



Kentucky Department of Education

Office of Education Technology - January 2021

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 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%

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

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



Anytime, Anywhere, Always On, Differentiated Teaching and Learning

Future-Ready Student

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.



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

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.

COLLABORATION & ONLINE SKILLS

Student-reported ease of collaborating using online documents



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



82% of districts offer at least one computer science course

Student-reported frequency of reading online content

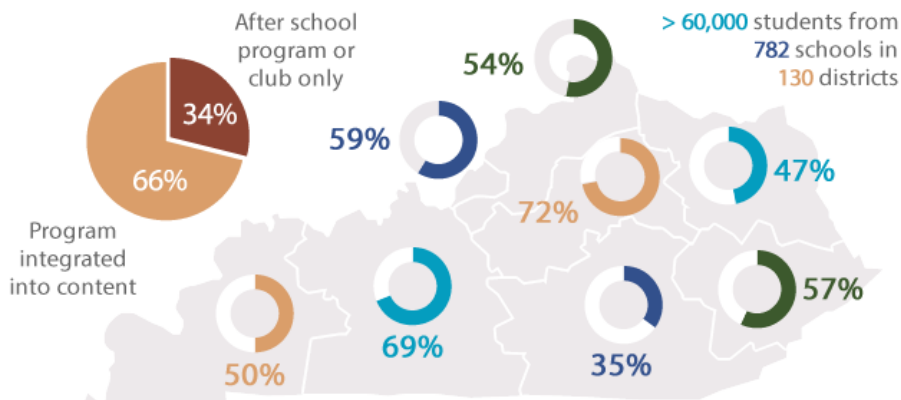


72% at least once a week

10% said never



Student Technology Leadership Program



PERCENTAGE OF SCHOOLS WITH STLP BY REGION

Future-Ready Teacher

KY is cited as a top 3 state in teachers accessing and using quality data to raise achievement for all students (Data Quality Campaign)



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



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

ONLINE SKILLS

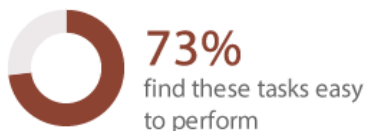
Teacher-reported ease of collaborating using online documents



36% expressed interest in PD in this area

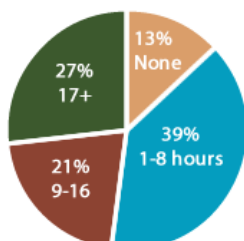
FOUNDATIONAL SKILLS

Basic computing skills - sending email and creating spreadsheets



14% expressed interest in PD in this area

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



80% of these teachers say the quality is average or above average

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

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



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

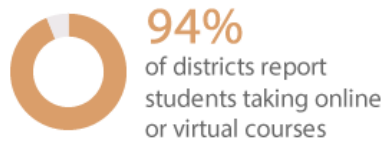


37% ↑2%

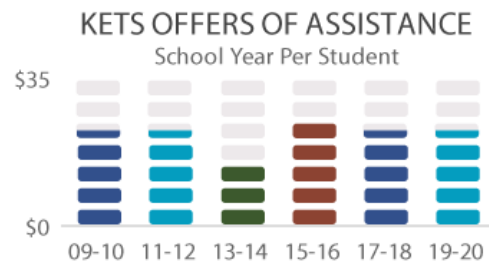
Online Tools for Critical Thinking

Tech Trends

ONLINE & VIRTUAL LEARNING



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



94% of districts are using Google Apps for Education. Of these, >80% have integrated with Office 365 & Active Directory

LEARNING MANAGEMENT SYSTEM



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

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.



SCHOOL DIGITAL DEVICE FOOTPRINT

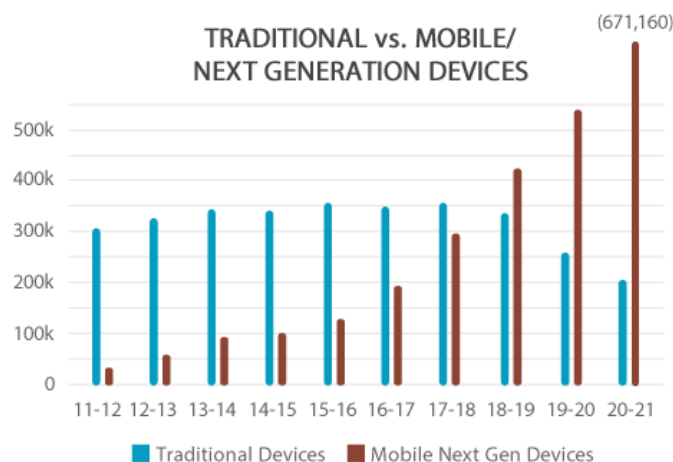


Over 1 million student and staff computers (1,014,667)



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 its kind.



*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.



Sources

Kentucky Digital Readiness Report: http://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>
 Project Tomorrow Speak Up: <https://tomorrow.org/speakup>

2021
January

