

Technology Plan  
Fayette County Public Schools  
Lexington, Kentucky



Creation Date: April 15, 2015

As per the SLD: The technology plan creation date is the month and year the technology plan was written, not the date when you began to develop or draft it. The SLD defines the creation date as the date it first contained all five required elements in sufficient detail to support the services requested on your Form 470. The creation date must be prior to the date the Form 470(s) is posted.

Plan Start Date: July 1, 2015

Plan Updated June 30, 2020

Plan Expiration Date: June 30, 2022

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## **Executive Summary**

Fayette County's technology plan is incorporated in the District Improvement Plan which is submitted to the Board of Education annually for approval. The plan is based on the current needs and priorities of the district with the intention of advancing student achievement through effective instructional and operational practices. Goals of the plan include (1) improving academic achievement of all students, (2) improving technology literacy of all students, (3) providing staff with relevant training/professional development in regards to technology use and implementation, and (4) ensuring the district has adequate technical resources to support the educational needs of children and the business needs of schools.

Ultimately the goals are intended to move the district toward meeting our instructional needs, especially in terms of closing achievement gaps while raising overall student achievement. Significant activities that will address these goals are the continuation of our technology RFP process, emphasis on leveraging BYOD capabilities within the classroom, emphasis on teacher and student needs related to multimedia, online learning and the 4C's and STEM education. These activities place a high priority on leveraging technology use to improve student achievement within specific content areas and within the classroom across all grade levels. Although professional development funding is limited, the district will continue to focus training/professional development activities offered through the technology department and in conjunction with the student achievement department on using technology for effective teaching and learning.

The district expects the activities and goals within this plan will lead to increased student achievement by ensuring students have adequate access to technology resources and teachers and staff are prepared to incorporate the use of technology effectively into the curriculum. This will improve both student learning and student technology literacy. With the continued support of an enterprise wireless system that supports personal devices for students and staff, teachers will be continue to be pushed and supported in being innovative with the use of technology in support of teaching and learning. These activities encourage parent involvement and support of the community as a whole to provide the best possible resources and learning experiences for students.

## Planning Process and Methodology

The planning and writing process involved the contributions of the committee members who represent the core interests and needs of technology use across the district. Members worked collaboratively to review the existing plan and make necessary updates and revisions to reflect current district objectives. The plan is reviewed as a whole on an annual basis, with individual activities being evaluated as appropriate throughout the life of the plan. The CIO is the person responsible for reviewing and revising the plan along with the committee members listed.

Upon review of the 2013-2015 District Technology Plan, progress was made on all goals. Some activities were completed, others are continuing and some were not accomplished or are no longer relevant. Successful and ongoing activities include the following.

The district was successful in maintaining the 5-year replacement for computers and increasing the amount of technology available in schools. The RFP process has continued for the last several years as an effective method of dispersing additional technology funds to schools to address specific content needs and achievement gaps. Interactive whiteboard technology continues to be added to schools undergoing construction or renovation. Professional development for teachers in best practices for technology integration continues to be offered at the school and district level by TRT's, along with the annual Innovations for Learning Conference held in June for both Fayette County and surrounding area teachers.

The district continues to support and sponsor STLP groups in each of our schools and holds a showcase event each spring in the form of the STEM Fair. However in 2015, the STEM fair was not held in conjunction with the district science fair, which allowed for the addition of a district robotics competition that engaged over 300 students from Fayette county and surrounding district schools. The use of instructional videoconferencing continues to be encouraged and supported through staff expertise and district funds. Robotics initiatives have grown, and with funding from a recent grant, all elementary and middle schools have access to the latest software for programming existing and new model robots.

Although progress was made on all goals, some activities were less effective. Emphasis and support is still needed to effectively prepare all students to be technology literate by the end of 8<sup>th</sup> grade. Schools received information about the current ISTE Student Standards and Profiles, but continue to struggle with the most effective methods for ensuring all students are technology proficient. The district continues to promote 21<sup>st</sup> century skills for students, but work toward improving teacher and student proficiency of the 4C's is still needed.

## Current Technology and Resources

Fayette County Public Schools possesses a modern, robust and reliable technology infrastructure that is well supported. We have a fully switched fiber gigabit wide area network linking all district facilities to the network core. All Ethernet ports in the district provide gigabit connectivity to the desktop. We have recently deployed an enterprise grade wireless network across the district which provides connectivity for both district owned and student/staff personal wireless devices. The majority of schools and district facilities have been converted to an enterprise VoIP system and the goal in the next two years is to convert the remainder. To date, state provided internet access is adequate.

All schools possess both modern computer labs as well as classroom computers. We have a 5 year replacement cycle for teacher and student desktop computers at the state recommended 6:1 (student) and 1:1 (teacher) levels. As schools are renovated or newly constructed, we are equipping classrooms and resource rooms with interactive technology. Document cameras are commonplace. The district employs technicians to provide dedicated user hardware and software support at the following levels: high schools – one tech per school, middle schools – one tech per two schools, elem. and technical schools – one tech per approximately 4 schools. Absent an adequate professional development budget, we rely heavily on vendors and internal area specific expertise as PD resources for our technical staff.

## Curriculum and Instructional Integration Goals

### Goal 1

Improve the academic achievement of all students.

### Action Plan: Projects/Activities

Project/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Increase academic achievement of students at all levels through an RFP process. Schools will write proposals for extra technology funding to target specific content areas in which their state assessment scores need improvement or in which there are achievement gaps.	Student achievement, overall, will increase and achievement gaps will narrow.	Long-term success of this activity will be measured through scores on state assessments in targeted areas as well as individual measures of academic improvement identified by schools.	7/15 – 6/18	Coordinator of Instructional Technology	KETS
Provide ongoing professional development for teachers on how best to integrate technology into curricula and instruction, with particular emphasis on the 4 C's.	Teachers will more effectively integrate technology into curricula and instruction.	Clarity survey data, PD follow up surveys, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund

Project/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Support STEM initiatives in schools by infusing technology with emphasis in areas such as robotics, coding, problem solving, etc.	Students in STEM related programs will have more access to technology.	Technology included in STEM programs.	7/15 – 6/22	Coordinator of Instructional Technology	General fund, grant funds
Showcase effective Student Technology Leadership projects at the district STEM Fair and robotics competition.	Students will have a real world audience to demonstrate their proficiency of STEM skills.	Participation in STEM Fair	March of each year	Coordinator of Instructional Technology	KETS and general fund
Support schools in making virtual connections to promote communication and collaboration via various platforms of video conferencing.	Increased development of communication and collaboration skills via video conferencing.	Participation in instructional videoconferences.	7/15 – 6/22	Coordinator of Instructional Technology	General fund
Provide training and instructional support to leverage BYOD opportunities in the classroom with an emphasis on improving student proficiency of the 4 C's as well as content knowledge.	Increased access and use of technology in the regular classroom for learning.	Clarity survey data, PD follow up surveys, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund

Project/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Increase the blended and online learning opportunities through a district provided LMS to extend learning beyond the classroom along with providing training and classroom support.	Increased usage of online classroom platforms in support of instruction and the 4 C's.	Clarity survey data, LMS usage data, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund

## **Curriculum and Instructional Integration Goals – Evaluation**

The activities described were developed to provide over-arching support of all curriculum and instructional initiatives across the district. By ensuring all students have adequate access to technology and providing professional development to teachers on best practices for integrating technology, the district is able to support instruction and learning across grade levels and content areas. In addition, the district promotes the use of distance learning through video conferencing opportunities that provide support to Kentucky Core Academic Standards as well as preparing students to be college and career ready. Schools also have the opportunity to apply for funding through an RFP process for additional technology based on specific achievement needs of students within the school.

Evaluation of activities is on-going based on the specific requirements and timeline of each activity to ensure that progress is being made. Changes in the needs of schools and students are taken into consideration throughout implementation. New developments and opportunities are also considered and mid-course revisions to the plan are made as needed. The person responsible for each activity will collect data as appropriate for each activity and share with the committee to determine if/when changes are needed. Progress will be shared with district leaders and the superintendent as needed.

## Student Technology Literacy Goals

### Goal 1

Improve the technology literacy of all students.

### Action Plan: Strategies/Activities

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
With support of school and district technology staff, classroom teachers will embed technology with classroom content instruction in support of Kentucky Core Academy Standards.	Students will acquire required technology and literacy skills to become technology literate by the end of 8 <sup>th</sup> grade and extend skills throughout high school.	Clarity survey data, student work samples, lesson plans, observation.	7/15-6/22	Coordinator of Instructional Technology	General fund
Current ISTE Student Standards and Profiles will be used by teachers in conjunction with the Kentucky Core Academic Standards to develop appropriate instruction and activities to insure technology literacy of students.	Students will acquire required technology and literacy skills to become technology literate by the end of 8 <sup>th</sup> grade and extend skills throughout high school.	Clarity survey data, student work samples, lesson plans, observation.	7/15-6/22	Coordinator of Instructional Technology	General fund

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
All students will receive internet safety instruction annually by the end of first semester on digital citizenship topics that appropriate at each grade level.	Students will demonstrate responsible digital citizenship behaviors as part of their technology literacy proficiency.	School internet safety instructional plans	7/15-6/22	Internet Safety district and school level coordinators	General fund
Identify needs and provide teacher training in areas such as multimedia, online learning and the 4C's in order to insure teachers have necessary skills to instruction students as needed to meet technology proficiency targets.	Increased teacher and student use of technology skills.	Clarity survey data, student work, lesson plans, observation.	7/15-6/22	Coordinator of Instructional Technology	General fund

## **Student Technology Literacy Goals – Evaluation**

Ensuring technology literacy of all students by 8<sup>th</sup> grade is a challenging, but important goal of the district. Through the use of district Technology Resource Teachers, training is provided to schools and teachers on a frequent basis. This work revolves around preparing teachers to utilize technology with students through meaningful content-based assignments. Emphasis will be placed on currently identified areas of weakness, including multimedia skills, online learning skills and technology use in support of the 4C's. Teachers will be provided access to the current ISTE Standards and Profiles for Students in addition to the technology components included in the Kentucky Core Academic Standards. The district will continue to provide access and training for electronic resources such as Office 365 and GAFE as well as resources identified at the school level. The district will also provide access to iSAFE materials for internet safety instruction as well as compile other resources that schools may choose to use. Progress toward the goal will be monitored at school and district level and changes will be made to the plan as needed.

## Staff Training/Professional Development Goals

### Goal 1

Provide staff training/professional development with an emphasis on the effective use of technology to improve student achievement.

### Action Plan: Strategies/Activities

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Hold an Innovations For Learning Conference focused on effective integration of technology into curricula and instruction. Teachers from other districts will be invited to attend, to promote better communication of ideas across the state.	Teachers will acquire knowledge to use technology more effectively.	Conference registration and evaluations	June of each year	Coordinator of Instructional Technology	General fund, community partners
Digital Learning Coaches provide ongoing professional development for teachers on how best to integrate technology into curricula and instruction.	Teachers will more effectively integrate technology into curricula and instruction.	Clarity survey data, PD follow up surveys, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Increase effective technology integration knowledge of school level support staff such as the LMS, STC, TIS, etc. to provide just in time support at the school level.	Teachers will more effectively integrate technology into curricula and instruction.	Clarity survey data, PD follow up surveys, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund
Develop additional district and school level training opportunities to meet current needs and time demands on teachers. These could include online facilitated and self-paced training, job embedded support, mentor/cohort support, grade/dept level (PLC) planning and administrator training.	Teachers will more effectively integrate technology into curricula and instruction.	Clarity survey data, PD follow up surveys, lessons plans and classroom observations.	7/15 – 6/22	Coordinator of Instructional Technology	General fund

## Staff Training/Professional Development Goals – Evaluation

Currently the majority of staff across the district are proficient at utilizing technology for required management and productivity tasks. Although the needs and available hardware in each school may be different, teachers are continuing to improve their competency in integrating technology use with students to improve both teaching and learning. The district response to varying school needs is to provide relevant professional development opportunities in a variety of formats. Some schools have included instructional technology staff in their building-level staff allocations to provide first-line support. For additional support and for those schools who do not have an on-site instructional technology staff member, district technology resource teachers provide district-wide trainings, school-specific trainings, one to one or small group trainings and online opportunities for professional development. Emphasis will also be placed on training school-level staff in a multitude of roles to become teacher leaders in promoting technology integration.

Topics of training are varied, but some examples of broad topics are below.

- Creating and facilitating an online or blended classroom
- Leveraging BYOD successfully in the classroom
- Utilizing intelligent classroom resources (interactive whiteboards, clicker systems, document cameras, etc.) to enhance learning
- Addressing core academic standards through the use of robotics in the classroom and after school programs
- Effective use of mobile devices and classroom technology to promote the 4C's

Evidence of the impact of professional development include Clarity survey data, PD evaluations, observations, lesson plans, one-on-one feedback as appropriate, conference attendance and anecdotal feedback from schools.

## Technology Goals

### Goal 1

Increase efficiency by ensuring the district has adequate technical resources to support the educational needs of children and business needs of schools.

### Action Plan: Strategies/Activities

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Increase the number of computers and other emerging technologies in schools, including a 5-year replacement cycle for all desktop computing devices.	Long-term success of this activity will be measured through maintaining a 5-year replacement cycle for desktop computing devices and improving the student:device ratio per school.	Inventory of computers and mobile devices in schools	7/15 – 6/22	CIO	KETS and general fund
Provide interactive whiteboard technology for schools currently under renovation or construction.	Students will participate more actively in classes.	Construction/renovation plans; technology inventory	7/15 – 6/22	CIO	Renovation and construction funds
Monitor usage of the district's wide area network (WAN). When bandwidth usage exceeds 80%, the district should increase bandwidth.	Students will have access to adequate bandwidth to participate in instructional activities which require connectivity.	This activity will be fully implemented when the total district's average bandwidth usage does not exceed 80% of capacity during the instructional day.	ongoing	CIO	General fund

Strategy/Activity	Instructional Outcome	Indicator	Timeline	Person(s) Responsible	Funding Source
Convert phone systems to voice over Internet protocol (VOIP). All district offices and 47 schools have been converted to VOIP. The remaining 7 schools will be converted as budget allows.	District will save money on phone connectivity which can be used for instructional resources.	This activity will be fully implemented when all schools and facilities are connected via voice over IP telephone service.	7/15 - 6/22	CIO	E-Rate if approved and general fund
Follow a business continuation plan to ensure that vital functions of the district can continue in the event of a disaster. This plan includes remote-site daily backup of critical data, as well as automated within-site redundancy and system restore.	Critical student data will be kept secure to avoid interruption of instruction that would occur if the data were lost.	Implementation of continuation plan	7/15 – 6/22	CIO	General Fund
Maintain and enhance the district wide wireless network.	School staff and students will be able to use district and personal wireless devices to access instructional content.	Enterprise wireless continues to be available in all areas of all district facilities.	7/15 – 6/22	CIO	E-Rate if approved and general fund.

## **Technology Goals – Evaluation**

The district will actively monitor progress in meeting stated goals. We will review the goals and progress on a quarterly basis. We will also treat this plan as a living document and as either the instructional environment or technology environment changes make the necessary additions and revisions to the document. We will monitor national and state standards i.e. (ISTE standards) as well as other technology industry standards (i.e Gartner) to make sure that we are on-track with our goals. We will also utilize data from state and local assessments (i.e. MAP, K-PREP, Clarity survey, etc.) to help align education outcomes and expectations with plan goals.

## **Budget Summary – Narrative**

The District in large part operates on a zero based budget from year to year. Each spring all departments justify 100% of their budget requests based on line item amounts for both new district-wide projects as well as continuing initiatives. All eRate reimbursements go back into the general fund so that the base technology funding isn't impacted by changes in eRate reimbursement rates. Likewise, since KETS dollar amounts may vary widely from year to year, the majority of those dollars are reserved specifically for innovative school driven projects via a request for proposal process.