Kentucky's K-12 Digital Readiness

Kentucky Department of
EDUCATION
January 2022

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
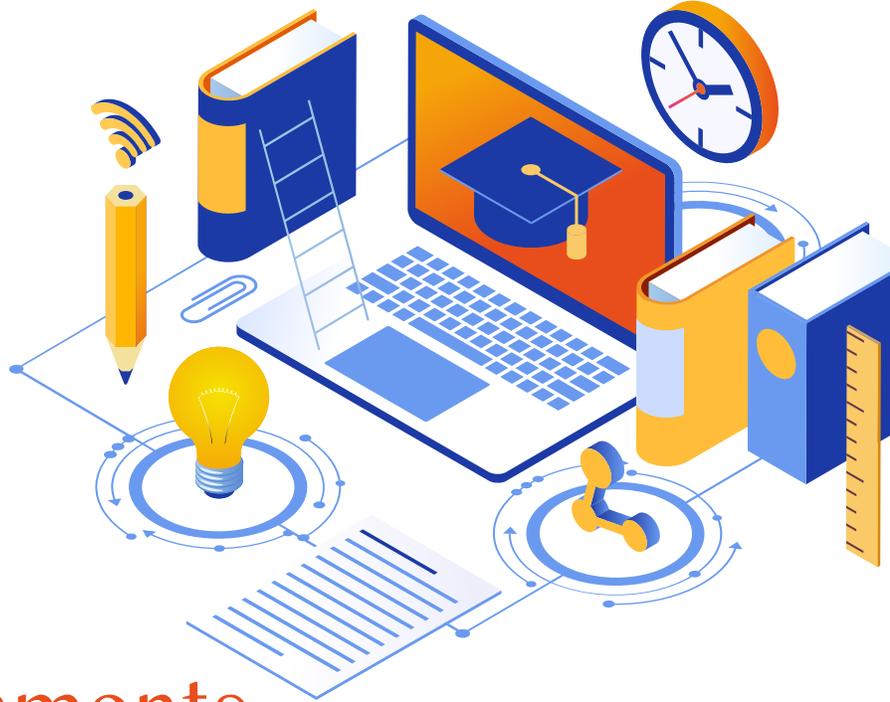
Digitally Ready Learning Environments

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.

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.

School fiber internet total usage increased **+69%** over the past 24 months while maintaining uptime of **99.98%**

*Greater than **332 kilobytes** per second bandwidth per student available through statewide fiber network service.*

98%
of students have internet access for school work beyond school campus
*98% have access to a digital device for school work beyond the school campus.*

95%
of students report internet access at home

.67 to 1
Student to digital device ratio
that's better than 1 device per student
Down **.11** compared to last school year

909,695
Student instructional devices

1,038,885
Student and staff devices

District BYOD and 1:1 Implementation
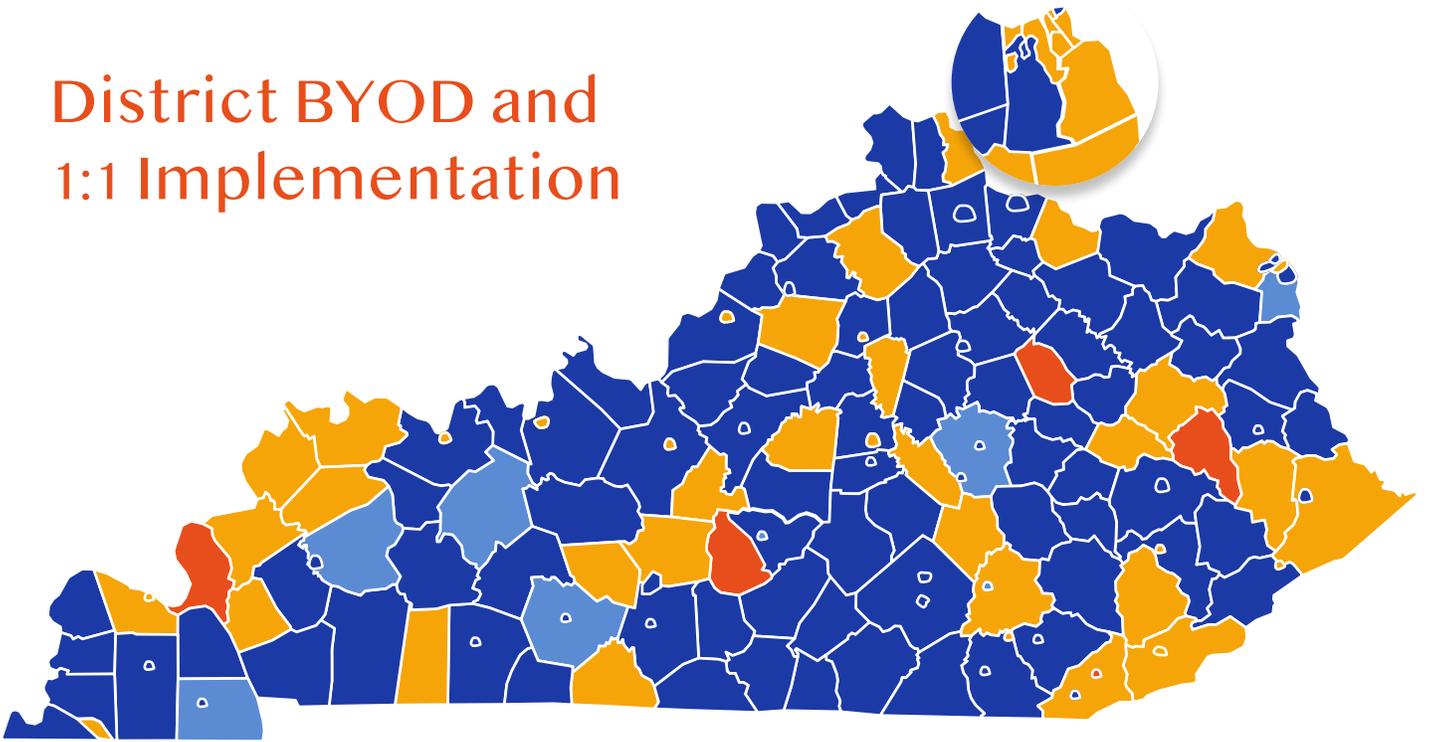
5% 8 Districts with BYOD only

28% 48 Districts with 1:1 only

3% 5 Districts without BYOD or 1:1
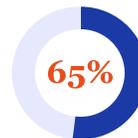
**65%** 111 Districts with both BYOD and 1:1

100% of schools provide Wi-Fi access to students.

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

Digitally Empowered Learners
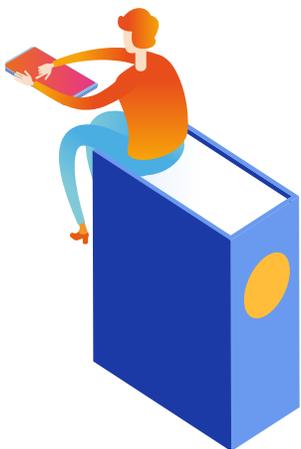
Strong online skills, such as confidence using shared digital workspaces, have been correlated with increased collaboration in the classroom. Students can think about concepts and interactions in more varied ways with the affordances of multimedia and multimodal representations. Students who have access to computers and the Internet are more likely to use technology more frequently and have better technology skills.

Digital Communicator

58% of students are asked to write online at least a few times a month

70% of students are asked to post and/or share their work online

Digital Designer

89% of students use technology to demonstrate knowledge by creating videos, slide presentations, art, music, podcasts, etc.

76% of students are asked to use digital tools to conduct experiments and/or take measurements

Over **51%** of students in Kentucky utilize technology to engage with experts outside of the classroom.

Digital Collaborator

Developing a level of comfort with digital collaboration outside of school helps students be more successful when collaborating with classmates, teachers, and other experts.

86% of students are asked to collaborate using online documents

71% of students are asked to work with other classmates online

Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world; act and model in ways that are safe, legal and ethical.

88% of student say their teachers talk with them about how to act respectfully while online

79% of students say their classmates always or usually treat each other with respect when collaborating online.

Less than **3.5%** say their classmates never treat each other with respect.

95% of districts report having a strategic plan for teaching digital citizenship skills.

46%

59%

46%

36%

56%

71%

43%

32%
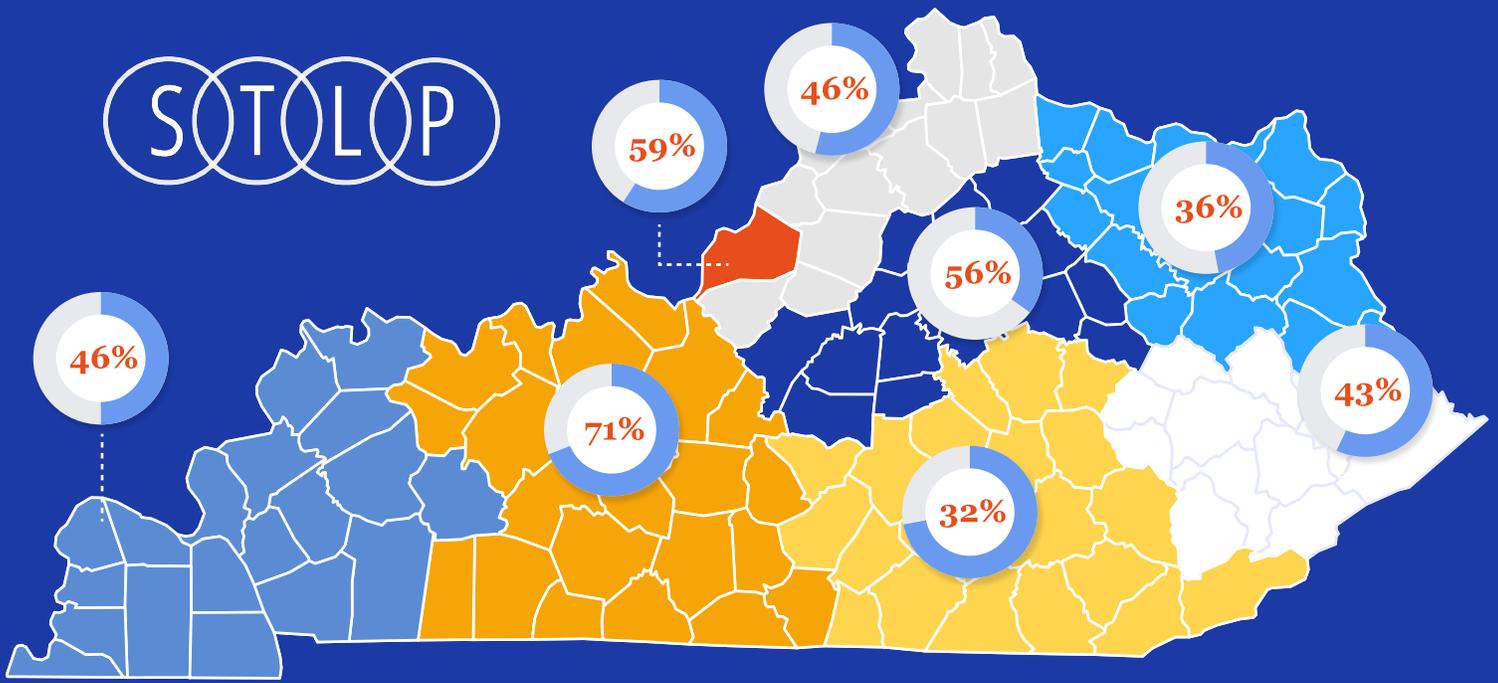
Greater Than 50,000 Students From 757 Schools In 126 Districts.

70% program integrated into content
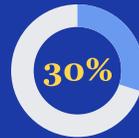
30% after school program or club only

Digitally Empowered Educators

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 them when learning new online and multimedia skills.

Digital Learning Designer

Educators design engaging, learner-centered digital learning experiences and environments enabled by high quality digital content and resources providing student voice, choice and path.

How are Kentucky's teachers frequently engaging with students for instructional purposes?

84%
create and utilize instructional videos, discussion board posts, use virtual curricula, or run virtual classes

89%
create digital resources such as instructional videos, hyperdocs, choiceboards

85%
use online curriculum

68%
use a Learning Management System
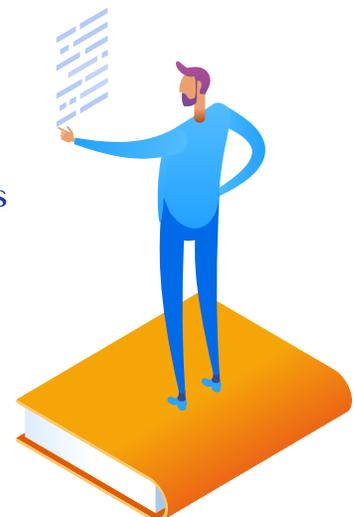
Digital Communicator

Kentucky's Educators Use A Variety Of Ways To Stay Connected With Students And Their Families
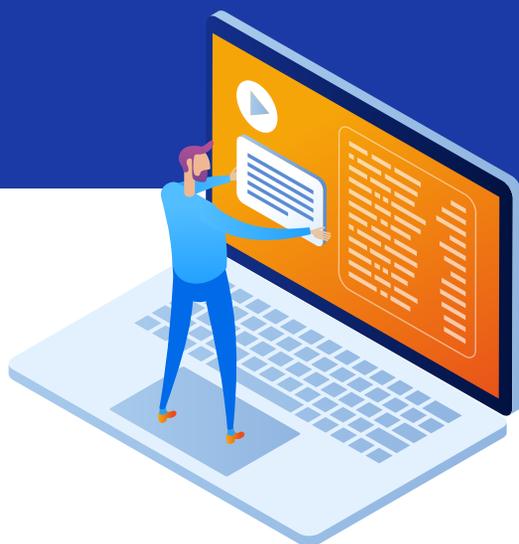
Connecting With Parents

Video Calls	49%
Email	93%
Phone or text	86%
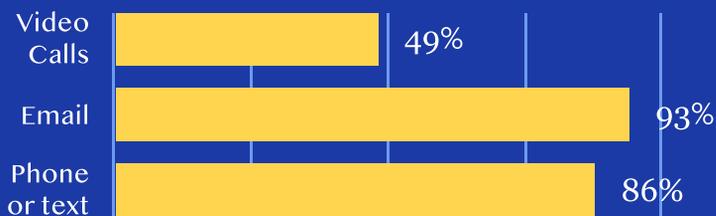
Connecting With Students

Video Calls	58%
Email	66%
Phone or text	35%

0%   25%   50%   75%   100%
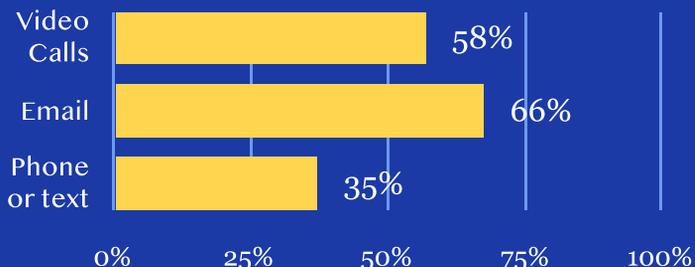
KY is cited as a top 3 state in teachers accessing and using quality data to raise achievement for all students (Data Quality Campaign).

Kentucky's educators are facilitating a collaborative digital learning space in the following ways:

Educators are intentional to collaborate with peers, students, and experts outside the school to improve practice, discover and share resources and ideas, and solve problems

Digital Learning Collaborator

69% frequently ask students to post and/ or share their work online

43% frequently ask their students to engage virtually with experts outside of the classroom

78% frequently ask students to create things using technology (e.g., videos, slide presentations, art, music, podcasts)

74% frequently ask students to collaborate online with classmates
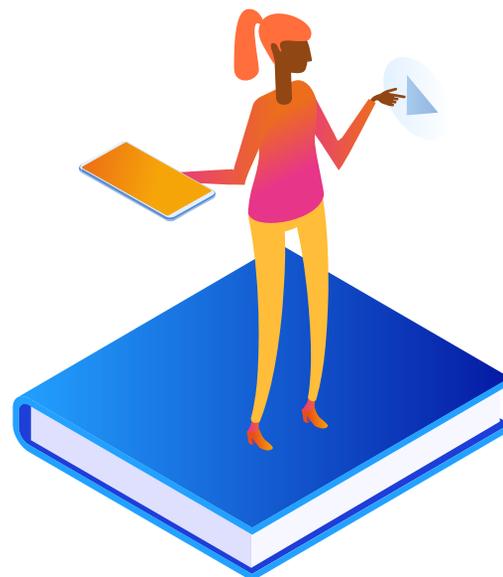
83% frequently collaborate with other teachers to design learning experiences using technology

Just over **97%** of teachers have access to a part or full-time digital learning coach (DLC). Access to DLCs has doubled in the past 2 years.

1045 Library Media Specialists employed at the district or school level

60% report intentional collaboration and support of digital strategies for teaching and learning

90% of teachers feel highly confident managing students who are using technology

78% feel learning is more engaging when using technology

Digitally Empowered School Leader

75% of school leadership feel Learning is more engaging for our students when they're using technology

99% of school leadership feel strongly that they encourage teachers to try new things with technology

96% of school building leaders report regularly discussing technology during teacher evaluations

Tech Trends

1,176 large-scale, organized network attacks aimed at denying internet access to all Kentucky schools and districts were successfully mitigated.

School Digital Device Footprint

Chrome	Windows	iOS	Mac OS	Android
75%	16%	7%	2%	1%

97% of districts are using Google for Education. Of these, greater than **80%** integrated with Office 365 & Active Directory.

More than **4 Billion** unauthorized connection attempts against school networks are blocked annually by statewide security services.

Traditional vs. Mobile/ Next Generation Devices

● Traditional Devices　　● Mobile Next Gen Devices

Bar chart showing Traditional Devices vs. Mobile Next Gen Devices from 17-18 through 21-22. Y-axis from 100k to 900k. The 21-22 Mobile value is labeled (857,594).
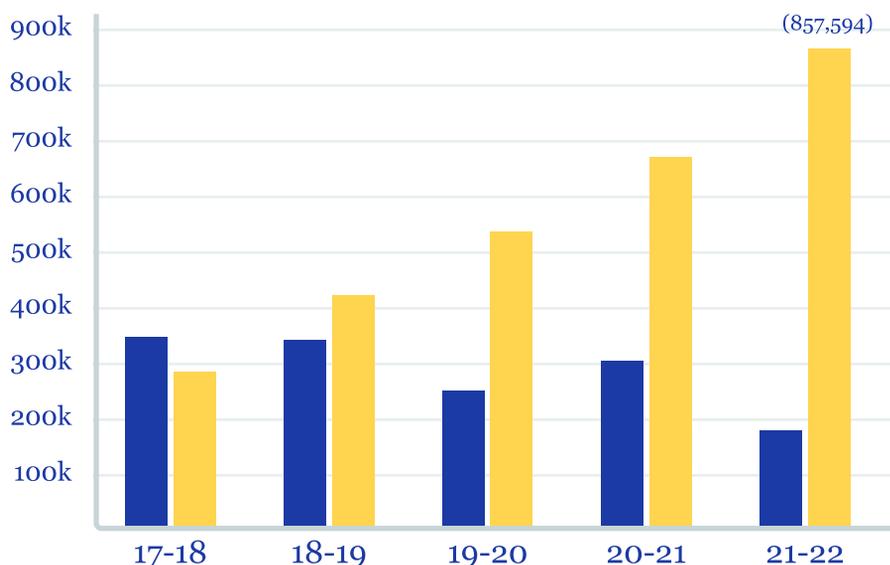
Online & Virtual Learning

94% of districts report students taking online or virtual courses. **45** districts offer online or virtual courses to students in other districts.

Learning Management System

95% 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.

K-12 Online Assessment

In 2021, more than **405,182** 3rd - 12th grade students in **100%** of Kentucky school districts successfully participated in high-stakes statewide testing, accounting for more than **1.2 million** testing sessions - resulting in the largest and most successful online assessment efforts of its kind.

KETS Offer of Assistance
School Year Per Student

Bar chart of KETS Offer of Assistance per student: 13-14 ($15), 15-16 ($25), 17-18 ($21), 19-20 ($21), 21-22 ($21). Y-axis from $5 to $25.
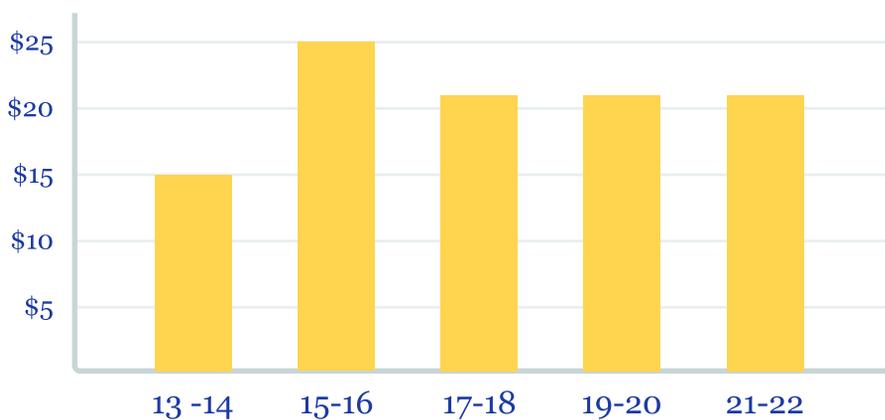
Sources

Kentucky Digital Readiness Report: https://applications.education.ky.gov/trs_reports/

Kentucky School Report Card: https://www.kyschoolreportcard.com

BrightBytes: http://brightbytes.net

Digital Driver's License (DDL): http://iDriveDigital.com

Google Analytics

Open House: http://openhouse.education.ky.gov