

Required Substantive Components of the Local School District Technology Plan

Schools, school districts, and libraries that want to apply for Schools and Libraries support, commonly referred to as "E-Rate," must first prepare a technology plan. Beginning with FY2016, technology plans are recommended for Priority 2 services (Internal Connections and Basic Maintenance of Internal Connections). An established technology plan sets out how information technology and telecommunications infrastructure will be used to achieve educational goals, specific curriculum reforms, or library service improvements.

A technology plan designed to improve education should cover the entire funding year (July 1 to June 30) but not more than three years. The plan must contain the following elements:

Goals and realistic strategies for using telecommunications and information technology

A professional development strategy

An assessment of telecommunication services, hardware, software, and other services needed

Ongoing evaluation process

Policies

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Union County Public Schools
Technology Plan
2018 - 2021

Effective July 1, 2018 through June 30, 2021

DPI is the certified technology plan approver for libraries and public schools for North Carolina.
www.usac.org.

LEA/Charter Name: Union County Public Schools

LEA/Charter Number: 900

Superintendent: Dr. Andrew Houlihan

Superintendent Signature: _____

Local Board Chairperson: Melissa Merrell

Local Board Chair Signature: _____

Person of Contact: James Parker, Chief Technology Officer

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Technology Council

Member

Jay Parker
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Tom Childers
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Job Title/Position

Chief Technology Officer
IT Services Manager
Principal, Antioch Elementary School
Principal, Piedmont High School
Principal, Porter Ridge High School
Principal, Weddington Middle School
Director, School Performance High Schools
Principal, Unionville Elementary School

Union County Public Schools Technology Plan 2018-2021

Vision Statement

The mission of Union County Public Schools is “Preparing All Students to Succeed.” In order to do so requires the use of many forms of digital technology to allow the consumption of knowledge and production of products which demonstrate learning by students. The same is true for the teaching faculty and support staff who work to educate our students.

Core Values

The school system will base its strategic plan, its technology plan and all its operations on the following principles:

Leadership

Capable, visionary leadership at all levels of the organization that is constantly focused on the aim of the system is necessary to sustain high performance results that inspire and engage students and other stakeholders. Setting clear direction, facilitating innovation, establishing a student-focused, learning-oriented climate, as well as demonstrating clear, visible values are key roles for effective leaders. Leadership must be both personally committed to, and actively involved in, communicating and reinforcing the school system's values and expectations to both internal and external customers/stakeholders.

Customer-Driven Quality (i.e., Student/Stakeholder Focus)

Customer-driven quality is the foundation for a quality system and includes all attributes that contribute to creating value and satisfaction for internal and external customers. Meeting/exceeding student and other stakeholders' (e.g., parents, businesses, suppliers, taxpayers) needs and expectations must be a constant focus of the system. Knowing and continually monitoring these needs/expectations (current and emerging) are essential functions at all levels of the organization.

Results Orientation

Satisfying and empowering students and stakeholders require a constant, unswerving focus on students, stakeholders, and operational results. Student performance, organizational process, human resource, business, and supplier/partner support results must be monitored continually to determine overall performance of the system. The use of a balanced composite of performance measurements and indicators (leading and lagging) will offer an effective means to verify that value and satisfaction have been created for all students and stakeholders.

Organizational Responsibility and Citizenship

Quality management objectives must stress community responsibility and citizenship. Health, ethnic, safety, and environmental considerations should be taken into account in all the operations of the school system.

Partnership Development

Partnership development is about building internal and external relationships to accomplish the strategic goals and objectives of the school system. Developing such partnerships with external suppliers and stakeholders and internal co-producers (i.e., teamwork) is

one key to achieving performance excellence. The key requirements for success of these partnerships are addressed through regular communication, evaluating progress, and having processes in place for adapting to changing conditions.

Management by Fact

The pursuit of quality and operational performance goals of the organization requires that process management be based on reliable data, information and knowledge gained through careful and systematic analysis. This requires that a set of processes are in place to: (1) collect and analyze relevant data; (2) convert the data to information and knowledge; and (3) share it throughout the organization to create the understanding and wisdom that are necessary to make appropriate decisions, solve problems, manage variation in and improve the system continually. Such knowledge must be made available to all internal and external stakeholders.

Long-Range Outlook

High performing organizations have a strong future orientation and are willing to make long-term commitments to students, customers, suppliers, the community and other key stakeholders. The constancy of purpose must permeate the entire system and its culture.

Design Quality and Prevention

Design quality and prevention places strong emphasis on building quality into key work processes and support services. Problems and waste prevention are achieved at much lower costs when intervention occurs “upstream” at earlier stages in these processes.

Fast Response

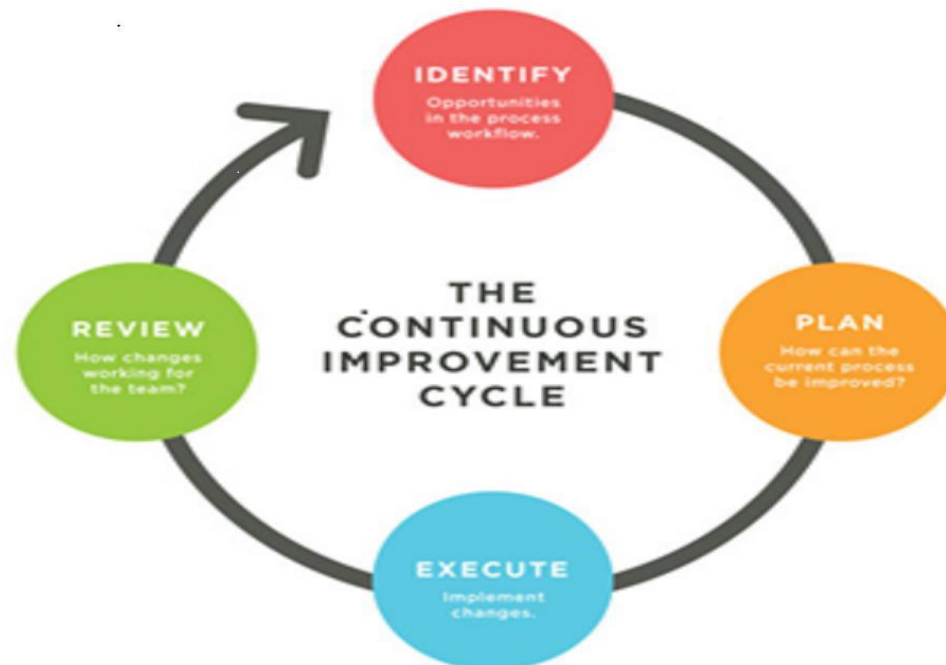
A timely, more flexible response to internal and external customers is a priority for any organization. Responding quickly to student/stakeholder requests is also essential to organizational success as determined by “end-user” satisfaction. Relationships built on trust, confidence, and loyalty are also essential here. Schools and departments must be committed to simplifying and shortening work processes and paths to achieve major improvements in response time.

Employee Participation and Development

An organization’s success in improving performance depends on the skills and motivation of its workforce. Employee success depends on having meaningful opportunities to learn new knowledge and practice new skills. To this end, the school system must invest in the development of the workforce through education, training and the creation of opportunities for continuing growth focused on “success and high student achievement for all.”

Continuous Improvement

Achieving the highest levels of quality requires a well-defined and well-executed approach to continual improvement. Using a Kaizen model of Identify/Plan/Execute/Review improvement model enables the organization to achieve higher levels of performance. This approach should be imbedded in the way a school system functions: (1) Identify Opportunities; (2) Plan on changes in the current processes for improvement; (3) Execute changes or implement technical improvements; (4) Review the effectiveness of changes, adjust for best performance, analyze data models.



Alignment

The best chance to improve a school system, school, and/or classroom occurs when there is alignment of “system” aim (i.e., purpose, intent) to operational processes (i.e., methods, work) and intended results (i.e., output, outcomes). Essential work functions (e.g. teaching) must be in line with the planning, curriculum, staff development, and assessment frameworks that guide their deployment. This “aligned management system” must be understood and followed by all internal stakeholders.

Systems Thinking: (A systems perspective)

A “system” is a collection of inter-related processes and people who work together enabling an organization to accomplish its aim. The success of the school system is dependent upon people working together through core work processes toward a common aim that inspires and engages students and stakeholders.

Fairness and Equity

All students, staff, and stakeholders shall be treated fairly and without regard to race, color, national origin, gender, age, handicapping condition or geographic location in the county.

Union County Public Schools Technology Plan Strategic Priorities 2018 - 2021

Shared Services Model

Universal Access and Refresh of Personal Teaching and Learning Devices

Access to Digital Teaching and Learning Resources, Including Digital Textbooks

Model of Technology-Enabled Professional Development

21st Century Leadership for Your LEA/Charter

Union County Public Schools (UCPS) has committed itself to providing a 21st century learning environment across all learning environments PreK-12. An ambitious effort over the last 12 months has led to dramatic improvements in the following areas:

- Allocation of 700 iPad Air II's in grades K-2 based on 1 device per 12 students (1:12)
- Distribution of 3,200 Laptops for teachers and instructional leaders
- Updated wireless access points providing improved access coverage in all UCPS locations by June 2018.
- Network equipment refreshed in all 53 schools.

- Microsoft Exchange email upgrades from 2012 to 2016
- Internet filtering conversions from Light Speed to Zscaler for staff and students
- Equipment refresh projects at the elementary, middle and high school levels
- Professional development efforts to support personalized instructional methodologies at the elementary, middle and high school level
- Implementation of EmpowerED digital teaching and learning supporting 1:1 laptop initiative with teachers in grade 3 through 12.
- Infrastructural improvements with disaster recovery platforms increasing both reliability and efficiency standards.
- Internet bandwidth upgrades from 3 to 4 gig improving online learning and streaming of instructional applications. NC Research and Education Network (NCREN) will continue to monitor and increase efficacies based on performance utilization standards.
- Internet governance standards implemented with an approval process for student access to educational material.
- Centralizing E-rate funding and management within Technology Services.
- Implementing a SSO Single Sign On platform for grades K-12. This will streamline access to digital resources and provide consistent user credentials for UCPS.

These initiatives have allowed UCPS to continue moving forward on a path where all schools across all grade levels will have a true 21st century learning environment. These environments will allow easy access to digitized materials to supplement all curriculum areas whether in the form of digital textbooks or through streamed video from content providers such as Discovery Education. The work has been done to allow these ambitious education reform goals to occur in UCPS.

Beyond providing the tools to implement such an environment, UCPS has committed itself to conducting high-quality professional development in many areas that directly impact the instruction that occurs in the classroom. Whether it is learning about working in professional learning communities, interactive board training, or implementing project-based learning, UCPS is giving teachers and administrators many opportunities to refine and enhance their teaching and leading abilities. EmpowerED accomplishes the goals of training educators to use digital devices effectively thus preparing all children for college, careers, or home choices. Oversight of these areas and support for each school provided by the Office of School Performance and Office of Teaching and Learning.

UCPS is proud of the quality and speed at which it has been able to effectively support complex technical areas while applying sweeping changes to its technology programs with expectations in the form of greater student achievement.

Strategic Priority 1: Statewide Shared Services Model

Essential Questions

How will we leverage collaborative purchasing to pay substantially less for technology services and platforms?

How can a Statewide Shared Services Model assist in shifting primary support from infrastructure to instructional needs?

How can a Statewide Shared Services Model enable increased infrastructure and technology efficiency and sustainability?

How can a Statewide Shared Services Model provide higher service reliability?

How can a Statewide Shared Services Model facilitate more strategic budgeting models for our district?

Current Status and Moving Forward

Union County Public Schools (UCPS) continues to improve and expand its technological infrastructure at its core and corresponding schools. This growth provides student and faculty access to learning tools and resources in order to ensure our students are obtaining a high quality, 21st century education. Great attention has been paid toward expanded bandwidth and computing capacity and ease of secure access and scalability of systems to meet the demands of the ever growing flow of digital information for learning and site administration.

UCPS has equipped all schools with wireless access points and has utilized virtualization technology to achieve the goals of a robust network infrastructure which lends to highly reliable and available resources, and reduces the cost of information technology when applicable.

UCPS has worked with Wide Area Network vendor to create a true fault tolerant, fully redundant, fiber network to all district locations. Also established (SLA) Service Level Agreements providing expedited repairs to physical or logic network failures.

The state of North Carolina has also been aggressively implementing a program of change in order to support the compute-power necessary and network infrastructure needed to connect students, teachers, and administrators to a vast array of services in order to provide access to curricular materials and services that can provide cost savings to school systems. UCPS has watched with great interest the development of these programs and has elected to leverage one at this time, by allowing NC Research and Education Network (NCREN) to be the Internet Service Provider to the school district at no charge to UCPS.

Other opportunities are likely to follow as the state implements other shared services for UCPS to join and leverage these cost saving opportunities such as HomeBase, identity management, and content providers. In each case, UCPS will evaluate the opportunities

available to determine final participation as it meets district objectives. As with some systems, keeping some services such as email, collaboration, and communication platforms in the UCPS Private Cloud infrastructure is desired, in order to maintain full ownership of the data generated over the course of operation. Decisions on any contracted Cloud Service providers will be determined based on business needs and functionality enhancements.

The priority of UCPS is to continue refining its systems achieving the highest internal efficiencies of operation by:

1. Utilizing virtualization technology where applicable.
2. Conducting centralized purchasing of devices through Technology Services thus standardizing hardware and software environments.
3. Forming collective agreements with other NC local education districts for improved cost of services.
3. Cooperatively budgeting across departments to pool resources providing infrastructure and services, and keeping all internal systems as up-to-date as possible. This includes seeking out E-Rate funding for all applicable areas where this federal program can be of benefit.

UCPS has committed itself to maximizing resources provided by the UCPS Private Cloud and the NC Education Cloud in order to continue providing efficiency with single sign on access. Also endeavors with third party vendors has expanded our SSO platform to include any district approved application within the same SSO platform.

Alignment to Other Plans and Initiatives:

Strategic Priority 1: Statewide Shared Services Model

Union County Public Schools will utilize and align with the following key initiatives/plans to reach for the vision and complete the strategic priorities of our plan...

Continue to analyze the technology infrastructure of the LEA to support a 21st century curriculum and assessment system while supporting the North Carolina Essential Standards. This will allow the transition from paper-based assessment systems to one that takes greater advantage of technologies in all grade levels.

Provide Digital Tools to expose, explore, and engage all students in college / career planning

Continue to increase access to devices as well as professional development around how these can be leveraged in classroom for both students and teachers to increase individualized learning experiences. Here are the initiatives supporting this from a district:

Technology Services improvements and Standards

UCPS 21st Century Systems will provide operations that are effectively and efficiently implemented.

- **Implement the infrastructure blueprint.**
- **Provide and support student, teacher, and administrator access to Learner Management System, Learning Object Repository, and Web Collaboration Tools.**
- **Participate in the evaluation of the RttT initiatives and use the resulting evaluation data and conclusions to improve effectiveness.**
- **Use LEA/Charter and school technology funds to enhance school and LEA/Charter technology infrastructure to facilitate online, real-time assessments at each school.**

Home Base Instructional Tools

To support strategicwide instructional improvement tools to more effectively manage teacher and student resources.

- **PowerSchool SIS- administrative and classroom management**
- **NCEES (Truenorthlogic) - teacher evaluation and growth model**
- **Schoolnet - formative and summative assessment tools and digital curriculum resources**
- **Canvas - Learning management system for support classroom excellence**

Strategic Priority: Enhance academic programs to meet the needs of all students

- **Provide equitable high quality core instruction to all students to create independent learners**

Strategic Priority: Engage parents and community

- **Goal: UCPS will equitably allocate and align budgeted resources to meet identified needs for the UCPS community**

- **Goal: UCPS systems will support the effective and efficient operations of the district and school by offering technical resources to support guardians.**
- **Goal: UCPS will promote and encourage community/parent involvement and input in schools.**

Strategic Priority: Support and develop UCPS employees

- **Goal: UCPS will recruit, hire, and retain quality employees.**
- **Goal: Provide differentiated, relevant training opportunities for all employees**

Facilitate increased access model through major hardware realignment.

- **Surplus all existing hardware five years and older (ongoing)**
- **Standardize instructional devices for classrooms in K-12**
- **Remove older Netbooks from elementary schools and replace with Ipad Air II's.**
- **Utilize baseline model to provide equity of access (ongoing)**

Strategic Initiatives : Statewide Shared Services Model to Support

Long -Term Outcomes

Suggested Goals/Targets	July 1, 2018 - June 30, 2020	July 1, 2020 - June 30, 2021	Yearly Evaluation Evaluation and funding Method(s)
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Participate in state Internet Service Provider shared resource through NC Research and Education Network (NCREN).

Activity: Maintain NCREN as the Internet Service Provider to UCPS.

Responsible: Technology Services Department

Activity: Maintain NCREN as the Internet Service Provider to UCPS.

Responsible: Technology Services Department

Documentation of Internet Service.

Provider (ISP)

Maintain and expand UCPS local servers services in order to provide services to schools and administrative units at lower operational costs.

Activity: Continue to virtualize UCPS server-based resources in order to utilize UCPS local servers infrastructure.

Responsible: District Leadership; Technology Services Department

Activity: Continue to virtualize UCPS server-based resources in order to utilize UCPS local services infrastructure.

Responsible: Chief Technology Officer, Technology Service Services Department

Inventory and assessment of data center hardware, configuration, and available services to support district goals.

Maintain a robust Wide Area Network (WAN) connecting schools to the UCPS Data

Activity: Apply for E-Rate Priority Funding to maintain a robust Wide Area Network (WAN) Infrastructure capable of meeting current and anticipated future bandwidth capacity needs.

Responsible: Technology Services

Activity: Apply for E-Rate Priority Funding to maintain a robust Wide Area Network (WAN) infrastructure capable of meeting current and anticipated future bandwidth capacity needs.

Responsible: Technology Services

Annual E-Rate funding

Maintain robust Local Area Network (LAN) at all school and administrative sites.

Activity: Apply for E-Rate Priority II monies to fund internal connections (network equipment, wireless network equipment, and site cabling) where possible give school free and reduced lunch percentages. Work with district leadership to secure annual recurring monies to fund internal connections at all other school and administrative sites according to replacement cycle planning.

Responsible: District Leadership; Finance Department; Technology Services Department

Activity: Apply for E-Rate Priority II monies to fund internal connections (network equipment, wireless network equipment, and site cabling) where possible give school free and reduced lunch percentages. Work with district leadership to secure annual recurring monies to fund internal connections at all other school and administrative sites according to replacement cycle planning.

Responsible: District Leadership; Finance Department; Technology Services Department

Project planning and documentation.

Department budgets.

Lifecycle planning documentation.

Annual E-Rate application and Universal Service Administrative Company (USAC) Funding Decision Letters.

Enroll in and utilize the state cloud computing offerings that provide new cloud-based services UCPS is not currently using or those which provide cost-savings to UCPS if already in use or hosted by a private cloud.

Activity: Utilize state cloud computing offerings which benefit students and faculty of UCPS and offer a long-term cost savings for said service(s) to increase operational efficiency.

Responsible: Technology Services Department; Learning and Teaching Department

Activity: Utilize state cloud computing offerings which benefit students and faculty of UCPS and offer a long-term cost savings for said service(s) to increase operational efficiency.

Responsible: Technology Services Department; Learning and Teaching Department

Enrollment and utilization of state cloud-offered computing resources. Dependent on NC DPI can maintain production and reliability standard offered by industry leaders, cost-savings can be validated, and new services offered.

Provide content filtering in accordance with the Children's Internet Protection Act (CIPA).	Activity: Maintain a locally controlled Internet content filtering system that provides filtering capability both inside and outside of the district network for both students and staff on UCPS-owned assets.	Activity: Maintain a locally controlled Internet content filtering system that provides filtering capability both inside and outside of the district network for both students and staff on UCPS-owned assets.	Filtering system purchase and service agreement documentation. Filtering logs as requested.
	Responsible: Technology Services Department	Responsible: Technology Services Department	

Measure and monitor the operational effectiveness of the UCPS connectivity, UCPS Wide Area Network (WAN) connectivity, and school-based networks and associated systems.	Goal of 99% or greater network uptime and associated connectivity.	Goal of 99% or greater network uptime and associated connectivity.	Wide Area Network (WAN) and Local Area Network (LAN) network monitoring utilization metrics.
	Responsible: Technology Services Department	Responsible: Technology Services Department	

Maximize E-Rate funding to Support Instructional Programs and student digital learning.	Activity: Ensure all digital resources comply with CIPA, COPPA, and HIPPA policies.	Activity: Ensure all digital resources comply with CIPA, COPPA, and HIPPA policies.	Evaluation of policies, content, and audits.
	Responsible: Technology Services	Responsible: Technology Services	

Provide equitable and additional access to digital resources

Activity: Participate in HomeBase IIS offerings throughout North Carolina implementation phase.
Activity: Continue to partner with digital resource providers not included in the North Carolina IIS.
Responsible: Technology Services Department

Activity: Participate in HomeBase IIS offerings throughout North Carolina implementation phase.
Activity: Continue to partner with digital resource providers not included in the North Carolina IIS.
Responsible: Technology Services Department

Enrollment and utilization of state offered resources. If state can maintain production and reliability standard offered by industry leaders, cost-savings can be validated, and new services offered.

Reduce operating costs by facilitating a more strategic budgeting model utilizing blended funding

Activity: Centralize purchasing to ensure all of digital resources schools have equitable access.
Responsible: Technology Services

Annual financial of digital resources to ensure all reports schools have equitable access.
Responsible: Technology Services

Promote/maintain innovative funding model by utilizing NCEdCloud offerings, Home Base and/or comparable alternatives

Activity: Reallocate a portion of curriculum and instruction school-based funding to subsidize both HomeBase and comparable alternatives.
Responsible: LEA Leadership in conjunction with Technology Services Department

Activity: Reallocate a portion of curriculum and instruction school-based funding to subsidize both HomeBase and comparable alternatives.
Responsible: LEA Leadership in conjunction with Technology Services Department

Annual financial reports

Participate in state Internet Service Provider shared resource through NC Research and Education Network (NCREN).

Activity: Maintain NCREN as the Internet Service Provider to UCPS.
Responsible: Technology Services Department

Activity: Maintain NCREN as the Internet Service Provider to UCPS.
Responsible: Technology Services Department

Documentation of Internet Service Provider (ISP)

Strategic Priority 2: Universal Access to Personal Teaching and Learning Devices

Essential Questions

Why do our teachers and students need access to personal teaching and learning devices?

How will we provide ample access to individual teaching and learning devices?

What models can be used for implementing universal access to personal teaching and learning devices in our LEA/Charter.

Current Status and Moving Forward

Universal access to personal teaching and learning devices implies a commitment to making technology available to students, teachers and administrators in a quantity that enhances instruction and administration within a school. UCPS has committed itself to achieving a model of universal access by structuring environments that allow for mobility, flexibility, accessibility to networks and equipment, and resources. UCPS understands the necessity of universal access of learning devices for students and teachers; digital content and subsequent systems used to personalize learning are expanding daily. In order to support the district goals, UCPS has committed themselves to the following. **In order to sustain this infrastructure, we will need a sound life cycle replacement.**

1. Providing wireless networks at all school and central office sites to allow ease of access to information.
2. Providing guest internet access for school partners and district events.
3. Purchasing 25,500 chrome books for grades 6-12, replacing 5- year old devices.
4. Providing access to 10,000 chrome books in grades 3-5.
5. Ensuring a true 1:1 learning environment for students where student in grades 3-5 have daily access to chrome books and grades 6-12 are individually assigned for school / home use.
6. Reallocated laptops for all K-12 teachers in key locations supporting student labs, school programs, and targeted learning.
7. Retooling Early College with repurposed laptops thus replacing chrome books to enhance student learning.
8. Providing a CANVAS learning management systems and Google Apps for Education (GAPE)
9. Providing iPads to grade levels K-2 to enhance classroom instruction and boost critical thinking skills.

Increasing access and providing equipment and instructional resources takes a commitment to secure adequate funding. The senior leadership of UCPS has designated resources in order to provide the dollars necessary for such an ambitious effort. UCPS Superintendent and cabinet staff worked as a team to pool resources enabling the types of changes outlined above.

This collaboration has not only implemented a true 1:1 laptop environment in grades 3-12 but ensured sustainability of this framework. During the summer of 2018, UCPS technology services will again complete a major technology overhaul for all UCPS schools with chrome book refresh. A 5-year refresh cycle was implemented for all computers that includes extended warranties for this time period. UCPS will remove the technology access fee for all students as a result of vendor negotiations.

With the combined efforts of collaboration, pooled resources, expansion of the 1:1 initiative and summer overhaul, UCPS will continue to be a premier leader in education.

Alignment to Other Plans and Initiatives:

Strategic Priority 2: Universal Access to Personal Teaching and Learning Devices

Union County Public Schools will utilize and align with the following key initiatives/plans to reach for the vision and complete the strategic priorities of our plan...

Continue to analyze the technology infrastructure of the LEA to support a 21st century curriculum and assessment system while transitioning to Common Core State and North Carolina Essential Standards. This will allow the transition from paper based assessment systems to one that takes greater advantage of technology.

E-Rate Funding

UCPS Race to the Top Strategic Priority 4: 21st Century Systems operating effectively and efficiently.

(C)(3) (1.2): Utilize LEA/Charter and school technology funds to enhance school and LEA/Charter technology infrastructure to facilitate online, real-time assessments at each school.

Leverage state-wide instructional improvement tools to more effectively manage teacher and student resources.

- **PowerSchool SIS- administrative and classroom management**
- **NCEES (Truenorthlogic) - teacher evaluation and growth model**
- **Schoolnet- formative and summative assessment tools and digital curriculum resources**
- **CANVAS Learning Management System**

UCPS Strategic Plan

Strategic Priority: High achieving and globally competitive students.

- **UCPS will prepare students for the 21st Century.**

Strategic Priority: 21st Century systems operating effectively and efficiently.

- **Goal: UCPS will equitably allocate and align budgeted resources to meet identified needs for systems.**
- **Goal: UCPS systems will support the effective and efficient operations of the district and school.**

Facilitate increased access model through major hardware realignment.

- **Surplus all existing hardware five years and older (ongoing)**
- **Deploy Chromebooks to all secondary students**
- **Standardize teacher devices in K-12**
- **Allocate chrome books to elementary schools**
- **Utilize baseline model to provide equity of access (ongoing)**

<p>Continue to provide teachers with a laptop computer for use with their instructional duties.</p>	<p>Activity: Teachers in grades K12 will be issued a laptop computer for use with their instructional duties.</p> <p>Responsible: District Leadership; Curriculum and Instruction Department, Technology Services Department</p>	<p>Activity: Teachers in grades K12 will be issued a laptop computer for use with their instructional duties.</p> <p>Responsible: District Leadership; Curriculum and Instruction Department, Technology Services Department</p>	<p>Initiative planning and documentation</p> <p>Annual Media and Technology Report (AMTR)</p> <p>Purchase orders</p>
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<p>Maintain and extend wireless connectivity on school campuses to provide system wide access to educational and administrative applications and information.</p>	<p>Activity: Annually review wireless infrastructure capacity to plan for upgrades to system or lifecycle replacement purchasing.</p> <p>Responsible: Technology Services Department</p>	<p>Activity: Annually review wireless infrastructure capacity to plan for upgrades to system or lifecycle replacement purchasing.</p> <p>Responsible: Technology Services Department</p>	<p>Documentation of wireless access point deployment.</p> <p>Local and wide area network metrics.</p> <p>Purchase orders.</p>
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<p>Develop a comprehensive sustainable LEA plan for universal access. <i>Resources: NCDPI, NCLTI, Educator Effectiveness, and District & School Transformation</i></p>	<p>Activity: Work toward establishing break/fix baselines for Chromebooks in grades 6-12. Activity: Evaluate student device refresh timeline for all grade levels.</p> <p>Responsible: Technology Services Department</p>	<p>Activity: Work toward establishing break/fix baselines for Chromebooks in grades 6-12. Activity: Evaluate student device refresh timeline for all grade levels.</p> <p>Responsible: Technology Services Department</p>	<p>Initiative planning and documentation</p> <p>Annual Media and Technology Report (AMTR)</p> <p>Purchase orders</p>
<p>Communicate your plan to all Stakeholders.</p>	<p>Activity: Publish Technology Plan on UCPS website.</p> <p>Responsible: Technology Services Department</p>	<p>Activity: Publish Technology Plan on UCPS website.</p> <p>Responsible: Technology Services Department</p>	<p>UCPS website archives</p>

<p>Increase overall access to personal learning devices.</p>	<p>Activity: Participating students in grades 6-12 will be issued a Chromebook computer for learning during the school year. Activity: Continue to expand access model in all elementary locations.</p> <p>Responsible: Technology Services Department, Financial Department, District Leadership</p>	<p>Activity: Participating students in grades 6-12 will be issued a Chromebook computer for learning during the school year. Activity: Continue to expand access model in all elementary locations.</p> <p>Responsible: Technology Services Department, Financial Department, District Leadership</p>	<p>Initiative planning and documentation</p> <p>Annual Media and Technology Report (AMTR)</p> <p>Purchase orders</p>
<p>Utilize Personal Learning Devices to promote student owned learning.</p>	<p>Activity: Emphasize project based learning. Activity: Expand UC-Virtual course offering to eligible students throughout the district.</p> <p>Responsible: Curriculum and Instruction Department, Technology Services Department</p>	<p>Activity: Emphasize project based learning. Activity: Expand UC-Virtual course offering to eligible students throughout the district.</p> <p>Responsible: Curriculum and Instruction Department, Technology Services Department</p>	<p>NCEES</p> <p>PowerSchool enrollment numbers</p>

Utilize increased access to personal teaching and Learning devices available in elementary classrooms.	Activity: Work with school leadership to facilitate increased use of digital devices. Responsible: District Leadership, Technology Services Department	Activity: Work with school leadership to facilitate increased use of digital devices. Responsible: District Leadership, Technology Services Department	Define and evaluate devices best targeted towards young learners
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Strategic Priority 3: Statewide Access to Digital Teaching and Learning Resources, Including Digital Textbooks

Essential Questions

What are digital teaching and learning resources? What are digital textbooks?

Why do teachers and students need access to digital teaching and learning devices?

What are the benefits of digital textbooks?

What are open educational resources and how can they be used?

How can access to these resources be increased in our LEA?

Current Status and Moving Forward

Union County Public Schools (UCPS) has been committed to leveraging digital teaching and learning resources throughout the course of providing instruction to students. UCPS provides students and teachers with Google Applications for Education (GAFE) accounts and LMS Canvas for centralized hosting of instructional tools. The core suite of applications allows teachers and students to use Google Documents, Presentations, Spreadsheets, Forms, Drawings and Sites. Google Drive provides a place to store and manipulate materials utilized by the teacher. The ease of creating and sharing documents, presentations and spreadsheets promotes collaboration among students with real-time results. Additionally, students in grades 6-12 have student Google email accounts that allow them to email any student or teacher within the county. Given the benefit of having access to digital teaching and learning resources that UCPS has validated through its own research, our goal is to find ways to effectively allow access to all digital resources, including digital textbooks. UCPS in its 1:1 initiative continues to offer opportunities that allow students to download digital texts in order to have access to them on their devices. This innovative approach provides students with their materials, greater administrative efficiency in delivering and managing inventories of these materials, and a savings in cost to the school system for such resources. Moving forward, UCPS will leverage online streaming services and applications to enforce student achievement in every classroom. Empowered professional development training will educate and model effective teaching methods with all instructional staff.

UCPS will also use Canvas as its LMS Learning Management System hosted by the NC Department of Public Instruction. This all-encompassing application provides much needed resources for teachers with course management, cloud storage, ability to upload homework assignments, create lesson plans, and provide resource support from home environments.

All UCPS students, teachers and administrators will continue to benefit from the continued advances in digital materials. Working with the North Carolina Department of Public Instruction to establish a procedure for sharing in a state-wide procurement process for such resources will help with cost and access to these materials. UCPS welcomes this change where it is appropriate and beneficial to students.

Alignment to Other Plans and Initiatives:

Strategic Priority 3: Statewide Access to Digital Teaching and Learning Resources, Including Digital Textbooks

Union County Public Schools will utilize and align with the following key initiatives/plans to reach for the vision and complete the strategic priorities of our plan....

Leverage state-wide instructional improvement tools to more effectively manage teacher and student resources.

- **PowerSchool SIS- administrative and classroom management**
- **NCEES (Truenorthlogic) - teacher evaluation and growth model**
- **Schoolnet - formative and summative assessment tools and digital curriculum resources**

Strategic Priority: High achieving and globally competitive students.

- **UCPS will prepare students for the 21st Century.**

Strategic Priority: 21st Century systems operating effectively and efficiently.

- **Goal: UCPS will equitably allocate and align budgeted resources to meet identified needs for support with all technical environments.**

Goal: UCPS systems will support the effective and efficient operations of the district and school.

3: Statewide Access to Digital Teaching and Learning Resources, Including Digital Textbooks

Suggested Goals/Targets	July 1-2018 - June 30, 2020	July 1-2020 - June 30, 2021	
<p>Utilize procured resources such as Home Base and other open education resources</p>	<p>Activity: Support the use of state-provided resources such as Home Base by Training stakeholders on an annual basis in the use of these platforms.</p> <p>Responsible: Teaching and Learning; Technology Services Department; Career and Technical Education Department</p>	<p>Activity: Support the use of state-provided resources such as Home Base by training stakeholders on an annual basis in the use of these platforms.</p> <p>Responsible: Teaching and Learning Department; Technology Services Department; Career and Technical Education Department</p>	<p>Platform utilization metrics.</p> <p>Training documentation.</p>

Monitor state’s progress of digital content implementation.

Activity: Participate in regional and state offerings and conferences as well as regularly monitor NCDPI communication.

Activity: Participate in regional and state offerings and conferences as well as regularly monitor NCDPI communication.

Membership attendance and communication archives.

Work as partners with Department of Public Instruction (DPI) staff to incorporate the Instructional Improvement System (IIS) into the daily operational aspects of school.

Activity: Ensure effective operation of the Instructional Improvement System (IIS) with LEA networks and digital devices.

Activity: Ensure effective operation of the Instructional Improvement System (IIS) with LEA networks and digital devices.

Participation metrics of state Instructional Improvement System (IIS).

Responsible: District Leadership; Teaching and Learning Department; Technology Services Department

Responsible: District Leadership; Teaching and Learning Department; Technology Services and Department

Performance metrics of district Local Area Network (LAN) and Wide Area Network (WAN).

Ensure equity to digital teaching and learning resources from school to school in your LEA

Activity: Ensure digital devices follow a system-determined replacement cycle to ensure equitable distribution.

Activity: Ensure digital devices follow a system-determined replacement cycle to ensure equitable distribution.

Annual Media and Technology Report

Responsible: District Leadership, Technology Services Department

Responsible: District Leadership, Technology Services Department

Lifecycle replacement planning

Purchase orders

Strategic Priority 4: Statewide Model of Technology-Enabled Professional Development

Examples of Essential Questions

What skills are needed to transition to digital teaching and learning resources?

How can these skills be delivered and sustained to our LEA teachers and administrators?

How do teachers, administrators, and staff work with colleagues to guide our LEA toward more effective uses of 21st Century tools for teaching, learning, and managing instruction?

How are teachers, administrators, and staff prepared to understand, implement, and assess the span of skills and processes that students need to succeed in the 21st Century?

How are teachers, administrators, and staff prepared to apply 21st Century assessment systems to inform instruction and measure 21st Century knowledge, skills, performance, and dispositions?

Current Status and Moving Forward

Teaching and leading in a 21st century learning environment requires the knowledge of best-practice and research-based instructional strategy and methodology. Additionally, knowing how to integrate a wide array of technology into the teaching and learning process is essential.

With the fast pace changes in software and hardware, most teachers and school administrators are daunted by the challenge of keeping current with technology trends. Therefore professional development is imperative in classrooms where technology integration is an expectation. The UCPS 1:1 initiative was a prime example of how ubiquitous access to digital devices and their successful use in the learning process depends on the teachers' ability to plan and execute instruction that leverages the presence of these devices. Intense and ongoing professional development has occurred with K-12 teachers, with an emphasis for teachers in grades 6-12 who have students receiving individual laptop devices. Instructional Coaches have conducted professional development with faculty at all middle and high schools at the time they receive their machines and at individual school sites. Working with the philosophy that designated teachers receive enhanced professional development to share and model with their peers, UCPS has successfully launched, sustained, and nurtured this initiative for teachers at all middle schools and has expanded this idea into our high schools. The initiative will continue to expand to the elementary levels in the next three years. UCPS has seen tremendous results in the transformation of the classroom environment and be expanded to elementary schools; this process will continue to be a "work-in-progress" for all schools as we evolve into a digital world. This does encompass other initiatives underway in UCPS to bring 21st century skills to the teaching and learning process. Recall that 21st century skills framework includes learning and innovation skills that are not restricted to just a technology-rich environment. Not only should we foster creativity and innovation, critical thinking and problem solving, and communication and collaboration in our students, but we should also foster them in our employees. Thus, UCPS has committed itself to fully implementing the Professional Learning Communities (PLC) model. UCPS will continue the professional development and support needed to sustain this initiative. Through the PLC model UCPS intends to foster the professional collaboration that is necessary

to make good decisions about student instruction by using all of the tools and measures available to fuel these discussions.

Beyond the professional development surrounding the PLCs at schools, other professional learning opportunities abound in UCPS. A “future leaders” program has been fully implemented to further enhance the working knowledge of the principal ship. Sessions have been created to support the Global teachers program, UCPS Global Schools initiative, and Curriculum Instructional Leaders. Training in technology and diversity is provided to principals and directors on a routine basis at monthly principal meetings. All of these initiatives are aimed at developing the necessary leadership and instructional capacity necessary to carry our schools forward into the 21st century.

UCPS employees have multiple options for delivering and receiving professional development. Delivery methods include but are not limited to face-to-face, Canvas LMS course content, Lync video conferencing, video tutorial archiving on our internal UCTV server, and web based resources. As described briefly in the text above, UPCS is committed to a program of developing all of its employees for the benefit of our students.

Alignment to Other Plans and Initiatives:

Strategic Priority 4: Model of Technology-Enabled Professional Development

Union County Public Schools will utilize and align with the following key initiatives/plans to reach for the vision and complete the strategic priorities of our plan...

Accountability and Curriculum Support

Continue to analyze the technology infrastructure of the LEA to support a 21st century curriculum and assessment system while transitioning to North Carolina Essential Standards. This will allow the transition from paper-based assessment systems to one that takes greater advantage of technology. With UCPS 1:1 model all students have access to devices used for testing requirements.

Increasing teacher and principal effectiveness so that every student has a great teacher and every school has a great principal.

Establishing and increasing the use of robust data systems like CEDARS that measure student success and inform teachers, principals, and policymakers about how they can improve the delivery of educational services to students.

Home Base Support Tools and Professional Development

Leverage state-wide instructional improvement tools to more effectively manage teacher and student resources.

- PowerSchool SIS- administrative and classroom management
- NCEES (Truenorthlogic) - teacher evaluation and growth model
- Schoolnet - formative and summative assessment tools and digital curriculum resources
- Power Teacher Pro 10 (July 2018) implementation

Strategic Priority: Quality teachers, administrators, and staff providing innovative leadership for the 21st century schools.

- UCPS will hire and retain highly qualified teachers, administrators and staff.

Strategic Priority: 21st Century systems operating effectively and efficiently.

4: A Statewide Model of Technology-Enabled Professional Development

<p>Implement a plan for embedded technology-enabled professional development for stakeholders.</p>	<p>Activity: Develop and deliver research-based professional development for stakeholders utilizing various platforms, including, but not limited to; online, face-to-face, and blended offerings.</p>	<p>Activity: Develop and deliver research-based professional development for stakeholders utilizing various platforms, including, but not limited to; online, face-to-face, and blended offerings.</p>	<p>Log of professional development offered to UCPS personnel.</p> <p>Inventory of Learning Management System (LMS) professional development modules.</p> <p>Staff Development Manager</p>
	<p>Responsible: Teaching and Learning Department, School Performance</p>	<p>Responsible: Teaching and Learning Department, School Performance</p>	

- **Goal: UCPS will equitably allocate and align budgeted resources to meet identified needs for systems.**

<p>Support models that assist all school personnel in creating technology-enabled instruction that transforms educational practice and improves student learning</p>	<p>Activity: Build capacity through developing school-based support teams.</p>	<p>Activity: Build capacity through developing school-based support teams.</p>	<p>School Performance Documentation</p> <p>PLC Documentation</p>
	<p>Responsible: Teaching and Learning Department, School Performance</p>	<p>Responsible: Teaching and Learning Department, School Performance</p>	

<p>Prepare Media Coordinators and Instructional Technology Facilitators to support digital reform.</p>	<p>Activity: Implement North Carolina Evaluation tool for Media Coordinators and Instructional Technology Facilitators.</p>	<p>Activity: Implement North Carolina Evaluation tool for Media Coordinators and Instructional Technology Facilitators.</p>	<p>Participant evaluations</p>
	<p>Activity: Attend regional, state, and national conferences (based on available funding).</p>	<p>Activity: Attend regional, state, and national conferences (based on available funding).</p>	<p>Conference registrations</p>
	<p>Activity: Implement and participate in PLCs to foster collaborative growth opportunities.</p>	<p>Activity: Implement and participate in PLCs to foster collaborative growth opportunities.</p>	<p>New Laptops</p>
	<p>Responsible: Teaching and Learning Department</p>	<p>Responsible: Teaching and Learning Department</p>	
<p>Deliver training to teachers using integrated technology as a model for further classroom integration. Canvas will be utilized as the platform for advancing student achievement and teacher collaboration.</p>	<p>Activity: Offer Professional Development through LMS and cloud based modalities to enhance teachers' understanding of classroom integration and model best practices.</p>	<p>Activity: Offer Professional Development through LMS and cloud based modalities to enhance teachers' understanding of classroom integration and model best practices.</p>	<p>Log of professional development offered to UCPS personnel.</p>
	<p>Responsible: Technology Services Department, Teaching and Learning Department</p>	<p>Responsible: Technology Services Department, Teaching and Learning Department</p>	

Support staff with online assessment delivery.	Activity: Support processes for ongoing training and information sharing for school-based faculty to conduct online testing in a reliable and secure manner.	Activity: Support processes for ongoing training and information sharing for school-based faculty to conduct online testing in a reliable and secure manner.	Record of training and professional development conducted in advance of online testing sessions.
	Responsible: Learning and Teaching Department, Technology Services Department	Responsible: Learning and Teaching Department, Technology Services Department	
Support students with online assessment delivery.	Activity: Students will practice with online assessments by using an online formative assessment program (HomeBase, mClass, etc.) on a routine, scheduled basis.	Activity: Students will practice with online assessments by using an online formative assessment program (HomeBase, mClass, etc.) on a routine, scheduled basis.	Logs and utilization metrics of formative assessment system(s) to show participation.
	Responsible: Learning and Teaching Department, Technology Services Department	Responsible: Learning and Teaching Department, Technology Services Department	

Provide ongoing support and professional development necessary for use of data to inform instruction.

Activity: Central Services and school-based leadership teams will review data and develop capacity to make data-driven instructional decisions.

Responsible: Learning and Teaching Department, School Performance, Technology Services

Activity: Central Services and school-based leadership teams will review data and develop capacity to make data-driven instructional decisions.

Responsible: Learning and Teaching Department, School Performance, Technology Services

Log of meetings including School Performance and school-based administrators.

Utilization metrics of data systems such as Education Value Added Assessment System (EVAAS).

Provide support for teacher and administrator progress and evaluation according to NCEES standards.

Activity: Offer professional development and support for administrative staff. Administrative staff will train onsite faculty.

Responsible: Human Resources, School Leadership

Activity: Offer professional development and support for administrative staff. Administrative staff will train onsite faculty.

Responsible: Human Resources, School Leadership

Log of professional development sessions and meetings.

Strategic Priority 5: 21st Century Leadership for All Schools and Districts

Examples of Essential Questions

Are your LEA/Charter leaders prepared to lead and create a vision for 21st century education?

Are mechanisms in place for school leaders to create 21st century learning cultures? Are professional growth programs/opportunities available to prepare teachers and administrators to lead 21st century learning environments?

Current Status/Moving Forward

The 21st century skills framework includes learning and innovation skills that are not solely restricted to a technology-rich environment for learning, but are equally valuable goals for the type of leadership necessary to carry schools in UCPS forward. Not only should we foster creativity and innovation, critical thinking and problem solving, and communication and collaboration in our teacher and students, but we should also foster them in our leadership at the building and central services levels.

Technology is the core infrastructure element in effective practices with teachers and students. As described briefly in the text above, UCPS is committed to a program of developing all of its employees for the benefit of our students, especially its leaders.

Alignment to Other Plans and Initiatives:

Strategic Priority 5: 21st Century Leadership for All Schools and Districts

Union County Public Schools will utilize and align with the following key initiatives/plans to reach for the vision and complete the strategic priorities of our plan...

Accountability and Curriculum Enhancements

Continue to analyze the technology infrastructure of the LEA to support a 21st century curriculum and assessment system while North Carolina Essential Standards. This will allow the transition from paper-based assessment systems to one that takes greater advantage of technology.

Implement an internal data warehouse where all authoritative information from human resources, accountability, and student information will be stored. From this centralized location custom key performance indicators will be measured and displayed with local servers. Any future enhancements will follow an agile methodology for development aligned with strategic plan objectives.

Home Base Support

Utilize components of DPI provided HomeBase framework to promote 21st century education.

Support Student Information System (SIS), North Carolina Educator Evaluation System (NCEES), and Schoolnet Assessments

UCPS Strategic Plan

Strategic Priority: Quality teachers, administrators, and staff providing innovative leadership for the 21st century schools.

- **UCPS will hire and retain highly qualified teachers, administrators and staff.**

Strategic Priority: 21st Century systems operating effectively and efficiently.

- **Goal: UCPS will equitably allocate and align budgeted resources to meet identified needs for systems.**

5: 21st Century Leadership for All Schools and Districts

Suggested Goals/Targets	July 1, 2018 - June 30, 2021		Yearly Evaluation	
	July 1, 2018 - June 30, 2021	July 1, 2018 - June 30, 2021	Evaluation Method(s)	DPI Use
Create and lead a vision for 21st century education	Activity: Implement the UCPS Strategic plan.	Activity: Implement the UCPS Strategic plan.	Performance goals outlined in the UCPS Strategic Plan	

Responsible: District Leadership

Responsible: District Leadership

Goals 2022

Create 21 century learning environments

Activity: Provide the professional development for professional learning communities.

Activity: Provide the professional development for professional learning communities.

Professional development data showing opportunities for Professional Learning Communities

Responsible: District Leadership

Responsible: District Leadership

Prepare teachers and administrators to lead 21st century learning environments

Activity: EmpowerED professional development opportunities in the areas of leadership, 21st century skills, and technology.

Activity: EmpowerED professional development opportunities in the areas of leadership, 21st century skills, and technology.

Professional development data showing professional development opportunities for

Activity: Expand and continue the Instructional Technology Mentor Teachers (ITMT) program.

Activity: Expand and continue the Instructional Technology Mentor Teachers (ITMT) program.

Professional Learning Communities

Responsible: District Leadership, Technology Services Department

Responsible: District Leadership, Technology Services Department

Plus / Delta Analysis

Develop strategic partnerships with community and business to promote 21st Century learning.

Activity: Support the work of the Union County Public Schools Education Foundation.

Responsible: District Leadership

Activity: Support the work of the Union County Public Schools Education Foundation.

Responsible: District Leadership

Record of Education Foundation work

Professional Development Activities

Union County Public Schools has utilized a train the trainer model for the purposes of implementing Power Teacher Pro grade book. Key central office personal obtained PowerSchool certification in the spring of 2018 while members of Curriculum and Instruction will receive training in late spring 2018. All stakeholders will monitor progress and state recommendations throughout the implementation process.

All school locations will hold mandatory teacher opportunities in various phases throughout the Power Teacher Pro initiative. Technology Services will dedicate personnel to support not only school based training but establish a digital library for district personnel.

Funding Sources

Funding sources necessary for successful implementation will be targeted towards onsite professional training by PowerSchool covered by Technology Services.

Evaluating Effectiveness

Power Teacher Pro integration is a major shift in classroom processes and will require constant monitoring and revision for effective integration. Evaluating the effectiveness of Power Teacher Pro implementation will be an ongoing process which includes effective processes, stakeholder satisfaction and overall LEA efficiency. The first measure will be operational effectiveness to ensure that basic processes and procedures are able to be carried out on a consistent basis by instructional classroom teachers, then by school personnel.

Once we are able to consistently utilize the full functionality within the Power Teacher Pro, our focus will shift to optimization of the application by managing configurations of categories, weights, and grade percentages at the district level.