DeKalb County School District

Division of Information Technology

DeKalb County School District

2018 - 2021 TECHNOLOGY PLAN

Table of Contents

DeKalb County School District
1701 Mountain Industrial Boulevard
Stone Mountain, GA 30083
USA

www.dekalbschoolsga.org

Executive Summary

Introduction

The mission of the DeKalb County School District (DCSD) is to ensure student success, leading to higher education, work, and lifelong learning. ***In the District's strategic plan, our core beliefs guide us to focus on teaching and learning with a goal of embedding an equitable and accessible 21st Century learning environment.*** This future ready learning environment supported by the use of emerging technologies throughout the curriculum will enable relevant and personalized learning as well as develop and nurture adaptable skills for all students. Success will continue to be defined by how well this learning environment produces globally competitive students prepared for higher education, work, and life-long learning in a rapidly changing society. A mission this significant and impactful requires the district to continue extensive evaluation and planning as it pertains to the district's educational technology infrastructure and tools.

During the Fall of 2017, the Division of Information Technology organized a Technology Advisory Committee to lead the development of a technology plan for the years 2018 – 2021. As with its 2015 – 2018 predecessor, ***this technology plan is a roadmap that guides stakeholders through the district's plans for ensuring equitable and ongoing access to a future ready learning environment*** that promotes 21st Century skills and themes.

From December 2017 to June 2018, this committee participated in multiple collaborative work sessions, administered questionnaires, as well as hosted round table discussions and focus groups with various stakeholders to discuss the next steps for supporting the technology needs and infrastructure of the district. The Technology Advisory Committee used this feedback along with educational technology research, standards, and best practices to expand the current shared vision for technology use in the district. An analysis and evaluation of the district's current technology infrastructure against the district's shared vision identified gaps that will certainly impede progress. ***These gaps or concerns were organized into five themes: Empowered Learning Environment, Community Partnerships, Professional Learning, Data Governance, and Infrastructure Enhancements***. In this technology plan, the committee has developed clear, concise, and aggressive goals to address each theme, ensuring the realization of the district's shared vision for technology use. It is the district's intent that this work will guide DCSD through the implementation of this technology plan for the next three years.

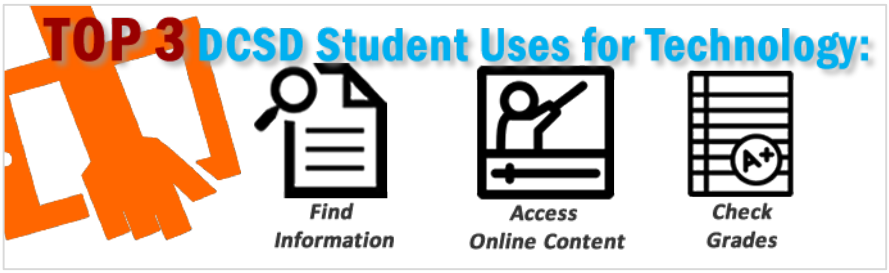
Stakeholder Expectations

A comprehensive group of stakeholders provided insight and guidance used to develop this technology plan. During data gathering activities, the focus was to review the current status of technology use after implementing the 2015 – 2018 Technology Plan. ***Overall, stakeholders acknowledged an increase in access to technology tools, improvements to the district's digital learning environment, and an introduction to more virtual learning opportunities.*** However, the district still has growth as it pertains to community engagement and continuous learning opportunities for all stakeholders.

Higher Education and DCSD Business Communities

Members of our business community and higher education communities recognized the district's increased focus on providing equitable access to tools and professional development. However, they reiterated the need to ensure soft-skills are accompanied by digital literacy critical for all students transitioning out of secondary school.

Students



Students noted that the increase in access to devices, digital tools, and resources enhanced their collaboration with the teacher and engagement with course content. They also shared that teachers in core content areas were providing access to more digital content and online resources allowing them to extend their learning. However, students prioritized future needs as learning to use technology to conduct effective research, finding examples to remediate and extend their learning, creating papers and presentations, managing files, and organizing time. Last but definitely not least, students want more assistance in using the technology to study and collaborate with other students. Community partnerships were seen by students as key to enhancing their learning experience.

"The community should work closely with my school and teachers to ensure that more relevant information is being digested on a daily basis. By relevant, I mean content that is connected to what careers and fields of study we wish to pursue." –DCSD Student

Parents

Although parents are in favor of the increase in access to technology, they overwhelmingly shared concerns about professional development and teacher readiness pertaining to how to use technology to support learning. Parents also agreed that students need to be empowered to use technology to gain real-world exposure to varied content and skills.

For parents, the district's top areas of improvement to address are:

- Increase access to devices and learning using technology.
- Ensure teacher training prepares teachers to use with students.
- Increase monitoring, cyber safety awareness, and data security.
- Engage and inform parents about district initiatives.

"It would be helpful to have workshops that expose parents and the community to the technology being used in the schools. This would help them buy into the technology vision of the district." –DCSD Parent

Teachers and Administrators

Insight from teachers and administrators was collected representing all grade levels and all district regions. Overall, educators noted accessing digital content, collecting assessment data, and providing real-world connections during instruction as being their top three uses of the increased access to technology. Emerging skills in assigning online coursework and creating digital portfolios were noted as their next focus. Educators were also optimistic about the possibilities of technology impacting use of instructional time to personalize and extend learning for students. However, lack of access, time, training, and inability to monitor student on the devices use were all concerns expressed as barriers to technology integration.

Vision

The Technology Advisory Committee continued to ensure the shared vision for the 2018 - 2021 Technology Plan remains rooted in the mission and strategic goals of the DeKalb County School District. When reviewing the focal points of the 2015 – 2018 shared vision, the technology plan pushed the district towards:

- fostering an engaging environment that facilitates enhanced teaching and learning, innovation, communication, collaboration and operational efficiency in alignment with the DeKalb County School District's strategic plan;
- providing a collaborative learning environment that utilizes leading technology to engage stakeholders, reflect the rigor of content standards and prepare students to be successful and competitive in the 21st century global society;
- developing and maintaining business systems that support the district's learning environment; and,
- providing the opportunity to access a learning environment that extends beyond the school's walls.

These elements of the district's vision are still very relevant. However, this technology plan continues to fortify this vision with an intent to nurture a culture of digital innovation. In this culture, all stakeholders are empowered to construct their digital identities and expected to model effective, safe, and ethical uses of technology.

Current Reality

Overview of our Technology Infrastructure

Fiber-Optic Wide Area Network

The district owns a buried fiber optic-based wide area network (WAN) that connects our schools to the Internet. The district's WAN is organized into three core sites and 16 head-end sites that are connected with 20 Gbps redundant fiber. Every school is connected to a head-end location using 20 Gbps of fiber optic cabling.

Industry-Standard Data Center

All district-level instructional and business applications are housed in a fully-functional data center located at the district's technology center. Currently, over 65 VMWare ESX servers which are servicing over 450 virtual servers across the entire school district have been deployed. A Network Operations Center (NOC) allows Information Technology to monitor critical network systems and take a proactive approach to problem resolution.

Network Connectivity

The district has upgraded and expanded the wireless environment for security purposes and to better support the use of mobile technology. All schools and centers have wired and wireless access. Through the district's ConnectIT project, a wireless access point was installed in every classroom capable of supporting at least 90 devices.

Web Filtering and Internet Protection

DCSD uses a web filtering solution to block inappropriate and potentially harmful content. The district also utilizes a firewall to control incoming and outgoing network traffic based on applied rule sets for securing data and other sensitive information from malware attacks and hackers. These web filtering and firewall solutions ensure compliance with the Children's Internet Protection Act (CIPA).

Communications Infrastructure

The district's telecommunications infrastructure provides telephone access to personnel in each school and center, including mobile classrooms. This encompasses over 13,000

telephones, 15,000 voice mailboxes, 600 smart phones and 400 cell phones. Sixty percent of the telephones use Voice over Internet Protocol (VoIP). The telecommunications platform also includes an in-house automated calling platform which provides the capability to rapidly send voice calls, SMS messages and email messages to parents, students and other stakeholders.

The communications infrastructure also includes managing the district's website and using a content management system to standardize and manage school websites. The district also leverages digital communications tools such as social media applications and official mobile applications to push relevant information to stakeholders.

Workstations, Devices and Peripherals

To ensure equitable access, the district is continually increasing the computer/device to student ratio. Currently, there is one district instructional device per .86 students. This ratio considers desktops, laptops, and iPads as instructional devices and reflects student enrollment and state-approved inventory as of May 25, 2018. All identified instructional classrooms have also been equipped with an interactive whiteboard or interactive flat panel.

Technology Support

Several levels of support personnel within the Division of Information Technology provide technology troubleshooting. The Support Center is the first point of contact for all users when there is a technical problem that cannot be resolved at the local schoolhouse level. Upon analysis, the Support Center staff utilizes a help desk call management system to escalate issues through first and second level support for every school and center. The district's Information Technology Support Center receives over 100,000 technical service requests per year via Web based application and phone.

DCSD Virtual Learning Environment

The district's virtual learning environment is a collection of interoperable web-based platforms that provide access to teaching and learning in a virtual environment. The district's learning management system (VERGE) is at the center of the VLE and provides course and content management, curriculum mapping, communication and collaboration tools, as well as assessment and assignment tools. Office 365 and Google Apps for Education are the available cloud-based productivity tools. In addition, there are a host of digital resources available to students and teachers via our Launchpad Student Portal. The district's Student Information System and Assessment Systems are also integral parts of the virtual learning environment.

Digital Learning Initiative

DCSD's Digital Learning Initiative systemically leverages the district's technology infrastructure to strengthen the learning experience for our students. The goal is to empower students to thrive in the constantly evolving technological society they will experience beyond high school.

Targets for DCSD are to:

- Provide continuous and equitable access to technology, digital content aligned to the curriculum, and learning opportunities.
- Prepare educators to maximize technology in ways that transform learning.
- Expose students to a variety of virtual and blended learning opportunities.

Digital Dreamers Technology Program

Digital Dreamers is a comprehensive technology program of the DeKalb County School District. This program will reach every student and teacher in the district, and continue to build on the district's vision of increasing students' technological footprint and preparing them to be globally competitive citizens.

The district has implemented four initiatives under the Digital Dreamers program.

- 1 Device per every student in grades 6 – 12
- 1 Device per two students in grades K – 5
- 1 Device per Teacher and Identified Instructional Staff
- 25,000 Mobile Hotspots for eligible and qualified high school students

The Digital Dreamers program illustrates the district's persistent efforts to bridge the digital divide for both our students and teachers. For more information visit the website at www.dekalbschoolsga.org/digital-dreamers.

IGNITE U Professional Learning Initiative

IGNITE U is a dynamic professional learning community DCSD has implemented to focus on effective and engaging technology integration. IGNITE U provides choices so learning experiences can be job embedded, relevant, and more personalized. In addition, IGNITE U ensures these learning experiences can happen any time, any place, and at any pace. The overall goal is to ensure the district's staff is proficient at using technology in innovative ways that supports learning.

FLEX Academy

FLEX Academy is the district's virtual learning academy which provides access to virtual learning courses for students. FLEX Academy is critical in providing an exemplar as it pertains to technology integration using the district's virtual learning environment. Students can currently take 21 virtual high school courses using the district virtual learning environment. The district's Virtual Learning Specialists are certified teachers developing and facilitating these courses.

Virtual Learning and Instructional Technology Program

DCSD's Virtual Learning Program consists of the Instructional Technology Department and FLEX Academy. Instructional Technology researches and evaluates innovative technology tools with the intent to provide targeted professional development and support through training modeling, coaching, and resource development. There are currently five instructional technology specialists and one instructional technology liaison providing support for all schools and departments as it pertains to our district's initiatives. As mentioned previously, FLEX Academy is the district's virtual learning academy. Virtual Learning leverages the synergy of both departments to support the district's strategic goals critical to student success.

Gap Analysis

As the Technology Advisory Committee analyzed stakeholder feedback, updated the shared, and evaluated existing technology infrastructure, five themes emerged as areas of concern for future technology use.

Empowered Learning Areas of Concern:

- Equitable access to technology needs to continue to expand.
- Anytime and anywhere access to the district's virtual learning environment with curriculum, content, and tools must be supported.
- Students need relevant exposure and training on using technology for organization, research, collaboration, and digital citizenship and literacy.
- Students need flexible opportunities to take virtual courses that support their personalized learning goals.

Community Partnerships Areas of Concern:

- The community needs to be made aware of the district's technology initiatives.
- Parents needs to understand how to use technology tools to assist child(ren) and monitor progress
- The district needs to work with community to identify partnerships to extend safe learning environments for students.

Professional Learning Areas of Concern:

- There needs to be a focus on relevant and timely integration of technology tools into instruction.
- Mentoring and coaching staff needs to be provided to increase individualized assistance for staff.
- Self-assessment and monitoring needs to be implemented to address growth at all performance levels.
- Exemplars on effective technology integration need to be made available to all teachers.
- Digital leadership must be address to prepare school administrators to lead in this technology-rich environment.

Data Governance Areas of Concern:

- The district's data governance policies need comprehensive review and updating.
- Stakeholders are not clear on their responsibilities as it pertains to federal and state laws as well as board policy governing the use of data.

Infrastructure Areas of Concern:

- District must continue to expand access to devices to ensure equity.
- The network needs to continue to expand to meet the stress of equitable access.
- Network security also needs to be reviewed.
- A focus needs to be placed on optimizing business systems so that they work together more seamlessly.

Goals and Strategies

Empowered Learning Environment

An empowered learning environment inspires students to take control of their learning through flexible and equitable access to education anytime and anywhere. Technology in this environment provides the digital tools and content as well as learning technologies that increase engagement and personalize learning.

Goal: Cultivate and support a constantly accessible learning environment supported by innovative technology that encourages all students to be active, creative, knowledgeable, and ethical participants in our globally connected society.

Strategies:

- Increase the district's digital footprint to provide continuous access to devices, internet, and a virtual learning environment both during and beyond the school day.
- Ensure students, educators, and parents have continuous access to digital content and resources aligned to district's curriculum.
- Enhance the interoperability of systems *(SIS, LMS, Assessment)* to more efficiently facilitate the integration of 21st Century skills into the teaching and learning.
- Implement a digital citizenship and literacy program that focuses on acquiring 21st century skills, online safety, and student rights and responsibilities to privacy.
- Expand access to a variety of virtual learning opportunities for students (per Senate Bill 289) that promote academic excellence, acceleration, and rigor.
- Develop technology integration exemplars that demonstrate how 21st Century skills can be integrated throughout the district's curriculum and into each of the content areas.
- Implement district technology integration benchmarks to ensure teachers cultivate an empowered learning environment.
- Leverage student participation to inform a student-centered technology-rich learning environment.

Data Governance

Data Governance addresses how data is used to make decisions that support student success as well as the overall management of availability, usability, security, integrity, and destruction of data in an organization.

Goal: **Create an information-centric and informed organizational culture that effectively and appropriately utilizes data to support teaching and learning as well as business enterprise and management.**

Strategies:

- Review and update district policies on data governance to reflect current federal laws on privacy and security of student data.
- Establish protocol and processes that inform the collection, storage, analysis, reporting, exchange, or archive of data by any district employee.
- Continue enhancing the integration of information systems and data across instructional, administrative, and business systems.
- Implement a series of data literacy learning opportunities that focus on legal and ethical responsibility in ensuring data is accurate, private, and secure.

Community Partnerships

Through the power of technology, families and school staff can collaborate with community members to support students' learning and development while expanding learning opportunities, community services, and civic participation.

Goal: Engage in ongoing collaboration and partnerships with parents, community organizations, and business partners to support students' learning and development while expanding learning opportunities, community services, and civic participation.

Strategies:

- Update and communicate common vision for 21st Century learning in the district.
- Increase partnerships with community organizations and business partners to extend access to the district's virtual learning environment and exposure to authentic learning opportunities beyond school hours.
- Develop digital citizenship and literacy learning opportunities for the parents and the community to address the district's virtual learning environment.
- Implement a parent portal option that facilities robust digital communication and collaboration between parents, teachers, administrators, and students.

Professional Development

According to the International Society for Technology in Education, educators must be leaders who "advocate for equitable access to educational technology, digital content, and learning opportunities to meet the diverse needs of all students".

Goal: **Develop collaborative, job-embedded, differentiated, and data-driven professional development experiences for all staff that ensures consistent and effective integration of technology in all environments.**

Strategies:

- Enhance current professional development plan that addresses classroom-focused technology competencies and literacies for integration and expansion.
- Expand professional development plan to address learning needs of district and local school administrators and support personnel.
- Leverage the virtual learning environment to provide diverse and differentiated learning opportunities as well as a tiered monitoring system to assess growth.
- Develop local-school technology integration strategies that support identified learning goals and provide relevant job-embedded experiences.
- Identify and train technology integration advocates for each building to further support and model 21st Century teaching, learning and assessment.
- Create an online professional learning community for teachers to share strategies using technology in the classroom available any time and any place.

Infrastructure Enhancements

Continuous evaluation and support of the infrastructure and technology components ensures the consistency and reliability necessary for equitable access to the district's virtual learning environment and superior performance of business enterprise systems.

Goals:

1. **Enhance secure, efficient and reliable connectivity to the the district technology infrastructure.**
2. **Ensure seamless and intuitive integration of systems that support the core business operations of DCSD.**

Strategies:

- Increase network and endpoint security.
- Increase district bandwidth to support wireless and Bring Your Own Device (BYOD) access.
- Assess and revise district data privacy and Children's Internet Protection Act (CIPA) policies.
- Upgrade software and hardware to monitor WAN/LAN for optimum network access by students and staff.
- Enhance processes for tracking, measuring, and refining network performance.
- Continue to implement and enhance the DCSD Disaster Recovery (DR) and Business Continuity (BCP) Plans.
- Improve cloud-based user access for instructional and administrative purposes.
- Continue to support the needs of high speed interactive devices (e.g., eBooks, tablets).
- Upgrade and integrate district's business and student systems to support electronic data sharing.
- Implement an Enterprise Resource Planning (ERP) system that will streamline business functions across all departments.
- Enhance business intelligence tools for analyzing and reporting data to help make smarter operational and instructional decisions.

Evaluation and Monitoring

To ensure overall success, key performance indicators will be monitored continuously throughout the duration of the technology plan period. Formal evaluations of progress will be completed and reported in yearly increments – Year 1, Year 2 and Year 3.

Communication and Marketing

Effective communication and collaboration amongst all stakeholder groups will be key to the successful adoption and implementation of the Technology Plan Goals. Initially, focus groups were formed and stakeholder meetings held to include internal school/department staff, students, parents and community members to inform, get buy in and participate in development of this three-year plan.

Moving forward, the Technology Advisory Committee will continue to use a variety of communicative methods and opportunities to promote and educate all stakeholders on the district's Technology Plan. These methods and opportunities include, but are not limited to:

- DCSD Communications Department will coordinate press coverage of technology-related news and updates
- The district's staff will make presentations at forums and conferences regarding technology integration throughout the district
- Parent centers throughout the district will hold classes in the use of technology for families and citizens in the community beyond the school day
- Technology information will be communicated through the district's website which is updated regularly with current information
- Educational Access Channel (Cable Television) – PDS 24 will share updates on technology information
- The district will communicate via social networks (i.e., Facebook.com, Twitter.com) DCSD WebPages with technology-related information:
    - http://www.dekalbschoolsga.org (DCSD Website)
    - http://www.dekalbschoolsga.org/information-technology (Division of Information Technology)
    - http://www.dekalbschoolsga.org/communications (Communications Department)
    - http://www.dekalbschoolsga.org/parent-resource-centers (Parent Resource Centers)

Technology Advisory Committee

Dr. Candace Alexander, Regional Coordinator

Dr. Lenisera Bodison, Curriculum and Instruction

Dawn Blackwell, Principal

Gary Brantley, Chief Information Officer

Mark Bryant, Principal

Paul Cammick,

Dr. Kyia Clark, Principal

Dan Copeland, Finance

Dr. Kathy Cunningham, Principal

Monika Davis, Virtual Learning & Instructional Technology

Rosalind Dennis, Educational Media & Instructional Materials

Monica Gray-Mays, English Language Studies

Monee Lawrence, IT Special Projects

Melanie McLendon, Student Information Systems

Ramona Mills, Operations

Denise Revels, Social Work

Alexander Riley, Transportation

Betty Roby, Applications Development

Alison Scott, Accountability

Antoinette Seabrook, Human Capital Management

Janitrea Sebree-Kelly, Human Capital Management

Carla Smith, Finance

Carla Smith, Technical & Support Services

Dr. Rodney Swanson, Principal

Joseph Swing, Enterprise Systems

Natalie Terrell, Project Management

Vanecia Thompson, Communications

Cadesha West, Legal Affairs

Student Advisory Representatives

Teacher Advisory Representatives

Family Engagement Representatives and Parents

A Special Thank You to our Business and Higher Education Communities:

DeKalb Chamber of Commerce

DeKalb County Government

Microsoft

VOYA

Emory University

Georgia Institute of Technology

Georgia State University

Kennesaw State University