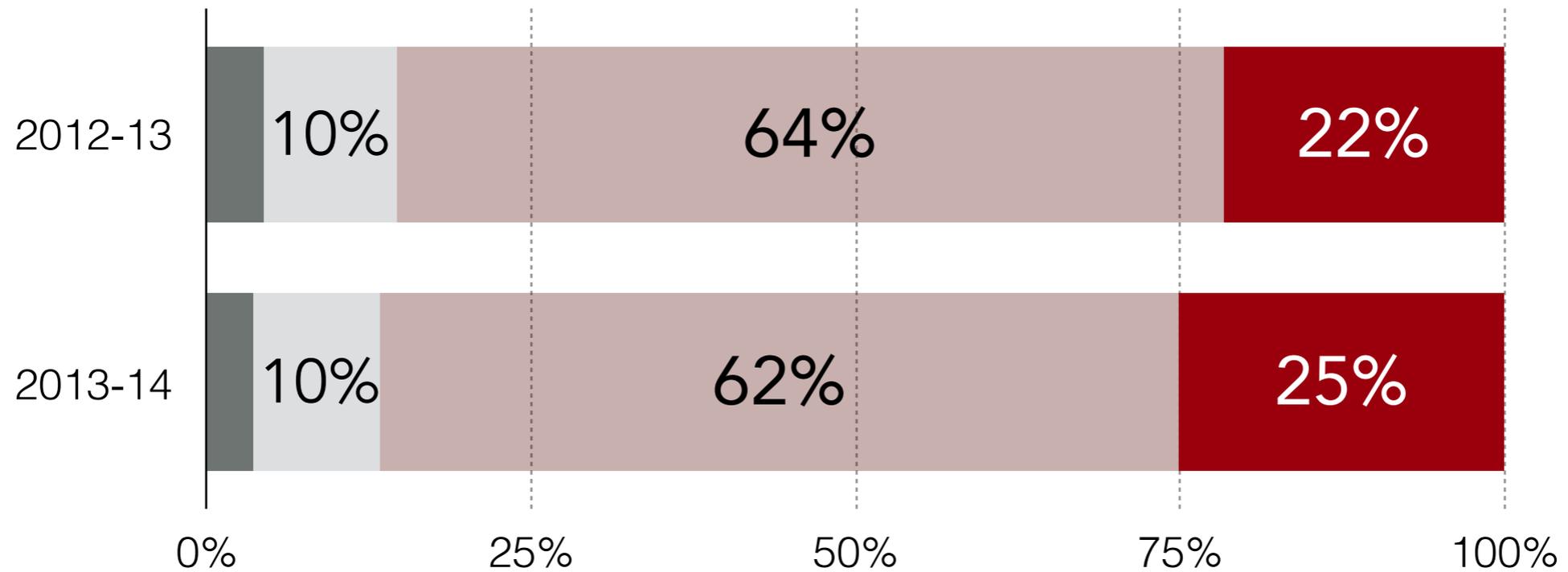
Meets

- Capacity to schedule and distribute video over organization or cable access network to the classroom.
- Two-way interactive video conferencing used to connect schools.

Exceeds

- Network provided video on demand.
- Two way interactive video conferencing used to connect to post-secondary institutions and other education providers.

Distance Learning



Initiates

- Shared access to one-way video and two-way audio.

Approaches

- Two-way video and audio in at least one classroom.

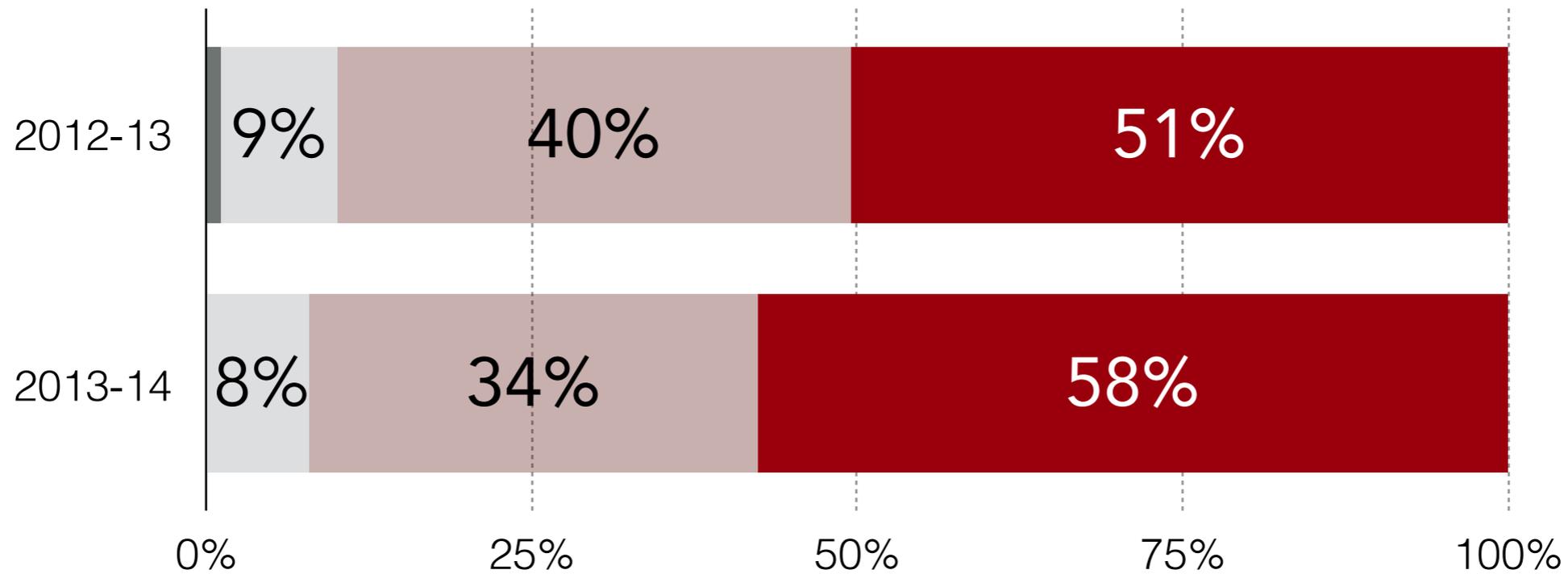
Meets

- Two-way video and audio in more than one classroom.

Exceeds

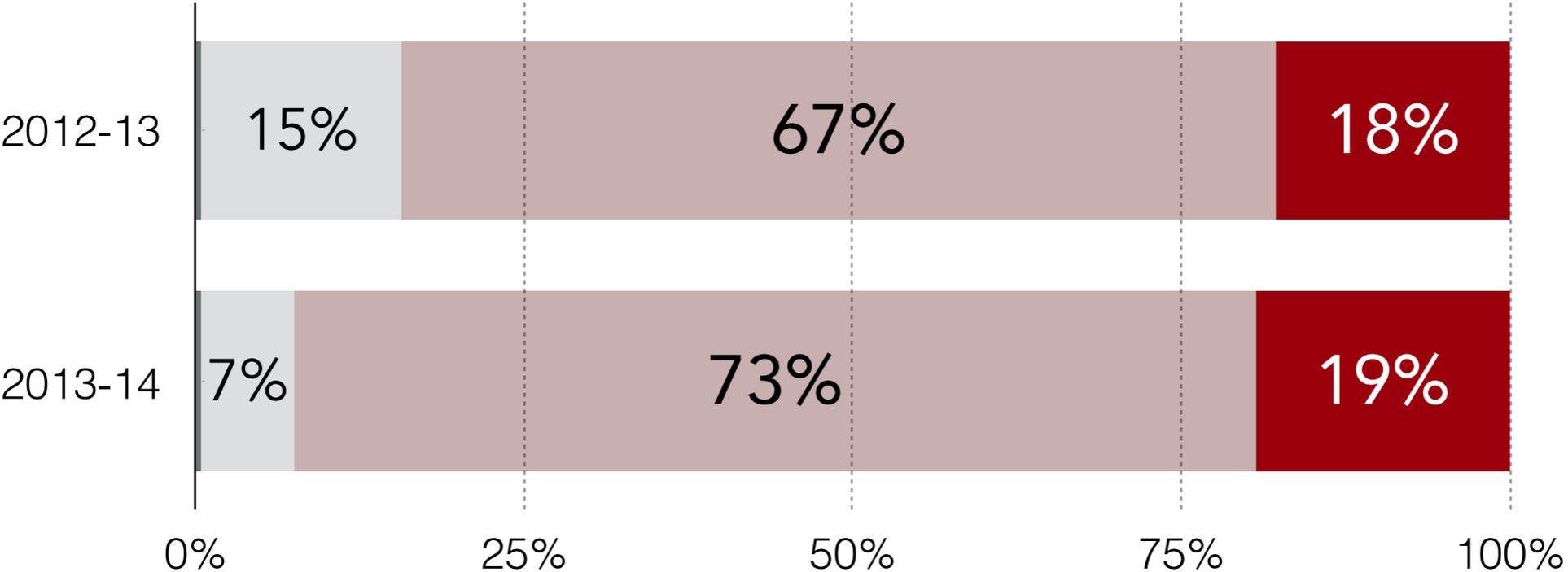
- Two-way video and audio in every student learning area provides access for all.
- Robust network allows interconnections with all other K-12 sites and post-secondary institutions.
- Web-based scheduling system allows sites to connect to one another without limitations.

LAN/WAN



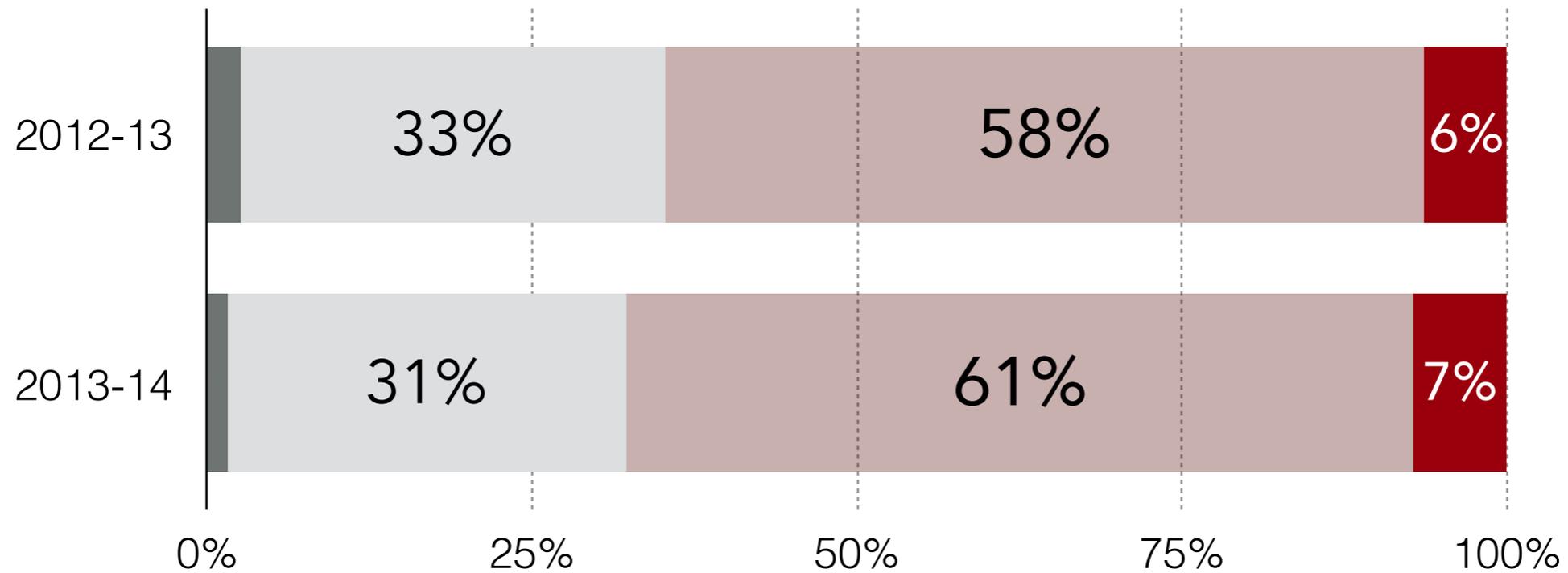
<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> ▣ Limited print/file-sharing network at each school. 	<ul style="list-style-type: none"> ▣ Most rooms connected to the LAN/WAN with student access. ▣ Minimum 10/100 hubbed-network. ▣ Basic filtering software in use. 	<ul style="list-style-type: none"> ▣ All rooms connected to the LAN/WAN with student access. ▣ Minimum 10/100 switched network. ▣ High end servers serving applications at the school with a replacement cycle 3 years. ▣ Filtering and virus protection software in use. 	<ul style="list-style-type: none"> ▣ All rooms connected to the LAN/WAN with student access. ▣ Robust WAN with 100 MB/GB and/or fiber switched network that allows for resources (i.e., video streaming, desktop conferencing, etc.) ▣ Infrastructure allows easy access to network resources for students and teachers including some wireless connectivity and remote access. ▣ Filtering, virus protection, and security measures, as well as disaster recovery plan in place. ▣ CIPA compliant.

Curriculum-Based Tools



<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> ■ Limited access to some instructional equipment (i.e., televisions, VCR's, digital cameras, scanners, handhelds, programmable calculators, etc.) ■ Tool-based software limited to word processing and spreadsheets. 	<ul style="list-style-type: none"> ■ Shared use of instructional equipment among groups of teachers. ■ Tool-based software includes presentation, some graphics and concept mapping. 	<ul style="list-style-type: none"> ■ Instructional equipment assigned to each teacher/classroom including at least a computer with projection device, TV, VCR, or DVD. ■ Tool-based software includes some multimedia authoring and video editing. 	<ul style="list-style-type: none"> ■ Fully equipped classrooms with all the technology infrastructure that is available to enhance student learning, including all forms of software, digital cameras, scanners handhelds, and other devices specific to content areas.

Educator Use of Technology



Initiates

- Teachers use basic computer operations such as email and word processing programs.
- At least 25 percent meet ISTE NETs and implement in the classrooms.

Approaches

- Teachers use productivity tools to streamline administrative tasks (grades, attendance, lesson planning, etc.)
- At least 50 percent meet ISTE NETs Standards and implement in the classroom.

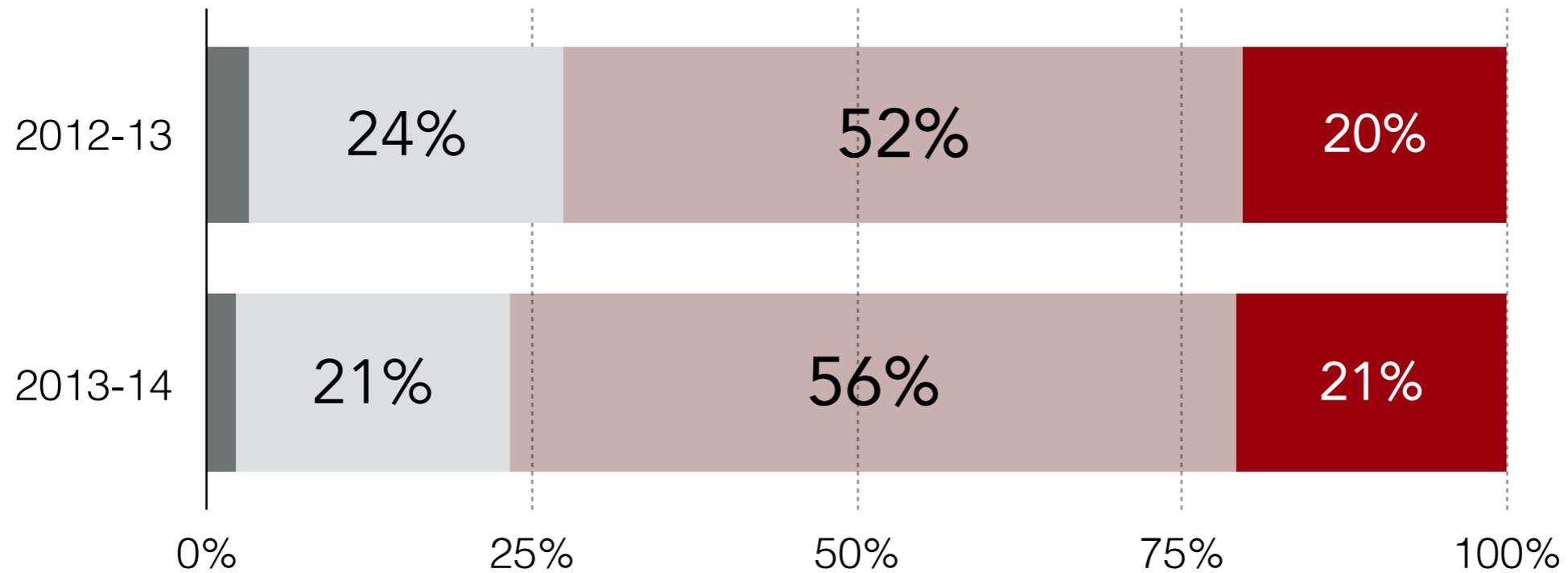
Meets

- Teachers implement various instructional technology strategies that support diverse needs of learners (research, multimedia, presentations, simulations, distance learning, etc.)
- Teachers use various forms of technology to communicate with peers and parents.
- At least 75 percent meet ISTE NETs Standards and implement in the classroom.

Exceeds

- Teachers use technology to develop new learning environments that are collaborative, interactive and customized.
- Teachers explore and evaluate new technologies and their educational impact.
- At least 90-100 percent meet ISTE NETs Standards and implement in the classroom.

Leadership



Initiates

- Administrators have limited awareness of benefits and applications of technology in instruction.
- Administrators lack basic computer operations skills.
- Administrators know and understand the ISTE NETs Administrator Standards.

Approaches

- Administrators recognize benefits and barriers of technology in instruction for all students and support use of technology in instruction.
- Administrators expect teachers to use technology for administrative and classroom management tasks.
- Administrators routinely use technology in some aspects of daily work.
- Administrators apply the ISTE NETs Administrator Standards.

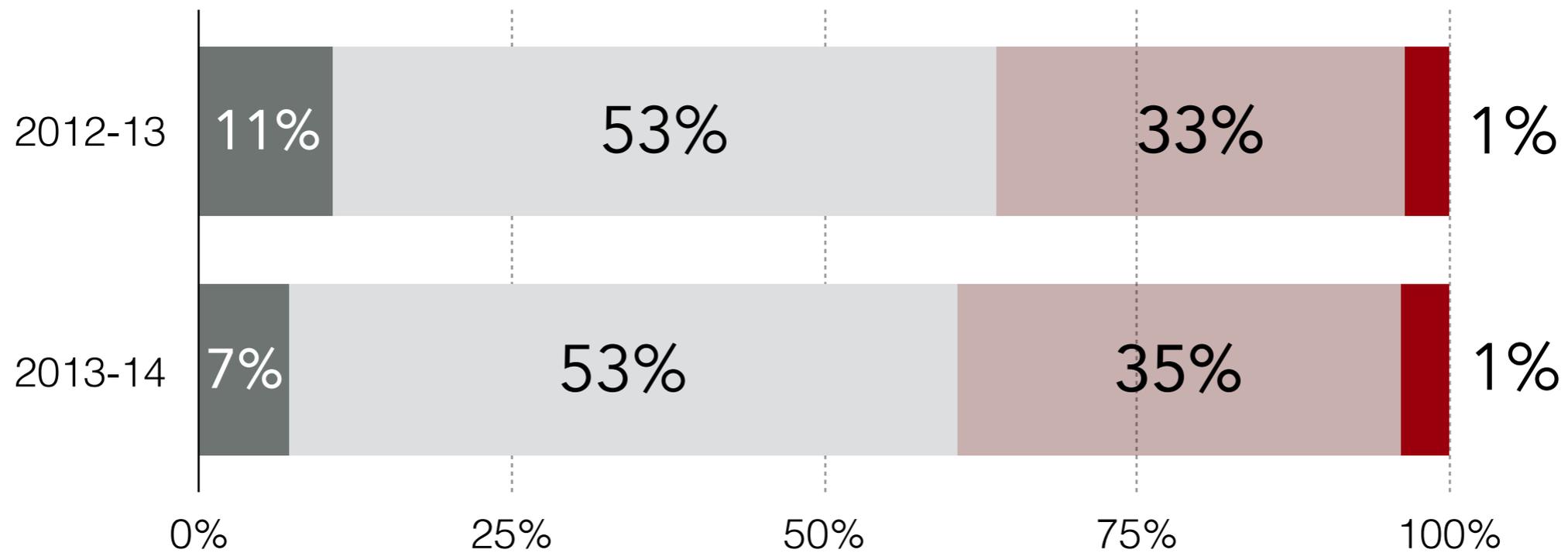
Meets

- Administrators expect use of technology in instruction for all students.
- Administrators model use in daily work including communications, presentations, on-line collaborative projects and management tasks.
- Administrators analyze and determine their proficiencies based upon the ISTE NETs Administrator Standards.
- Administrators are able to

Exceeds

- Administrators plan budget support for training and expect use of technology in instruction for all students.
- Administrators maintain awareness of emerging technologies.
- Administrators participate in job-related professional learning using technology resources.
- Administrators ensure integration of appropriate technologies to maximize learning and teaching.
- Administrators involve and educate the school community around issues of technology integration.

Professional Development



Initiates

- Five percent or less of technology budget allocated for professional development in technology-related training.
- No technology professional development plan in place or existing plan lacks defined progression toward organization technology goals.
- Technology professional development plan is not correlated to state and/or national technology standards.

Approaches

- 6-24 percent of technology budget devoted to professional development in technology-related training.
- Technology professional development plan has some measurable correlation to organization technology goals.
- Technology professional development plan provides some measurable correlation to state and/or national technology standards.

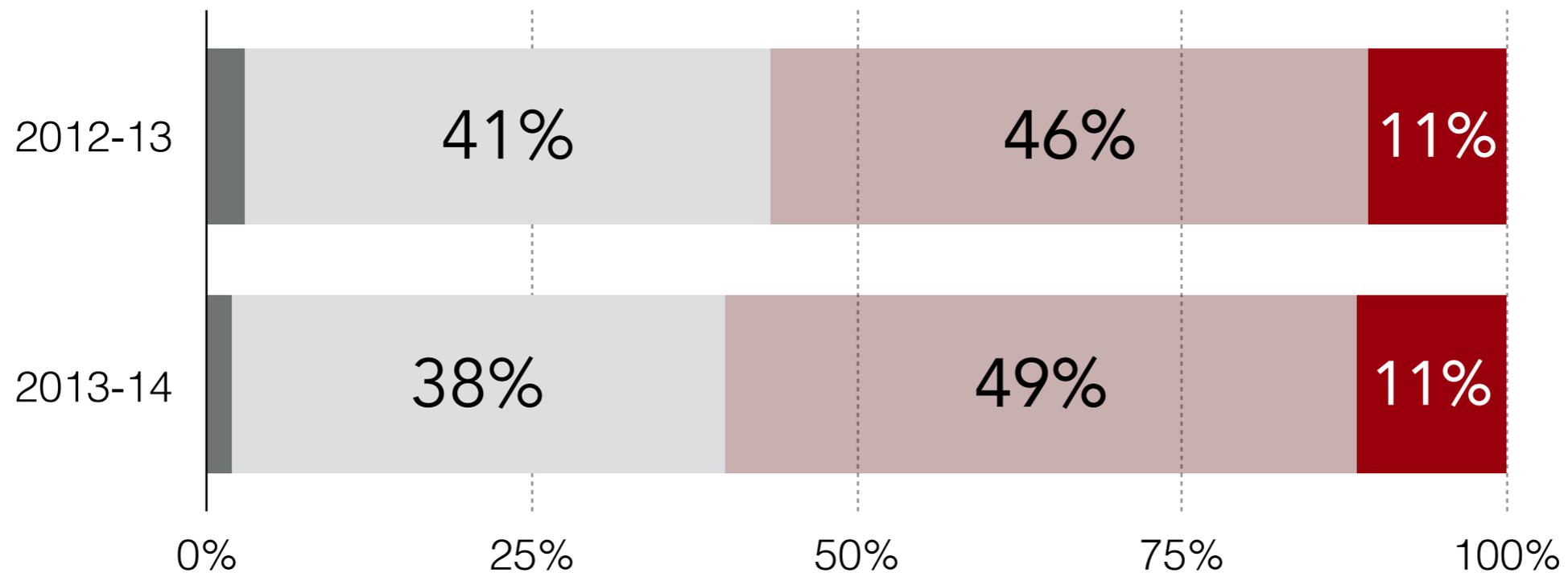
Meets

- 25-29 percent of technology budget devoted to professional development in technology-related training.
- Technology professional development plan has clearly measurable correlation to organization technology goals.
- Technology professional development plan provides significant measurable correlation to state and/or national technology standards.

Exceeds

- 30 percent or more of technology budget devoted to professional development in technology-related training.
- Technology professional development plan has clearly measurable correlation to organization technology goals and is evaluated and revised annually to ensure that organization technology goals are met.
- Technology professional development plan provides significant measurable correlation to state and/or national technology standards and plan is revised annually to consider emerging technologies.

Models of Professional Development



Initiates

- Leader presents information to group of teachers.

Approaches

- Teachers participate in hands-on instruction and use acquired skills to develop an instructional product as a follow-up activity.

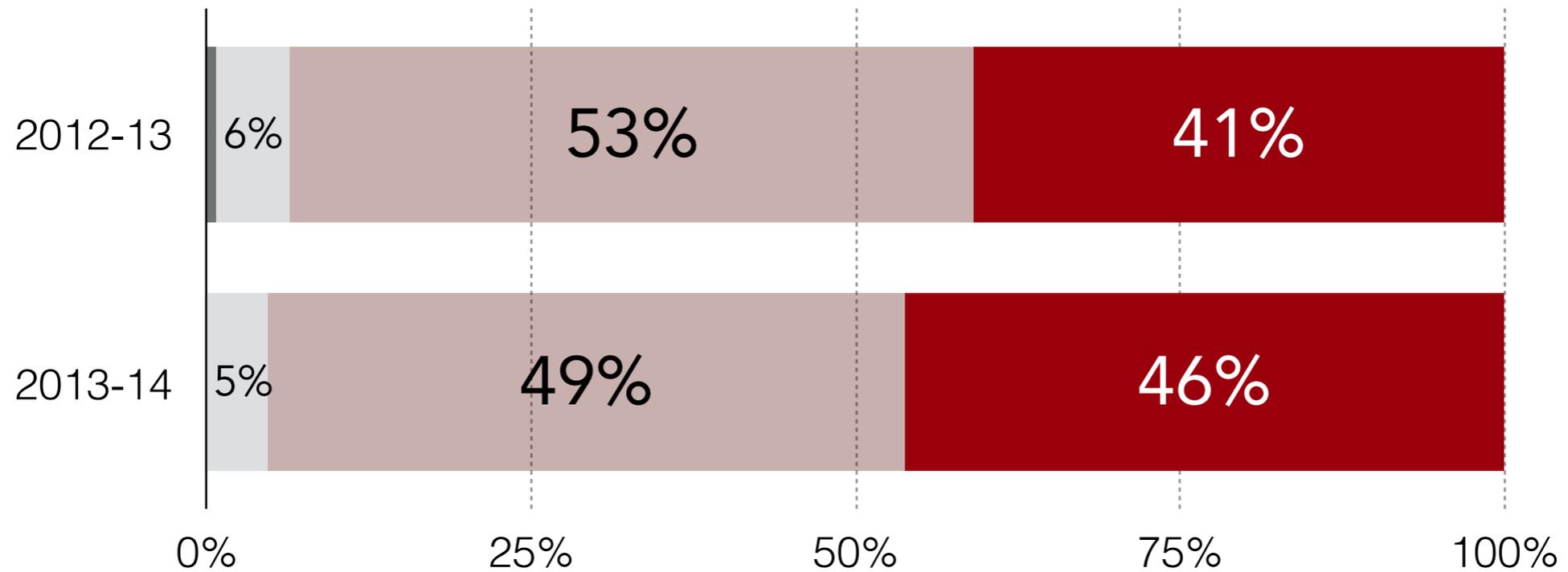
Meets

- Majority of instructional staff participate in coaching, modeling of best practices, scaffolding, and school-based mentoring (including collaboration between special education and regular education)
- Technology professional development includes requirement of classroom integration and student use of technology in the learning process.
- Professional development activities include a teacher and a student in a collaborative learning environment.

Exceeds

- Learning communities created among instructional staff to provide continuous coaching, modeling of best practices, and school-based mentoring.
- Additional professional development available anytime, at any level, through a variety of delivery systems (e.g. distance learning, on-line course work, state and national conferences, outside consultants, etc).

Electronic Data Support System



Initiates

■ Technology not used to review student assessment information.

Approaches

■ Technology used infrequently to review student assessment information.

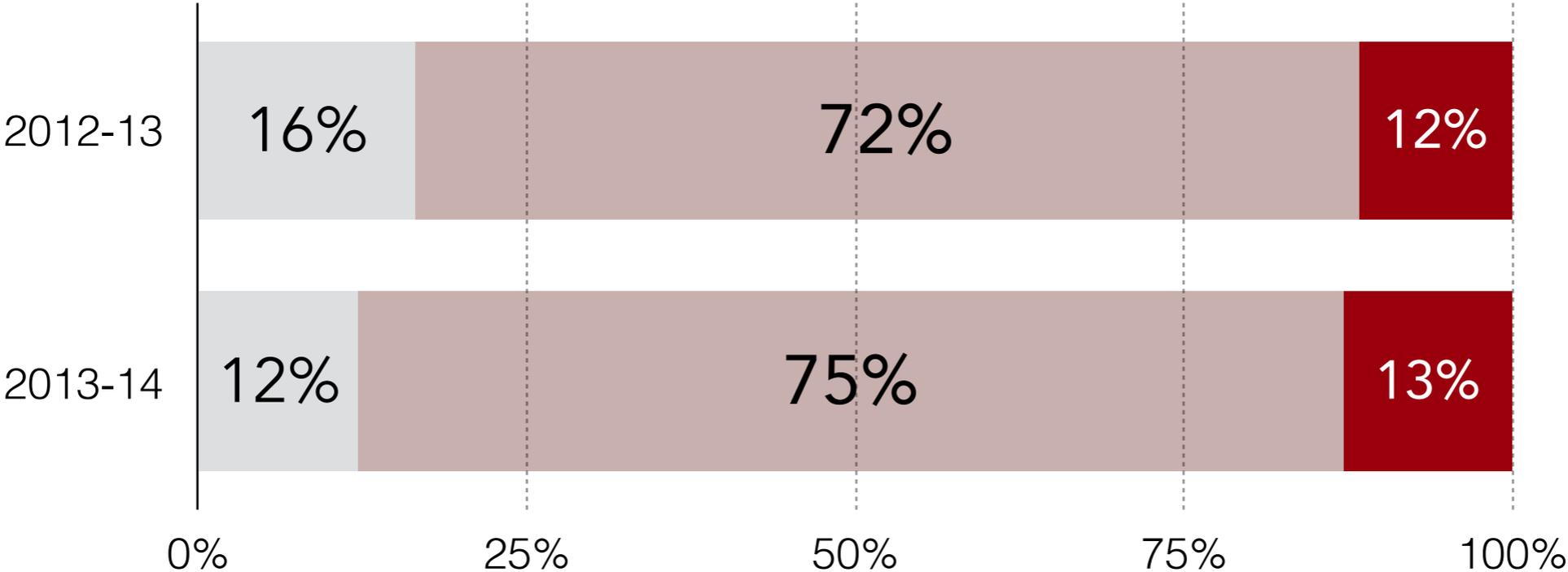
Meets

■ Technology frequently used to review student assessment information.

Exceeds

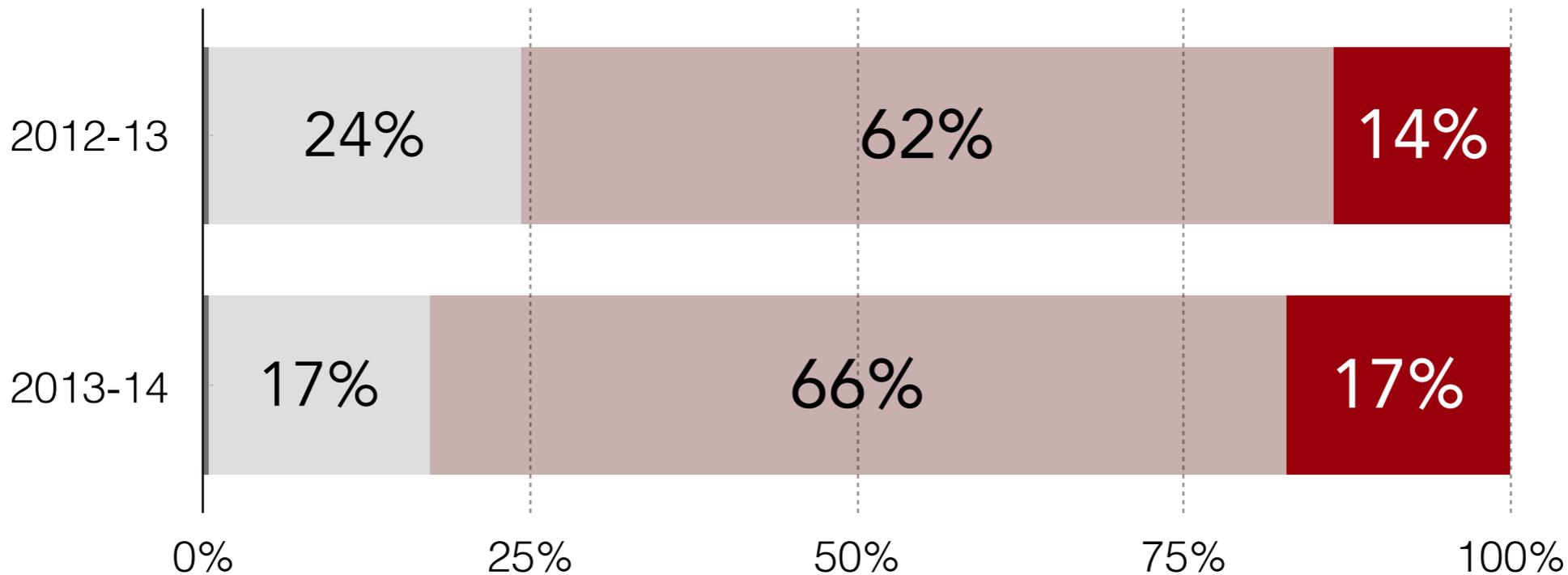
■ Technology regularly used to review student assessment information which results in needed changes in instruction.

Content of Technology Training



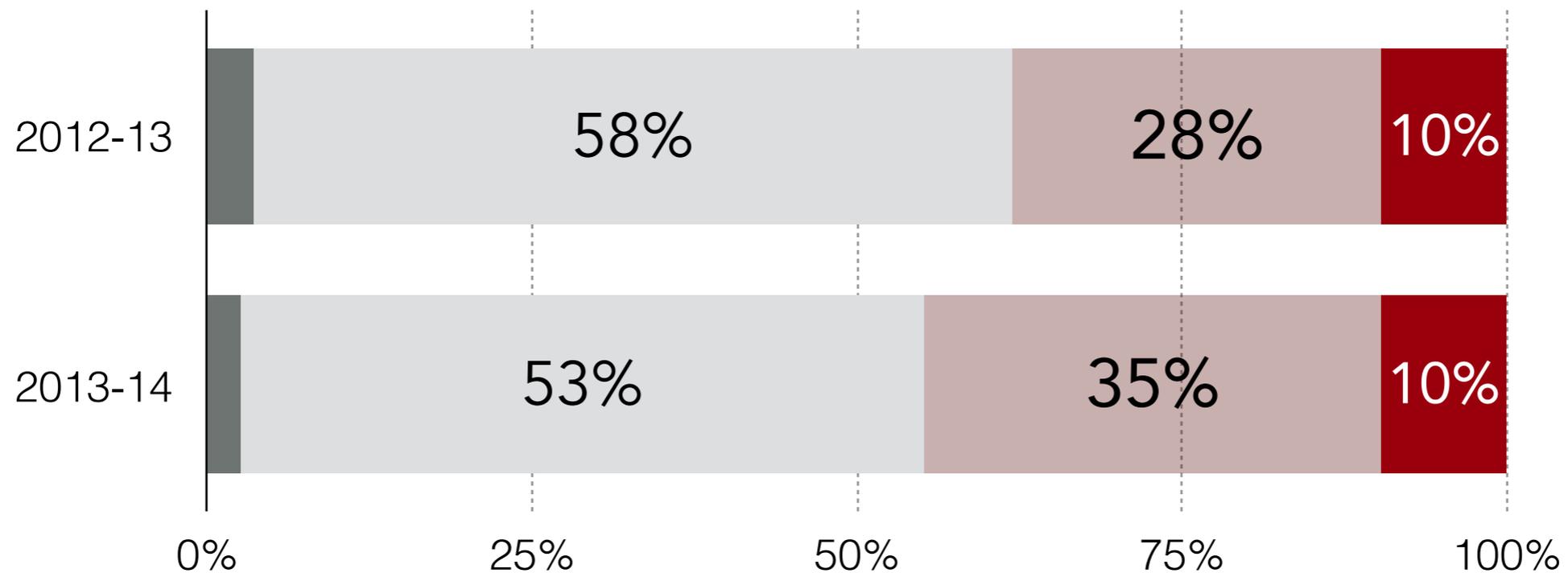
<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> Teachers acquainted with basic technology operations (word processing, email, Internet navigation). 	<ul style="list-style-type: none"> Teachers learn to use technology in the classroom (i.e., administration, management, and/or presentation software; Internet as a research and instructional tool). 	<ul style="list-style-type: none"> Teachers learn to use technology with curriculum/ students (i.e., integration skills for creating learner-centered technology projects using Internet, applications, multimedia presentations, data collection, making accommodations with assistive technologies, etc.) Integration of technology into instructional strategies to improve teaching and learning. 	<ul style="list-style-type: none"> Teachers learn about emerging technologies and their uses with curriculum/students (i.e., creation and communication of new technology-supported, student-centered projects). Integration of technology aligned with all content areas and grade levels. Technology training content supports growth toward national technology standards for teachers, administrators, and students.

Student Use of Technology



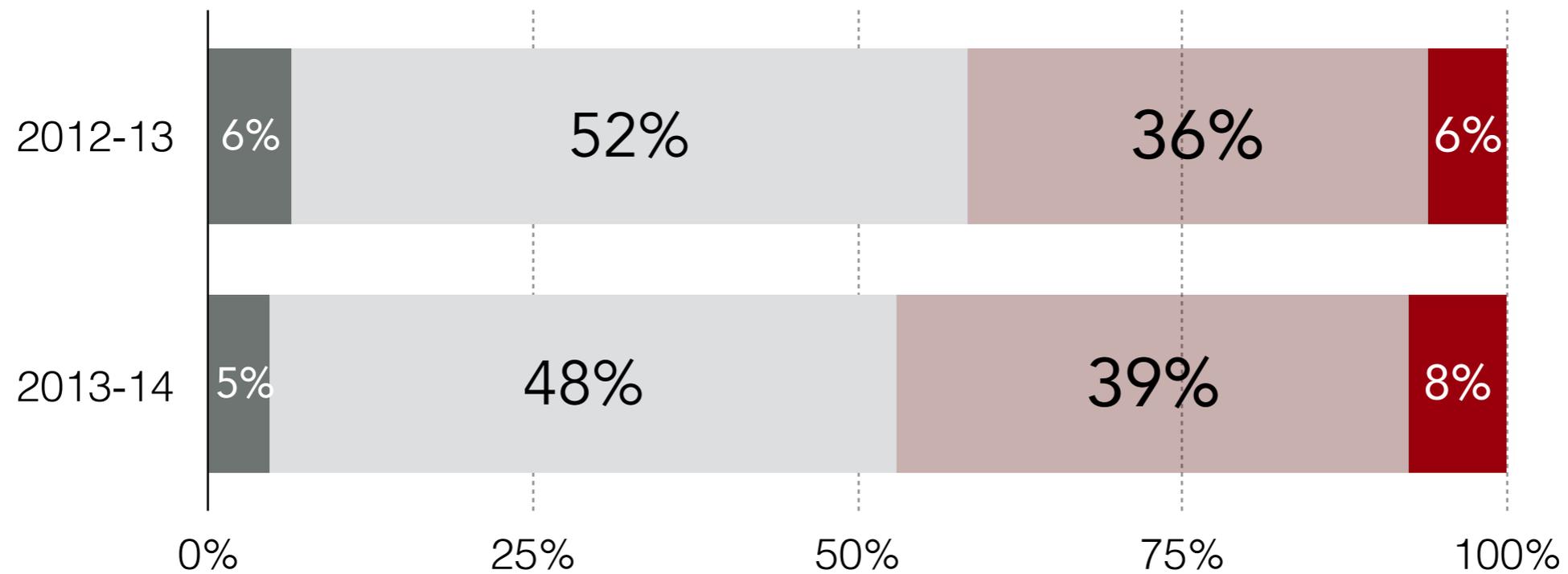
<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<p>Knowledge/Understanding</p> <ul style="list-style-type: none"> Infrequent use by students as a basic tool for drill and practice, and/or integrated learning labels for the purpose of identification, recollection, memorization, and review of basic facts. 	<p>Application</p> <ul style="list-style-type: none"> Frequent individual use by students to choose and use informational resources for the purpose of communication and demonstration of knowledge. 	<p>Analysis/Synthesis</p> <ul style="list-style-type: none"> Students regularly use technology for working with peers and experts, evaluation information, analyzing data and content in order to formulate and solve problems. Students regularly use technology for evaluation of individual progress. 	<p>Evaluation</p> <ul style="list-style-type: none"> Students regularly use technology for working collaboratively in communities of inquiry to propose, implement and assess solutions to real world problems. Students regularly use technology for evaluating and analyzing their own assessment information to improve learning. Students regularly use technology to publish and effectively communicate their knowledge with the global community.

Technology Integration



<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<p>Entry Level Technology</p> <ul style="list-style-type: none"> Teacher-centered lectures. Teachers allow students to use technology to work on individual projects. 	<p>Adoption Level Of Technology Use In Classroom</p> <ul style="list-style-type: none"> Teacher-directed learning. Teachers encourage students to use technology for cooperative projects in their own classrooms. Teachers use technology projects as an alternative form of assessment. 	<p>Adaption/Appropriation Level Of Technology Use In Classroom</p> <ul style="list-style-type: none"> Teachers facilitate communities of inquiry for students to collaborate with business and/or community members. 	<p>Innovation Level Of Technology Use In Classroom</p> <ul style="list-style-type: none"> Student-centered learning. Teachers act as facilitators in collaboration with external entities to develop 21st century skills (e.g., national or international, business and/or educational communities). Technology is vital to all curriculum areas and integrated on a daily basis.

Available Technology Curriculum



Initiates

- Provides some structured instruction, experiences, modules or courses in technology utilization.

Approaches

- Provides a variety of technology courses/ applications on different topics or at different levels to promote life long learning.

Meets

- Technology scope and sequence in place to fulfill ISTE NETs - A, S, T.
- Offers at least one sequential program of study in an area of technology.

Exceeds

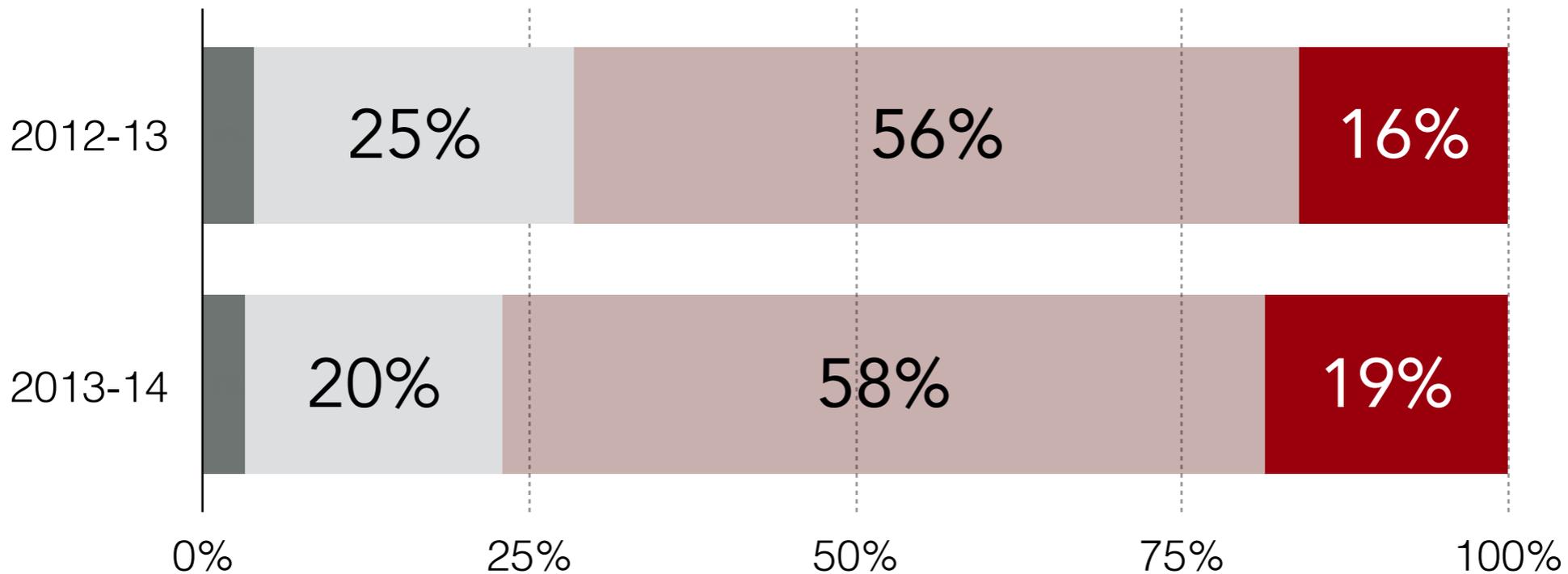
- Offers multiple sequential programs of study in technology.

Community Connection



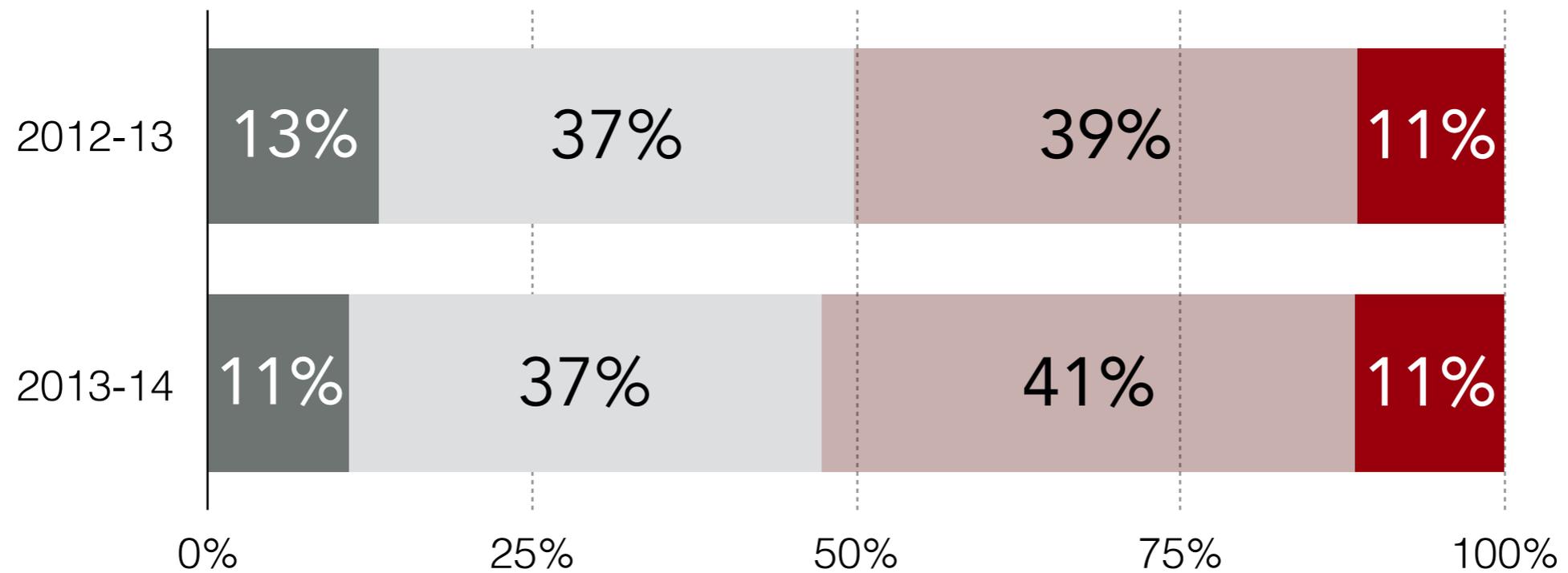
<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> ■ Minimal connection with parents and community through technology. ■ Minimal initiatives to increase community technology literacy. ■ Minimal awareness of initiatives, resources, laws and regulations related to public access to information technologies for persons with disabilities. 	<ul style="list-style-type: none"> ■ Basic communication with community utilizing technology. ■ Offers a technology literacy program for parents and/or community (e.g., family tech night, websites, or videos). ■ Partnering with business and/or community to offer job shadowing. ■ Identified information technology access priorities related to community utilization. 	<ul style="list-style-type: none"> ■ Partners with community to offer after hours training to parents/caregivers. ■ Students assist in technology skills training parents and community in real-life skills. ■ Business expertise brought to classroom. ■ Information technology access plan implemented and significant progress noted in accessibility. 	<ul style="list-style-type: none"> ■ Plays an active role in the promotion of technology literacy within the local community. ■ Provides outreach programs to promote collaboration among community, business and school. ■ Students participate in a mentoring program with business and/or community members. ■ Business and community provide financial support and human resources. ■ Minimal disability-related barriers exist related to information technology access.

Student Technology Essential Learnings



<i>Initiates</i>	<i>Approaches</i>	<i>Meets</i>	<i>Exceeds</i>
<ul style="list-style-type: none"> Up to 25 percent of students demonstrate proficiency in the ISTE NETs - Student Standards 	<ul style="list-style-type: none"> At least 25 percent of students demonstrate proficiency in the ISTE NETs - Student Standards. 	<ul style="list-style-type: none"> At least 50 percent of students demonstrate proficiency in the ISTE NETs - Student Standards. 	<ul style="list-style-type: none"> At least 75 percent of students demonstrate proficiency in the ISTE NETs - Student Standards.

Administrator Technology Competency



Initiates

■ Administrators know and understand the ISTE NETs - Administrator Standards

Approaches

■ Administrators apply the ISTE NETs - Administrator Standards.

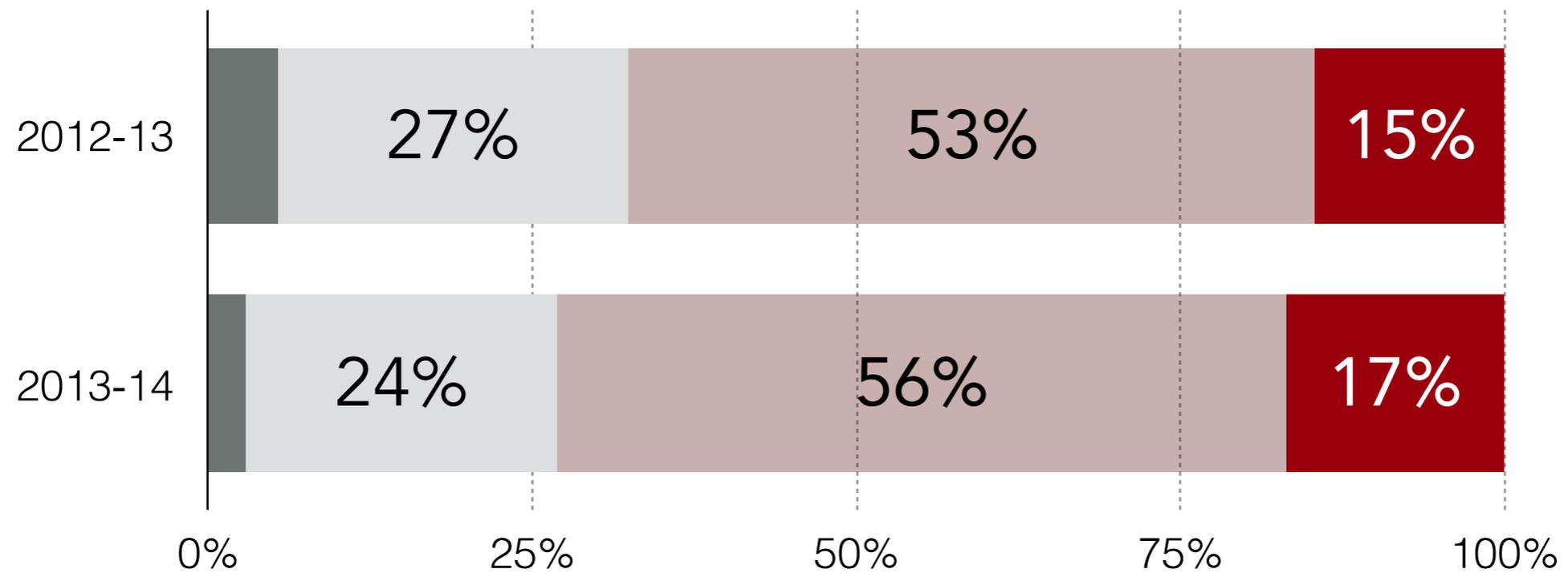
Meets

■ Administrators analyze and determine their proficiencies based on the ISTE NETs - Administrator Standards.

Exceeds

■ Administrators make decisions and adjust behaviors based on the ISTE NETs - Administrator Standards.

Teacher Technology Competencies



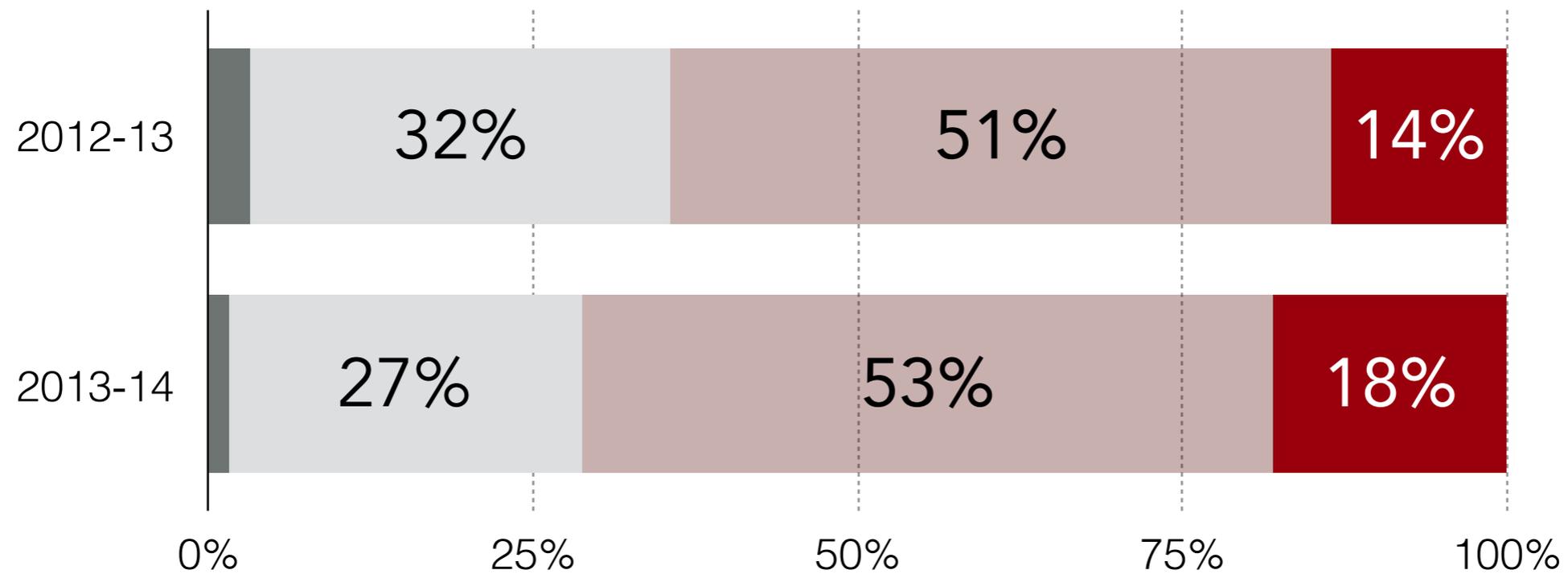
Up to 25 percent of educators demonstrate proficiency in the ISTE NETs - Teacher Standards.

■ At least 25 percent of educators demonstrate proficiency in the ISTE NETs - Teacher Standards.

■ At least 50 percent of educators demonstrate proficiency in the ISTE NETs - Teacher Standards.

■ At least 75 percent of educators demonstrate proficiency in the ISTE NETs - Teacher Standards.

Use of Technology In Learning



Initiates

- Educators understand the potential of technology in the learning process, however; the focus remains on productivity.

Approaches

- Educators apply effective use of technology to the learning task and opportunities thus increasing productivity.
- Educators use technology as an extension of the learning experience.

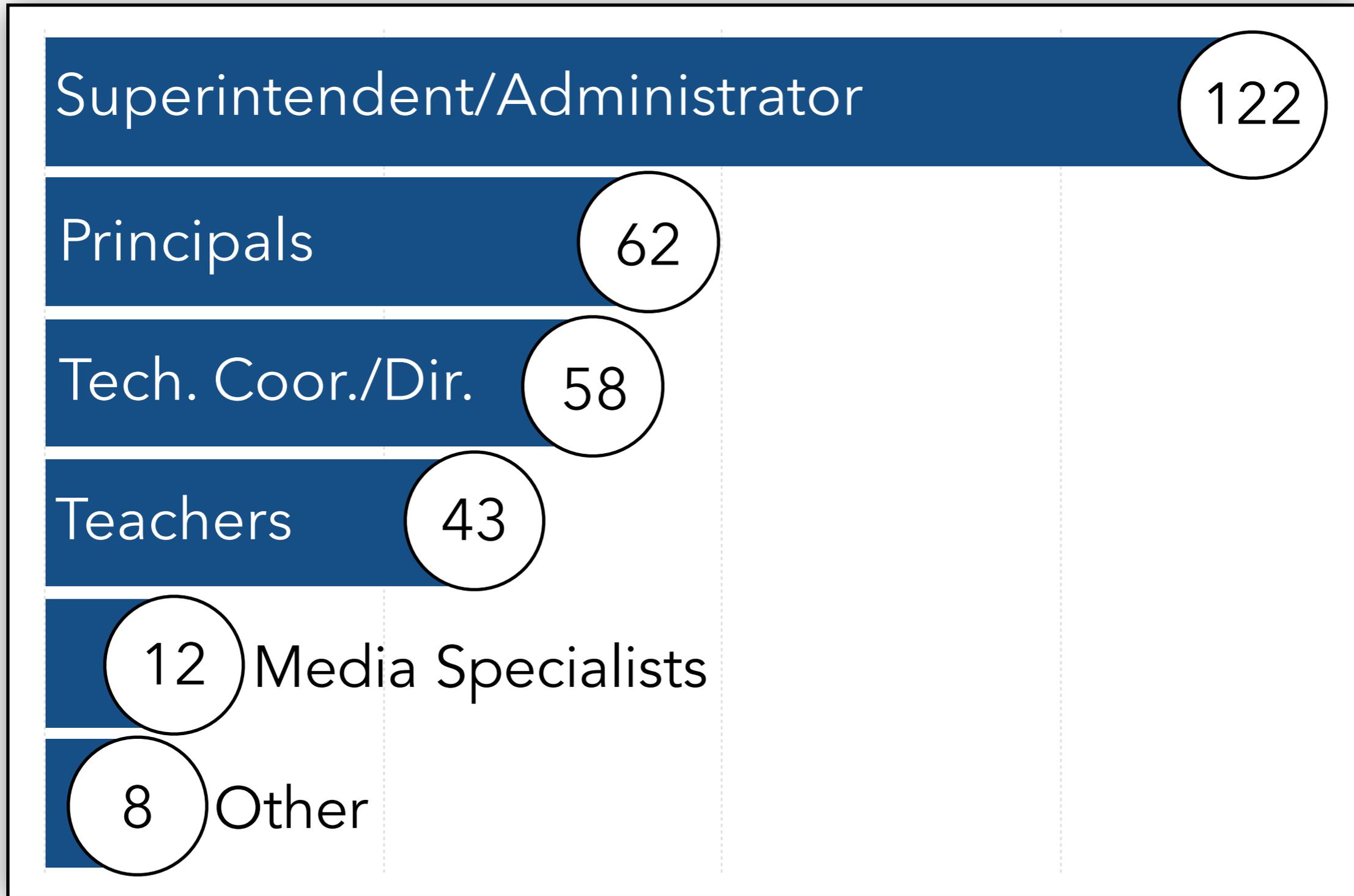
Meets

- Educators provide a variety of technology resources and allow/facilitate student choice of technologies to accomplish their learning.

Exceeds

- Educators facilitate effective use of technology in the learning process.
- Educators evaluate the impact of technology on the learning process and adjusts future learning experiences/opportunities accordingly.

Technology Report by Submission in Staff Table



Next Steps

- Deeper Data Analysis
- Analysis of Technology by School Size
- Looking at Data by Submitter
- Perceptions Data

- Other research/data ideas
- Additional collection ideas
- Other questions

Your Thoughts