Kentucky's K-12 Digital Readiness

We are headed toward greater and more meaningful digital interactions between family, school and community. We believe digital and future-ready foundations can:

- help empower student personalized learning experiences and preparedness for college and the workforce
- increase teacher productivity and digital workflows
- enhance communications and invaluable collaboration models
- expand data enhanced decision making, and provide a robust infrastructure for endless possibilities
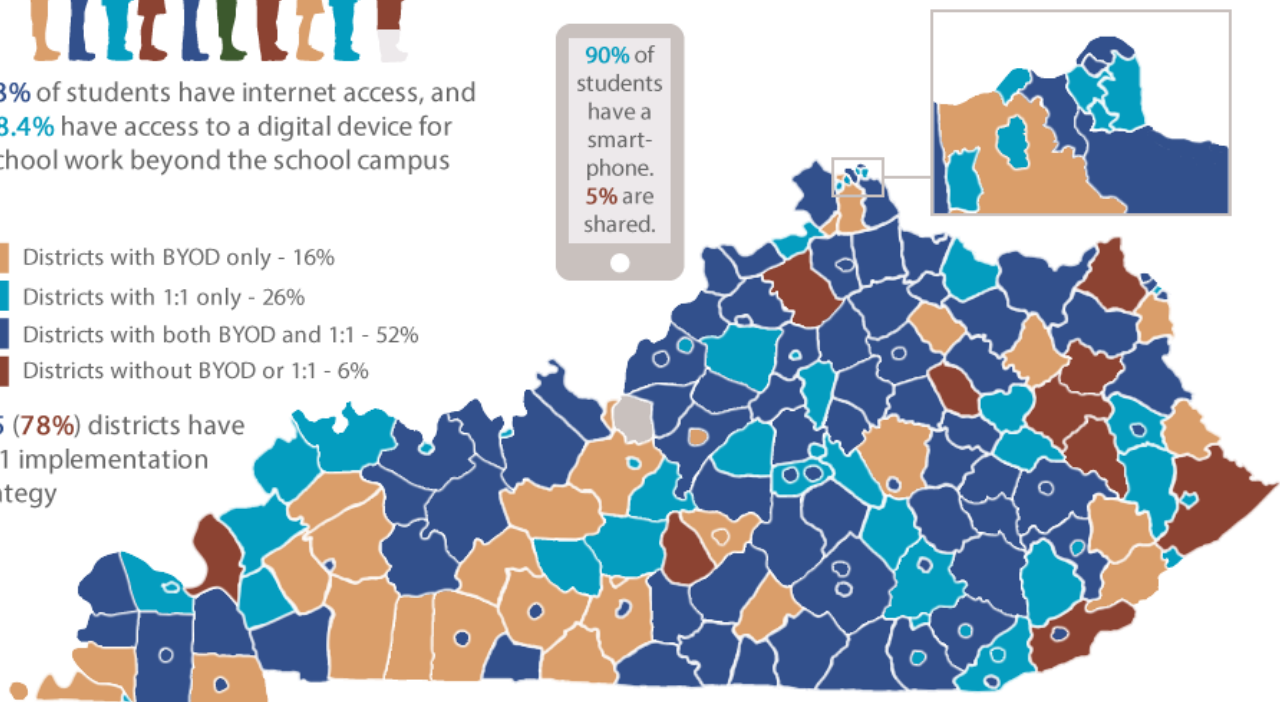
Access

Digital access at school and at home helps us understand how "plugged in" and "connected" our learners are during the school day and beyond. Students without access to technology in school and at home are less likely to engage in 21st century learning skills. Ease of access is a precursor to the desired shifts in student outcomes powered by digital tools and resources. Strategies such as 1:1 and Bring Your Own Device (BYOD) are being adopted across Kentucky to help meet this need.

97.8% of students have internet access, and **98.4%** have access to a digital device for school work beyond the school campus

28	Districts with BYOD only - 16%
45	Districts with 1:1 only - 26%
90	Districts with both BYOD and 1:1 - 52%
10	Districts without BYOD or 1:1 - 6%

135 (**78%**) districts have a 1:1 implementation strategy

STUDENT TO DIGITAL DEVICE RATIO

.78 to 1
↓.12

780,616
Student Instructional Devices

Over **1 million** student and staff computers (**1,014,667**)

100% of schools provide Wi-Fi access to students

Of these, **99%** schools have implemented dense Wi-Fi networks capable of supporting BYOD or 1:1 initiatives

>260 kbps
Bandwidth per student available through statewide fiber network service

100%
of Kentucky K-12 public schools and district offices are connected by the most reliable, highest speed and quality fiber internet services in the country.

The amount of KY K-12 internet consumed increased by

+52%
over the past 36 months while maintaining up time of

99.99%

90% of students have a smartphone. **5%** are shared.

Anytime, Anywhere, Always On, Differentiated Teaching and Learning

Future-Ready Student

86% of KY parents believe their child's school encourages technology use for teaching and learning

80% of KY parents believe technology use in class can enhance student learning

Strong online skills, such as confidence using shared digital workspaces, have been correlated with increased collaboration in the classroom.

Students can think about concepts and interactions in more varied ways with the affordances of multimedia and multimodal representations.

Students who have access to computers and the Internet are more likely to use technology more frequently and have better technology skills.
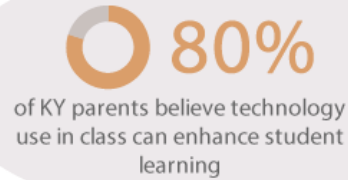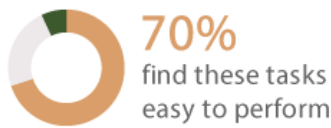
These skills are a precursor to the use of digital creativity, digital collaboration, digital communication and critical thinking while learning.

Students can also personalize the use of their technology and leverage greater access to engage in anytime, anywhere learning on topics of their choice.

MULTIMEDIA SKILLS

Student-reported ease of editing a photo

70% find these tasks easy to perform

Only **7%** said the task was impossible

Student-reported frequency of uploading photos from a digital device

71% at least once monthly

Only **15%** reported never performing this task

Student-reported frequency of downloading or streaming music, podcasts or other audio

80% at least once monthly

Only **13%** reported never doing so

FOUNDATIONAL SKILLS

Student-reported ease of connecting devices via bluetooth or wi-fi

97% find these tasks easy to perform

Only **2%** said the task was impossible

COLLABORATION & ONLINE SKILLS

Student-reported ease of collaborating using online documents

81% find these tasks easy to perform

4% said the task was impossible

Student-reported frequency of reading online content

72% at least once a week

10% said never

82% of districts offer at least one computer science course

STLP
Student Technology Leadership Program

After school program or club only

34%

66% Program integrated into content

> 60,000 students from **782** schools in **130** districts

54%

59%

72%

47%

50%

69%

35%

57%

PERCENTAGE OF SCHOOLS WITH STLP BY REGION

student responses: > 40,000 | teacher responses: > 5,000

Future-Ready Teacher

Teachers with strong foundational skills are able to handle administrative classroom tasks easily, including attendance and grading. Further, teachers who are confident in their ability to use foundational skills are often able to use these skills when learning new online and multimedia skills.

PERCEPTION OF DIGITAL SKILLS

Ability to manipulate photos and record and edit audio or video

66% find these tasks easy to perform

37% expressed interest in Professional Development (PD) in this area

ONLINE SKILLS

Teacher-reported ease of collaborating using online documents

83% find these tasks easy to perform

36% expressed interest in PD in this area

FOUNDATIONAL SKILLS

Basic computing skills - sending email and creating spreadsheets

73% find these tasks easy to perform

14% expressed interest in PD in this area

87% of KY teachers believe technology use in class can enhance student learning

CONFIDENCE WITH TECHNOLOGY

77% can solve their own tech problems

69% easily find new technologies to meet their teaching goals

Nearly **4 of 5 (76%)** teachers report having sufficient access to instructional technology...

just over 4 in 5 **(82%)** have access to a part or full-time digital learning coach (DLC)

Access to DLCs has **doubled** in the past **2 years**

92% of these teachers are encouraged to use technology for teaching and learning by school leaders

Teacher-reported hours spent per year participating in school-sponsored technology related PD

- 13% None
- 27% 17+
- 39% 1-8 hours
- 21% 9-16
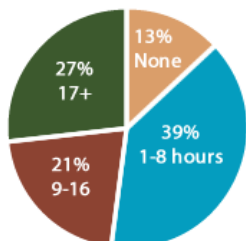
80% of these teachers say the quality is average or above average
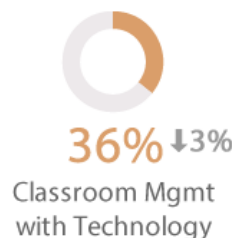
1,058 Library Media Specialists employed at the district or school level

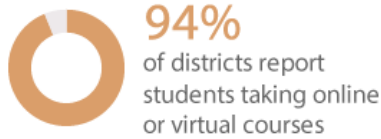**57%** report intentional collaboration and support of digital strategies for teaching and learning

88% of teachers report the internet speed at schools as average or better
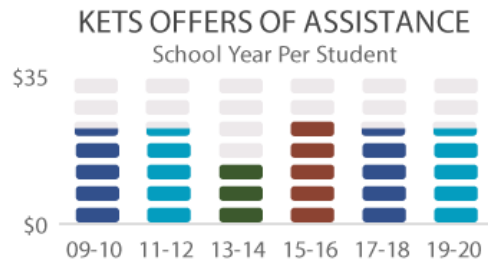
MOST REQUESTED EDUCATION TECHNOLOGY PD TOPICS

37% ↓2% Multimedia Skills

36% ↓3% Classroom Mgmt with Technology

37% ↑2% Online Tools for Critical Thinking

Tech Trends

ONLINE & VIRTUAL LEARNING

94% of districts report students taking online or virtual courses

38 districts offer online/virtual courses to students in other districts

LEARNING MANAGEMENT SYSTEM

95% ↑9% of districts sponsor a learning management system (LMS)

The majority of adoption is with free cloud services. However, there is an upward trend toward paid solutions.

SCHOOL DIGITAL DEVICE FOOTPRINT

64% ↑9% **CHROME**

23% ↓6% **WINDOWS**

9% ↓2% **iOS**

3% ↓1% **MAC**

1% **ANDROID**

Over **1 million** student and staff computers (**1,014,667**)

96% of districts report having a strategic plan for teaching Digital Citizenship Skills

KETS OFFERS OF ASSISTANCE
School Year Per Student

$35

$0

09-10 11-12 13-14 15-16 17-18 19-20

94% of districts are using Google Apps for Education. Of these, **>80%** have integrated with Office 365 & Active Directory
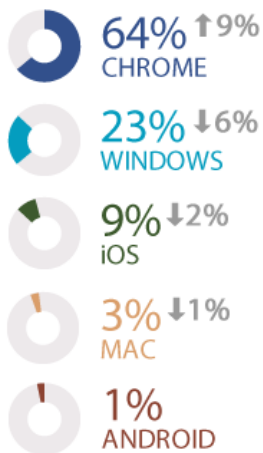
Billions upon **Billions** of unauthorized connection attempts against school networks are blocked annually by statewide security services.

269 large-scale, organized network attacks aimed at denying internet access to Kentucky schools and districts were successfully mitigated this past year.

SECURITY

K-12 ONLINE ASSESSMENT
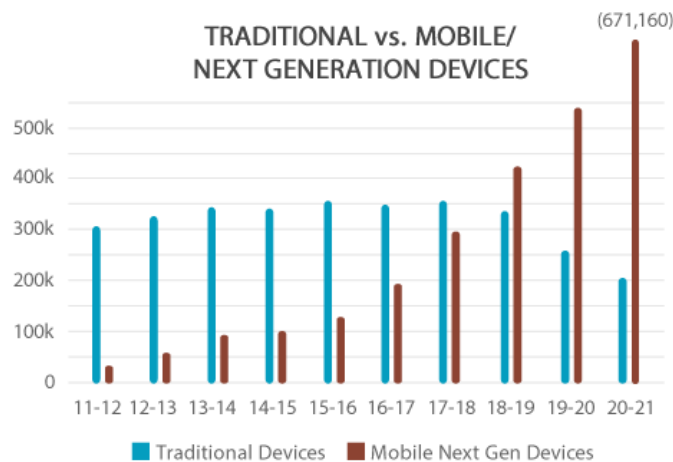
In 2020, more than **390,000** 3rd - 8th and 10th -11th grade students in **100%** of Kentucky school districts successfully participated in high-stakes statewide testing, accounting for more than **771,000** testing sessions - resulting in the largest and most successful online assessment efforts of it's kind.

TRADITIONAL vs. MOBILE/ NEXT GENERATION DEVICES

(671,160)

500k
400k
300k
200k
100k
0

11-12 12-13 13-14 14-15 15-16 16-17 17-18 18-19 19-20 20-21

■ Traditional Devices   ■ Mobile Next Gen Devices

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*For our 2021 infographic, we've presented subscript indicators for year-over-year (YOY) changes where applicable. **GREEN** indicates favorable changes, **RED** unfavorable, and **GRAY** neutral.

2021
January

Kentucky
UNBRIDLED SPIRIT