# *KEARNY SCHOOL DISTRICT*

# *TECHNOLOGY PLAN*

# *2016 - 2019*

## Period Covered: July 1, 2016 – June 30, 2019

**"… where technology strives to serve pedagogy."**

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## Three-Year Local School District Level Technology Plan

**July 1, 2016 through June 30, 2019**
New Jersey Department of Education

# Acknowledgments

The Kearny District Executive Technology Committee and the Kearny Board of Education acknowledge that we are all life-long learners and it is our collective commitment to provide exceptional learning opportunities to the residents of the Town of Kearny, which is the basis for the development of this collaborative plan. In particular, we wish to acknowledge the following constituents of the Town who strive to achieve the best teaching and learning environment for our learners:

- **The learners of Kearny** – it is this population who will benefit significantly from this plan through the sharing of human, financial and technological resources among the town's schools, libraries, and business partners.

- **The educators of the Town of Kearny** – the teachers, staff administrators and Board members who are committed to providing the best learning opportunities to all learners of Kearny. Once again, the educators of Kearny have evolved another collaborative initiative to benefit the residents of the Town.

- **The local Board of Education** and respective school administrators who have made a unanimous commitment to this project.

- **The members of the Kearny Technology Local Committees and the members of the Executive Technology Committee** who through their dedication to the use of technology as a fundamental educational resource have conceptualized a town-wide teaching and learning environment. They have brought their creativity, imagination and commitment together in developing this plan:

**Three Year Technology Plan 2017-2019 Executive Committee Members**

Neil Brohm, Director of Technology – Committee Chairman
Patricia Blood, Superintendent of Schools
Flora Encarnacao, Director of Curriculum & Instruction
Kelly Lindenfelser, Director of Special Services
Sophia Levchak, Supervisor of Federal Programs
Ron Smith, Interim Business Administrator
Mark Bruscino, Director of Facilities and Plant Operations

**Three Year Technology Plan 2017-2019 Contributing Committee Members**

Kearny High School Committee Members
Jacki Richardson, Principal
Justin Avitable, Assistant Principal
Paul Measso, Assistant Principal
John Millar, Assistant Principal
Dorothy Caulfield, Director of Guidance
Cindy Rogasis, Supervisor of Special Services

Franklin Elementary School Committee Members
Yvonne Cali, Principal
Donna Masters, Assistant Principal

Garfield Elementary School Committee Members
Curtis Brack, Principal

Lincoln Middle School Committee Members
Robert Zika, Principal
Patrick Ragnoni, Assistant Principal

Roosevelt Elementary School Committee Members
Steven Way, Principal

Schuyler School Committee Members
Valerie Iacono, Principal

Washington School Committee Members
Jon Zimmerman, Principal
Anonio Moyano, Assistant Principal

Special thanks also to the members of the Kearny School District Professional Development Committee and the members of the Kearny Board of Education.

# EXECUTIVE SUMMARY

## Historical Legacy

In the fall of 1996, the Kearny Board of Education, Superintendent of Schools and the Director of Curriculum formed the Kearny Distance Learning & Technology Committee. The Committee's immediate goal was to satisfy the State's requirement to develop a district distance learning and technology plan. The long-term goal was to build a cost-effective technological infrastructure for the Town of Kearny School District which incorporated the latest advances in personal computing, digital telecommunications, and electronic collaboration and provided an effective and efficient learning environment for our students. We continue to expect that technology will impact all aspects of the curriculum, teaching strategies and learning processes. In the spring of 2016, the Kearny District once again convened to examine and extend our long-term technology plans through 2019.

This plan will be reviewed, evaluated and modified, as needed, to ensure that our district is providing the best possible teaching and learning environment for our students, teachers and community.

## MISSION

"As we move through the 21st Century, the mission of this committee is to provide students, teachers, and administrators of the Kearny School District with a technologically sound and reliable teaching and learning environment."

In this information-rich era, we realize that most jobs will require a working knowledge of information technologies. Young people who leave school without the knowledge and skills required to find and hold a good job will pay a high price throughout their working lives, as will our society as a whole. The challenge is clear: we must provide the students, teachers, and administrators of the Kearny School District with a learning environment for the 21st Century. To meet this challenge we must integrate technology into every facet of the teaching and learning process.

The rapid pace of technological change in today's economy has created a unique challenge for educational institutions. Put simply: how do we keep up? As practical knowledge gravitates from books to periodicals to television to the Internet to eBooks, how do we provide the tools our learners need to make sense of this new world? Fortunately, the very advances that have created this fast-moving environment also provide us with the means to tame the chaos they have created. By seamlessly integrating technology with education, and developing effective learning and teaching strategies, we can create a learning environment that meets this challenge.

In order to maximize the efficient use of services and related costs, we will explore cooperative ventures among the Public Library, the Town of Kearny, Hudson County and other interested agencies, businesses and corporations to find ways to optimize functionality and costs.

Technological literacy is a requirement in today's world, along with reading, writing and arithmetic. Rapidly changing technologies and increasing international economic competition made possible by a worldwide communications network have transformed our economy. These same forces have created a society that grows

ever more complex, diverse, and mobile. Our success as educators will be measured by our students' ability to acquire the skills and knowledge necessary for high-technology work and informed citizenship.

"As we enter the 21st century, sophisticated digital technologies and the promise of exploding bandwidth will create a virtual convergence that will change our lives more dramatically than anything we have witnessed so far. It [technology] will deliver the power of the information age into the hands of everyone, anytime, anywhere."

> Bill Gates, Former Chairman and Chief Software Architect
> Microsoft Corporation

Our emphasis, during the years covered by this technology plan, will be to tap the power and potential of the wired and wireless access technologies to influence teaching strategies and learning processes.

# VISION

We are in agreement with the priorities identified by the Forum on the Future of Technology in Education and we envision our local educational technology environment to continue to incorporate these priorities throughout this technology plan.

**All students and teachers will have universal access to effective information technology in their classrooms, schools, communities, and homes.**

Much of the promise of the use of technology in education, including the notion of fostering learning anytime anywhere, hinges on the universal availability of learning tools for students and teachers and on their effective use. In addressing this issue, it is important to pay attention to individual learner characteristics and needs, as well as the social context of using technology.

**All teachers will effectively use technology.**

There is universal support for devising ways to encourage teacher use of technology aligned with instructional goals—whether delivered through pre-service education or in-service professional development or both. Given the continual changes and advances in technology, the need for training is ongoing and must not only be about how to use technology, but also about how to support student learning.

**All students will be technologically literate and responsible cyber-citizens.**

Today's world is marked by increasingly rapid social, political, and technological change—change that is becoming increasingly more difficult to predict. As a consequence, in addition to being academically, socially, and emotionally prepared, students will need to be technologically savvy—understanding how to locate information, determine its relevance, determine its accuracy, and integrate it with other sources. In addition, we must help students to remain vigilant in safeguarding personal information and from accessing inappropriate materials.

**Research, development and evaluation will shape the next generation of technology applications for teaching and learning.**

As the use of technology in education becomes more commonplace, it becomes critical to understand what we are learning about what works and what does not. Too often individual schools and districts are left without good information that could guide them in making appropriate investments in technology—investments that could result in tremendous changes to the educational experience for both teachers and students.

**Education will drive the E-learning economy.**

The Internet is fast becoming an engine of innovation in education. As it is revolutionizing business through e-commerce, the Internet is on a course to redefine education. E-learning, or the delivery of education and related services over the Internet, is being touted as the next most innovative application of the Internet, and private investment in education organizations is rapidly expanding. Fostering innovation in education—from the provision of digital learning, digital content, assessment services, tutoring, distance learning, data warehousing, and other forms of instructional technology – is important. Other areas ripe for innovation include ways of: establishing collaboration among schools, libraries, museums, higher education, and industry; evaluating the quality of educational materials and content; and, archiving public domain historical, cultural, and scientific resources.

> *"In order for our students to have the skills necessary to succeed academically, professionally, and personally in the 21st Century, every student, teacher and administrator will have access, from both inside the classroom and at home, to an information-rich environment of real-time electronic data, voice, and audio/video content. Distance learning academic research, daily communications, attendance, grading and other administrative functions will all take place on powerful multi-media computers connected to a high speed electronic network spanning every desktop of every school in the District and, through the Internet, connecting them to the world."*

The integration of advanced computer and communications technology with education is the single most important step in our effort to bring technological literacy to our learners. Technological literacy, however, is not only knowing how to use technology for word processing, spreadsheets, and Internet access; it comes from using the powerful learning opportunities afforded by technology to increase learning in academic subjects and increase students' skills. In a world of rapid technological change, intellectual adaptability and flexibility is paramount. Never before has the need for lifelong learning and education been so acute. Through the application of new communications technology, the Kearny School District hopes to pioneer a new paradigm for teaching that enables life-long and empowered learning for the residents of Kearny. We welcome new opportunities to enhance and revolutionize learning through technology.

Successful implementation of this plan requires the commitment of the local Board of Education and Superintendent of Schools to the ongoing professional development of teachers. This commitment has begun through the participation of teachers, staff and administrators in the development of this plan. Technical training must be provided for teachers, staff and administrators to introduce them to the capabilities of new technologies. If educators understand technology, they will be able to more effectively integrate it into the learning environment. This plan will provide all educators with equal access to a significant range of technological and human resources. Learning opportunities will be available any time and from anywhere for all the learners within the Town of Kearny.

All long-range plans, especially technology efforts, are works in progress. Before we can refine and improve this plan, its impact on the learners must be measured. To do this, the educational leaders in Kearny expand its role to include ongoing assessment of the changes made within the teaching and learning environment.

The ultimate goal of this effort is to provide the learners of Kearny with the best life-long learning opportunity we can. We hope to create an environment that will enable them to succeed in all aspects of their lives. We will succeed if we can expand the life-long learning opportunities for our residents through technology resources to enable learning to occur at any time, at any place, by anyone on any topic.

## BELIEFS

The Kearny District's Technology Mission and Vision evolved from a foundation of beliefs.

- We must be "learner centered". Our success as educators is ultimately measured by the future success of our younger students as they become full-privileged members of our society. It is also measured in the continued and enhanced success of our adult students as they rise to face new challenges in their lives.

- We are all life-long learners. Self-sufficient, life-long learning must be a goal for all of us. We, as educators, must introduce all learners to the benefits of a commitment to life-long learning by providing educational opportunities to all segments of our population.

- Technology expands our learning opportunities. Technology, through its ability to enhance all learning styles, is a crucial component of efficient and effective modern education.

- Professional development is the key to our success. Successful implementation of our distance learning and technology plan is contingent upon providing ongoing professional development opportunities for all teachers, staff and administrators. We must become life-long learners through these opportunities.

- All the constituents of our population (residents, educators, businesses and government) have a stake in this process. We must include all constituents of our community in our planning and implementation process as both learners and resources. We must seek out local community and business leaders and learn their needs to better prepare our learners for future employment.

- All must have equal access to these educational opportunities. Access to information and technology resources should be equally available to all learners. Distance learning should create an environment where opportunities for learning are accessible to all students and complement similar and unique curricula across districts.

## TERMS AND DEFINITIONS

Throughout this plan, the following terms and definitions are assumed.

*Distance Learning*: the delivery of learning opportunities through a combination of electronic data, voice and video media. These learning opportunities include the delivery of quality curriculum and instruction to schools, professional development for teachers, staff and administrators. The means of delivering this instruction can include—but is not limited to—the Internet, local area computer networks, school media centers and school and public libraries.

*Technology*: any electronic tool used to improve and enhance the teaching and learning environment.

The development of the Kearny Schools Technology Plan Committee was intended to satisfy the initial requirement for the local school district to receive Distance Learning Aid. The on-going goal, however, is to apply cost-efficient technology to enhance educational opportunities for all learners in the Town of Kearny.

# PLANNING PROCESS AND OVERVIEW

The Kearny District Technology Committee developed this three-year plan. This committee was formed in the spring of 2016 and worked under the direction of Neil Brohm, Director of Technology. The technology committee was comprised of members from the Executive Committee and the contributing committee members.

The Kearny Three-Year Technology Plan Committee consists of approximately twenty participants drawn from the community, the Board of Education and school district staff. Each school in the district has an advisory technology committee addressing the technology-related vision and needs of their school and reports their recommendations to the building principal. The building principals and other district administrators provide helpful and timely input to the executive committee.

Each level of the committee met as needed and provided input and the participants on the committee submitted contributions to the formation of this plan.

The committee's first task was to establish and affirm a common knowledge base to form a mission, a vision statement, and a set of beliefs. The committee set targets and technology priorities to help the district achieve the goals. Committee members referenced current research regarding the future of technology and its application to education. During this research phase it became increasingly clear that no meaningful district-wide technology initiative could succeed without maintaining and upgrading computer network infrastructure in each of the schools. The committee studied existing technology programs both within the Kearny school district and outside. Representatives from computer software and network integration firms were invited to give demonstrations of their wares to educate committee members on the current and future state of the art in learning technologies.

Once a common knowledge base was agreed upon, the committee established a baseline for technology in the district by taking an inventory of the computer hardware installed in all schools. This technology plan was developed to establish milestones and priorities and attach costs to achieving plan goals.

Recently we have successfully implemented a major upgrade to our infrastructure. We are a school district with seven school buildings. The high school serves as our main, central hub, receiving the 10GB fiber runs from the other schools as well as a 100MB Internet line from our ISP. We have an internet-capable, networked computer in every classroom with a high-speed internet connection. Each of our five elementary schools has multiple networked computer labs. Our middle school has several networked computer labs. A component of our three-year technology plan calls for maintaining and ensuring that we keep our computer labs running the best available software for the students using the computer and upgrading the computer labs as needed.

The network closets in our schools are equipped with 10/100/1000/10000 switching devices. A previous three-year plan recommended all backbone devices in a gigabyte switched environment, providing for faster and more reliable throughput. We have achieved that goal.

Each classroom has at least one new desktop computer. Many classrooms have additional desktops and laptops. The devices that are currently at least five years old will be replaced over the next three years. We expect to receive at least five years of service from a computer before considering it obsolete. During this three year plan, most of our classroom and lab computers will have been in service for at least five to eight years. Although we are committed to keeping these computers working, we are aware that we will need to replace these units to accommodate the changes in software and internet content. We are expecting to replace them with newer, more capable workstations.

Our high school has fifteen computer labs. Additionally, the district's administrative system runs on its own in-house server and is web-based, handling scheduling, grade reporting, attendance, athletics, and medical. We have implemented Genesis software in our K-12 administrative environment.

We have at least one Internet-connected computer in every classroom. Many classrooms have additional desktop computers and/or laptop computers. Wireless is available throughout the schools – the high school is adding more wireless access points as the current renovation progresses. We would like to provide more computers in the hands of our students. Our solution to this problem, to be continued during our three-year plan, is to provide additional mobile carts of wireless computers that can be shared by classrooms on an as-needed basis. This will give us greater security, use, and flexibility with the workstations while saving space and money. Where appropriate, we will create a technology learning center in a classroom with 4-6 wireless devices.

The high school library has forty-five student workstations. All are internet-connected and have the Microsoft Office Pro Suite. Shared cameras and other devices are available for student and teacher use.

All of the internet access in the school district is content-filtered through the use of a content filter appliance at the front end of the main feed. All internet traffic flows through this filtering device. As internet usage continues to increase, we expect to increase the bandwidth capacity from our ISP, allowing for faster delivery of data to the end-users.

We have included in our services for our faculty members a district-wide e-mail system and an online lesson plan module. All teachers have received training and we are expanding the uses to include class pages and web pages for each teacher as well as a feature for teachers to post homework and other assignments. Teachers can post their lesson plans online. We will continue to offer our teachers training in creating class pages to increase communication to our community. Each school posts articles of interest and calendars of events.

During the late spring and summer of 2012, our WAN completed a major upgrade. Our conversion to a private fiber 10GB WAN network has given us the opportunity to grow with technology without outgrowing the infrastructure's broadband pipeline. Our three-year plan calls for continuing the use of this broadband pipeline more effectively and efficiently.

Our priorities incorporated in this three-year plan call for improved desktop and technical support, improved data throughput by replacing shared devices with high-speed switched devices; delivering video to all classrooms via our network; upgrading our older, less-capable computers; implementing an administrative system supporting all schools and grade levels; and offering professional development sessions that address the needs of our staff and encourages them to continue to infuse technology into the delivery of the learning process. A robust, wireless infrastructure has been installed during 2013 and the use of wireless devices will comprise much of the expansion of technology throughout the district.

This overview document covers the three year technology plan for all the schools in the district. We have five elementary schools (PK-6); one middle school (7-8) and one high school (9-12).

## TECHNOLOGY INVENTORY SECTION

**District Summary**
**Three-Year Educational Technology Plan**

# Inventory Table

The table below may be used to describe the district, nonpublic or charter school's technology inventory used to improve student academic achievement. The use of this table is optional and is provided as a convenience.

| Three-Year Educational Technology Plan Inventory Table | | | |
|---|---|---|---|
| **Area of Need** | **Anticipated Inventory 2016-2017** | **Anticipated Inventory 2017-2018** | **Anticipated Inventory 2018-2019** |
| Technology Equipment including assistive technologies | Desktop Computers: 1,926<br>Laptop Computers:2,082<br>Wireless Tablet Devices:155<br>Smartboards: 332<br>Presentation Projectors: 17<br>Printers: 330<br>Senteo Systems: 20<br>Document Cameras: 175<br>1:1 ratio of iPads for special needs students; | Desktop Computers: 1,500<br>Laptop Computers: 2582<br>Wireless Tablet Devices 200<br>Smartboards: 350<br>Projectors: 17<br>Printers: 300<br>Senteo Systems: 25<br>Document Cameras: 175<br>For special needs students – 1:1 iPads ratio | Desktop Computers: 1,500<br>Laptop Computers:2882<br>Wireless Tablet Devices: 200<br>Smartboards: 350<br>Projectors: 17<br>Printers: 250<br>Senteo Systems: 25<br>Document Cameras: 175<br>For special needs students – 1:1 iPads ratio |
| Networking Capacity | -WAN: 10Gb private fiber; LAN: 1Gb fiber backbone; the district provides VoIP telecommunication and data technology services to seven school buildings. On the telecommunications side, the system currently supports 225 IP phone lines, There are approximately 20 POTS lines for auxiliary uses. There are approximately 15 cell phones used in the district. On the data side, there are 20 physical servers and 23 virtual | -WAN: 10Gb private fiber; LAN: 1Gb fiber backbone; the district provides VoIP telecommunication and data technology services to seven school buildings. On the telecommunications side, the system currently supports 225 IP phone lines, There are approximately 20 POTS lines for auxiliary uses. There are approximately 15 cell phones used in the district. On the data side, there are 20 physical servers and 23 virtual | -WAN: 10Gb private fiber; LAN: 1Gb fiber backbone; the district provides VoIP telecommunication and data technology services to seven school buildings. On the telecommunications side, the system currently supports 225 IP phone lines, There are approximately 20 POTS lines for auxiliary uses. There are approximately 15 cell phones used in the district. On the data side, there are 20 physical servers and 23 virtual |

| | | | |
|---|---|---|---|
| | servers; 5 Networked-attached Storage devices (NAS); 10 routers,105 network switches, 24 strands of 10 GB fiber for the WAN, a 1GB Internet Fiber line from the ISP. Wireless access points create an enterprise, full-coverage, wireless network; 62 battery backup units; 2 data center routers; 3 VPN routers; 1 firewall; 1 web content filter. | servers; 5 Networked-attached Storage devices (NAS); 10 routers,105 network switches, 24 strands of 10 GB fiber for the WAN, a 1GB Internet Fiber line from the ISP. Wireless access points create an enterprise, full-coverage, wireless network; 62 battery backup units; 2 data center routers; 3 VPN routers; 1 firewall; 1 web content filter. | servers; 5 Networked-attached Storage devices (NAS); 10 routers,105 network switches, 24 strands of 10 GB fiber for the WAN, a 1GB Internet Fiber line from the ISP. Wireless access points create an enterprise, full-coverage, wireless network; 62 battery backup units; 2 data center routers; 3 VPN routers; 1 firewall; 1 web content filter. |
| Filtering Method | Content Filtering: TrustWave Appliance w/software; Google email filtering | Content Filtering: TrustWave Appliance w/software; Google email filtering | Content Filtering: TrustWave Appliance w/software; Google email filtering |
| Software used for curricular support and filtering | Content Filtering: TrustWave Appliance w/software<br>Curricular Support: Microsoft Office Professional, Kid Pix, Printshop, Holt textbook software, Quia, Starry Night,<br>Achieve 3000<br>CatchUp Math<br>Carnegie Learning<br>Brain Pop<br>Starfall<br>National Geographic Online<br>Super Teacher Online Worksheets<br>Harcourt Trophies online resources<br>Pearson online resources<br>Voyager Learning VPort system;<br>Defined Stem; Fusion Science online<br>Interactive Science; | Content Filtering: TrustWave Appliance w/software<br>Curricular Support: Microsoft Office Professional, Kid Pix, Printshop, Holt textbook software, Quia, Starry Night,<br>Achieve 3000<br>CatchUp Math<br>Carnegie Learning<br>Brain Pop<br>Starfall<br>National Geographic Online<br>Super Teacher Online Worksheets<br>Harcourt Trophies online resources<br>Pearson online resources<br>Voyager Learning VPort system;<br>Defined Stem; Fusion Science online<br>Interactive Science; | Content Filtering: TrustWave Appliance w/software<br>Curricular Support: Microsoft Office Professional, Kid Pix, Printshop, Holt textbook software, Quia, Starry Night,<br>Achieve 3000<br>CatchUp Math<br>Carnegie Learning<br>Brain Pop<br>Starfall<br>National Geographic Online<br>Super Teacher Online Worksheets<br>Harcourt Trophies online resources<br>Pearson online resources<br>Voyager Learning VPort system;<br>Defined Stem; Fusion Science online<br>Interactive Science; |

| | | | |
|---|---|---|---|
| | Test preparation software for standardized tests, writing software, science lab simulation software, Quark, Photoshop, Creative Suite,. The K-3 elementary grades use a variety of learning software packages which are age and topic appropriate; FitnessGram; Edmentum; TurnItIn; ST Math; Learning.Com; Teaching Strategies GOLD; Naviance; Learning A-Z; Think Central: Math and Science; KUTA Software; Connect Ed; my.hrw.com; Holt Online Essay Scoring; Scholastic New/Storyworks/Storyworks Jr.; cclearninghub.org; | Test preparation software for standardized tests, writing software, science lab simulation software, Quark, Photoshop, Creative Suite,. The K-3 elementary grades use a variety of learning software packages which are age and topic appropriate; FitnessGram; Edmentum; TurnItIn; ST Math; Learning.Com; Teaching Strategies GOLD; Naviance; Learning A-Z; Think Central: Math and Science; KUTA Software; Connect Ed; my.hrw.com; Holt Online Essay Scoring; Scholastic New/Storyworks/Storyworks Jr.; cclearninghub.org; | Test preparation software for standardized tests, writing software, science lab simulation software, Quark, Photoshop, Creative Suite,. The K-3 elementary grades use a variety of learning software packages which are age and topic appropriate; FitnessGram; Edmentum; TurnItIn; ST Math; Learning.Com; Teaching Strategies GOLD; Naviance; Learning A-Z; Think Central: Math and Science; KUTA Software; Connect Ed; my.hrw.com; Holt Online Essay Scoring; Scholastic New/Storyworks/Storyworks Jr.; cclearninghub.org; |
| Technical Support and maintenance | - In-house Technology Support staff.<br>- In-house Network Engineer.<br>- SIS desktop support<br>- Print Press software and hardware maintenance<br>- Internet Integration Support from ISP<br>- Web-Based E-mail Support | - In-house Technology Support staff.<br>- In-house Network Engineer.<br>- SIS desktop support<br>- Print Press software and hardware maintenance<br>- Internet Integration Support from ISP<br>- Web-Based E-mail Support | - In-house Technology Support staff.<br>- In-house Network Engineer.<br>- SIS desktop support<br>- Print Press software and hardware maintenance<br>- Internet Integration Support from ISP<br>- Web-Based E-mail Support |
| Telecommunications equipment and services | -<br>Avaya VoIP System With 4 PRI lines | -<br>-Avaya VoIP System With 4 PRI lines | -<br>-Avaya VoIP System with 4 PRI lines<br>- |
| Other Services: | - OnSSI Netguard EVS Video Surveillance w/central server | - OnSSI Netguard EVS Video Surveillance w/central server | - OnSSI Netguard EVS Video Surveillance w/central server |

# NEEDS ASSESSMENT SECTION

## Current practices of Educators integrating technology across the curriculum

Our staff currently integrates technology across the curriculum in a comprehensive mixed environment. We have at least one computer in every classroom with the standard productivity software, Microsoft Office Professional, which provides word processing, spreadsheets, database access, presentation software, etc. Depending on the grade level, additional software is available through packages such as Printshop and Kid Pix. Each school has a lab available for teachers to send their students for work as a class. Additionally, each teacher may use a mobile laptop on a roll cart in their classroom. SmartBoards are available for use throughout the building. Most classrooms have a mounted SmartBoard and projector. All the media centers have a lab and SmartBoard. This hybrid approach allows the teacher to select the most practical and beneficial method when integrating technology. We expect to provide more laptops/netbooks/tablets, carts and Smartboards over the next three years. Another important aspect of the use of technology is the anticipated implementation of web-based Class pages for every teacher. Teachers will prepare their lesson plans on-line and the pertinent information can be posted to their classpage for viewing by the students and parents. A future expansion of this use of technology and communication will be to provide grades and report cards online to students and parents via a secure web interface.

## Summary of educators' proficiency in the use of technology within the district

A survey was conducted regarding our teachers and media personnel on Technology-Related Skills and the results indicated that 72% have average to above average skills in the use of technology in the classrooms; 28% were rated as expert.

## Educators have access to technology enabling technology integration across the curriculum

The staff is polled throughout the year and the principals, in conjunction with the Director of Technology and the Supervisor of Federal Funds, work together to provide the needed technology equipment in the schools. Special care is given to provide equity throughout the district. All schools have internet access in every classroom, computer labs with internet access, content software that is grade level appropriate, test preparation software as needed, cameras, laptops, document cameras, tablet PCs, projectors and SmartBoards are available for specific uses, as needed. Implementing wireless internet access has enabled the increased use of wireless devices by teachers and students, as they use mobile labs, laptops, tablets and other wireless equipment.

## Students have access to technology in their learning environment

Students have access to the computer(s) in their classrooms, libraries and computer labs. Many classrooms have the use of presentation software, projectors, cameras and Smartboards. Implementing wireless internet access has enabled the increased use of wireless devices by teachers and students, as they use mobile labs, laptops, tablets and other wireless equipment.

## The needs of educators are evaluated

Each school has a media specialist or technology teacher that functions as a technology resource in the school building. Staff members as well as the administration in the building may utilize this person as a resource for requesting instruction on how to use equipment. Staff members report equipment needing repair and requests new equipment to the building principal or the district's HelpDesk. The district tech support is used to resolve

issues/needs as soon as possible. The staff is polled throughout the year to determine their needs. The principal is in communication with the Federal Title Funds Supervisor the Technology Director to try and satisfy established needs and to plan for the following year. Each school principal has created a local school technology committee, comprised of teachers in the building, to advise them on all current and future needs. Some of the committees may also include parents and students.

### The needs of students are evaluated

The teachers are polled throughout the year to determine the needs of the students. The curriculum supervisors works with the building principals to address any areas that are reported as needing improvement based on standardized tests results. Remediation strategies are developed to address the areas needing improvement.

### Professional development addressed the educators' needs for technology integration

After school courses, usually six weeks in duration, one day a week, are offered during the year for staff desiring to improve their skills in technology integration. These programs are offered by the district and the presenters are instructors from the district. Course guides were submitted to the curriculum supervisors for approval and the Federal Title Funds Supervisor. Some of the programs (courses/workshops) offered included: Use of the Apple and Windows-based computers; Use of SmartBoards in the classroom; Use of Digital Cameras; Test Analysis; and Follett Destiny Software-Media Specialists.

Several key elements of previous professional development that will continue to be incorporated into ongoing professional development includes: Vertical Articulation has become a regular in-service program. The collaboration that takes place at these in-services is and will continue to be valuable. Also, technology is always a focus of professional development opportunities in our buildings and at district level. Finally, suicide prevention and gang awareness is included in the in-service sessions. This is also presented to the students. Vertical articulation opens up the line of communication so that we can begin to work as a learning community. The insight gained on both sides helps teachers to better understand what our students need; whether it be in the form of the information to be taught or simply the sharing of best practices. Technology is an ever growing force in today's workplace; therefore, this should also be true in the classroom. By learning how to use technology our teachers can use it in the classroom to enhance lessons and develop an appreciation of technology with the students.

A common professional development classroom, located in our Board Office building, is used for much of our PD sessions. By providing opportunities of collaborating and sharing best practices we hope to increase efficiency and student learning.

### Professional development for administrators was provided for the effective use of technology

Training sessions for each administrator are provided to demonstrate how technology can be used as a personal productivity device, to improve the delivery of instruction and how learning can take place in a lab environment. The district's own media specialists and selected teachers demonstrate the use of technology in their areas. The district strongly encourages the integration of technology in the learning process and this is fully supported and encouraged by the Superintendent, central office and the principals.

### Supports were provided for educators other than professional development,

As the district moves to integrate technology in new ways, many administrative tasks, previously completed manually by the office staff members, were automated and are now completed via a web interface software solution. Training sessions were completed to ensure that all office personnel were able to complete the necessary tasks.

### Professional development needs and barriers relating to using educational technology as part of instruction have been identified.

A survey of educational technology was completed by all staff members, including administrators and the following needs have been identified: 17% would like PD on how to integrate the use of Smartboards into a lesson; 15% would like PD on developing presentations such as PowerPoint; 14% would like PD on creating and posting web pages. Barriers identified through a teacher/administrator survey included a) funds allocated in budget for technology; b) limited technology support staff; c) technology specialists only available part of the time in the school; d) need for additional computers, cameras, smartboards, projectors; e) improved wiring.

### Technology support across all curricular areas

The district needs to provide additional and timely tech support in each building, improved bandwidth and faster computers. New textbooks are ordered that have software developed to work along with the textbook. Most are web-based. Training will be provided to the teachers that will use the software. Test preparation and remediation of skills software will be provided to each school.

### Prioritizing the identified needs

A continual need exists to evaluate and improve the bandwidth speed and reliability of the network and computer equipment – a) replace or improve obsolete computers. b) Improve the tech support skill sets and response times. c) Install textbook related software on all classroom computers. d) Increase the number of SmartBoards and laptops and wireless access availability in each building. e) Provide training to all on the use of available software and technology equipment.

### Use of assistive technologies

The Kearny School District utilizes a variety of assistive technology devices to accommodate the needs of its special education students. Among them are laptops, smartboards, enlarged keyboards for visually impaired students, tablet devices and FM systems for students with auditory defects.

All of our computer labs and classrooms are equipped to accommodate the various software programs in use by special education students. Some of these programs include Word Q, which is designed to assist students with dyslexia and Zoom Text, which is designed to assist students who are visually impaired. Other accommodations are implemented as needed.

## Replacing obsolete equipment

Many of our classroom computers are currently at least five years old. We expect to receive at least five years of service from a computer before considering it obsolete, so we will be replacing the aging desktop and laptop computers soon.

## Implement Cyber Safety

Today's world is marked by increasingly rapid social, political, and technological change—change that is becoming increasingly more difficult to predict. As a consequence, in addition to being academically, socially, and emotionally prepared, students will need to be technologically savvy—understanding how to locate information, determine its relevance, determine its accuracy, and integrate it with other sources. In addition, we must help students to remain vigilant in safeguarding personal information and from accessing inappropriate materials.

We use four levels of filtering methods. Our Internet access is filtered by a software package provided by Trustwave. This permits us to filter websites by category and user level (guest, student, teacher, administrator). The Trustwave package also permits us to filter by words, thus adding a second level of filtering. The third level of filtering is associated with e-mail, provided by Google, which filters spam messages and bad words. All of our filters have local manual overrides, performed at the district level, as needed. The fourth level of filtering involves the use of "social" filtering where the instructors challenge the students to use solid, well-founded values when they are surfing the internet and utilizing e-mail or other forms of electronic communication. Assembly programs are presented that explain the important issues concerning Internet safety, Cyber-bullying, sexting, chat rooms, social networking sites and other areas of concern. Students, parents and teachers are encouraged to use good judgment when using any technology or electronic communication methods.

There is a need to regularly review the effectiveness of the content filtering since there are many work-arounds published on the internet. As needed, our web content filter will be updated and improved to keep up with the technology that enables students to bypass web filtering.

## THREE-YEAR GOALS SECTION

The New Jersey Department of Education adopted the document "Working Toward the Future with Our Children" which contains The Education Technology Plan for New Jersey. **Our district's technology plan supports the New Jersey Education Technology Plan and is consistent with the stated ideas, goals and objectives that follow and are incorporated into and become part of this educational technology plan. The state's Goals and Objectives section will be updated as a revised set of goals is released.**

- Educators will attain the skills and knowledge necessary to effectively use educational technology to assist students to achieve the Core Curriculum Content

- Students, teachers and administrators will have access to educational technology in all learning environments, including classrooms, media centers, schools, and other educational settings such as community centers.

- New Jersey school districts will establish and maintain the technology infrastructure necessary for students and educators to access electronic information and to communicate freely via technology.

We have adapted portions of the goals into our technology plan. As the state prepares updated goals and objectives, we will review the goals and we expect to incorporate them into our 2016–2019 plan.

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***All students, no matter which district or school they attend, will be able to achieve the Core Curriculum Content Standards because they will have unlimited access to people, to a vast array of curriculum and instruction, and to information and ideas -- no matter where they exist.***

-- This Belief Statement is the ultimate goal of all New Jersey Educational Technology programs and grants.

**Goal 1**: Students will attain the educational technology and information literacy skills that will assist them in achieving the Core Curriculum Content Standards and to succeed in the workplace of the 21st century.

**Goal 2**: Educators will attain the skills and knowledge necessary to effectively use educational technology to assist students to achieve the Core Curriculum Content Standards.

**Goal 3**: Students, teachers and administrators will have access to educational technology in all learning environments, including classrooms, media centers, schools, and other educational settings, such as community centers.

**Goal 4**: New Jersey school districts will establish and maintain the technology infrastructure necessary for students and educators to access electronic information and to communicate freely via technology.

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***"Principals and other key school leaders should help teachers and other stakeholders build effective teams by developing new organizational structures and creating a shared vision that focuses on authentic student learning."***

***(Newmann, 1993; Maeroff, 1993).***

***GOAL 1: Students will attain the educational technology and information literacy* skills that will assist them in achieving the Core Curriculum Content Standards and to succeed in the workplace of the 21st century.***

Suggested benchmarks for Goal 1:

1.1 Educational technology will be infused into every school district's curriculum and instructional activities.
1.2 All school districts will adopt curricula that include information literacy and educational technology standards aligned with the Core Curriculum Content Standards and accepted national standards.
1.3 All students will demonstrate proficiency in using educational technology and information literacy skills to enhance learning, increase productivity and promote creativity.
1.4 All students will have equitable and easy access to effective and engaging software, and online resources for content delivery as an integral part of every school curriculum. Content materials will meet universal design standards to assure access for students with disabilities.
1.5 All students will have equitable and easy access to the Internet and other distance learning technology to obtain information and resources from remote locations to collaborate, publish and interact with peers, experts and other audiences.
1.6 All students will use technology tools and applications for solving problems, making informed decisions, and participating in authentic, project-based learning.
1.7 All students will act responsibly and ethically when obtaining and using onsite and online information resources.

*Information literacy refers to the need for information, how to access, evaluate, synthesize and communicate it.

**Local**

**Indicators demonstrated by local school districts to enhance the achievement of Goal 1:**

- Achieve student to multimedia computer ratio of 5:1 or less to provide access where and when it is needed for students and staff.
- Provide high-speed access to Internet for distance learning, communication and research-based activities.
- Develop grade-appropriate curricular processes in conjunction with staff (i.e. technology coordinator, media specialists and teachers) that support technology literacy (the use of word processing, databases, spreadsheets and presentation programs) as essential for all students.
- Encourage administrators participation in the New Jersey Exemplary Leadership Institute for Technology in Education (NJ ELITE) or similar professional development program.

**The following concepts should be included in planning at the curricular levels.**

- Develop a means for ongoing assessment of student progress in the use of technology literacy skills.
- Model and maintain lesson plans demonstrating infusion of technology into daily school activities.
- Apply the appropriate technology tool to the learning experience in all curricular areas.
- Demonstrate mastery of 21st century skills for all students.

➢ ISTE: (http://cnets.iste.org/index2.html)
➢ New Jersey Technological Literacy Standards (Draft 11/02)

- Use technology to evaluate mastery of technology skills in multiple formats and progressively challenging experiences.
- Provide all students with the opportunities to achieve, master and excel by utilizing technology anytime, anyplace.
- Understand Internet safety issues.
- Recognize the ethics involved with using online materials.

- Apply and understand copyright laws.
- Use appropriate search techniques and have the skills to evaluate and ethically use results.
- Produce multimedia projects (PowerPoint, FLASH, HyperStudio etc.) by the end of 8th grade.
- Guide students in developing grade-appropriate products that incorporate the use of technology.

**Demonstrate and assess student progress through activities such as:**

- Student interviews
- Student portfolios
- Observations
- Standards-based scoring guides
- Surveys
- New Jersey Statewide Assessments
- Ongoing performance-based assessments of computer literacy skills.
- Evaluation using AECT (Association for Educational Communications and Technology) and AASL's (American Association of School Librarians) Information Literacy Standards for Student Learning.

Student research, products and presentations demonstrating:

* Efficient information retrieval skills
* Use of materials evaluated for reliability and usefulness

- Improved student attendance
- Improved student retention
- Local Improvement Plan
- Community partnerships
- Local Foundations
- Grants where applicable at federal, state and local levels.

**Perspectives**

**Assessment tools** measure the effectiveness of practices, provide feedback for ongoing planning, and build accountability into the system. Electronic assessment tools — online or locally based -- have the ability to provide timely, efficient results in flexible formats that allow schools and districts to focus on results. Assessment tools can document the current status of students' and teachers' use of technology. The results support further alignment of educational process for students and the development of a shared vision for curricular progress and staff development.

The results also demonstrate current evaluation of the alignment of assessment, standards, curriculum and instruction. Using technology's tools to do assessment provides the ability to develop individual learning plans and statistically view the effectiveness of curriculum processes on an ongoing basis.

Student achievement will be viewed through multiple measures in the school, such as teacher observations, portfolio, class work, assignments and standardized tests.

An annual survey will continue to provide the New Jersey Department of Education with an assessment of technology's use in schools. Current research will assist in developing a method to determine the technology literacy of New Jersey's students and the level of technology implementation in schools.

The New Jersey Department of Education will continue to direct school districts and – in appropriate circumstances – direct schools to implement and update their local technology plans to address core elements of successful school

educational technology activities, including facilities planning, maintenance and equipment upgrades, implementation strategies, staff development, curricula revision, spending and evaluation plans. These technology plans will be submitted to the county-based committees for approval.

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***"When teachers have access to high-quality results-driven, content-specific staff development their students' academic achievement increases."***

***—National Commission on Teaching and America's Future***

**GOAL 2: Educators will attain the skills and knowledge necessary to effectively use educational technology to assist students to achieve the Core Curriculum Content Standards.**

Suggested benchmarks for Goal 2:

2.1 All educators will participate in high-quality professional development activities and attain, at a minimum, intermediate proficiency levels in utilizing educational technology to enhance student achievement.

2.2 All supervision and evaluation practices will address the effective use of educational technology for student achievement of the Core Curriculum Content Standards.

2.3 All educators will use technology tools and applications that provide opportunities for authentic, student-centered, project-based learning.

2.4 All educators will have access to e-mail and other interactive tools to communicate with parents, students and other educators.

2.5 All educators will act responsibly and ethically when obtaining and using onsite and online information resources.

2.6 All schools will have technology coordinators for educators that offer timely, onsite guidance and modeling to enhance teacher and administrator proficiency in using and managing technology-based resources.

**Local**

**Indicators demonstrated by local school districts to enhance the achievement of Goal 2:**

- Lists of available current professional development activities and evaluations of those offered through the district or by approved professional development providers and disseminate to educators through the district to support ongoing, effective and relevant staff development programs.
- On-going performance-based assessment of computer literacy skills.
- District and or school technology plans demonstrating a high-achieving learning environment through technology and professional development plans supported by a technology coordinator or staff member specifically assigned the task of supporting skill development and technology infusion into the curriculum for staff and students.
- Professional Improvement Plans for teachers, media specialists and administrators individualized to develop skills necessary to infuse technology into daily practice.
- Technology inservices -- attendance by all staff.
- Administrators, faculty and staff modeling appropriate use of technology.
- Curriculum guides supporting 21st century workplace skills.
- Lesson plans evidencing infusion of technology into daily curricular activities.
- Certificates for professional development hours.
- Intradistrict certification for achieving core proficiencies developed by ISTE (standards for teachers) and TSSA (standards for administrators).
- Technology coordinators supporting skill development and infusion of technology into curricular processes.
- Observations.
- Classroom-based access to technology for all staff.
- Teacher and administrator mentoring programs dealing with technology skills and/or infusion skills.
- Prescriptive teacher assessments of technology skills (ex. Danielson – Administrative Observer.

- Surveys of teacher needs supporting the development of need-specific professional development to provide the ability of a skill continuum from drill and practice to applications that support authentic, student-centered, project-based learning.
- Teacher evaluation checklists supporting basic technology skill development
- Online evaluations
- Budgetary items expended for staff development.
- Development of a local foundation
- Staff development opportunities and support for all teachers to learn, use, and infuse 21st century skills into their daily processes.

➢ International Society for Technology Education (ISTE): (http://cnets.iste.org/index3.html)
➢ ETTC Technology Proficiency Courses: (http://www.somsd.k12.nj.us/~ettc/webpage.htm)
➢ Educational Information and Resource Center (EIRC) (http://www.eirc.org)

**Perspectives**

**On the national level**, John Bailey, former director of educational technology for the U.S. Department of Education spoke of the importance of the administration in bridging the gap between access and implementation.

*As the country continues moving toward a technology agenda based not just on access to technology but use of technology, leadership becomes pivotal. Technology is just a tool, and as such its value is derived from how it is used. Leaders assign technology its purpose by aligning the appropriate tools with the appropriate goals in order to overcome specific challenges. Without this alignment, technology will simply be another 'add-on' that tinkers around the edges of the classroom, instead of empowering teachers and students.*

*Leadership's challenge to successfully integrate technology with the many levels of education goals and standards might be seen as analogous to a conductor with an orchestra. The conductor relies on well-trained musicians to use the right instruments at the right time in order to make music instead of noise. If we as a nation are going to make 'music' instead of 'noise' from our technology tools, it will require strong leaders who are coordinating the appropriate technology tools with well-trained teachers to solve real educational challenges.*

**On the state level**, recognizing the need for specific organizational strategies to maximize the use of technology in New Jersey schools, the New Jersey Principals' and Supervisors' Association (NJPSA), the New Jersey Association for School Administrators (NJASA) and the New Jersey Department of Education (NJDOE) with the support of the Bill and Melinda Gates Foundation have joined forces to develop the NJ ELITE program. The purpose of this partnership is to establish a series of orientations, institutes, seminars and ongoing support activities dedicated to enhancing principals' and superintendents' technology leadership skills and achieve educational goals and systemic change. (2000-2003)

NJPSA and NJASA will continue to provide leadership-centered events for principals and superintendents and expand to include technology activities. There will be involvement of public and private sector partners to achieve educational goals beyond the grant-funded period.

**On the local level,** administrative leadership is key to effective change. In the document *Lessons Learned: Factors Influencing the Effective Use of Technology for Teaching and Learning, 2001*, it is stated that "the single most important factor affecting the successful integration of technology into schools is leadership". Effective administrators lead by example. Principals are the most visible administrators in the schools and need to use technology effectively in order for teachers to embrace the technology. The schools with great impact have great leaders.

In addition to what exists currently, New Jersey will require that all teachers involved with an educational technology grant program utilize a pre- and post-testing product that will assess the levels of technology implementation and usage in the classroom.

**Professional Development**

All teachers and media specialists must have the ability to use information technologies to enhance and expand teaching and learning. To accomplish this, technology needs to be accessible when and where needed by faculty and students. Training should identify teaching strategies that support the successful integration of technology into the curriculum. Training can be accomplished by activities such as: inservice, co-mentoring, virtual communities of practice, workshops in-person or online and conferences.

Intense professional development means ongoing, sustained training that may include a series of workshops on one topic, in-class mentoring, online mentoring, mentoring in district or within the school, online workshops and courses, and regularly scheduled workshops that directly pertain to recognized needs. Skill development must be reinforced through in-class assistance and support. Additional guidance with lesson plans, teaching strategies, and problem-solving is needed in class. A mentor whether in-class, online or via videoconference, is an individual that will lend support to the classroom teacher. The mentor has expert knowledge with using technology in the classroom and can help teachers informally through one-on-one partnerships. A mentor will provide advice and support to the teacher and might assist in dealing with challenges in the classroom where an outside perspective is helpful.

Teachers will be in a position to gain knowledge on infusing technology and have the opportunity to implement the newly acquired knowledge in the classroom. The students will benefit from the teachers' knowledge and develop their technology literacy skills as the teachers' proficiency skills progress. It is expected that the pattern and the end result will be evident with technology infused into regular curricular processes and higher student academic achievement.

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***"As long as the computers are down the hall and up the stairs to the lab, they are irrelevant to education."***

***–Elliot Soloway***

**GOAL 3: Students, teachers and administrators will have access to educational technology in all learning environments, including classrooms, media centers, schools, and other educational settings such as community centers.**

Suggested benchmarks for Goal 3:

3.1 All students and educators will have regular and equitable access to technology equipment (both desktop and portable) when needed in all learning environments. This includes access to technologies with universal design features or other design modifications that assure access for students with educational disabilities.

3.2 All school districts will provide a ratio of five students or less to one multimedia computer in all instructional classrooms, with each of these classroom computers connected to the Internet.

3.3 All districts, schools and classrooms will be connected to broadband, high-speed voice, video and data networks in all learning environments.

3.4 All schools will have Local Area Networks (a system or network of interconnected computers within a school building), and all districts, where appropriate, will have Wide Area Networks (a network that electronically interconnects multiple school networks -- usually within a school district).

3.5 All districts and schools will have high-quality, highly informative, user-friendly Web sites.

3.6 All educators will have easy access to technical support via a technician and/or electronic assistance that is necessary to maintain operating technology equipment (e.g., help desks, hot lines, electronic monitoring, and troubleshooters).

3.7 All school districts will establish relationships with appropriate partners, including, but not limited to, other public agencies and entities, education institutions, community-based organizations and private corporations to increase opportunities for sustained technology access and broad, collaborative learning environments.

3.8 All districts and schools will identify and support the needs of students who do not have access to technology in their homes to enable them to continue their learning through technology when school is not in session.

3.9 All school districts will adopt an Acceptable Use Policy and other means to ensure that all students, teachers and administrators are able to use technology systems, online resources and software in a safe, ethical and secure manner.

**Local**

**Indicators demonstrated by local school districts to enhance the achievement of Goal 3:**

- Student-to-computer ratio should allow easy access when and where needed by students, administrators and staff.
- Student access to multimedia-capable computers with Internet access in classrooms and media centers.
- Student access to wireless handheld devices.
- Established high speed LANs (Local Area Network).
- Established high speed WANs (Wide Area Network).
- E-mail use.
- Technology-infused lesson plans.
- Productivity software.
- Inventory of hardware and software.
- Monitoring daily access to target technical support.
- Administrative software.
- A safe Internet environment for students to work in.
- Acceptable Use Policies (AUP) for all users.
- Maintenance of records that authorize use of a student's personal information on district- or school-based Web sites. (Bill A592).
- Lists of resources for students and parents through Web-based information, community centers, homework hot lines, teacher e-mail, teacher-developed Web sites and training/workshops provided by various districts.
- Education of administrators, teachers, media specialists and students in the ethical use of computers.

**Perspectives**

**On Access:**

New Jersey's Vision for Educational Technology:

**All students, no matter which district or school they attend, will be able to achieve the Core Curriculum Content Standards because they will have unlimited access to people, to a vast array of curriculum and instruction, and to information and ideas -- no matter where they exist.**

New Jersey's vision focuses on the ability of the student to access technology anywhere, anytime. In aligning locally with this vision, schools should provide additional access for students when feasible, such as before and after school in labs or classrooms, during lunchtime, in the school library or media center, community centers and after-school programs that expand classroom instruction. With technology infused at the school levels comes the responsibility to provide continued access. Partnerships should be investigated to support further access for students and community with limited or no home access when school is not in session.

**On Collaboration:**

Partnerships are advantageous for both the schools and the communities they serve. The relationship is rich in resources and benefits. Community involvement contributes expertise and skills that are needed by the school in order to successfully educate students. The student benefits from the skills and expertise introduced in the school system, which contributes to improvement of the community. The New Jersey Department of Education and local schools and districts should continue to research and facilitate partnerships.

**On Parental Involvement**

New Jersey has already taken steps to assist parents in understanding technology and the relationship to the curriculum.

All schools should strive for parental involvement. Research shows that parental involvement is critical to the successful academic achievement of the child. There are many ways schools can get parents involved in school activities using technology, such as having an active and current Web site that includes informative items for the parents, (e.g. test dates, in-service days, sports schedules, health alerts.)

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***"Substantial change programs do not run themselves. They need active orchestration and coordination."***

***-- Louis and Miles (1990)***

**GOAL 4: New Jersey school districts will establish and maintain the technology infrastructure necessary for students and educators to access electronic information and to communicate freely via technology.**

Suggested benchmarks for Goal 4:

4.1 All school districts will obtain and maintain broadband, high-speed networks and reliable Internet access that enables students and educators to support their curricula activities.
4.2 All school buildings will have the equipment necessary to provide distance learning opportunities when and where it is needed in the school.
4.3 All schools will maintain quality hardware/software with adequate capacity and capability to support successful learning in classrooms, media centers and throughout the learning environment.

**Local**

**Indicators demonstrated by local school districts to enhance the achievement of Goal 4:**

- High-speed connectivity to global and local resources through:

➢ High speed WANs (Wide Area Networks)
➢ High speed LANs (Local Area Networks)—wired or wireless
➢ Multimedia computers

- Current productivity software (administrative, staff and student)
- Lesson Plans.
- Access to e-mail.
- Access to Internet.
- Budget/TCO (Total Cost of Ownership).
- Technical support for both infrastructure and teachers.
- Maintenance plan to keep current infrastructure fully operational.
- Replacement plan for obsolete equipment.
- After-school access through classes, labs and student programs that support and expand classroom instruction.

**Perspectives**

Technology integration is closely tied to the infrastructure in place. In order to have access to technology when and where it is needed, the school must have a high-speed, well-maintained Internet-connected infrastructure, multimedia-capable hardware and software and capacity to use the technology where and when it is needed in the learning environment.

Schools need to plan the development of high-speed voice, video and data networks that offer secure high-speed connectivity throughout the learning environment.

High-speed connectivity is the backbone for most educational technology services. Maintaining this infrastructure and providing technical support are essential. The infrastructure whether wired or wireless, supports the goal of developing a well-rounded student prepared with 21st century skills.

The technology infrastructure must not only address the physical plant's needs but also the needs of a secure system. A secure system maintained by skilled technical staff would include such items as:

- Emergency data retrieval tools supporting the educational technology network.
- Regularly scheduled backup of all data stored off site.

A firewall or other suitable means of security in place to protect against unwarranted intrusion into system.

# THREE YEAR IMPLEMENTATION AND STRATEGIES SECTION

**District Level**
**Three-Year Educational Technology Plan Checklist**

## Three-Year Implementation Activity Table

Strategies and activities that relate to the district school's goals and objectives

| Three-Year Technology Implementation Activity Table | | | | |
|---|---|---|---|---|
| **District Goal and Objective** | **Strategy/Activity** | **Timeline** | **Person Responsible** | **Documentation** |
| 1.1 | Educational technology will be infused into every school district's curriculum and instructional activities | 2016-2017; then ongoing | Director of Curriculum and Instruction | Course guides, mapping modules, lesson plans |
| 1.2 | All school districts will adopt curricula that include information literacy and educational technology standards aligned with the Core Curriculum Content Standards and accepted national standards. | 2016-2019 | Director of Curriculum and Instruction; Superintendent of Schools | Mapping, course guides, lesson plans |
| 1.3 | All students will demonstrate proficiency in using educational technology and information literacy skills to enhance learning, increase productivity and promote creativity | 2016-2019 | Principals, Director of Curriculum and Instruction | Portfolios, Test Scores |
| 1.4 | All students will have equitable and easy access to effective and engaging software and online resources for content delivery as an integral part of every school curriculum. Content materials will meet universal design standards to assure access for students with disabilities, including assistive technology as needed. | 2017-2019 | Director of Curriculum and Instruction; Director of Special Services | Appropriate Web design rules and guidelines followed |
| 1.5 | All students will have equitable and easy access to the Internet and other distance learning technology to obtain information and resources from remote locations to collaborate, publish and interact with peers, experts and other audiences | 2016-2019 | Director of Technology; Principals | All classrooms, library and labs have working computers and Internet access. |
| 1.6 | All students will use technology tools and applications for solving problems, making informed decisions, and participating in authentic, project-based learning | 2016-2019 | Director of Technology; Principals | All classrooms, library and labs have working computers and Internet access. |

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|---|---|---|---|---|
| 1.7 | All students will act responsibly and ethically when obtaining and using onsite and online information resources | 2016-2019 | Principals; Director of Technology | Content Filtering in place for all electronic communications and Internet uses. |
| 2.1 | All educators will participate in high-quality professional development activities and attain, at a minimum, intermediate proficiency levels in utilizing educational technology to enhance student achievement | 2016-2017, 2017-2019 | Professional Development Chairperson, Supervisor of Federal Funds, Director of Curriculum and Instruction | InService Programs offered and attendance required |
| 2.2 | All supervision and evaluation practices will address the effective use of educational technology for student achievement of the Core Curriculum Content Standards | 2016-2019 | Principals, Asst Principals, Director of Curriculum and Instruction | Procedures established and evaluation forms completed |
| 2.3 | All educators will use technology tools and applications that provide opportunities for authentic, student-centered, project-based learning | 2016-2019 | Principals and Instructional Supervisors | Observations and surveys |
| 2.4 | All educators will have access to e-mail and other interactive tools to communicate with parents, students and other educators | 2016-2019 | Director of Technology | Stat usage reports |
| 2.5 | All educators will act responsibly and ethically when obtaining and using onsite and online information resources | 2016-2019 | Principals, Asst Principals | AUP Consent policy |
| 2.6 | All schools will have technology coordinators for educators that offer timely, onsite guidance and modeling to enhance teacher and administrator proficiency in using and managing technology-based resources | 2016-2019 | Principals, Director of Technology, Superintendent of Schools | Positions created and filled |
| 3.1 | All students and educators will have regular and equitable access to technology equipment (both desktop and portable) when needed in all learning environments. This includes access to technologies with universal design features or other design modifications that assure access for students with educational disabilities | 2016-2019 | Director of Technology; Director of Special Services | Inventory and feedback from students, teachers |
| 3.3 | All districts, schools and classrooms will be connected to broadband, high-speed voice, video and data networks in all learning environments | 2016-2019 | Director of Technology | Inventory |
| 3.4 | All schools will have Local Area Networks (a system or network of interconnected computers within a school building), and all districts, where appropriate, will have Wide Area Networks (a network that electronically interconnects multiple school networks -- usually within a school district). A VoIP | 2016-2019 | Director of Technology; Director of Facilities | Inventory |

| | | | | |
|---|---|---|---|---|
| | telephone and data system will be available for all communication needs. | | | |
| 3.5 | All districts and schools will have high-quality, highly informative, user-friendly Web sites | 2016-2019 | Superintendent; Webmaster | Evidence of Website |
| 3.6 | All educators will have easy access to technical support via a technician and/or electronic assistance that is necessary to maintain operating technology equipment (e.g., help desks, hot lines, electronic monitoring, and troubleshooters) | 2016-2019 | Director of Technology | Tech Support Staff headcount |
| 3.7 | All school districts will establish relationships with appropriate partners, including, but not limited to, other public agencies and entities, education institutions, community-based organizations and private corporations to increase opportunities for sustained technology access and broad, collaborative learning environments | 2016-2019 | Superintendent; Principals | Relationships established |
| 3.8 | All districts and schools will identify and support the needs of students who do not have access to technology in their homes to enable them to continue their learning through technology when school is not in session | 2016-2019 | Superintendent; Public Library Director; Principals | Availability of after hours use of school labs, libraries and public libraries |
| 3.9 | All school districts will adopt an Acceptable Use Policy and other means to ensure that all students, teachers and administrators are able to use technology systems, online resources and software in a safe, ethical and secure manner. | 2016-2019 | Superintendent; Principals | Policy forms posted on website and in Parent and Student handbooks |
| 4.1 | All school districts will obtain and maintain broadband, high-speed networks and reliable Internet access that enables students and educators to support their curricula activities. | 2016-2019 | Director of Technology | Inventory |
| 4.2 | All school buildings will have the equipment necessary to provide distance learning opportunities when and where it is needed in the school. | 2016-2019 | Director of Technology | Inventory |
| 4.3 | All schools will maintain quality hardware/software with adequate capacity and capability to support successful learning in classrooms, media centers and throughout the learning environment. | 2016-2019 | Superintendent, Director of Technology, Principals | Inventory, Surveys |
| 4.4 | Each school will be prepared to implement the administration of the PARCC testing preparation. | 2016-2019 | Director of Technology; Directors of Curriculum and Special Services and Supervisor of Federal Funds; Principals | Completion of test site classrooms with sufficient electric, network drops, bandwidth, and computers. |

## PROFESSIONAL DEVELOPMENT STRATEGIES SECTION

**District Level**
**Three-Year Educational Technology Plan Checklist**

# Professional Development Table

Professional development detail is needed for the first school year of the educational technology plan. The use of this table is optional and is provided as a convenience.

| Educators' Proficiency/ Identified Need | Ongoing, sustained, high-quality professional development planned | Support |
|---|---|---|
| Aides will identify and provide appropriate assistance for special needs students. | State certification topics covered for certification of aides | . On-going support provided through small group training, PLCs, and special services director. |
| Common Core State Math and English Language Arts Standards, continued development in elementary, middle and high school implementation | Achieve 3000 training will provide intensive common core training in the implementation of the Math and English Language Arts Standards across the curriculum to turn-key trainers from all district schools. | Teachers will be provided release time through grade level and subject area PLCs and will continue to be supported by building Common Core Specialists as well as building administrations and curriculum directors. |
| Remedial instruction in Mathematics and English Language Arts at the high school, as well as blended learning for home instruction and classroom use. | Training of key leaders in the Edmentum blended learning program to provide assistance to those teachers addressing remedial instruction and home instruction. | Supervisors and key trainers will be available to provide support to those teachers implementing the program. |
| Identify student reading levels and literacy skills in order to increase student achievement in English Language Arts literacy in primary and elementary grades. | Training of all primary teachers in the use of a program to be determined for use in grades K-2.<br>Continued training for teachers in 3-8 on the Achieve 3000 program. | On-going support provided through grade level PLCs, curriculum director and early childhood coach. |
| Increase teacher knowledge and understanding of the domains evaluated in the new teacher evaluation system (Danielson-Administrative Observer). | District wide online training in inter-rater reliability.<br>Completion of explorations and case studies with immediate feedback and the ability to collaborate with colleagues in order to effectively implement the Danielson-Administrative Observer model. | On-going professional development through building level meetings and PLCs with support from teacher leaders, administration and the School Improvement Panel and teacher coaches. |
| Prepare for implementation of PARCC assessment | Train teachers in the use of online assessments for the collection of data to inform instruction and increase student achievement | Support from curriculum director, building administrators and supervisors in the use of online assessments and data management. |

| | | |
|---|---|---|
| Continued training in the Genesis Student Data Management System and Performance Pathways | Building facilitators provide hands on training on an as needed basis in the areas of lesson-planning, gradebook and other student related functions of the program. | Support from facilitators, directors of technology and curriculum, and Genesis specialists. |
| Continued training in the IEP Direct Student Data System | Child Study Team facilitators provide hands on training on an as needed basis in the areas of processing and developing IEP plans and other student related functions of the program. | Support from CST facilitators, director of special services, and IEP Direct specialists. |

A school teacher in the district, appointed annually, is chairperson of the Professional Development Committee and works closely with the curriculum directors as they guide and direct the activities of the PD Committee. This PD committee is comprised of faculty members, curriculum directors, other administrators and central office personnel.

Teachers and library media personnel have access to educational technology in their instructional areas. Inservice sessions will be provided for all teachers and media center personnel on integrating technology in their learning environments. Additional topics for PD will include the use of online lesson plans, class pages, content related software, use of formative assessment and Google docs.

Each administrator has an Internet-ready desktop computer in their office and a laptop tablet PC. Several administrators use mobile devices and all administrators have a wireless netbook with webcam capabilities allowing video teleconferencing as needed.

Technical staff receives training on an on-going basis. Senior members teach, by example the junior members. Additionally, outside vendors are brought in to present to the technical staff members. On-line sessions are available and certifications are achieved through on-line testing.

To become proficient on the application of assistive technologies to support students in their learning, staff members are enrolled in workshops, trade shows etc. at the district's expense regarding assistive technology. Flyers, pamphlets and information regarding such workshops are distributed to the staff. Those who attend then turnkey the information to the other staff members. Professional development sessions are set up as needed.

Professional Development opportunities will be provided by the Kearny School District Professional Development Committee and the district.

## EVALUATION PLAN SECTION

**District Level**
**Three-Year Educational Technology Plan Checklist**

# Evaluation Plan Table

| Educational Technology Plan Evaluation Narrative | |
|---|---|
| **Describe the process to regularly evaluate how...** | |
| a. *Telecommunication services, hardware, software and other services are improving education.* | D. Bandwidth capacity is evaluated regularly and additional bandwidth is added as the need indicates. It is evaluated throughout the year for performance. A system has been selected that will allow the bandwidth to be increased as needed. Additional funds will need to be allocated each year to provide the additional bandwidth capacity. Network equipment to accommodate the increased demand for speed will be installed, as needed. Many of the educational tools are web based and reliable and speedy Internet access is required. The district uses an IP phone system with integrated voicemail and email. This has improved communication between all areas within the district and with parents. This system is analyzed on a regular basis, and improvements are added as needed. Our telecommunications maintenance is supported by and maintained by contracts with Johnston Communications and Avaya.<br><br>We currently have a VoIP phone installation. Our first level of support is our in-house staff certified VoIP engineer. |
| b. *Effective integration of technology is enabling students to meet challenging state academic standards.* | In order to enable students to meet challenging state academic standards, the use of technology to deliver individualized and differentiated instruction is used throughout all grade levels. Mobile labs are utilized to provide access to computers in classrooms as well as formal computer labs in each building. Teachers receive professional development to become proficient in understanding the data produced through the programs used by the students. |
| c. *The LEA is meeting the identified goals in the educational technology plan.* | Each school has a team of teachers working with the building administration to determine the technology needs for the students and teachers. The information gathered during these working sessions is communicated to the Directors of Technology, Curriculum, Special Services, Supervisor of Federal Funds, and Central Office. Every |

| | |
|---|---|
| | attempt is made to keep every classroom equipped with the needed resources to implement the educational technology plan. |

The evaluation process that enables the progress and effectiveness of goals to be monitored includes the regular use of walk-through evaluations, discussion and focus groups designed around PLCs that address these issues. Test scores and data-driven analysis will be done to determine progress or identified limitations. Professional Development sessions will be conducted as needed. Teachers will be surveyed to help identify recognized needs.

The educational leaders in the district will constantly be exploring and addressing new technologies and teaching styles and then recommending and implementing the new ideas when and where appropriate. Input from students, parents, teachers, administrators and directors will be evaluated and considered. This is done throughout the year. Student progress will play an important role in helping determine what strategies are effective.

The administrators in the district have direct contact with the faculty to communicate goals and objectives. The high school has additional support and oversight with the departmental chairpersons in each discipline and communicates with faculty members on a weekly basis. In turn, the faculty is directly involved and an integral part of the continual process of monitoring, evaluating and adjusting curriculum. Each school has an established Instructional Technology Committee comprised of the principal and teachers. This committee meets regularly to discuss and recommend the needs of the teachers and students. The district Director of Technology uses this valuable input to determine the needs of the classrooms and schools. Software purchases are evaluated by a software review committee comprised of the Curriculum Directors and master teachers. This organizational structure allows for the effectiveness in several areas.

It is useful for integrating technology into curricula and instruction to promote 21st century skills, global collaboration and outreach by enhancing programs with the use of the internet and having the students experience various software applications by infusing it into their assignments and projects. Software selection is relevant to the established needs.

It is also useful for enabling students to meet challenging state academic standards and by students meeting their individual academic potential and skill level. Use of software and technology is based on student need and is designed to assist the student in improving their skills in the appropriate content area. Also, the course offerings and counseling services allow for personal goals to be achieved.

Developing life-long learning skills by the mapping of curricula as well as the blending of departmental and school benchmarks, students are afforded the advantage of extra-curricular activities, intern and externships and community relationships to build career opportunities.

## FUNDING PLAN (July 2017 – June 2018) SECTION

**District/Nonpublic School/ Charter School**
**Three-Year Educational Technology Plan Checklist**

# Funding Plan Table

Complete this table to indicate the funding source of anticipated costs of technologies to ensure that students have access to technology. The use of this table is optional and is provided as a convenience.

| | Three-Year Educational Technology Plan Anticipated Funding Table (First Year) | | | | |
|---|---|---|---|---|---|
| **ITEM** | **DESCRIPTION OF ITEM TO BE PURCHASED** | **FEDERAL FUNDING** | **STATE FUNDING** | **LOCAL FUNDING** | **MISC. (e.g. Donations, Grants)** |
| Digital curricula | Anticipated spending for 2016-2017, includes subscriptions to, Achieve 3000, Word Q, Zoom Text, and other similar packages as well as creating and maintaining an appropriately designed website.<br><br>All of our computer labs and classrooms are equipped to accommodate the various software programs in use by special education students. Some of these programs include Word Q which is designed to assist students with dyslexia and Zoom Text which is designed to assist students who are visually impaired. Other accommodations are implemented as needed. | **20K** | **7K** | **225K** | |
| Print media needed to achieve goals | Printing includes three areas: a) copiers b) networked and stand-alone | | | **70K** | |

| | | | | | |
|---|---|---|---|---|---|
| | printers c) Desktop Publishing | | | | |
| Technology Equipment | Our technology equipment needs for the next three years includes replacing obsolete computers, printers and other equipment as they approach end-of-life. We also need to include additional smartboards, projectors, scanners, document cameras and other peripherals that enhance the curriculum and educational process.<br><br>Classroom computers, laptop computers, tablet devices, electronic readers, printers, smartboards, projectors, document cameras, response systems | | **20K** | **56K** | |
| Network | Our networking capacity completed a major overhaul and we expect the additional wireless infrastructure to be completed by the summer of 2017. All network closets have been upgraded to include high-speed connectivity. We will also be incorporating a wireless controller to coordinate, monitor and secure all the wireless hotspots in the district. A consolidated, district-level virtual server environment has been implemented. A video security system was installed covering designated locations in all school buildings. A district-wide unified VoiP communications system was installed, replacing our outdated centrix phone system. Increased tech | | **9K** | **21K** | |

| | | | | | |
|---|---|---|---|---|---|
| | support for the classrooms and administration will be added as needed. Ongoing training will be provided for teachers and administrators to ensure effective use of technology in the classrooms.<br>Wireless access points, switches, cabling, WAN fiber connectivity, LAN connectivity | | | | |
| Capacity | 1 GB fiber Comcast Internet provider | | **12K** | **30K** | |
| Filtering | Trustwave Filtering, Google email filtering | | **1.8K** | **4.2K** | |
| Software | Subscriptions to fee-based web programs, SIS software, antivirus software | **20K** | **2.4K** | **5.6K** | |
| Maintenance | We have an in-house staff that maintains our equipment and the functionality of software. We also have annual contracts with outside vendors to support our network infrastructure and networking equipment, our servers, and all critical applications.<br><br>We have an excellent technology support staff that is highly skilled and certified on Cisco, Dell, Apple and other products. Our first level of support is in-house. We also maintain on-going contracts on all critical networking equipment and servers. Our computers and printers are covered by at least three years of service contracts. We replace equipment that is no longer providing adequate service. Most computers are in service for 7-8 years before they are | | **4.5K** | **30.5K** | |

| | | | | | |
|---|---|---|---|---|---|
| | taken out of service. The extended length of service is possible due to the care and use by the students and faculty and the excellent support and repair skills of the tech staff.<br><br>Annual contract support for data center equipment, servers and network equipment | | | | |
| Upgrades | Equipment, software and other technology-related tools are constantly under review for functionality and operability. Every effort is made to keep equipment functioning properly for as long as possible. Computers, printers and other equipment is repaired immediately or replaced if a repair is not possible. We will replace computers at least every five years. Computers will be replaced sooner if they become functionally obsolete - meaning that they will not run the software needed. Computers may be left an additional year if they are performing well and are able to run the required software packages. We do not replace on a strict cycle. As technology changes, we are committed to adjust to the new demands and requirements. Upgrade costs will be addressed in the renewal fees of purchased subscriptions | **10K** | **2K** | **36K** | |
| Policy and Plans | Our in-house tech-support staff provides technical | | | **3K** | |

| | | | | | |
|---|---|---|---|---|---|
| | support at the first level and we offer sessions for additional support and training as needed. The second level support utilizes third party support for software uses as well as hardware. For areas such as use of laptops and smartboards and the like, we use in-service times, after school sessions and third party trainers. Whenever possible, we encourage the use of the turn-key training model.<br><br>As the district's use of technology increases, we will provide the necessary support staff to provide timely and effective solutions. This may require increasing the availability of support staff by improving part-time workers to full-time or increasing the number of part-time workers. | | | | |
| Other services | This plan will be reviewed, evaluated and modified, as needed, on a regular basis, to ensure that our district is providing the best possible teaching and learning environment for our students, teachers and community. The Kearny School District utilizes a variety of assistive technology devices to accommodate the needs of its special education students. Among them are laptops, smart boards, enlarged key boards for visually impaired students and FM systems for students | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | with auditory defects.<br><br>We look first to in-house staff resources to provide tech support for any area needing attention. We have provided funding to contract out any needs that arise to support our systems, instruction and implementation projects.<br><br>We will continue using On-line Lesson Plans for September 2017. Training will be provided by the vendor and/or turn-key by our own staff. This will include web pages for teachers, Web-based e-mail by Google; class pages and the website are provided by eChalk. These products integrate email services, class pages, and web sites. Genesis is used for attendance, grade reporting and NJDOE State reporting under the same vendor and Lesson Plans | | | | |
| Firewall and Web Filtering – Utilizing E-Rate Funding | Replace current firewall with new technology that improves protection against cyberattacks and web filtering bypasses | **225k** | | **45K** | |
| Infrastructure Switches and Wireless Access Points | Replace end of life equipment as needed – Utilizing E-Rate Funding | **190K** | | **38K** | |
| | . | | | | |

# Appendix A

## Technology Plan Components Checklist

***APPENDIX A***

# Technology Plan components CHECKLIST

- If the Future Ready District Level summary report was generated within the past year school year, include a copy of the district report with the Plan submission.
- If the NJTRAx Digital Learning Surveys summary report was generated, include a copy for all identified schools.

**This form may be used to ensure all components are addressed in the submitted document for review. Please address the areas below for each school that will be the focus for digital learning transformation over the next three years in the technology plan.**

**County/District Code:**
**School /Charter School/Renaissance School (SCHOOL NAME):**
**NJTRAx PARCC Technology Readiness Rating:**
**NJTRAx Digital Learning Readiness Rating:**

| STEP | | YES | NO |
|---|---|---|---|
| 1. | The District-level vision is included in the School-based Plan. | Pg 10 | |
| 2. | NJTRAx technology readiness system for this school was updated. | Appdx C | |
| 3. | NJTRAx Digital Learning surveys for this school was completed, if applicable. | Appdx D | |
| 4. | School-based S.M.A.R.T. Goals, Strategies, Objectives and Indicators that evaluate the completion and success of the goal(s), strategies, and objectives are included for this school. | Pgs 22-30 | |
| 5. | The action plan identifies the person(s) responsible for ensuring goals, strategies and objectives are completed within the specified time frames. | Pgs 31-33 | |
| 6. | The submitted plan addresses the task of reflecting on the results of the activities, and adjusting the plan accordingly for this school at targeted time intervals. | Pgs 37-38 | |
| 7. | A budget is included that supports the activity plan. | Pgs 39-44 | |
| 8. | The plan for digital learning through the infusion of technology | | |

| | | | |
|---|---|---|---|
| | within instruction and/or the curriculum is clearly understood in this school. | Pgs 18-21 | |
| 9. | The signed STAKEHOLDER ASSURANCE is included. | Pgs 6-7 | |

# Appendix B

## Acceptable Use Policy

# 2360 USE OF TECHNOLOGY

The Board of Education recognizes the use of technology in the educational process is an essential part of the schooling experience. Technology is to be viewed as a resource to enhance the learning process among other resources available to teachers and pupils. In addition, technology can be used to enhance the administration of the schools and the district. In order to provide direction and meaning to the use of technology as an instructional resource, the Board encourages and supports staff use of technology as a component of the learning process.

For purposes of this policy "technology" includes, but is not limited to, the use of computers and computer peripherals, communications networks, access to databases and libraries of information and the integration of audio, video, multimedia devices and media for purposes of teaching and learning.

The Superintendent, in consultation with teaching and support staff, shall recommend to the Board the acquisition of appropriate technology to best implement the curricular, instructional, and administrative program of the school district. The Superintendent shall prepare a technology plan for the school district to encompass the following:

Curricular, Instructional and Administrative Need

The technology plan shall define the curricular, instructional and administrative need for technological equipment and media for the district.

In-service Education

The Board shall provide opportunities for school staff to participate in in-service programs on hardware or software programs to be used in the execution of educational and administrative tasks. In-service programs may be provided in or out of the district.

Standards, Codes and References

All technology installations shall conform to the industry standards and applicable federal, State and local statutes and codes.

Facilities Planning

In all facilities projects involving new constructions, additions, and renovations the Superintendent or designee shall ensure the plans include provisions for current and future technology needs in terms of the structural, electric/electronic, mechanical, acoustical and visual systems of the building(s). All educational specifications shall include features required for the use of instructional technology.

Computers

The school district will provide support or maintenance agreements for specified brands of computers. All other computers purchased or donated will be subject to repair only when non-allocated funding is available and therefore may remain unrepaired until funding is available.

Computer Software Acquisition and Upgrading

The school district will only support the specified upgrades and training. Staff members shall not purchase software that has not been included on a list of specified software or has been approved by the Assistant Superintendent and Director of Technology.

The Superintendent will recommend the purchase of upgrades to software as needed. An evaluation of upgrades shall be made by appropriate personnel and no upgrade shall be purchased without the express approval of the Assistant Superintendent.

Site Licenses

In the case where more than one copy of a software program is required, the Director of Curriculum and Testing at the elementary schools and the Vice Principal of Curriculum and Instruction at the high school shall attempt to acquire or negotiate a site license with the software developers. In the event a site license is not possible, vendors shall be sought who will provide multiple copies at a discounted cost.

Software Copyright

All employees shall strictly adhere to the copyright laws of the United States. No software shall be copied and/or distributed except in accordance with these laws. All software placed on media workstations or any network with public access shall be copy protected by the Director of Curriculum and Testing and Vice Principal of Curriculum and Instruction, who shall assure that individuals who have access to such programs shall not copy them without authorization.

Internal Communication (District)

The school district shall provide communication between schools by a variety of means.

External Communications

The Board encourages the use of external communications so schools may utilize the vast resources of external databases and communicate with other schools, external agencies, and businesses throughout the world. Gateways to such communications will be supported by the school district. The use of particular gateways shall be approved by the Director of Technology. The Director of Technology shall be responsible for the installation of software in district owned computers and/or computer systems that prevents access to gateways and Internet sites that have material considered by the Director of Technology to be inappropriate for use by pupils.

Computer Laboratories and Distributed Computing

In order to provide teacher, staff, and pupil access to computers, the Board directs that provisions be made to provide computer access in computer laboratories, classrooms, and school libraries/media centers.

Audio/Video

All audio and/or video materials shall be used in accordance with the copyright laws of the United States. Teachers, pupils, or staff who create audio or video materials containing the voices or images of the individuals involved shall obtain proper releases from those individuals, their parent(s) or legal guardian(s) for instructional use within the school.

Informing Parents, Legal Guardians and Interested Parties

Upon request, the Building Principal shall make available to parent/legal guardians the computer hardware and software used in the district in order that a computer purchased privately for home use may be compatible with the computer and software the pupil uses in the school setting.

Technology Coordination

The Board shall appoint a Director of Technology to assure the technology needs of the district are met in the most efficient manner possible at the lowest costs available to meet specified needs.

Broadcast Rights and Copyrights

The Board specifically retains the Broadcast rights and copyrights to all materials created by employees of the Board as part of their responsibilities to the Board. Any financial remuneration for the use of such materials shall be retained by the Board.

Computer Security

The Director of Technology shall develop security procedures to include, but not be limited to, the following areas:

1. Physical Security of Equipment

   All computer equipment shall be maintained in a secure manner appropriate to its location.

2. Data Security

   a. Back-up procedures for system files, libraries, and data shall be practiced in a timely fashion.

   b. Disaster recovery plans shall be kept up-to-date at all times.

   c. Password protection shall be in place and updated periodically.

   d. Resource security shall be in place to prevent unauthorized access to system files, libraries, and data.

3. Employee Training

   All new employees having, as part of their job responsibilities, access to computers and information systems will be trained in the proper security procedures outlined above.

   All employees having, as part of their job responsibilities, access to computers and information systems will be kept up-to-date on current security procedures for equipment and data.

4. Transaction Audit Trail

   Appropriate procedures will be maintained in order to monitor system activity and users, as necessary.

5. Security Officer

   The Superintendent shall designate the Director of Technology as the district's Computer Security Officer to monitor system security procedures.

Use of Facsimile (FAX) Machines

Fax machines provide a useful means of communicating and shall be subject to the same rules that apply to the use of telephones. All incoming faxes shall be considered confidential mail. No disclosure of the contents of any fax shall be made except to the individual for whom the fax is intended. Any individual violating this confidentiality shall be subject to discipline as provided by the policies and regulations of the Board.

N.J.A.C. 6A:26-6.1 et seq.
17 U.S.C. 101 et seq.

Adopted: 19 October 2009

## 2361 ACCEPTABLE USE OF COMPUTER NETWORKS/ COMPUTERS AND RESOURCES

The Board of Education recognizes as new technologies shift the manner in which information is accessed, communicated, and transferred; these changes will alter the nature of teaching and learning. Access to technology will allow pupils to explore databases, libraries, Internet sites, and bulletin boards while exchanging information with individuals throughout the world. The Board supports access by pupils to these information sources but reserves the right to limit in-school use to materials appropriate for educational purposes. The Board directs the Superintendent to effect training of teaching staff members in skills appropriate to analyzing and evaluating such resources as to appropriateness for educational purposes.

The Board also recognizes technology allows pupils access to information sources that have not been pre-screened by educators using Board approved standards. The Board therefore adopts the following standards of conduct for the use of computer networks and declares unethical, unacceptable, or illegal behavior as just cause for taking disciplinary action, limiting or revoking network access privileges, and/or instituting legal action.

The Board provides access to computer networks/computers for educational purposes only. The Board retains the right to restrict or terminate pupil access to computer networks/computers at any time, for any reason. School district personnel will monitor networks and online activity to maintain the integrity of the networks, ensure their proper use, and ensure compliance with Federal and State laws that regulate Internet safety.

Standards for Use of Computer Networks

Any individual engaging in the following actions when using computer networks/computers shall be subject to discipline or legal action:

A. Using the computer networks/computers for illegal, inappropriate or obscene purposes, or in support of such activities. Illegal activities are defined as activities that violate Federal, State, local laws and regulations. Inappropriate activities are defined as those that violate the intended use of the networks. Obscene activities shall be defined as a violation of generally accepted social standards for use of publicly owned and operated communication vehicles.

B. Using the computer networks/computers to violate copyrights, institutional or third party copyrights, license agreements or other contracts.

C. Using the computer networks in a manner that:

1. Intentionally disrupts network traffic or crashes the network;

2. Degrades or disrupts equipment or system performance;

3. Uses the computing resources of the school district for commercial purposes, financial gain, or fraud;

4. Steals data or other intellectual property;

5. Gains or seeks unauthorized access to the files of others or vandalizes the data of another person;

6. Gains or seeks unauthorized access to resources or entities;

7. Forges electronic mail messages or uses an account owned by others;

8. Invades privacy of others;

9. Posts anonymous messages;

10. Possesses any data which is a violation of this Policy; and/or

11. Engages in other activities that do not advance the educational purpose for which computer networks/computers are provided.

Internet Safety Protection

As a condition for receipt of certain Federal funding, the school district shall be in compliance with the Children's Internet Protection Act, the Neighborhood Children's Internet Protection Act, and has installed technology protection measures for all computers in the school district, including computers in media centers/libraries. The technology protection must block and/or filter material and visual depictions that are obscene as defined in Section 1460 of Title 18, United States Code; child pornography, as defined in Section 2256 of Title 18, United States Code; are harmful to minors including any pictures, images, graphic image file or other material or visual depiction that taken as a whole and with respect to minors, appeals to a prurient interest in nudity, sex, or excretion; or depicts, describes, or represents in a patently offensive way, with respect to what is suitable for minors, sexual acts or conduct; or taken as a whole, lacks serious literary, artistic, political, or scientific value as to minors.

This Policy also establishes Internet safety policy and procedures in the district as required in the Neighborhood Children's Internet Protection Act. Policy 2361 addresses access by minors to inappropriate matter on the Internet and World Wide Web; the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications; unauthorized access, including "hacking" and other unlawful activities by minors online; unauthorized disclosures, use, and dissemination of personal identification information regarding minors; and measures designed to restrict minors' access to materials harmful to minors.

Notwithstanding blocking and/or filtering the material and visual depictions prohibited in the Children's Internet Protection Act and the Neighborhood Children's Internet Protection Act, the Board shall determine other Internet material that is inappropriate for minors.

In accordance with the provisions of the Children's Internet Protection Act, the Superintendent of Schools or designee will develop and ensure education is provided to every pupil regarding appropriate online behavior, including pupils interacting with other individuals on social networking sites and/or chat rooms, and cyberbullying awareness and response.

The Board will provide reasonable public notice and will hold one annual public hearing during a regular monthly Board meeting or during a designated special Board meeting to address and receive public community input on the Internet safety policy - Policy and Regulation 2361. Any changes in Policy and Regulation 2361 since the previous year's annual public hearing will also be discussed at a meeting following the annual public hearing.

The school district will certify on an annual basis, that the schools, including media centers/libraries in the district, are in compliance with the Children's Internet Protection Act and the Neighborhood Children's Internet Protection Act and the school district enforces the requirements of these Acts and this Policy.

Consent Requirement

No pupil shall be allowed to use the school districts' computer networks/computers and the Internet unless they have filed a consent form signed by the pupil and his/her parent(s) or legal guardian(s).

Violations

Individuals violating this Policy shall be subject to the consequences as indicated in Regulation 2361 and other appropriate discipline, which includes but are not limited to:

1. Use of the network only under direct supervision;
2. Suspension of network privileges;
3. Revocation of network privileges;
4. Suspension of computer privileges;
5. Revocation of computer privileges;
6. Suspension from school;
7. Expulsion from school; and/or
8. Legal action and prosecution by the authorities.

N.J.S.A. 2A:38A-3
Federal Communications Commission: Children's Internet Protection Act
Federal Communications Commission: Neighborhood Children's Internet Protection Act

Adopted: 19 October 2009
Revised: 27 July 2015

## 2363 PUPIL USE OF PRIVATELY-OWNED TECHNOLOGY

The Board of Education recognizes technology is always changing and as a result of increased accessibility to technology many pupils possess technology devices for their use during non-school hours. These privately-owned devices may be beneficial to pupils during school hours for approved educational purposes. Therefore, the Board of Education will allow pupils to use their privately-owned technology devices under conditions outlined in this Policy.

For the purpose of this Policy, "technology" means hardware or software.

For the purpose of this Policy, "privately-owned" means technology hardware and software that is purchased, owned, and maintained by the pupil at no expense to the school or school district.

For the purpose of this Policy, "hardware" means any device that can store, access, retrieve, and/or communicate data or information. "Hardware" may include, but is not limited to, any type of computer device; wireless telephone; electronic reader; personal digital assistant (PDAs); video broadcasting and/or recording device; or camera.

For the purpose of this Policy, "software" means any computer program(s) or related data that provide instruction for telling a computer or other hardware device what to do and how to do it.

The use of privately-owned technology by a pupil in the educational program during the school day must be approved by the pupil's parent or legal guardian and the school teaching staff member responsible for supervising and/or providing the pupil's instructional program. A teaching staff member may approve a pupil's use of privately-owned technology based on the assignment(s) to the pupil. The teaching staff member may also prohibit the use of privately-owned technology for an assignment(s).

Pupils who use privately-owned technology in school will not be given access to the school district's computer server(s) or network(s). In the event the teaching staff member approves the use of privately-owned technology to access the Internet, the access must be through the privately-owned technology without the use of any school district hardware or software. A teaching staff member who approves a pupil to use their privately-owned technology to access the Internet during instructional time will provide the pupil with a list of approved Internet sites the pupil is permitted to access.

A pupil granted such permission must comply with school district policies and regulations regarding acceptable use of computers and technology. Any use of privately-owned technology by a pupil shall be in strict accordance with the teaching staff member's specific approval(s) and Board policies and regulations. Any violation will subject the pupil to appropriate discipline and/or grading consequences.

The teaching staff member, in considering the use of privately-owned technology, will ensure such approval does not provide any advantage or benefit to the pupil who owns such technology over the pupil who does not own such technology. The teaching staff member will not approve the use of privately-owned technology if the teaching staff member determines the use would be advantageous or beneficial to the pupil who owns such technology over the pupil who does not own such technology.

The school district assumes no responsibility for any privately-owned technology brought to school by a pupil. The pupil shall be responsible for the proper operation and use of any privately-owned technology brought to school. School staff members shall not be responsible for the effective use and/or technical support for any privately-owned technology.

The school district shall assume no responsibility for the security of or damage to any privately-owned technology brought to school by a pupil. Pupils are encouraged to purchase private insurance for loss, damage, or theft of any privately-owned technology the pupil brings to school.

Adopted: 17 November 2014

# Appendix C

## NJ TRAX District / School Reports

**Kearny District Report**

**Garfield Elementary School**

**Franklin Elementary School**

**Roosevelt Elementary School**

**Schuyler Elementary School**

**Washington Elementary School**

**Lincoln Middle School**

**Kearny High School**

# District Report

## Kearny

(Ratings based on Minimum PARCC specifications.)

This report provides a snapshot of the district's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Districts and Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

**District Technology Readiness for Online Assessment**

**Rating for: PARCC Minimum Specifications**

**Rating for: PARCC Recommended Specifications**

The Readiness Ratings for Online PARCC Performance Assessment (20-day window) use a scale of 0-9, where 0 = Missing or Out of Range Data, 1-3 = Low Not Ready, 4-6 = Moderate Not Ready, and 7-9 = Ready.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.

o The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.



## District Report: Executive Summary

**Technology Readiness Rating**

To be considered OVERALL TECHNOLOGY READY FOR ONLINE TESTING the District must meet each of the following criterion:

A) The District must be rated Network Ready (see below for definition)

B) All schools in the district that are testing sites must be rated as Technology Ready for Online Testing.

**Network Readiness Rating**

If the District is the Internet Service Provider for its schools then, to be deemed Network Ready, the district must have adequate bandwidth to accommodate normal traffic plus all simultaneous test takers from all schools across the duration of the testing window. In addition, all its schools must be Network Ready.

If the District is not the ISP, then to be considered Network Ready, all its schools must be Network Ready.

**Device Readiness Rating**

To be device ready, a district must have all of its schools device ready.

## Testing Specifications

Number of schools: 7

Number of students to be tested: 3962

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Grades Tested: 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11

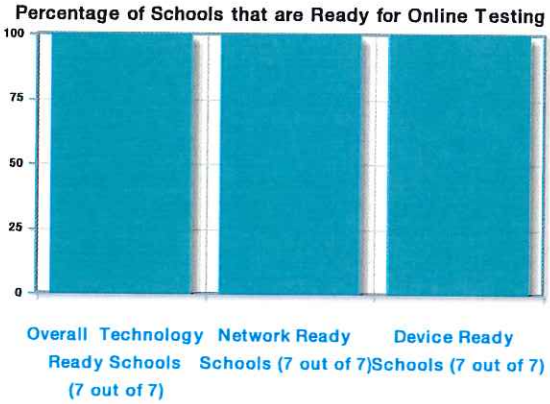
Assessment Window: 30 days

Assessment Sessions per Day: 2

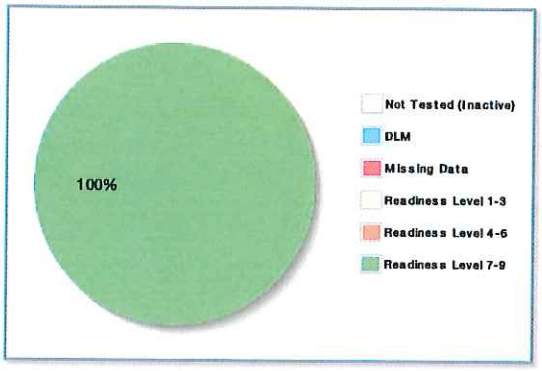
| Grade | Number of Students |
|---|---|
| 3 | 385 |
| 4 | 425 |
| 5 | 409 |
| 6 | 464 |
| 7 | 463 |
| 8 | 439 |
| 9 | 458 |
| 10 | 420 |
| 11 | 499 |

## Summary Status Report

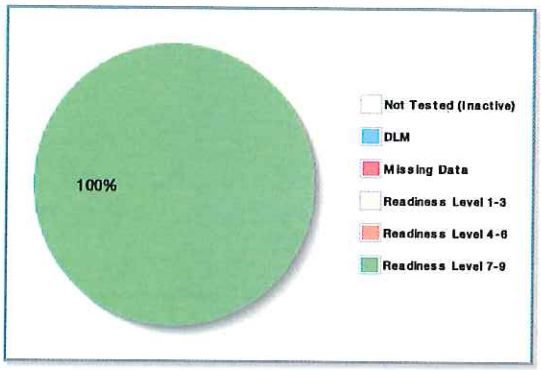
**Percentage of Schools that are Ready for Online Testing**



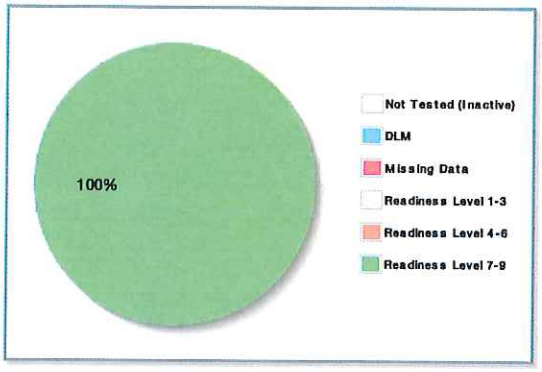

**School Technology Readiness Levels**




**School Network Readiness Levels**




**School Device Readiness Levels**



# District Network Readiness

## Kearny

(Ratings based on Minimum PARCC specifications.)

A District is Network Ready for Online Assessment if it meets one of two criteria:

- If the district is the Internet Service Provider (ISP) for its schools, then all its schools must be network ready and there must be adequate district Internet bandwidth available to accommodate all simultaneous users from all schools across the district at 50 Kbps per test taker for those not using caching servers, and at 5 Kbps for those using caching servers.
- If the district is not the ISP then to be considered network ready all the schools must be rated as Network Ready for Online Assessment.

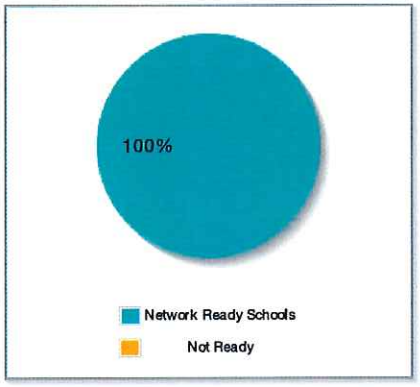
**New Jersey/PARCC Guidelines for Overall District Technology Readiness for Online Assessment**

To be considered OVERALL TECHNOLOGY READY FOR ONLINE TESTING the district must meet each of the following criterion:

- All schools must be rated as Technology Ready for Online Assessment.
- The District must be rated Network Ready for Assessment: If the district is the Internet Service Provider (ISP) for its schools, then there must be adequate district Internet bandwidth available to accommodate normal Internet traffic plus the extra load required to meet the online assessment demands of the maximum number of simultaneous test takers for all schools across the district, for the duration of the testing window. If the district is not the ISP, then to be considered network ready, the district must have all the schools rated as Network Ready for Online Assessment.

### This District's Network Status

**Percentage of Network Ready Schools:**




**A Closer Look at the Schools**

| Category of Network Readiness for Online Assessment | Count of Schools | Schools |
|---|---|---|
| NOT TESTED | 0 | |
| DLM | 0 | |
| MISSING DATA | 0 | |
| NOT READY Low Level Rating:1-3 | 0 | |
| NOT READY Mid-Level Rating:4-6 | 0 | |
| READY Rating:7-9 | 7 | • Kearny High School<br>• Franklin Elementary School<br>• Garfield Elementary School<br>• Lincoln Elementary School<br>• Roosevelt Elementary School<br>• Schuyler Elementary School<br>• Washington Elementary School |

### Recommendations

Please check your individual schools' network ratings and associated recommendations.

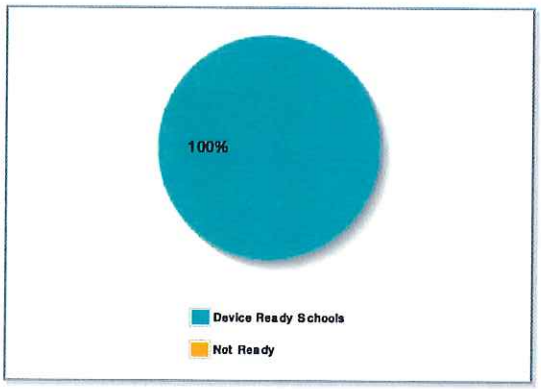
# District Device Readiness

## Kearny

(Ratings based on Minimum PARCC specifications.)

The chart to the right provides a snapshot of the Device Readiness for Testing for the schools in this District.

The table below provides the ratings for individual schools in the district.




| Category of Device Readiness for Online Assessment | Count of Schools | Schools |
|---|---|---|
| NOT TESTED | 0 | |
| DLM | 0 | |
| MISSING DATA | 0 | |
| NOT READY<br>Low Level<br>Rating:1-3 | 0 | |
| NOT READY<br>Mid-Level<br>Rating:4-6 | 0 | |
| READY<br>Rating:7-9 | 7 | • Kearny High School<br>• Franklin Elementary School<br>• Garfield Elementary School<br>• Lincoln Elementary School<br>• Roosevelt Elementary School<br>• Schuyler Elementary School<br>• Washington Elementary School |

**Recommendations**

For specific recommendations on device readiness, please review the reports from each school, or use the Sandbox to investigate how the District's readiness ratings change when devices are upgraded or added.

School Report

# Garfield Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Department of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 216

Number of Grade 6-11 students to be assessed: 73

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 2239

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 10

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 3 | 58 |
| 4 | 75 |
| 5 | 83 |
| 6 | 73 |

School Device Readiness

# Garfield Elementary School

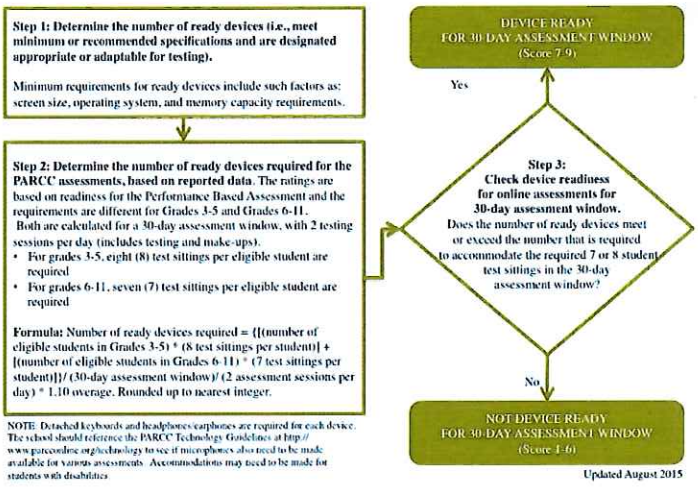
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

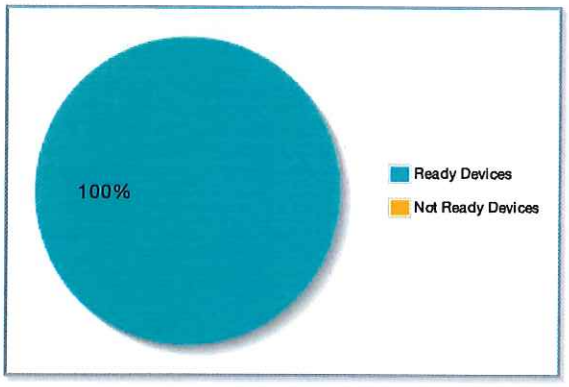


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 216 |
| Number of test-eligible students, Grades 6-11: | 73 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 115 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 22 % |
| Number of testing devices with detached keyboards: | 36 |
| Number of minimum devices needed: | 42 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** 115

According to your NJTRAx records your school has:

- 115 devices
- 115 ready devices
- 0 devices that could be upgraded
- 22 % devices with headphones
- 69 % devices with keyboards

**Devices Required per Your Assessment Specifications:** 42

| Devices Required | = | [(Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings)] | / | Number of days of testing | / | Number of test sessions per day | * | 1.10 (overage) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Devices Required | = | [(216 * 8) | + | (73 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 42 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

GAP: +73

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 115, is equal to or greater than the 42 required for your school to accommodate all student testing sessions, your school is READY.

**Not Enough Headphones**

The number of headphones appears to be insufficient for the minimum number of devices that you need to administer simultaneously.

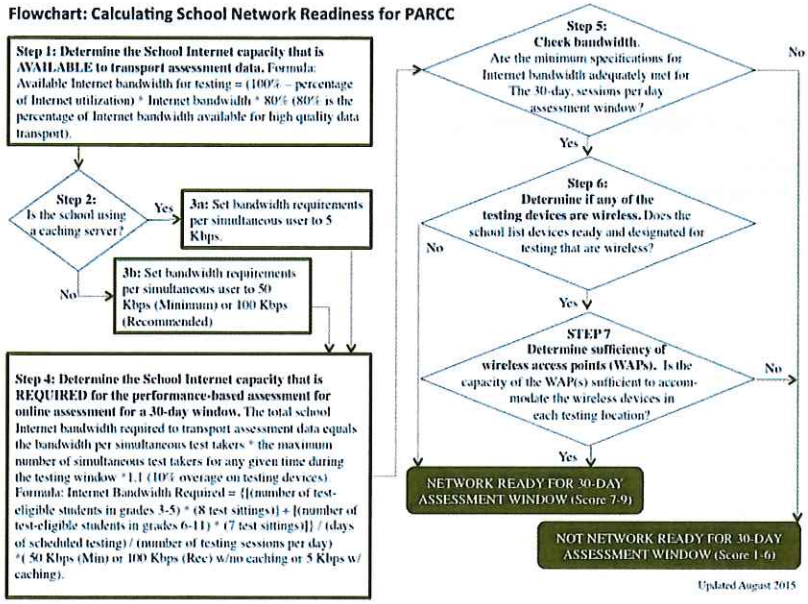
School Network Readiness

# Garfield Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

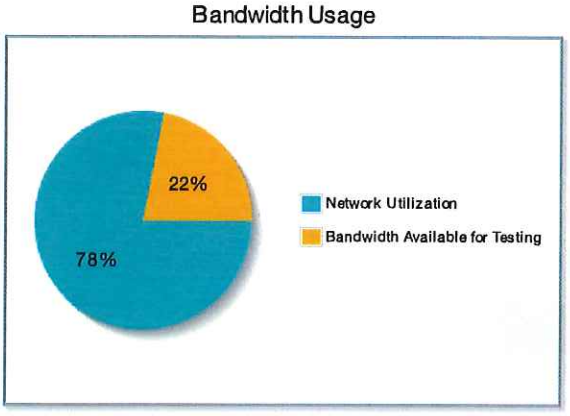
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 216 |
| Number of test-eligible students, Grades 6-11 | 73 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 4 out of 4 locations |
| Total rooms | 4 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 1.87**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 1728 | + | 511 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 1.87 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

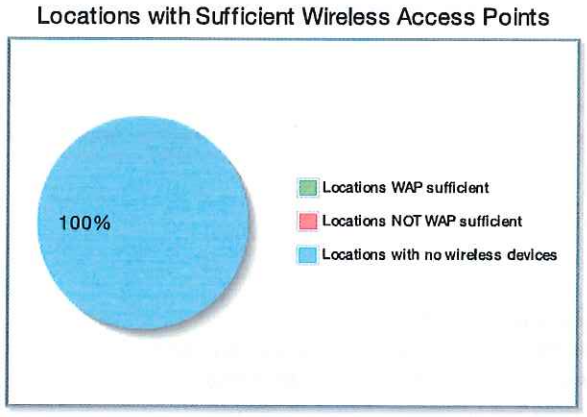
**GAP: + 15.73 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Report

# Franklin Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A **"No Rating"** will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Department of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 375

Number of Grade 6-11 students to be assessed: 168

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 4176

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 15

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 3 | 126 |
| 4 | 121 |
| 5 | 128 |
| 6 | 168 |

School Device Readiness

# Franklin Elementary School

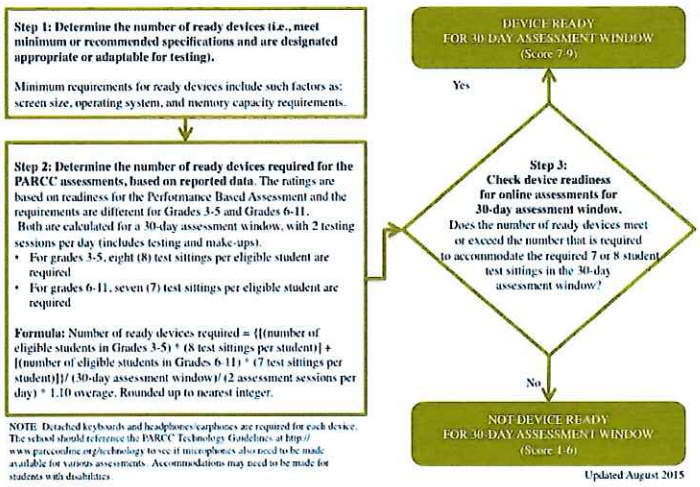
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

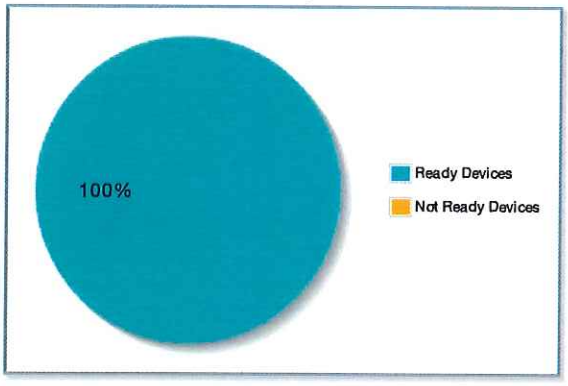


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 375 |
| Number of test-eligible students, Grades 6-11: | 168 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 140 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 36 % |
| Number of testing devices with detached keyboards: | 14 |
| Number of minimum devices needed: | 77 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** **140**

According to your NJTRAx records your school has:

- 140 devices
- 140 ready devices
- 0 devices that could be upgraded
- 36 % devices with headphones
- 90 % devices with keyboards

**Devices Required per Your Assessment Specifications:** **77**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Devices Required** | = | **[(Number of test-eligible Grade 3-5 students) * (8 test sittings)** | + | **(Number of test-eligible Grade 6-11 students) * (7 test sittings)]** | / | **Number of days of testing** | / | **Number of test sessions per day** | * | **1.10 (overage)** | = **Result** |
| Devices Required | = | [(375 * 8) | + | (168 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = 77 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

**GAP:** **+63**

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 140, is equal to or greater than the 77 required for your school to accommodate all student testing sessions, your school is READY.

**Not Enough Headphones**

The number of headphones appears to be insufficient for the minimum number of devices that you need to administer simultaneously.

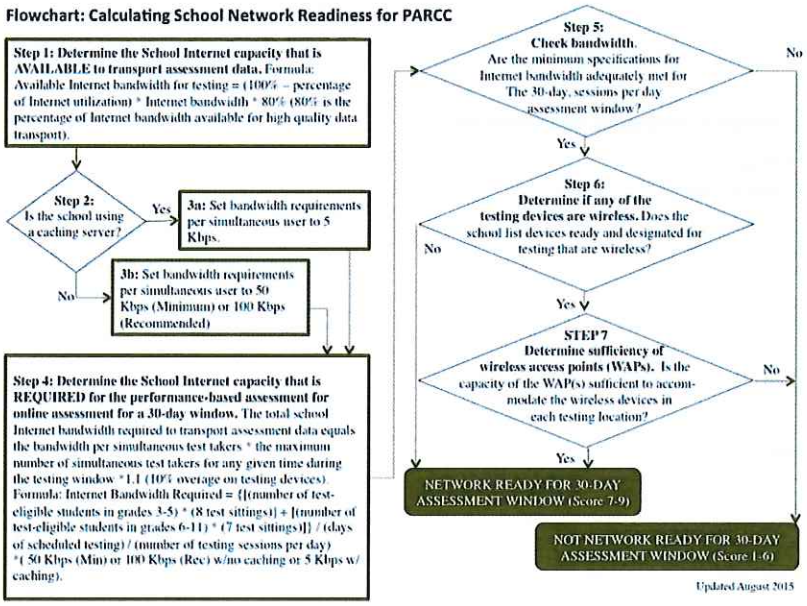
School Network Readiness

# Franklin Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

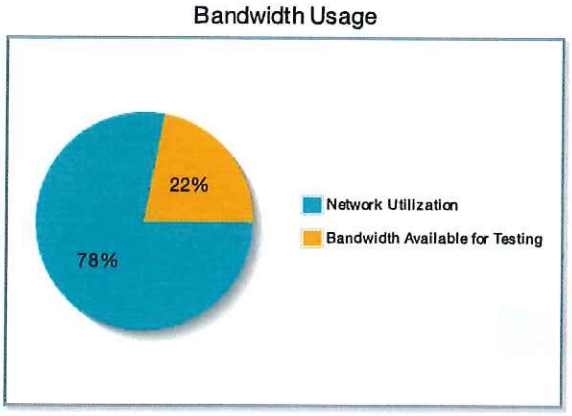
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 375 |
| Number of test-eligible students, Grades 6-11 | 168 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 6 out of 6 locations |
| Total rooms | 6 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Available Internet bandwidth** | = | **( 100%** | **-** | **% Internet utilization )** | * | **Reported bandwidth** | * | **80%** | = | **Result** |
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 3.48**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Required Internet Bandwidth** | = | **[ (Number of test-eligible Grade 3-5 students) * (8 test sittings)** | + | **(Number of test-eligible Grade 6-11 students) * (7 test sittings)** | / | **(days in testing window)** | / | **(No. sessions daily)]** | * | **Bandwidth/test taker (Mbps)** | = | **Result** |
| Required Internet Bandwidth | = | [ ( 3000 | + | 1176 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 3.48 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

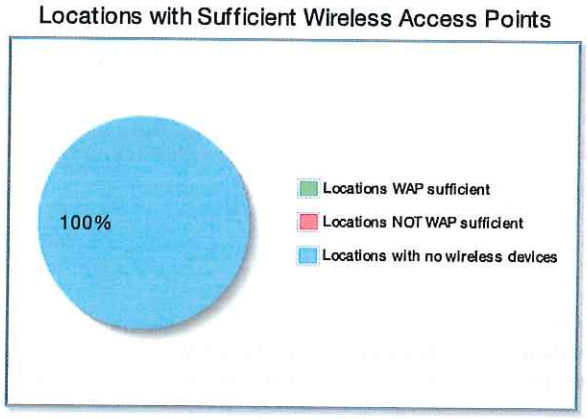
**GAP: + 14.12 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Device Readiness

# Roosevelt Elementary School

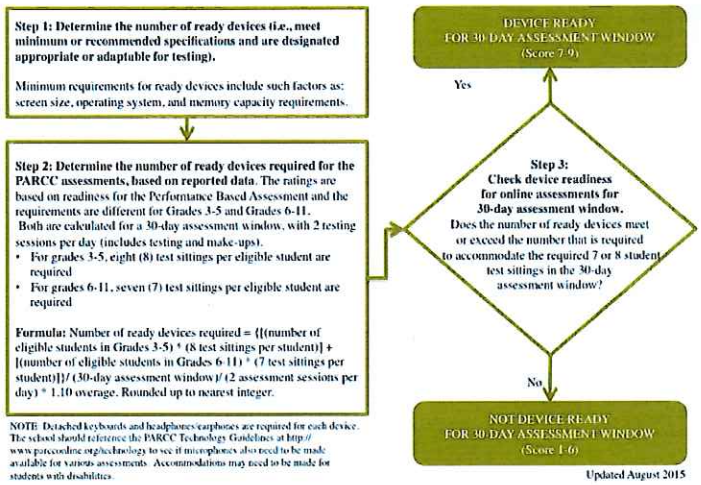
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

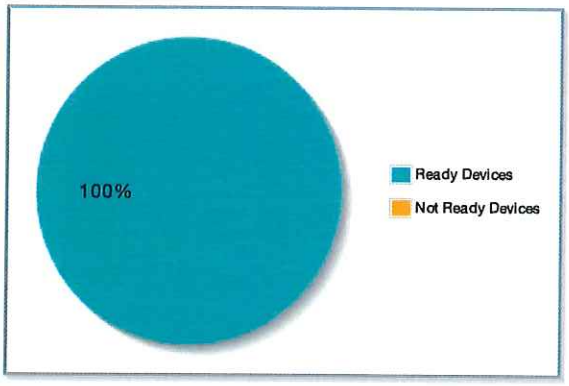


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 180 |
| Number of test-eligible students, Grades 6-11: | 57 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 78 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 32 % |
| Number of testing devices with detached keyboards: | 30 |
| Number of minimum devices needed: | 34 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

School Report

# Roosevelt Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Depertment of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 180

Number of Grade 6-11 students to be assessed: 57

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 1839

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 12

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 3 | 45 |
| 4 | 77 |
| 5 | 58 |
| 6 | 57 |

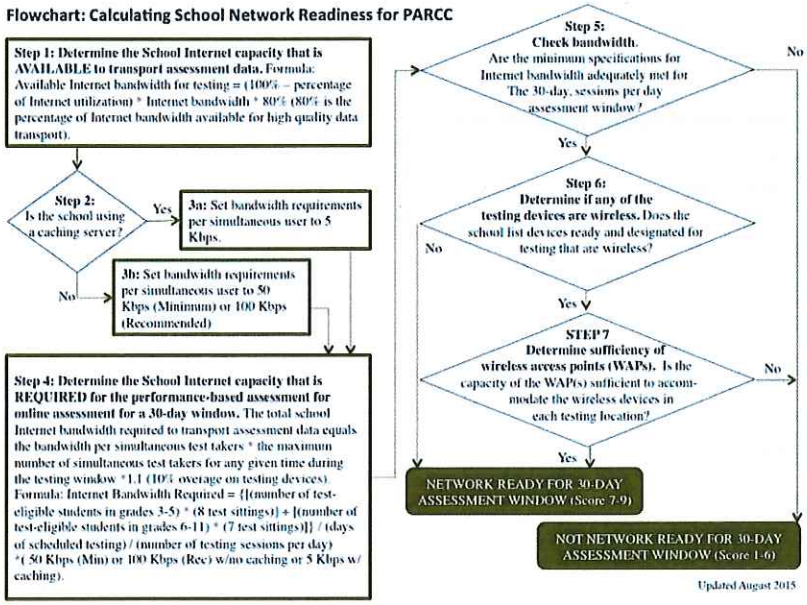
School Network Readiness

# Roosevelt Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

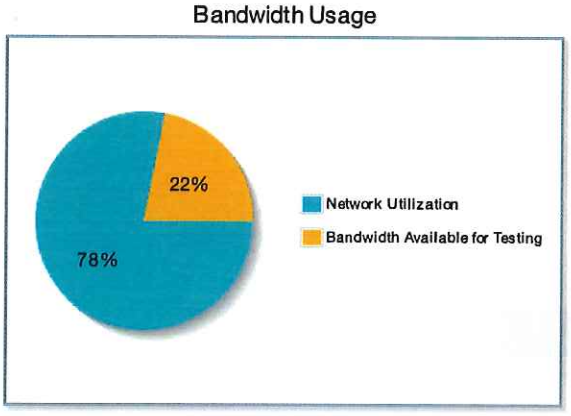
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 180 |
| Number of test-eligible students, Grades 6-11 | 57 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 4 out of 4 locations |
| Total rooms | 4 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



**Devices Ready for Online Assessment:** 78

According to your NJTRAx records your school has:

- 78 devices
- 78 ready devices
- 0 devices that could be upgraded
- 32 % devices with headphones
- 62 % devices with keyboards

**Devices Required per Your Assessment Specifications:** 34

| Devices Required | = | [(Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings)] | / | Number of days of testing | / | Number of test sessions per day | * | 1.10 (overage) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Devices Required | = | [(180 * 8) | + | (57 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 34 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

GAP: +44

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 78, is equal to or greater than the 34 required for your school to accommodate all student testing sessions, your school is READY.

**Not Enough Headphones**

The number of headphones appears to be insufficient for the minimum number of devices that you need to administer simultaneously.

### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 1.53**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 1440 | + | 399 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 1.53 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

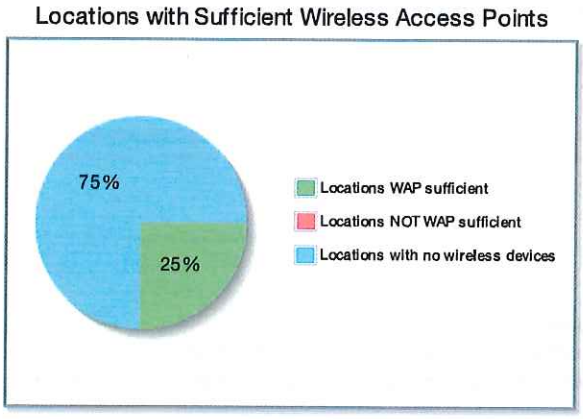
**GAP: + 16.07 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Report

# Schuyler Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Depertment of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 183

Number of Grade 6-11 students to be assessed: 89

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 2087

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 13

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 3 | 67 |
| 4 | 54 |
| 5 | 62 |
| 6 | 89 |

School Device Readiness

# Schuyler Elementary School

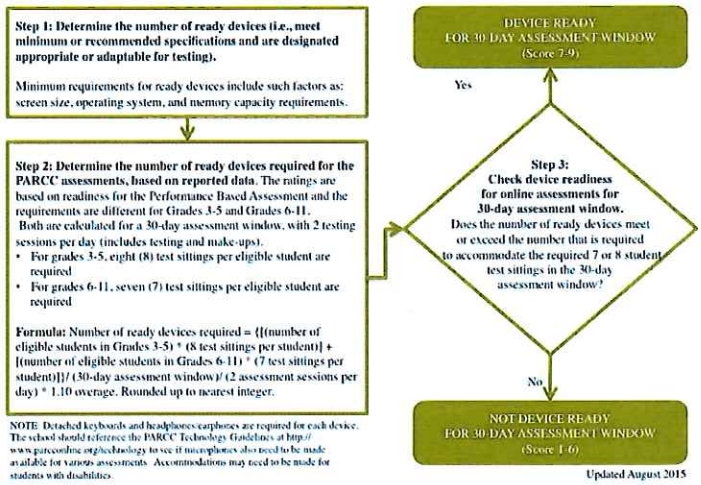
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

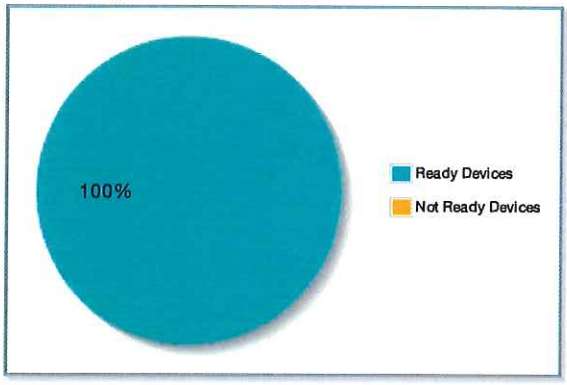


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 183 |
| Number of test-eligible students, Grades 6-11: | 89 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 85 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 59 % |
| Number of testing devices with detached keyboards: | 0 |
| Number of minimum devices needed: | 39 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** 85

According to your NJTRAx records your school has:

- 85 devices
- 85 ready devices
- 0 devices that could be upgraded
- 59 % devices with headphones
- 100 % devices with keyboards

**Devices Required per Your Assessment Specifications:** 39

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Devices Required** | = | **[(Number of test-eligible Grade 3-5 students) * (8 test sittings)** | + | **(Number of test-eligible Grade 6-11 students) * (7 test sittings)]** | / | **Number of days of testing** | / | **Number of test sessions per day** | * | **1.10 (overage)** | = | **Result** |
| Devices Required | = | [(183 * 8) | + | (89 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 39 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

GAP: +46

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 85, is equal to or greater than the 39 required for your school to accommodate all student testing sessions, your school is READY.

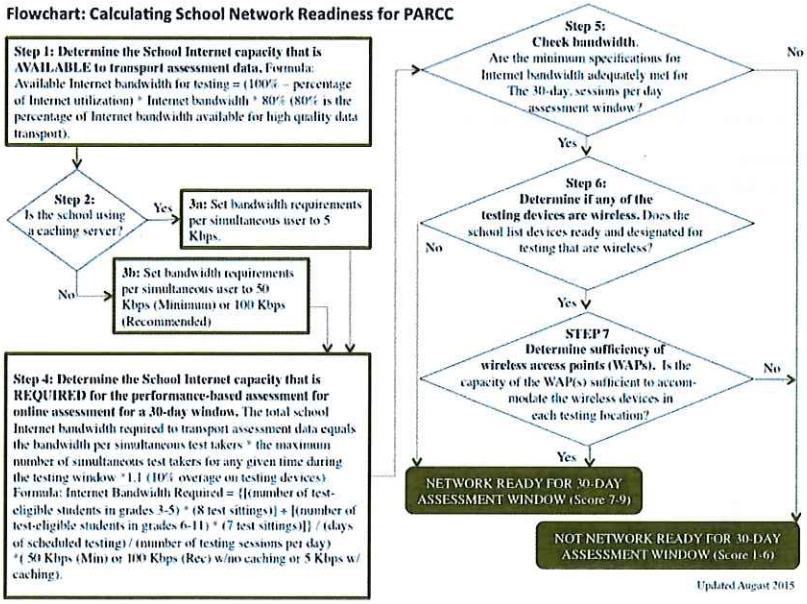
School Network Readiness

# Schuyler Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

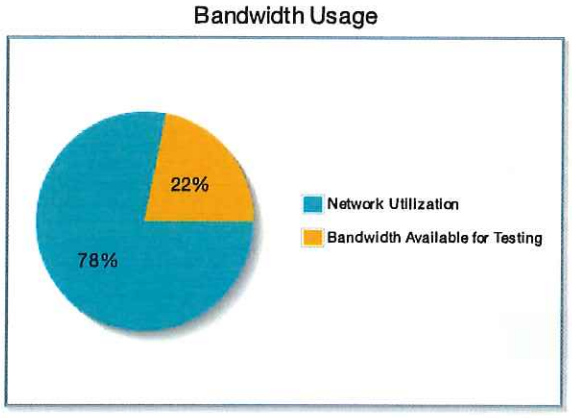
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 183 |
| Number of test-eligible students, Grades 6-11 | 89 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 4 out of 4 locations |
| Total rooms | 4 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 1.74**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 1464 | + | 623 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 1.74 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

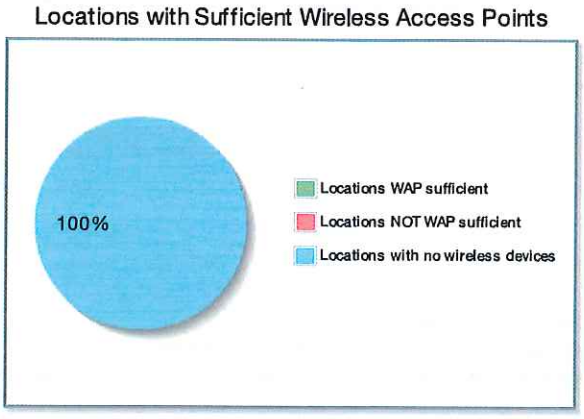
**GAP: + 15.86 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Report

# Washington Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Depertment of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 265

Number of Grade 6-11 students to be assessed: 77

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 2659

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 15

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 3 | 89 |
| 4 | 98 |
| 5 | 78 |
| 6 | 77 |

School Device Readiness

# Washington Elementary School

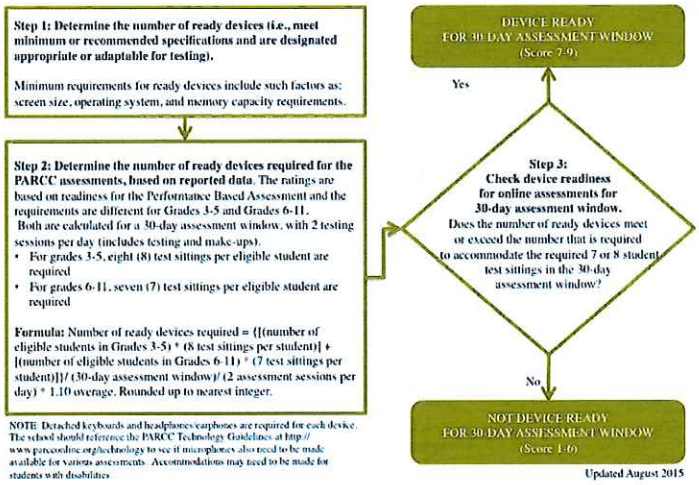
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

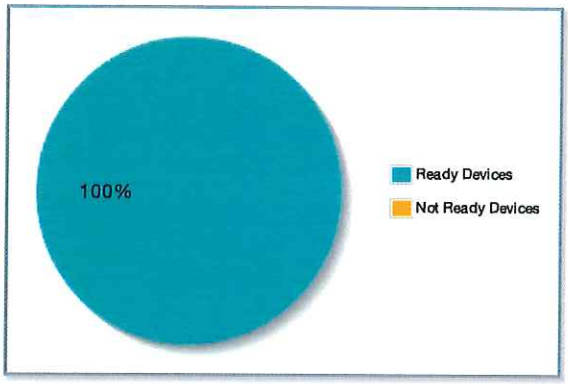


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 265 |
| Number of test-eligible students, Grades 6-11: | 77 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 91 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 55 % |
| Number of testing devices with detached keyboards: | 0 |
| Number of minimum devices needed: | 49 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** **91**

According to your NJTRAx records your school has:

- 91 devices
- 91 ready devices
- 0 devices that could be upgraded
- 55 % devices with headphones
- 100 % devices with keyboards

**Devices Required per Your Assessment Specifications:** **49**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Devices Required** | = | **[(Number of test-eligible Grade 3-5 students) * (8 test sittings)** | + | **(Number of test-eligible Grade 6-11 students) * (7 test sittings)]** | / | **Number of days of testing** | / | **Number of test sessions per day** | * | **1.10 (overage)** | = | **Result** |
| Devices Required | = | [(265 * 8) | + | (77 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 49 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

**GAP:** **+42**

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 91, is equal to or greater than the 49 required for your school to accommodate all student testing sessions, your school is READY.

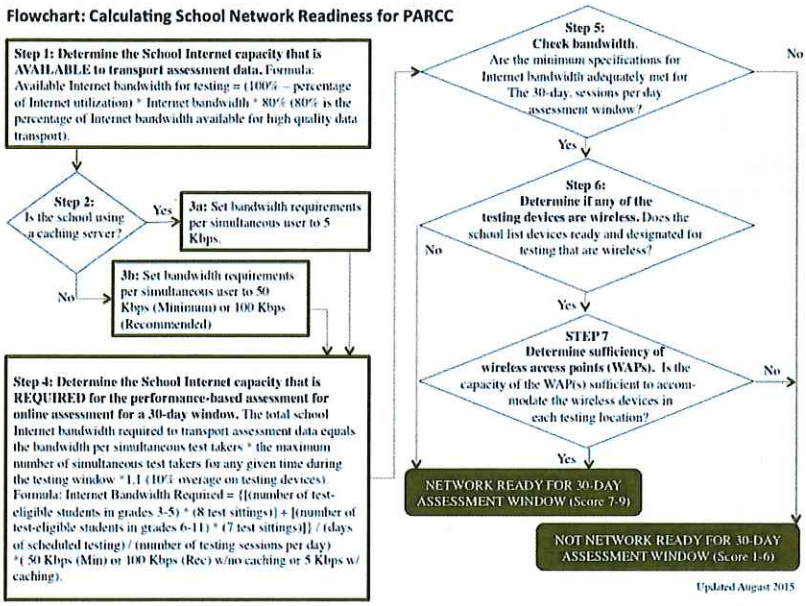
School Network Readiness

# Washington Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

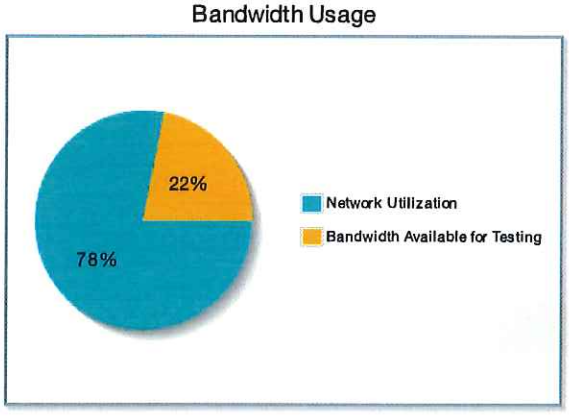
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 265 |
| Number of test-eligible students, Grades 6-11 | 77 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 4 out of 4 locations |
| Total rooms | 4 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 2.22**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 2120 | + | 539 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 2.22 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

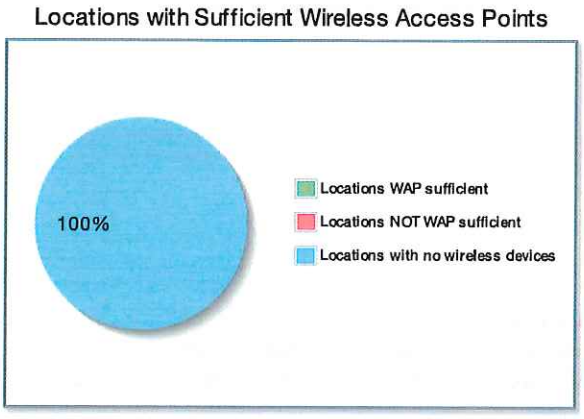
**GAP: + 15.38 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Report

# Lincoln Elementary School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A **"No Rating"** will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Department of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 0

Number of Grade 6-11 students to be assessed: 902

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 6314

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 20

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 7 | 463 |
| 8 | 439 |

School Device Readiness

# Lincoln Elementary School

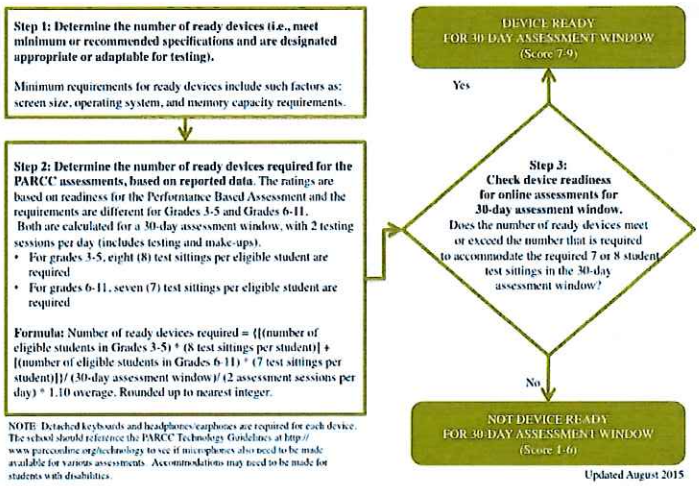
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

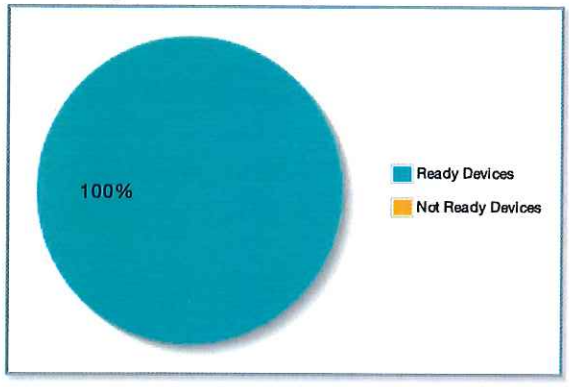


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 0 |
| Number of test-eligible students, Grades 6-11: | 902 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 162 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 31 % |
| Number of testing devices with detached keyboards: | 0 |
| Number of minimum devices needed: | 116 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** 162

According to your NJTRAx records your school has:

- 162 devices
- 162 ready devices
- 0 devices that could be upgraded
- 31 % devices with headphones
- 100 % devices with keyboards

**Devices Required per Your Assessment Specifications:** 116

| Devices Required | = | [(Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings)] | / | Number of days of testing | / | Number of test sessions per day | * | 1.10 (overage) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Devices Required | = | [(0 * 8) | + | (902 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 116 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

GAP: +46

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 162, is equal to or greater than the 116 required for your school to accommodate all student testing sessions, your school is READY.

**Not Enough Headphones**

The number of headphones appears to be insufficient for the minimum number of devices that you need to administer simultaneously.

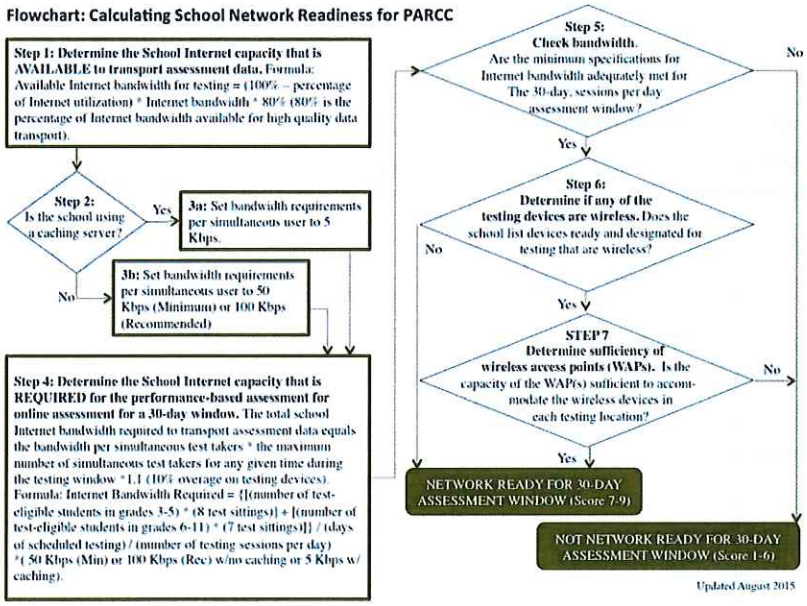
School Network Readiness

# Lincoln Elementary School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

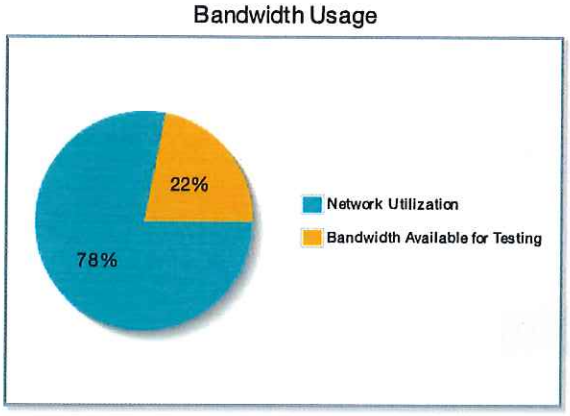
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 0 |
| Number of test-eligible students, Grades 6-11 | 902 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 7 out of 7 locations |
| Total rooms | 7 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



### Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 5.26**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 0 | + | 6314 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 5.26 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

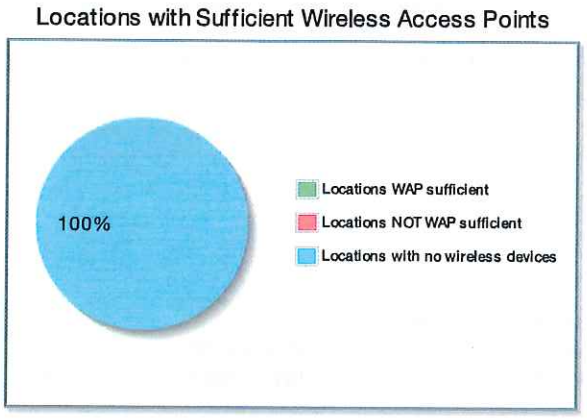
**GAP: + 12.34 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



School Report

# Kearny High School

(Ratings based on Minimum PARCC specifications.)

| Technology Readiness for Online Testing | Device Readiness for Online Testing | Network Readiness for Online Testing |
|---|---|---|

This report provides a snapshot of the school's technology readiness for online assessment based on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. This report is intended to be informational and to be used as one element of the data reviewed by Local Educational Agencies (LEAs)/Testing Sites as they prepare for technology readiness.

The report is based upon assumptions that influenced the calculations and results.

The assumptions are as follows:

- The administration window for each of the two PARCC summative assessments is twenty (20) days. All assessments and make-ups must be administered within the twenty day window. Although some LEAs/Testing Sites may be able to schedule fewer days, the report is based on the availability of all twenty days.
- As per PARCC documentation, the report uses two assessment sessions per day in its calculations.
- This report uses a 10% overage included in the amount of devices that are needed in order to account for possible breakage and repair issues that could occur during the assessment administration.
- This report uses PARCC minimum bandwidth specifications for online testing. Those specifications are: 50 Kbps per student with no content caching and 5 Kbps when content caching is used. Eighty percent (80%) of the available Internet bandwidth is used in the network readiness calculation since 80% represents the percentage of Internet bandwidth typically available for high quality data transport.
- A "**No Rating**" will display in the results when one of two situations arise:
    - The rating could not be determined due to **missing data** from the school's NJTRAx data file.
    - The **data are out of range** – for example, an Internet utilization entry with the entry at 0% (which does not take into account normal, everyday usage) or 100% (which indicates there would be no bandwidth available for testing above normal usage).

It should be noted that the reporting feature of the PARCC TRT does not include all of these assumptions. Due to this, the results of this report may differ from the reports found in the PARCC TRT.

## Determining Overall Readiness

### New Jersey Department of Education: PARCC Guidelines for School Technology Readiness for Online Assessment

This report provides a snapshot of the school's technology readiness for the PARCC Performance Based Assessment. The ratings are calculated on the NJTRAx data provided by the school's representative. The readiness ratings in this report are only as accurate as the data upon which they are based and are not a guaranteed indicator of success. The Technology Readiness Ratings are shown for both Minimum PARCC specifications and for Recommended PARCC specifications.

To be considered "READY FOR ONLINE ASSESSMENT," schools must meet each of the following criterion:

1. Testing Specifications. The testing window of 30 days and testing schedule of 2 sessions per day as set by PARCC, must adequately accommodate the number of student test sessions required.

2. Device Readiness for Assessment. Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones/earphones and physical keyboards are required for each device used for testing. While neither of the latter is factored into the device readiness ratings, alerts will appear if insufficient numbers are available.

Note 1: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations. Your current Device Readiness Rating is displayed above.

3. Network Readiness for Testing. The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of devices needed to accommodate the testing of all eligible students during a 30-day testing window, assuming 2 testing sessions per day. In addition, the capacity of the wireless access points in each testing location must be sufficient to handle all the wireless devices in that location.

## Testing Specifications:

Number of Grade 3-5 students to be assessed: 0

Number of Grade 6-11 students to be assessed: 1377

Number of test sittings per Grade 3-5 student: 8

Number of test sittings per Grade 6-11 student: 7

Total number of test sittings for all students: 9639

Number of testing days: 30

Number of testing sessions per day: 2

Total number of testing sessions in the testing window: 60

Minimum number of days required to complete PARCC Performance Based Assessment, based on current NJTRAx data: 26

Number of Students to be assessed by grade:

| Grade | Number of Students |
|---|---|
| 10 | 420 |
| 11 | 499 |
| 9 | 458 |

School Device Readiness

# Kearny High School

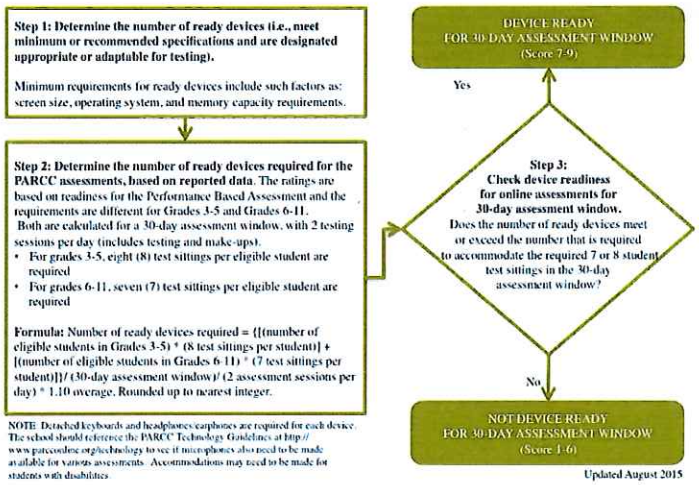
School Device Readiness Rating for Online Testing:
(Rating based on Minimum PARCC specifications.)

Device Readiness is a key factor in determining Overall Readiness for Online Testing. It is defined as follows: Given the testing specifications provided by the school, the number of devices that meet minimum specifications in each testing location must be sufficient to accommodate the maximum number of test-eligible students scheduled to use that testing location any period during the testing window. Headphones for each device should be available, along with a printer in each testing location, but neither is currently factored into the device readiness score.

Note: Device readiness is based on factors such as screen size and memory capacity requirements. A 10% overage on the number of devices required has been added to accommodate possible device failures and the variance in classes scheduled into the testing locations.

The specific process used to determine your school's device readiness is shown in the flowchart below.

**Flowchart for Calculating Device Readiness for PARCC**

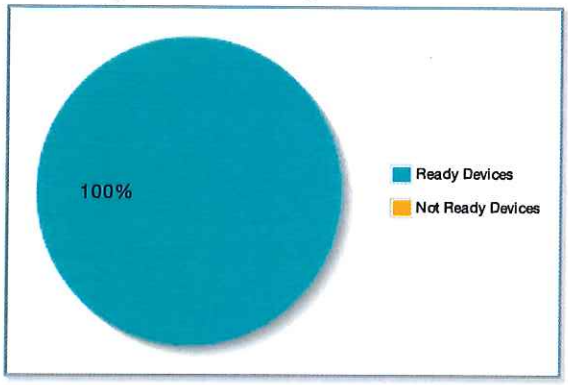


## Your school's testing specifications

| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5: | 0 |
| Number of test-eligible students, Grades 6-11: | 1377 |
| Assessment Window (days): | 30 |
| Test sessions per day: | 2 |
| Test sittings per Grade 3-5 student: | 8 |
| Test sittings per Grade 6-11 student: | 7 |
| Number of devices available that meet specifications: | 189 |
| Upgradeable devices: | 0 |
| Percentage of devices for which headphones are available: | 26 % |
| Number of testing devices with detached keyboards: | 0 |
| Number of minimum devices needed: | 177 |

## The current inventory of devices ready for online testing

Percentage of devices ready for online assessment




## Gap Analysis

As a next step, the NJTRAx system presents you with a gap analysis. It documents the number of devices that are ready in your school for online testing, the number of devices required per your testing specifications, the percentage of devices that are ready for online testing, and recommendations your school might consider in closing any identified gaps.

**Devices Ready for Online Assessment:** **189**

According to your NJTRAx records your school has:

- 189 devices
- 189 ready devices
- 0 devices that could be upgraded
- 26 % devices with headphones
- 100 % devices with keyboards

**Devices Required per Your Assessment Specifications:** **177**

| Devices Required | = | [(Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings)] | / | Number of days of testing | / | Number of test sessions per day | * | 1.10 (overage) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Devices Required | = | [(0 * 8) | + | (1377 * 7)] | / | 30 | / | 2 | * | 1.10 (overage) | = | 177 |

Note: With some exceptions, a minimum of 20 devices is required for testing.

GAP: **+12**

**Gap(s) and Recommendations**

**Overall Device Readiness Recommendation:**

Because the number of devices for testing that meet minimum requirements, 189, is equal to or greater than the 177 required for your school to accommodate all student testing sessions, your school is READY.

**Not Enough Headphones**

The number of headphones appears to be insufficient for the minimum number of devices that you need to administer simultaneously.

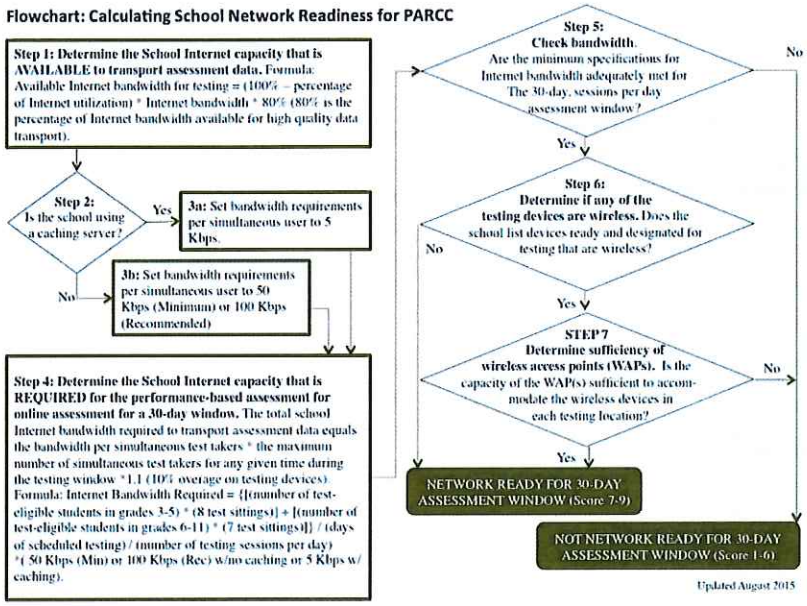
School Network Readiness

# Kearny High School

**Network Readiness Rating:**
(Rating based on Minimum PARCC specifications.)

School Network Readiness is a second major factor in determining a school's Overall Readiness for Online Testing. It is determined as follows: The bandwidth available on the school Internet connection during the testing window must be sufficient to accommodate the load generated by the maximum number of simultaneous test takers at the school. In addition, the ratio of wireless devices to wireless access points in each testing location must meet minimum standards. Note: See district report for adequacy of the district Internet bandwidth to accommodate district wide testing.

The specific process used to determine your school's network readiness is shown in the flowchart below.




**The following data descriptor table outlines the data set submitted to NJTRAx on behalf of your school.**

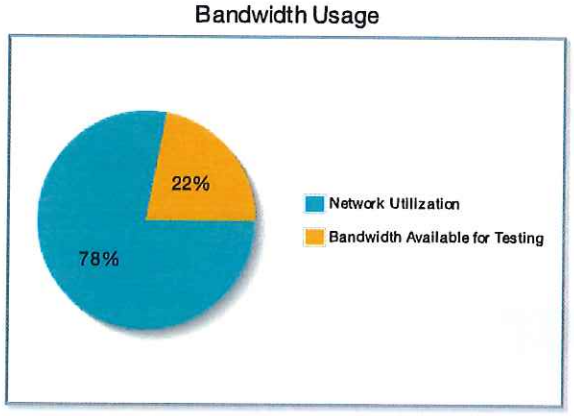
| Data Descriptors | Data |
|---|---|
| Number of test-eligible students, Grades 3-5 | 0 |
| Number of test-eligible students, Grades 6-11 | 1377 |
| Test sittings per Grade 3-5 student | 8 |
| Test sittings per Grade 6-11 student | 7 |
| Assessment window (days) | 30 |
| Test sessions per day | 2 |
| School using caching servers? | No |
| Internet bandwidth (reported) | 100.00 |
| Internet bandwidth utilization | 78% |
| School rooms that are WAP Sufficient (i.e., either sufficient wireless access points* or no wireless devices) | 8 out of 8 locations |
| Total rooms | 8 |

*In WAP sufficient rooms, the number of wireless devices in the room is less than or equal to the capacity of the WAP(s) serving that room.

**Current Network Capacity**

According to the data entered into the NJTRAx system and subsequent calculations, your school has:

22 % of your school's Internet bandwidth available for online testing.
(That represents 9.5 Mbps of bandwidth available for carrying testing data).



**Gap Analysis**

As a next step, the NJTRAx system presents you with a gap analysis, documenting your school's network requirements for online testing, your current network capacity, and ratio of devices to WAPs by location gap analysis. The analysis also includes recommendations your school might consider in closing any identified gaps.

**Available bandwidth for assessment in Mbps: 17.6**

| Available Internet bandwidth | = | ( 100% | - | % Internet utilization ) | * | Reported bandwidth | * | 80% | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| Available Internet bandwidth | = | ( 100% | - | 78 %) | * | 100.00 | * | 80% | = | 17.6 |

**Required bandwidth for assessment in Mbps: 8.03**

| Required Internet Bandwidth | = | [ (Number of test-eligible Grade 3-5 students) * (8 test sittings) | + | (Number of test-eligible Grade 6-11 students) * (7 test sittings) | / | (days in testing window) | / | (No. sessions daily)] | * | Bandwidth/test taker (Mbps) | = | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Internet Bandwidth | = | [ ( 0 | + | 9639 ) | / | (30) | / | (2) ] | * | 50 / 1000 | = | 8.03 |

A positive gap indicates the school has more available bandwidth for assessment than what is required for the school. While a negative gap indicates the school's available bandwidth for assessment is less than what is required for the school.

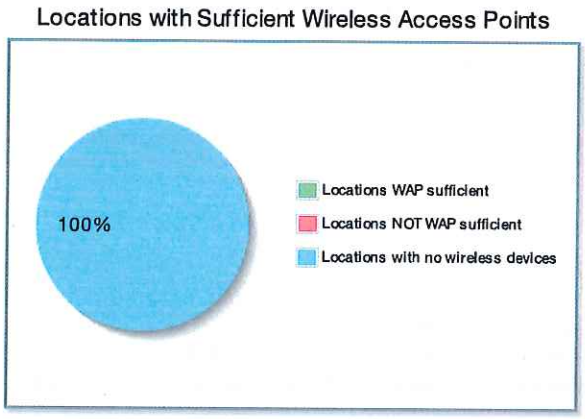
**GAP: + 9.57 Mbps**

**Ratio of devices to WAPs by location gap analysis:**

The rating for network readiness includes an analysis of the adequacy of wireless access points in each testing location in the school.

- If the testing location does have wireless devices and has enough WAP capacity to accommodate all such devices it is deemed WAP sufficient.
- It the testing location does have wireless devices, but does not have enough WAP capacity to accommodate them it is deemed WAP insufficient.
- If the testing location has no wireless devices then the WAP sufficiency is Not Applicable (N/A)

The chart below indicates the percentage of testing locations in this school in each category.



# Appendix D

## Future Ready Survey Reports

# DIGITAL LEARNING READINESS REPORT

**KEARNY**

***Date of Report: 11/04/2016***

## Digital Learning Readiness Score: 6.4 *(of 10)*

Technology now allows for personalized digital learning for every student in the nation. The Future Ready Schools District Pledge, according to the U.S. Department of Education, is designed to set out a roadmap to achieve that success and to commit districts to move as quickly as possible towards a shared vision of preparing students for success in college, careers and citizenship. This roadmap can only be accomplished through a systemic approach to change, as outlined in the graphic below.

With student learning at the center, a district must align each of the seven (7) key categories, or gears, in order to advance toward successful digital learning:

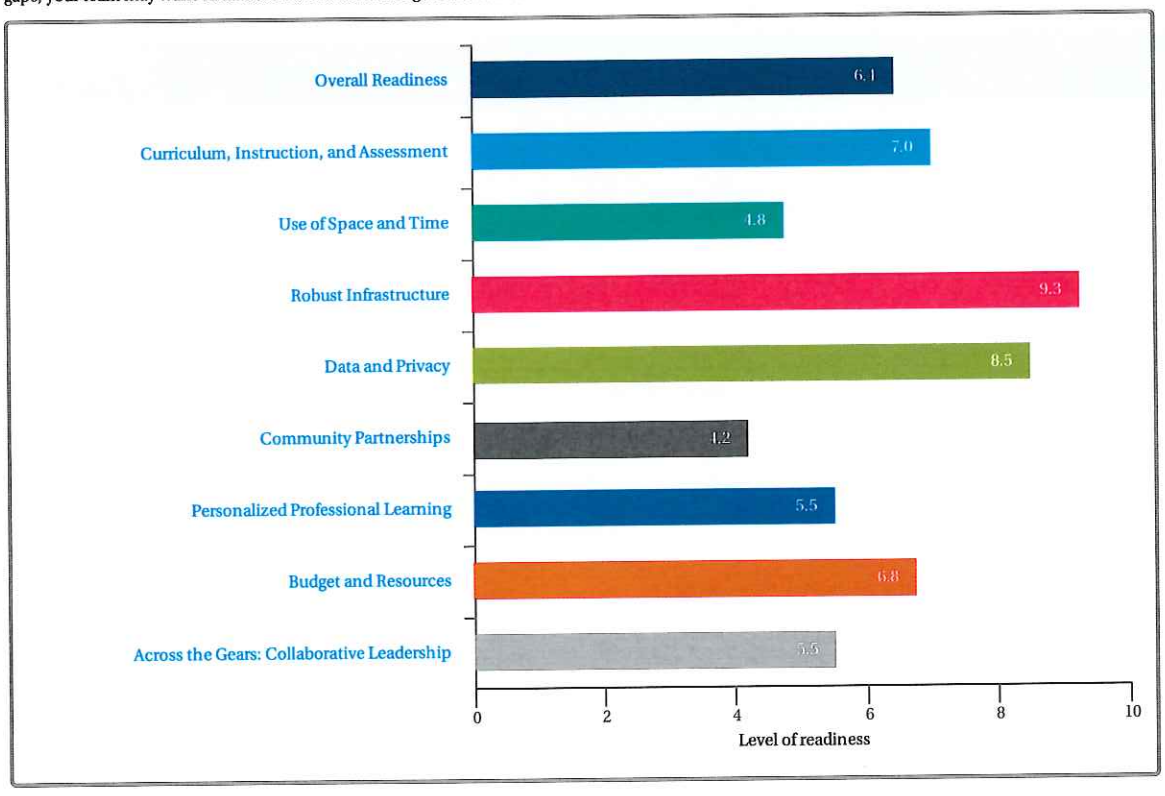
1. Curriculum, Instruction, and Assessment
2. Use of Time
3. Technology, Networks, and Hardware
4. Data and Privacy
5. Community Partnerships
6. Professional Learning
7. Budget and Resources

The outside rings in the figure emphasize the importance of empowered leadership and the cycle of transformation where districts vision, plan, implement and assess continually. Once a district is strategically staged in each gear, district leaders can be confident that they are ready for a highly successful implementation phase that leads to innovation through digital learning.

This confidential report indicates your district's readiness to implement digital learning. The chart below provides a snapshot of your district's progress to date across the seven gears in the Future Ready Schools framework.

## Digital Learning Readiness per Gear

This chart provides a snapshot of your district's Readiness Ratings across the seven gears in the Future Ready framework. After your district works on its gaps, your team may want to take the self-assessment again and see trends over time.



## Digital Learning

Digital learning is defined as the strengthening, broadening and/or deepening of students' learning through the effective use of technology. It individualizes and personalizes learning to ensure all students reach their full potential to succeed in college and a career.

*Digital learning is the strengthening, broadening, and/or deepening of students' learning through the effective use of technology.*

Digital learning can be enabled through a range of instructional practices. Much more than "online learning," digital learning encompasses a wide spectrum of tools and practices. It emphasizes high-quality instruction and provides access to challenging content, feedback through formative assessment and opportunities for learning anytime and anywhere.

Staging your district to implement digital learning successfully is a complex progress. It will include (1) investigating and researching new designs for learning; (2) envisioning a range of possibilities and formally adopting a new vision; (3) collaboratively developing plans to enable that vision; and (4) staging the implementation for success by enacting policies and capacity building measures. The following provides important information about the foundation your district is establishing in support of digital learning.

## Your District's Vision for Digital Learning

| District Vision |
|---|
| Much of the promise of the use of technology in education, including anytime anywhere, hinges on the universal availability of learning tools for students and teachers and on their effective use. In addressing this issue, attention is given to individual learner characteristics and needs, as well as the social context of using technology. All students and teachers will have universal access to effective information technology in their classrooms, schools, communities, and homes. |

| Vision for Students | Included in Your District's Vision | |
|---|---|---|
| | No | Yes |
| Personalization of learning | X | |
| Student-centered learning | X | |
| 21st Century Skills/deeper learning | | X |
| College and career readiness | X | |
| Digital citizenship | X | |
| Technology skills | | X |
| Anywhere, anytime learning | X | |

## Your District's Uses of Technology for Learning

| This table reports the status of your district's uses of educational technology: | Available in Your District | In Your District's Plans | Not Yet a Priority |
|---|---|---|---|
| Online coursework | | X | |
| Intelligent adaptive learning | X | | |
| Digital content in a variety of formats and modes (i.e., visual, auditory, text) | X | | |
| Assessment data (formative and summative) | X | | |
| Social Media | | | X |
| Blended learning | | X | |
| Digital tools for problem solving (visualization, simulation, modeling, charting, etc.) | | X | |
| eCommunication sites for student discussions | | X | |
| eCommunication sites for teacher discussions | | X | |
| Real-world connections for student projects | X | | |
| Tools for students to develop products that demonstrate their learning | X | | |
| Digital student portfolios | X | | |
| Online research | X | | |

## Your District's Digital Learning Environment

**The following table presents the status of various elements of your district's digital learning environment:**

| Elements in a Digital Learning Environment | Available in Your District | In Your District's Plans | Not Yet a Priority |
|---|---|---|---|
| Presentation tools | X | | |
| Multimedia production | | | X |
| Social Media | | | X |
| Productivity tools | X | | |
| Document management | | X | |
| Learning management system | | X | |
| eCommunication tools - Asynchronous Tools | | | X |
| eCommunication tools - Synchronous Tools | | X | |
| Library of curated digital content | X | | |
| Collaborative workspace | X | | |
| Visualization tools | | X | |

## Strategic Use of This Report

The purpose of this assessment is to provide your distict's "readiness to implement" scores in the context of the seven gears in the Future Ready Schools framework, as well as provide your district with a "way forward" in closing gaps. To do so, the Alliance for Excellent Education, in partnership with the Metiri Group, is providing rubrics for each element of the gears. To find your district's way forward, simply note your district's stage of readiness as reported on the following pages, and map that back to the associated rubric. Target next steps by looking at the table cell that represents the next level to the right. A score at the "staging" level indicates that your district is ready for implementation.

**The rubrics have been developed based on the following levels of readiness:**

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders are becoming more deeply informed about emerging research, trends, best practices, and added value related to digital learning. They are supported in their investigation through conference attendance, webinars, and in-depth discussions at district leadership meetings to ensure deep understating that informs their vision of digital learning. | District leaders have identified viable new directions for the school district. They have reviewed the possibilities, built scenarios for how those possibilities would look in their district, and working in tandem with key stakeholders, established a common vision of the future. | District leaders have established indicators of success based on the vision, set a baseline, and conducted a gap analysis. They have forged a plan for closing the gaps and identified key strategies for making progress toward those targets. They have projected benchmarks and milestones and created timelines, associated work plans, management plans and budgets. | District leaders have enacted policies, established new structures, identified budgets and assigned roles and responsibilities that collectively stage the district well for achieving the outcomes described in the vision. Where appropriate, they have undertaken pilots to document the efficacy of the elements of the plan. Once the district reaches the staging level, it is ready to begin full implementation. |

# Gear 1: Curriculum, Instruction, and Assessment

Through a more flexible, consistent, and personalized approach to academic content design, instruction, and assessment, teachers will have robust and adaptive tools to customize the instruction for groups of students or on a student-to-student basis to ensure relevance and deep understanding of complex issues and topics. Providing multiple sources of high quality academic content offers students much greater opportunities to personalize learning and reflect on their own work, think critically, and engage frequently to enable deeper understanding of complex topics. Data are the building blocks of diagnostic, formative, and summative assessments—all of which are key elements in a system where learning is personalized, individualized, and differentiated to ensure learner success.

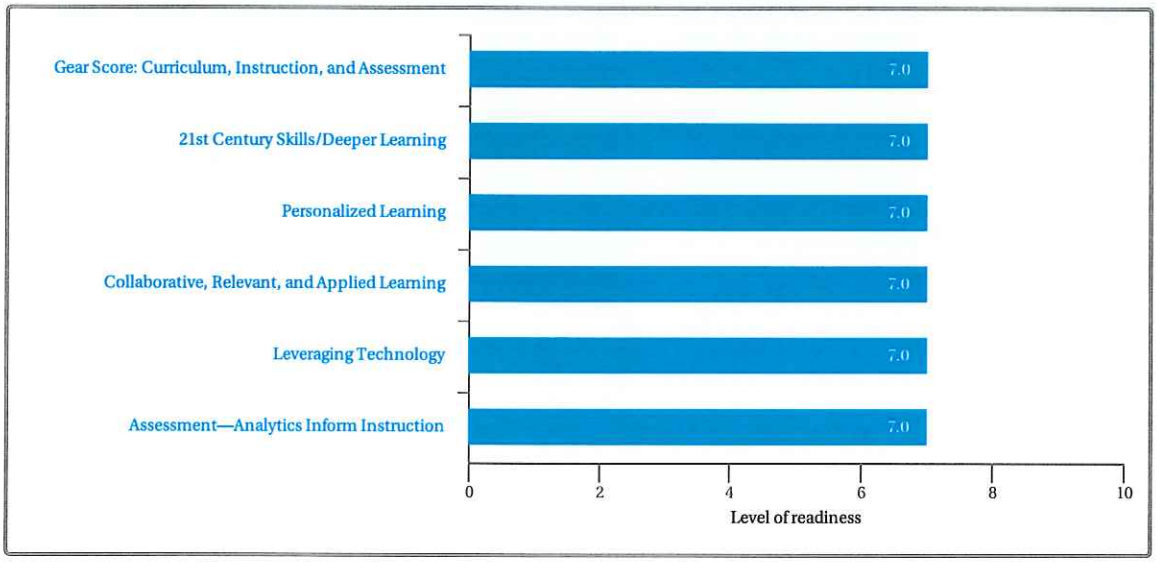
### Elements of this Gear:

- 21st Century Skills/Deeper Learning
- Personalized Learning
- Collaborative, Relevant, and Applied Learning
- Leveraging Technology
- Assessment—Analytics Inform Instruction

### Your District provided the following Curriculum, Instruction, and Assessment vision:

> Curriculum, instruction, and assessment practices will leverage the full range of technology and digital resources to ensure students are immersed in rich, authentic, relevant learning experiences that enable 21st Century Skills/deeper learning across the disciplines.

### Your District's Stage of Readiness for Curriculum, Instruction, and Assessment



## Depth of Your District's Knowledge Base: Curriculum, Instruction, and Assessment

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Curriculum, Instruction, and Assessment | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss strategies for building college and career readiness through digital learning. | | | X |
| Discuss leveraging diverse resources accessible through technology to personalize learning for all students. | | | X |
| Discuss providing students with the opportunity and specific skills to collaborate within and outside of the school, in the context of rich, authentic learning. | | | X |
| Discuss instituting research-based practices for the use of technology in support of learning. | | | X |
| Discuss transitioning to a system of digital and online assessment (diagnostic, formative, adaptive, and summative) to support continuous feedback loops improvement informed by data. | | | X |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| Integrate strategies to promote 21st Century skills/deeper learning outcomes into curriculum and instruction for all students. | | | | X | |
| Design curriculum and instruction that leverage technology and diverse learning resources to enable all students to personalize their learning with choices and control. | | | | X | |
| Develop curriculum and instruction that provide each student the opportunity to solve real-world problems and encourage collaboration with students, educators and others outside of the school environment. | | | | X | |
| Integrate technology seamlessly in the teaching and learning process while assuring that the use of technology adds value to learning for all students. | | | | X | |
| Provide opportunities for all schools to use digital and online assessment systems that provide all students and teachers with real-time feedback in ways that increase the rate and depth of learning, and that enable data-informed instructional decision ma | | | | X | |

## Rubrics for Curriculum, Instruction, and Assessment

### 21st Century Skills/Deeper Learning: Readiness Score of 7

Curriculum, instruction, and assessment are based on clear expectations that all students will leave the education system well staged for college acceptance or for alternative paths to workplace readiness. These expectations mandate solid grounding in standards-based content, but also intentionally integrate elements of deeper learning, such as critical thinking, creativity and innovation, and self-direction; as well as providing opportunities for authentic learning in the context of today's digital society.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders familiarize themselves and staff with new state learning standards and with research-based principles and strategies for 21st Century skills/deeper learning. Attention is given to the assessment of these skills as well. | 21st Century skills/ deeper learning outcomes are explicitly referenced and defined in the district's vision of the college and career ready student. Guidance documents and templates for curricula based on these standards are developed. | Instructional leaders formally integrate 21st Century skills/deeper learning into all curriculum documents. District leaders develop explicit plans for building the capacity of the system to develop 21st Century skills/deeper learning skills in students. In addition, they develop plans for assessing these skills/ outcomes on an equal footing with content skills. | District leaders communicate new expectations for college and career readiness that incorporate 21st Century skills/deeper learning. They begin awareness trainings to orient educators to new curricular scope and sequences, guides to 21st Century skills/deeper learning, and upcoming series of associated professional development. They pilot programs that incorporate the new vision for learning. |

### Gaps & Strategies for 21st Century Skills/Deeper Learning

**Gap 1.1**

The district has not yet reviewed 21st Century Skills/Deeper learning competencies, selected a set of skills that resonate with all stakeholders, and integrated those skills into all curricula. Support materials, information resources, professional development, and pilot programs have not been developed.

**Strategies to Close Gap 1.1**

**A Curriculum Integration Process**

Integrate skills into the existing curriculum once a framework for the skills has been created. There are several approaches to integrating 21st Century Skills/Deeper Learning into the district curriculum. One approach is to create a framework for each skill that defines its components, the strategies for strengthening that component in students, and the grade levels at which that strategy might be implemented. The process results in a description of how to teach the skill from the simplest concepts to the most complex. The curriculum can then be reviewed unit by unit and decisions made where that component already exists or might best fit and how it would change the learning that takes place in that unit. Engaging key stakeholders in this process, including multi-disciplinary teams of teachers, is essential to ensuring the skills are adequately aligned with the curriculum and fostering buy-in among staff members.

**A Parallel Curriculum Approach**

Consider a parallel curriculum. Some districts have found success utilizing a parallel curriculum in promoting 21st Century Skills/Deeper Learning. For example, if critical thinking is a targeted skill, units on critical thinking skills (e.g., predicting, making decisions, and analyzing arguments) can be developed and implemented at selected grade levels. When teaching a unit where the skill might be included, all teachers in grades beyond the grade targeted for this instruction can then be asked to review and reinforce the strategies with their students; include selected strategies as required elements of the work assigned in the units and, most importantly, include that element of the skill in the assessment.

**Plan for Implementation**

The cross-functional team should develop a plan for implementation once a set of key, 21st Century Skills/Deeper Learning competencies have been adopted. Ask the team to re-read the scenarios developing in the envisioning stage along with the results from the back mapping exercise as a foundation for planning. The plan should include: • clarity in definition • an explanation of why each skill or competency is important to the students' future • how the skill is mapped into the curriculum • sample scenarios • revisions to unit/lesson templates to include a section on which 21st Century Skills/Deeper Learning competencies being addressed • plans to assess the skills • descriptions of professional learning needs • strategies and timelines for building awareness and expertise with administrators and staff • outreach to parents • budget to fully systemically support the plan.

**Gap 1.2**

The district does not assess and report student attainment of 21st Century skills.

**Strategies to Close Gap 1.2**

**Plan for Implementation**

Build a plan for systematic use across the district once a set of possible assessments for the 21st Century Skills has been identified and classified by grade levels and content areas. The plan should include: • a listing of all the potential assessments • identification of assessments recommended for use in tracking student achievement of the skills, suggested grade level(s) and content areas for each assessment • a plan for administration of the assessments • a description of how the data will be used in a cycle of continuous improvement • a proposed timeline for both implementation of the entire plan and the administration of the assessments • a budget should be developed and sources identified to ensure funds are allocated to systemically support the implementation.

## Personalized Learning: Readiness Score of 7

Educators leverage technology and diverse learning resources to personalize the learning experience for each student. Personalization involves tailoring content, pacing, and feedback to the needs of each student and empowering students to regulate and take ownership of some aspects of their learning.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders research personalized learning and document the characteristics of personalized learning environments and the requirements for building these characteristics. | A common vision for personalized learning is written and communicated, and includes rich scenarios of practice in multiple grade levels and content areas. | District leaders develop plans for promoting and/or expanding opportunities for personalized learning. Policies and access to technology are supportive of these plans. | District leaders prepare a plan for implementing personalized learning at all levels. This plan includes organizational tools, professional development, and examples of practice aimed at multiple levels and content areas. |

## Gaps & Strategies for Personalized Learning

Gap 2.1

There may not be a deep understanding of personalized learning for students or the research on this topic. The possibilities that technologies and social media bring to advance such learning with students may not be understood.

**Strategies to Close Gap 2.1**

| |
|---|
| **Learn from Others**<br>Identify aspects of others' work that you would like to replicate as well as aspects that you want to try to avoid as you move from visioning to planning. Prioritize your lists to ensure the most important components receive the most emphasis. Consider your unique context, the district's overall goals and priorities, as well as those of your stakeholders and community as you determine how to put your vision into practice. |
| **Sharing is Caring**<br>Continue to share your plans with stakeholders as projects take shape and change over time. Focus on sharing research and current best-practices with others by leveraging social media tools and other easily accessible outlets (e.g., district and school websites, local media) to build a knowledge base related to personalized learning and the opportunities your plan creates for students. |

Gap 2.2

District leaders may not have yet recognized the key role that technology and social media will play in empowering students to personalize their own learning.

**Strategies to Close Gap 2.2**

| |
|---|
| **Consider the Support Structures Your Schools Will Need to Personalize Learning**<br>Continue to identify alignment between your developing plan and the commitment to provide the policy (such as grading policy), infrastructure, curriculum, and professional development needed to systemically support personalized learning at the district level. |
| |
| |
| |

Gap 2.3

Current policies instructional guidance/resources, and/or professional learning opportunities may not be supportive of or may serve as barriers to personalized learning.

**Strategies to Close Gap 2.3**

| |
|---|
| **Implement the Vision aligning Policy and Budget**<br>Back-map policies and agreements that need to be in place in order to make that vision possible with a clear idea of what you would like personalized learning to look like in your district. Work with this team to identify budget needs and critical questions that need to be addressed prior to finalizing a plan. |
| **Empower Students**<br>Identify student needs in understanding how to engage with personalized learning based on the identification of gaps in students' skills. Build out a concrete plan that will empower all students equitably and provide the necessary skills for all students to engage in personalized learning opportunities. |
| **Plan Professional Learning Activities**<br>Identify professional learning needs in understanding how to facilitate personalized learning based on the identification of gaps in educators' skills. Build out a concrete plan that will provide the necessary skills for all educators to provide personalized learning experiences for their students. Start to identify training materials or professional development providers that can bridge any gaps in skills for teachers as they transition from current to envisioned practice for personalized learning. |
| |
| |

## Collaborative, Relevant, and Applied Learning: Readiness Score of 7

In digital learning environments, students do work similar to that of professionals in the larger society. They collaborate with educators, fellow students, and others outside of the school environment on projects that often (1) involve the creation of knowledge products, (2) foster deep learning, and (3) have value beyond the classroom walls.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders review the research related to rich, authentic learning, including variants, such as project- and problem-based learning. Teams have also gathered research and best practices on promoting and leveraging collaboration. | The concept of student work as collaborative and authentic is noted as central to the district's vision. District leaders gather examples of teaching and learning, meeting these criteria through research and piloting. A framework for collaborative, relevant and applied learning is created and communicated to all stakeholders. | Instructional leaders review all curricula for opportunities for rich, authentic, and collaborative learning and document these opportunities. Initial plans for the adoption and implementation of these curricula are made that include necessary staff training and support. | Instructional leaders finalize a plan and assign responsibilities for implementing rich, collaborative authentic work that includes unit designs and templates, professional development, and support for teachers as they scale up new instructional practices. |

## Gaps & Strategies for Collaborative, Relevant, and Applied Learning

**Gap 3.1**

The district has not yet researched, documented, and communicated the value of authentic learning in K-12 education. A framework for rich, authentic work has not yet been developed.

**Strategies to Close Gap 3.1**

| |
|---|
| **Engage the Business Community**<br>Engage groups like the local Chamber of Commerce to identify ways that business leaders could contribute to collaboration and real-world experiences Troubleshoot existing policies to ensure student safety while encouraging participation in collaborative opportunities. Work to purposefully to engage experts to work with students so that authentic learning can take place. |
| **Bridge Current Realities to the Vision**<br>Articulate a formal plan that will bridge from current practice into new practices that support deeper learning and collaboration. Based on existing research, identify the skills and knowledge needed for educators and students for authentic learning opportunities to take place. Collect data from staff members to identify gaps in teacher and student readiness, and plan out opportunities for learning, modeling, and visiting successful models to ensure that the vision and plan represent best practices and align with the needs of stakeholders. |
| **Pilot Through a Curricular Team**<br>Articulate a formal plan that will bridge from current practice into new practices that support deeper learning and collaboration. As part of that plan, identify gaps in teacher and student readiness, and plan out opportunities for learning, modeling, and when possible visiting successful models to ensure that the vision and plan are aligned with locally defined best practices. |

**Pilot Through A Curricular Team**

Engage a curricular team in reviewing current practice, and articulating areas that would be primed for piloting authentic, collaborative learning opportunities. Have the team create example unit/lesson plans or learning opportunities that can be implemented in classrooms as model lessons or as a pilot. Consider engaging this team in the development of a complete scope and sequence that would ensure that students have the skills they need to collaborate and work on rich authentic work, as well as ensure continually complex learning opportunities.

**Assign Responsibilities**

Identify the persons who will be responsible for each component of the plan, think through timelines carefully to map out next steps and readiness for implementation. Chart this plan and make it available to monitor progress.

Gap 3.2

The district has not yet revised curriculum, instruction, and assessments that align to and support collaborative and authentic learning.

**Strategies to Close Gap 3.2**

**Ease the Transition**

Articulate a formal plan that will provide the necessary scaffolds to bridge current practice into practice that is consistent with the district's vision for authentic learning and collaboration. As part of that planning process, identify gaps in student readiness, and plan out opportunities for learning, modeling, and visiting successful districts, schools, and classrooms to ensure that the vision and plan are consistent with locally defined best-practices for authentic, collaborative learning environments.

**Facilitate Natural Progressions**

Provide opportunities and time for classroom teachers to explore examples of authentic, collaborative learning and engage in discussions about those examples. When possible, create natural opportunities for teachers to explore the use of new frameworks and approaches for demonstrating student understanding. Make every effort to ensure that your plan focuses on preparing teachers for this work.

**Identify Professional Learning Needs**

Collect data from district educators related to professional development needs, using information about possible gaps from the envisioning stage as a guide. Provide clear explanations of the district's vision and definitions of authentic, collaborative learning to ensure data gathered accurately reflect educators' needs given the districts' expectations. In addition to instructional issues, consider what level of access to the professional development and materials will be necessary to continually provide rich authentic learning opportunities for students.

## Leveraging Technology: Readiness Score of 7

Educators in digital learning environments integrate learning-enabling technology seamlessly into the teaching and learning process. These educators have the skills to adopt multiple, highly effective learning technologies and adapt to diverse, evolving learning structures to assure that the use of technology adds value to the learning process.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District technology and curriculum staff members collaborate with other key stakeholders in an investigation of the latest research and best practices related to technology-enabled learning. | District leaders and key stakeholders establish a common vision for building and sustaining a digital learning environment that clearly defines the role technology plays in supporting these new learning environments. | Instructional leaders review all curricula for opportunities to apply current technologies to improve teaching and learning in ways that align with research and best practices. They then align and integrate these technologies into all curriculum documents. | Instructional leaders prepare a plan for proactively integrating technology into teaching and learning practices throughout the district. This includes professional learning plans and communities of practice. They pilot robust and effective integration of learning technologies within the curriculum. |

## Gaps & Strategies for Leveraging Technology

Gap 4.1

District leaders may not yet have established a culture of digital innovation that promotes pedagogy-driven, digital transformations in curriculum, instruction, and assessment.

**Strategies to Close Gap 4.1**

**Name Your Model**

Identify one (or more) of the best practice technology integration models identified in the investigation process that will guide the development of a comprehensive plan to integrate learning-enabling technology into curriculum and classroom practice. The cross-functional team may choose to focus on one model, or combine models to best suit the district's needs. Once a model has been agreed upon, create a plan for piloting the model with selected teachers in the district. Establish a feedback loop that will inform future versions of the model.

**Put it in Writing**

Develop a comprehensive plan for the integration of effective learning technologies to share with stakeholders (i.e., all professional staff, parents/families, local businesses, and local subject matter experts). Clearly define roles and responsibilities, the implementation timeline, and program evaluation methods for the integration plan. Build ample opportunities for stakeholders to provide feedback on the plan into the timeline. Where possible, map funding requirements for implementation to potential Learning Return on Investment (LROI) and Total Cost of Ownership (TCO).

Gap 4.2

District leaders may not have worked in tandem with key stakeholders to plan, build, and sustain a digital learning environment where technology and digital resources are seamlessly aligned with curriculum, instruction, and assessment as integral to the learning process.

**Strategies to Close Gap 4.2**

**Let Data Drive the Vision**

Collect any available data on the current levels of readiness of leadership, professional staff, students, and the community to implement this vision of a digital learning environment. Identify necessary data that are not available and create a plan for collecting it.

**Weave It In**

Review the district's current strategic plan and embed the new vision for integration of digital learning and curriculum into the existing plan. Emphasize integrating the vision into the strategic plan, rather than simply adding it in, and obtaining input from stakeholders regularly throughout the process. Develop specific examples to illustrate the change in practice that would take place once implemented in a district classroom. Include a communication plan that will align any modifications to research and best practice in order to champion this change in practice.

Gap 4.3

The district may not yet have established expectations and supports for building technological competence and digital citizenship required of students if they are to leverage technology to deepen their learning.

**Strategies to Close Gap 4.3**

**Plan but Continually Adjust**

Review the district's existing technology integration plan to assure that it is aligned to the new vision for digital learning. Make sure the plan identifies implementation roles and responsibilities as well as measurable goals and outcomes. Due to rapid changing technology developments and requirements, build in an annual reexamination of technology policies, practices and funding to maintain effectiveness and efficiency. The review process should include district leaders, teachers, students, and subject matter experts. Identify methods and timelines to evaluate the implementation of the integration plans. Develop a comprehensive communication plan.

## Assessment—Analytics Inform Instruction: Readiness Score of 7

The district and its schools use technology as a vehicle for diagnostic, formative, and summative assessment. The school system has mechanisms (i.e., processes and digital environments) for using data to improve, enrich, and guide the learning process. Educators actively use data to guide choices related to curriculum, content, and instructional strategies.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders are becoming more deeply informed about the type of assessments they will need to evaluate student progress in content and process standards as well as 21st Century competencies. They continue to investigate and confirm findings. | District leaders have identified the type of assessments that will be required to track progress over time, but have yet to establish a common vision around specific indicators, metrics, or instruments. | District leaders have established an initial plan using data to guide choices related to curriculum, content, and instructional strategies. They have identified indicators, metrics, and/or instruments for use in determining student progress over time. They have identified diagnostic assessments, formative, and summative assessments. Policies, budgets, and access to necessary technologies necessary to support these assessments have been identified. | With policies, budgets, and access to necessary technologies necessary to support these assessments in place district leaders have established a series of diagnostic, formative, and summative assessments. They have established analytics and mapped reports to expected learning outcomes. Education professionals are prepared to use the data generated by these assessments to track student progress over time, identify gaps, and make changes to improve results. |

## Gaps & Strategies for Assessment—Analytics Inform Instruction

**Gap 5.1**

District leaders have not yet established a data culture where everyone is expected to use research, data, and evidence-based reasoning. Teachers are not yet using data to guide their instructional and content-related choices.

**Strategies to Close Gap 5.1**

**Set the Bar**

Develop priorities based on the vision. Use the gathered research and input from stakeholders identify aspects of others' work that you would like to replicate as well as aspects that you want to try to avoid. Finalize a prioritized list of goals aligned with the vision that represent the district's direction. Build upon the goals to develop a district plan for incorporating digital assessments into district-wide practice.

**Find Out What They Know**

Identify gaps in the knowledge of staff at all levels of the organization related to using data to inform instructional decisions. Model the use of data in this process by conducting interviews with district leaders, surveys of instructional staff members, and even focus groups of school administrators and instructional staff.

**Ensure Safety**

Leverage the expertise of privacy and security experts to trouble shoot your plans along the way. Consider inviting these experts to be part of your internal team to ensure that best practices and future readiness in privacy and security are a consistent part of the conversation.

**Gap 5.2**

District leaders have not established protocols for using technology to collect, analyzing, access, secure, and analyze diagnostic, formative, and summative data to guide teaching and learning.

**Strategies to Close Gap 5.2**

**Plan Backwards**

Back-map what infrastructure, policies, data maps, privacy and security measures, and agreements need to be in place in order to make the digital assessment vision possible. Complete data maps as part of the planning process to ensure they are ready to be shared with staff. Be sure to include plans for integration of using formative and summative data with grading policies and practice.

**Continue Learning**

Continue to explore examples of digital assessments and engage classroom teachers in discussions about those examples and provide ample time for teachers to practice both administering assessments and interpreting data. When possible, create natural opportunities for teachers to explore the use of digital assessments with students in low-stakes scenarios. Make every effort to ensure that your plan focuses on monitoring and assessing learning, as well as informing instruction. Troubleshoot your plans to be sure that they purposefully assess, and provide quality, meaningful data to teachers, students, and parents.

**Explore Tools**

Identify specific tools to support the vision based on the vision and plan. Begin meeting with vendors and sharing your vision. Evaluate each vendor based on that vision, continually seeking out vendors and other stakeholders that can positively contribute to the work of your district over time. Clearly identify how each vendor will support your needs and what work you would need to do internally to "fit" with the available tools for digital assessment.

**Needs or Wants?**

Identify teacher and student needs related to participation in digital assessments. Work with the shared leadership team to identify budget needs and critical questions that need to be addressed prior to finalizing a plan.

Gap 5.3

How are students actively involved in using data to self-assess?

**Strategies to Close Gap 5.3**

**Access with Discretion**

Develop a viable plan for incorporating digital assessments into current practice, be sure that the plan is collaboratively developed and meets the diverse needs of the districts (from district level planning, parent communication, and instructional planning). Because some benchmark assessments require access to be scheduled within specific software prior to use, be sure that as part of your planning you are articulating expectations for professionals who are responsible for that set up. As part of the planning phase, give careful consideration to how data will be mapped to learning outcomes and standards, and establish specific plans for how mastery/deficiency scores will be identified. Work with teachers and other education professionals to gather examples of how data can help establish individual learning paths for students.

**Parents as Partners**

Design a mechanism for parents to gain access to data related to their child, vet that mechanism with local parents and other stakeholders to trouble-shoot any issues of equitable access.

**Keep Teachers Current**

Collect data on teacher training needs, specific to the collection and analyzing of student data. Be sure that strategies for analysis are clear and that all teachers will continually have access to the training necessary to make quality use of any data they are provided.

# Gear 2: Use of Space and Time

Student-centric learning requires changes in the way instructional time is used. There are new opportunities for utilizing in-school and out-of-school time, and leveraging approaches such as competency-based learning to make learning more personalized and learning opportunities more accessible. These new opportunities leverage technology to meet the needs, pace, interests, and preferences of the learner. This transition is made possible through innovative uses of technology for assessing student learning, managing learning, engaging students in learning, disseminating content, and providing the infrastructure necessary to encourage flexible, anytime, anywhere learning opportunities.

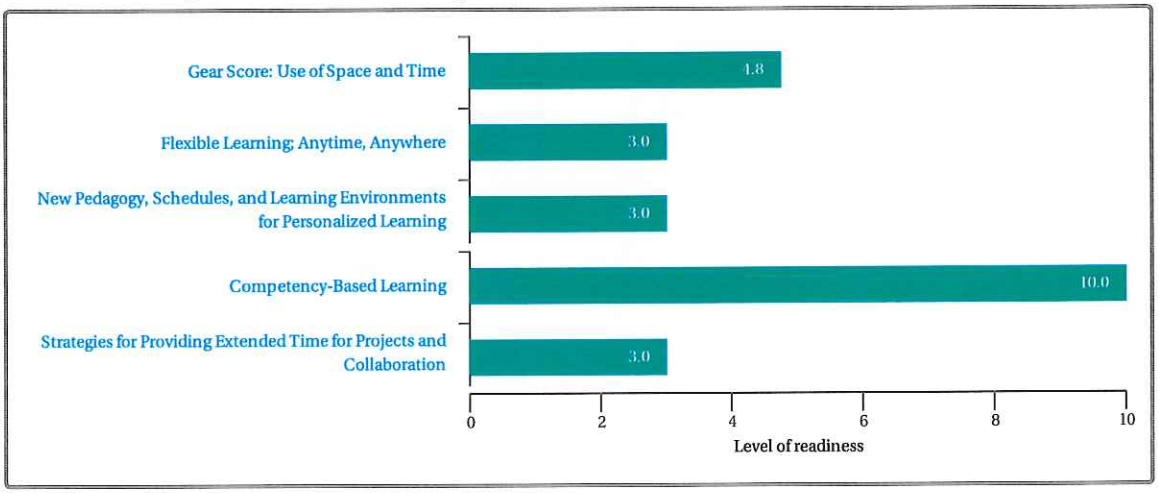
### Elements of this Gear:

- Flexible Learning; Anytime, Anywhere
- New Pedagogy, Schedules, and Learning Environments for Personalized Learning
- Competency-Based Learning
- Strategies for Providing Extended Time for Projects and Collaboration

### Your District provided the following Use of Space and Time vision:

Our district supports the notion of anyone, anytime, anywhere learning and the use of technology to assist fulfilling this vision.

### Your District's Stage of Readiness for Use of Space and Time



## Depth of Your District's Knowledge Base: Use of Space and Time

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Use of Space and Time | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss options for providing students with online and digital learning options for anywhere, anytime learning. | | X | |
| Rethink the use of instructional time and school schedules to provide students with extended time for projects and collaboration, and to provide the flexibility required for personalized, student-centric learning. | | X | |
| Discuss the merits of allowing students flexibility in the time it takes them to complete a course or attain a standard (competency-based learning). | X | | |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| By leveraging technology and media resources, students have options to learn any time of day, from home, school and/or community. | | X | | | |
| Teachers are transitioning to more student-centric environments, leveraging flexible uses of time to enable personalized learning for their students. | | X | | | |
| Student progress is measured by performance and mastery, rather than attendance/seat time (competency-based learning). | | | | | X |
| The district has moved away from rigid schedules and short class periods, toward instructional time allocations that are flexible, enabling extended work time for complex projects. | | X | | | |

## Rubrics for Use of Space and Time

### Flexible Learning; Anytime, Anywhere: Readiness Score of 3

By leveraging technology and media resources, digital learning options are available for students at any time of day, from home, at school, and in the community. The value of anytime, anywhere learning is dependent on access and capacity for use; ubiquitous, robust internet access and the capacity to use digital learning tools and resources effectively.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders utilize existing research and trends to inform their thinking about flexible, anytime, anywhere learning. They do so by attending conferences, visiting other districts to observe models, leveraging internal and external expertise, and discussing options with colleagues, families, and other stakeholders. District leaders have sought out different perspectives and assembled concrete ideas for providing access to models of online and blended learning, while attending to the questions of equity around 24/7 access to device and high-speed Internet. They have investigated accessibility policies, including acceptable and responsible use. | District leaders use research, and existing practice to build out scenarios for supporting and accessing flexible, anytime, anywhere learning in their schools. They have explored various strategies for access, including one-to-one and bring your own device (BYOD) programs, community-wide Internet access, flexible licensing agreements, and partnerships with community stakeholders. They have established a common vision that leverages technology to empower anytime, anywhere learning through 24-7 access to devices, high-speed Internet access, and digital learning content. | District leaders have collaboratively developed a plan for flexible, anytime, anywhere learning in their district. That plan leverages technology and is attentive to issues related to 24/7 access of device, high-speed Internet, and digital content. They have identified key strategies, policies, timelines, necessary budgets, licensing agreements, and community engagement during staging and implementation. District leaders have also identified gaps in teacher and student readiness for anytime, anywhere learning and created initial plans for integrating models of online and blended learning into their school day, and beyond. | District leaders have policies and budgets in place to enact their plan for anytime, anywhere learning. They have identified plans for addressing issues of access for device, high-speed Internet, and digital content for every student. District leaders have staged a digital learning or content management environment that allows classroom teachers to begin to work towards models or online and blended learning, and have continual review processes in place for licensing agreements. They have measures in place to evaluate their plans, and a continual feedback system to monitor roll out of any devices, access issues, or blended learning opportunities. They are staged to provide professional development to teachers, and additional training to students that will enable flexible, anytime, anywhere learning. |

### Gaps & Strategies for Flexible Learning; Anytime, Anywhere

**Gap 1.2**

Teachers and students who will be engaging with flexible, anytime, anywhere learning opportunities are not yet fully prepared to successfully participate.

**Strategies to Close Gap 1.2**

**Do Your Research**

Collect information about current teaching and learning practices, including how and where students learn outside of school, methods teachers use for encouraging out-of-school-time learning, and what digital content curation strategies are already in place at the district, school, and even individual teacher levels. Preparing teachers and students to successfully participate in flexible anytime, anywhere learning must begin with current practice in mind. To begin the process of determining how to move toward a more flexible teaching and learning environment, seek out concrete examples from other districts at the local, state, and national level that have fully prepared their teachers and students for flexible, anytime, anywhere learning.

Identify digital content curation strategies that teachers are already using.

Seek out concrete examples from other districts at the local, state, and national level that have fully prepared their teachers and students for flexible, anytime, anywhere learning.

**Gap 1.1**

The district does not have the policies, infrastructure, and the digital learning tools and resources in place to fully embrace flexible, anytime, anywhere learning.

**Strategies to Close Gap 1.1**

**Through the Looking Glass**

Become informed. What does flexible, anytime, anywhere learning look like and what does it take to make it happen? Have a cross-functional team of district stakeholders (e.g., district administrators, principals, curriculum specialists, technology directors, teacher leaders, parents, community partners) collect examples of how 24/7 learning takes place in school settings and in the workplace. Build a collection of successful solutions and models ranging from exploratory pilots to full implementation of flexible, anytime, anywhere learning systems.

**Preparing the Way**

Interview leaders from districts who are further along in the process and other subject matter experts who have successfully implemented flexible, anytime, anywhere learning to determine what process they used to get started and how they removed barriers to successful implementation. Then identify the barriers your district, students, and community members face (e.g., infrastructure, access to devices and content, 24/7 Internet access, district policies, scheduling, training needs of students and staff, licensing agreements, funding) that could hinder adoption of flexible, anytime, anywhere learning opportunities. Be sure to investigate administrator, teacher, and student beliefs and expectations for using technology and resources that may prevent them from being successful in anytime, anywhere learning.

**Leverage your Human Capital**

Find your expert, early adopters among administrators, students, and staff. Recruit subject matter experts from local and regional businesses, universities, and the community. Use the expertise from these champions of anytime, anywhere learning to identify examples of key factors for successful implementation (e.g., ubiquitous access to digital technology and content, affordable and reliable Internet access, connections to subject matter experts and systemic technical support, opportunities for collaborative skill development and problem solving, competency-based progression) that will illustrate potential barriers and potential solutions for your district.

## New Pedagogy, Schedules, and Learning Environments for Personalized Learning: Readiness Score of 3

To facilitate more personalized learning, educators work together to identify and validate new designs for personalized learning where the use of time is adaptable and flexible. Associated resources are made available to all students both synchronously and asynchronously to promote flexibility.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate new designs for personalized learning wherein time is both adaptable and flexible. The district is identifying both synchronous and asynchronous learning opportunities by accessing existing research and reaching out to other districts that are using time differently to promote personalization. The district deepens their understanding of the infrastructure necessary to encourage personalized learning through new pedagogies, schedules, and learning environments. | District leaders have collaboratively developed a vision for personalized learning that leverages new pedagogies, schedules, and learning environments. They use both research and existing practice to review new possibilities for their district and have identified which of those would work locally. | A plan for utilizing new pedagogies, schedules, and learning environments to promote access and participation with personalized learning opportunities is constructed. This plan leverages resources that can be made available to students both synchronously and asynchronously, and accounts for policies, necessary budgets, and licensing agreements that will empower education professionals and students to use time differently to engage students. Necessary training for teachers is identified and any gaps that exist in student readiness are addressed. Those gaps include issues related to equitable access for all students. | District leaders have staged education professionals and students for personalized learning opportunities through the use of new pedagogies, schedules, and learning environments. Policies, funding, and metrics to measure effectiveness are in place, and the infrastructure is ready to provide synchronous and asynchronous learning opportunities to all students. |

## Gaps & Strategies for New Pedagogy, Schedules, and Learning Environments for Personalized Learning

**Gap 2.1**

The district has not yet defined and adopted a pedagogical shift to personalized learning, anytime and anywhere.

**Strategies to Close Gap 2.1**

**Connect and Collect**

Build a cross functional network of experts (e.g., teacher educators, instructional designers, curriculum coaches) to assist district leadership in researching and compiling literature and concrete examples that illustrate how learners learn (cognitive theory) and how it is applied in practice (traditional, online, and blended learning). Complete a literature review that can serve as a guide for your district.

**Unbound by Approach, Pace, and Space**

Think freely about the art and science of learning, unbound by approach, time, and location. Investigate how students, professional staff, and business and community members learn and include data on their environment, social interactions, institutions and entertainment. Consider how access to resources in the real-life is different than access in education; how can instructional practice help organize and scaffold learning, and how activities and strategies can be optimized in order to build new ideas and development of complex skills. Develop a vision of how learning in your district can take advantage of the affordances of technology to better replicate a practical learning model. Be prepared to share this vision with professional staff, students, and the community.

**Picture the Finish Line**

Make plans early for assessing progress in terms of pedagogical shifts. Identify key indicators of personalized learning that align with the district vision, and measures of these indicators. Enlist instructional leaders to provide feedback on the assessment plan. Consider both valid and reliable indicators, as well as collection of qualitative data from interviews and focus groups, to ensure that an accurate picture of progress is obtained.

Gap 2.2

The district has not yet implemented an effective, personalized learning environment. One where learning is connected to an individual learner's interests and experiences, and where learners have more control over the when, where, what and how they are learning.

**Strategies to Close Gap 2.2**

**A PLE is not an LMS**

Ensure key leaders are aware of the difference by building definitions by consensus for both terms and developing vignettes that provide a clear picture of effective implementation of a PLE. A Personalized Learning Environment (PLE) is not a Learning Management System (LMS). As a reference point, a PLE is learner-centric environment composed of personal targets for learning, tools and resources, pathways to communicate and collaborate, and services used to direct personal learning and achieve personally defined goals. An LMS is a system (software or web-based) that tends to be course driven or teacher-centric, and used to plan, implement, and assess the learner's progress for credit. It may be tangential to or overlap functions with a PLE. Find examples of PLE models that are successfully implemented in k12 and higher education. Identify LMS and other course driven systems to illustrate how a LMS can contribute to personalized learning not be mistaken for it.

**Challenges not Barriers**

Consider the staffing needs and time requirements of a personalized learning environment and rethink traditional models of staff assignments and scheduling. Know as much as you can about current staffing and class scheduling. Have district leaders (or contract with external experts) analyze current formulas for allocation of professional staff, student schedules, and use of space and time. Research a variety of successful programs to identify how flexible staffing and use of time is addressed then document challenges and solutions that could be applied to flexible, anytime anywhere learning. Visit model districts and programs to get a first-hand picture of personalized learning in action. Interview district leaders, professional staff and students, and conduct community focus groups for additional insight.

## Competency-Based Learning: Readiness Score of 10

One facet of personalized learning, Competency-Based Learning (CBL), integrates student voice and choice, flexible paced learning with timely support, and demonstration of academic proficiency. Pace of learning is flexible based on the needs of individual students and the challenges of complex, often project-based work. Timely support is provided to accommodate learning needs and guarantee access to content and resources. Upon mastery of explicit, measurable and transferable outcomes that demonstrate the application and creation of knowledge, learners move on to a new, targeted standard or course.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders are accessing current research, investigating current trends, and identifying best practices with competency-based learning. They are utilizing extant resources to develop a deep understanding of competency-based learning as it relates to digital learning. | District leaders have a vision for competency-based learning that is grounded in research and best practice. That vision leverages technology, and supports the districts vision for personalized learning. With a common vision in place, key stakeholders have been able to assist the district in building out scenarios that create the best opportunities for the district. | District leaders have developed a plan to transition to competency-based learning. This plan includes provisions for providing the district with necessary data to train teachers, inform stakeholders, redesign curriculum, and envision new ways of facilitating instruction and assessment. A gap or needs analysis has identified the infrastructure that will be necessary to support competency-based learning. As a part of the overall plan they have identified policies, budgets, and issues of equity in accessibility of devices and high-speed Internet to allow for the full opportunities of this transition to be realized. | District leaders have enacted their plan, with new policies that establish competency-based learning in place. With the necessary infrastructure, policies, and budgets in place issues related to equity and access have been addressed. Teachers and students are prepared for the transition to competency-based learning, and the district is staged with redesigned curriculum, instruction and assessment practices. |

## Gaps & Strategies for Competency-Based Learning

Gap 3.1

The District has not yet integrated Competency Based Learning (CBL) into its policy and practice. It has not created designs that provide flexible, paced learning with robust, timely support, learner voice and choice, and measures to evaluate learner proficiency that align to self-paced learning.

**Strategies to Close Gap 3.1**

**Partnerships in Practice**

Work with the other districts, companies and agencies to identify effective methods for evaluating progress, how to structure licensing and purchasing agreements that allow for district flexibility, and planning structures for facilitating the CLB change process. Partner with others (i.e., districts, vendors, consultants, colleges and universities, and digital content providers) to leverage each organization's capacity to provide quality and timely professional development and systemic technical support.

**Let it Be Known**

Update stakeholders at each milestone using multiple methods of communication. Share concrete examples of how learners are advancing through your Competency Based Learning (CBL) models.

## Strategies for Providing Extended Time for Projects and Collaboration: Readiness Score of 3

Districts are re-imagining the school day and school year by re-designing and extending learning time, providing greater access to integrated enrichment and quality instruction. Rather than rigid schedules and short class periods, time allocations are flexible, allowing for extended schedules and work time for complex projects. Digital learning enables students to productively use time during and beyond the school day, often redefining homework time.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders utilize existing research and trends to inform their thinking about extending student use of time. By attending conferences and visiting other districts, district leaders have identified successful models at each level (elementary, middle, and high). They have investigated long-standing practices to identify schedule changes that may provide students with extended time for projects and collaboration. | District leaders use research, and existing practice to build out scenarios that would allow students extended time for complex projects. They have explored various strategies for utilizing time differently during and beyond the school day, and identified examples of how authentic learning opportunities could be enhanced by new learning structures and schedules. They have established a common vision with the input of education professionals and other stakeholders. Included in this vision is attention to the necessary infrastructure (including equitable access to devices, high-speed Internet, and learning materials outside of school) to make full use of extended time. | District leaders have collaboratively developed a plan that integrates strategies for extended student work time. They have identified gaps in teacher and student readiness and created initial plans for integrating different scheduling models during and beyond the school day at all levels. The plan is attentive to transition needs and timelines (including policies and budgets), to ensure that curriculum provides enhanced opportunities for students to engage in authentic work. District leaders have been attentive to issues related to access of devices, high-speed Internet, and learning materials throughout the plan. | District leaders have the curriculum, policies, and budgets in place to enact their plans for extending time during and beyond the school day. Teachers and students are prepared for this transition and are staged to leverage new authentic learning opportunities that necessitate more time for collaboration and projects. Education professionals and other stakeholders (including families) understand the scheduling changes that are occurring and the ways that those changes will be continuously evaluated. District leaders have identified plans for addressing issues of access for devices, high-speed Internet, and learning materials for every student. |

## Gaps & Strategies for Strategies for Providing Extended Time for Projects and Collaboration

**Gap 4.1**

The district has not yet instituted flexible time allocations or curricula that support extended work time for students during and beyond the school day, nor re-designed the use of learning time to provide greater access to integrated enrichment and quality instruction.

**Strategies to Close Gap 4.1**

**It's About Time**

Research how school time is allocated. One helpful representation of school time (cited in the Chalkboard Project's A Review of Research on Extended Time in K-12 Schools) breaks it down as total allocated time, instructional time, engaged time, and academic time; the last being where the learning environment, learner, and readiness align so that learning occurs. Document examples of instructional time, engaged time, and academic time in preparation for a closer analysis of use of time in your district. In addition, investigate how other districts in your area are using instructional, engaged, and academic time.

**A Closer Look**

Work with district staff, students, and parents to identify activities in the school day and school year allocated to learning (structured and unstructured), and time allocated to non-learning related activities (e.g., attendance, announcements, transitions, homeroom, breakfast or lunch). Look closely at the amount of time allocated to specific activities versus the amount of time the activities actually take, paying special attention to inefficiencies that may be eating into the instructional day. Determine how much access to learning is made available beyond normal school hours. Armed with this information, calculate how much time might be captured and re-allocated to learning in the course of a day, week, month, and year.

**Quality vs. Quantity**

In the end, the quality of the use of time allocated for learning is most important. Research best practice examples of the use of learning time. Create a clear definition of quality use of time for your district, collaborating with educators, parents, and other key stakeholders to come to consensus. Identify practices that optimize opportunities for reaching the learning sweet spot; where skill mastery and deep learning occurs (e.g., self-paced learning, frequent feedback loops, a culture of high expectations, personalized learning, project-based learning, opportunities for collaboration). Define how implementing these practices can impact allocated learning time (e.g., an authentic learning project can be a year-long activity, collaboration and feedback may take place online after school hours).

Gap 4.2

The district has addressed technology requirements necessary to support extended learning time through digital learning. This includes, equitable access to digital learning environments, devices, high-speed Internet, digital content, and learning materials during and beyond the school day for all students.

**Strategies to Close Gap 4.2**

**Get Help from Your Friends**

Seek out other districts at the local, state, and national level that have infrastructure, policies, and agreements in place to support flexible, anytime, anywhere learning. Gather information related to the policies, processes, and funding sources that have made them successful. Attend local, state, or national conferences focused on e-learning, one-to-one initiatives, and mobile or wireless learning. Assemble multiple, concrete examples of policies that would support digital learning during and beyond school hours. Gather information and contacts that may provide information and support as your district moves forward.

# Gear 3: Robust Infrastructure

When employed as part of a comprehensive educational strategy, the effective use of technology provides tools, resources, data, and supportive systems that increase teaching opportunities and promote efficiency. Such environments enable anytime, anywhere learning based on competency and mastery with empowered caring adults who are guiding the way for each student to succeed. High quality, high speed technology and infrastructure systems within a school district are essential to the advancing of digital learning.

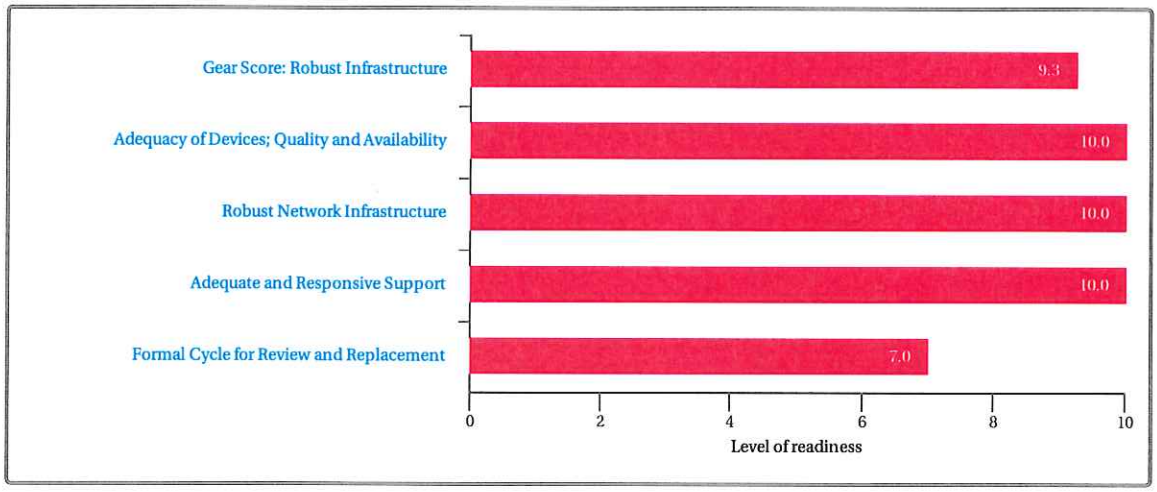
### Elements of this Gear:

- Adequacy of Devices; Quality and Availability
- Robust Network Infrastructure
- Adequate and Responsive Support
- Formal Cycle for Review and Replacement

### Your District provided the following Robust Infrastructure vision:

In order to effectively implement the anytime, anywhere notion of the use of technology for learning activities, we will provide sufficient bandwidth and access for all users and all applications.

### Your District's Stage of Readiness for Robust Infrastructure



## Depth of Your District's Knowledge Base: Robust Infrastructure

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Robust Infrastructure | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss a variety of options available to districts to ensure that appropriate Internet-ready technology devices are available to support teaching and learning. | | | X |
| Discuss the elements and implementation of a robust, responsive and safe network infrastructure. | | | X |
| Discuss the elements of a positive, effective, service-oriented technology support system. | | | X |
| Discuss a comprehensive, environmentally sound cycle for review and replacement of technology software, hardware and infrastructure. | | | X |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| Designing and implementing diverse and creative options to ensure that appropriate Internet-ready technology devices are available to students to support learning at any time. | | | | | X |
| Designing and implementing a network with adequate bandwidth and a supportive infrastructure to ensure ready and consistent access to online resources for teaching and learning. | | | | | X |
| Creating and implementing a support system that is characterized by a positive service orientation, is proactive, and provides resources, coaching and just-in-time instruction to prepare teachers and students for the use of new technologies. | | | | | X |
| Formalizing the review and replacement of all technologies in a cycle that is timely, proactive, and environmentally responsible. | | | | X | |

## Rubrics for Robust Infrastructure

### Adequacy of Devices; Quality and Availability: Readiness Score of 10

The school has considered a host of creative options to ensure that diverse and appropriate technology devices are available to all students and staff to support powerful digital learning at any time, from any location.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| As part of a needs assessment for learning technologies, district leaders evaluate proposed and anticipated uses and the technology devices that best accommodate those applications. Special attention is given to strategies that will allow for equitable access to devices for all in the school community. | District leaders establish criteria for technology devices based on future applications and identify types and numbers of devices that will support those applications. Criteria include specific mention of any subpopulation of staff or students for whom access may be an issue and criteria for providing equitable access to all. | District leaders develop a specific plan for procuring and placing devices to meet the needs of provide equitable access in support of teaching and learning. | The district is well staged to deploy identified technologies, with plans for budgeting and purchasing, placement/distribution, and training and support. |

### Gaps & Strategies for Adequacy of Devices; Quality and Availability

Gap 1.1

A future-oriented needs assessment has been conducted to determine technology hardware needs. This assessment has contributed to a comprehensive device procurement component to the overall district plan. This procurement plan is sustainable and includes specific elements ensuring that all staff and students will have equitable access to devices.

**Strategies to Close Gap 1.1**

**Community Outreach**

Communicate with parents/guardians and the community to ensure systemic support. Discussions in public forums (school board meetings, town halls) contribute to wide spread understanding of what the district is trying to accomplish through its technology investments. Such transparency greatly contributes to strong community support.

**Metrics for Success**

Establish a scorecard for successful investment in devices and other technologies prior to implementation. Identify the expected learning outcomes and the metrics by which data on the results will be collected, analyzed, and reported.

### Robust Network Infrastructure: Readiness Score of 10

Adequate bandwidth and a supportive infrastructure are in place to ensure ready and consistent access to online resources for teaching and learning. Teams monitor usage and identify possible bottlenecks prior to them affecting teaching and learning. Privacy, safety and security are primary concerns as well. The school community collaboratively designs responsible use policies, and confirm that the network design is supportive of these policies.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| Technology leaders assess current network capabilities and future network needs, both at school and in the communities that they serve. Privacy, safety and security are primary concerns for this review along with Digital Age functionalities. They collaborate with parents, students, and staff members to research elements of a responsible use policy. | Technology leaders ensure their vision includes an element of robust, safe and equitable network access at school and in the home. They integrate a plan for responsible use into that vision. | Technology leaders develop plans for a network infrastructure that is robust, safe and extensible. Plans include district facilities and a comprehensive set of options for home access as well. The entire school community collaboratively develops a formal responsible use policy. | Technology leaders are staged to roll out a robust network infrastructure that anticipates learning needs and facilitates access anytime and anywhere. This infrastructure meets or exceeds all standards for safety, privacy and security. A responsible use policy is completed and accepted by the entire school community. |

### Gaps & Strategies for Robust Network Infrastructure

Gap 2.1

The district has not yet designed and/or deployed an updated infrastructure that is robust, addresses digital learning, administrative, and business operations requirements and security.

**Strategies to Close Gap 2.1**

**Infrastructure**

Position the networking infrastructure as a utility – treated just as the district would heating, water, and electric bills. The cost of maintaining and upgrading the network is a reoccurring budget item.

**The Lesson**

Accept that every initiative may not go as planned. Learn along the way, putting forth a tireless effort to make sure technology initiatives moving along in beta are not disrupting the classroom. When districts are pioneering technology initiatives, it's essential to treat setbacks as a learning moment and not a failure. Ultimately, make sure the technology team and district leaders have an open line of communication along with a vision that is focused and flexible.

Gap 1.2

The district has not yet created an updated plan to ensure the privacy, safety, and security of the network, including a responsible use policy collaboratively created and accepted by all members of the school community in support of that design, and responsibilities for monitoring strict implementation.

**Strategies to Close Gap 1.2**

**The Living AUP or RUP**

Make the Acceptable or Responsible Use Policy a living document – it'll never be 100% comprehensive. Get input from stakeholders, while keeping it true to the district's goals for learning and access. RUPs allow a district to have a more open network, access, tools, which create a more open, safe place for learning while holding users to the policies in place. The district can't teach them to not ride their bike in a busy street by keeping the bike chained to a telephone pole. The RUP should encourage users to DO this or that. Limit the "DO NOT" language except where necessary. Keep it simple yet clear. Share it regularly and remind users of it often. Look to other districts – borrow language, ideas, and implementation. Don't start from scratch.

**Engage All Stakeholders in Cyber Security**

Engage students, staff, and parents/guardians in learning about, why, and how to take ownership for cyber security. While often cyber security is thought of as the domain of the Information Technology team, in reality, it requires effort on the part of all users to stay safe and secure.

**Be Vigilant About Student Privacy**

Constantly look at ways to ensure student privacy. This begins with vetting vendors who collect student data and ensuring that they do not use it beyond the collection process and to make their product better.

**Putting Policies into Practice**

Establish the practices necessary to fully implement the intent of the policy. That translates into a digital citizenship program, where every student learns to: 1) stay safe and secure online, 2) learns and practices good citizenship in terms of cyber interactions, 3) develops strategies for dealing with cyber bullying.

## Adequate and Responsive Support: Readiness Score of 10

Sufficient technical and instructional support, characterized by a positive service orientation, is available in every school. This support is proactive, providing resources, coaching, and just-in-time instruction to prepare teachers and students to use new technologies, thereby reducing the need for interventions during the learning process.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders examine desirable levels and methods for providing technology support, including needs assessment activities. | District leaders establish a vision and criteria for comprehensive, user-oriented support services that prioritize support for research-based teaching and learning practices. | District leaders develop a comprehensive plan for support that is user-focused and driven by the teaching and learning goals of the district. | District leaders are staged for a program of comprehensive, learning-centered, and proactive support. |

## Gaps & Strategies for Adequate and Responsive Support

Gap 3.1

The district has not yet created and implemented a plan for next-generation support that is comprehensive, user-focused and well-matched to the vision for digital learning.

**Strategies to Close Gap 3.1**

**Exploration Time**

Consider the capacity building needed to get teachers and other staff ready to use technology effectively. Do it early and often. For example, one district created a model for summer professional development called "EdCamp Tuesdays" over the summer before a 1 to 1 deployment scheduled for the fall. These days were optional for teachers in the district, and for teachers in neighboring districts. In short, they simply wanted to bring educators together to share ideas and findings around the device. While the sessions were not packed or overflowing, they were well attended by teachers in the district and teachers outside of the district who were curious to see where the device in education was going. For everyone involved it was a tremendous learning experience and a successful way to provide support and optional PD throughout the summer months.

**Pace the Implementation**

Approach technology integration at a healthy, reasonable pace. The key is trust and transparency. It is also essential to provide time for teachers to acclimate to the devices and applications they will be using in the classroom. Some schools integrate pilot devices for trials and feedback, providing teachers with devices over the summer to use and adapt to, and developed optional professional development drop-in sessions over the summer.

**On-Demand Support Structures**

Create structures that enable educators (and students) to access support on-demand. For example, a website with commonly used digital tools and applications along with videos, scripts, and FAQs for quick access. In short, a district's own version of Khan Academy for EdTech. Such resources are convenient ways for teachers, and really anyone in the world, to learn about new and emerging digital tools.

**Authentic Learning: A Student Run Help Desk**

Develop a student tech team. A student manned help desk often includes high school students who want to take an elective that would also serve as a support system for EdTech in the schools. For efficiency, the IT department would want to staff the help desk with students throughout the day, offering services to both teachers and students for instant support. The help desk could also create online resources for students, teachers, and the world. Those who have instituted this approach consider it one of the greatest benefits of our tech initiatives. A careful balance needs to be struck to ensure that the learning and capacity building of these students comes first. Typically a school will find that the students are very inventive in providing support structures to streamline the system.

**Student and Parental Device "Drivers" Ed**

Consider holding summer sessions that could be considered "Device Driver's Ed" sessions for students and their parents. In a high school that used this approach, the sessions were mandatory for all students who were receiving their devices during year one of the launch and for incoming freshmen. In short, the IT department briefed parents/guardians and students on the school's policies surrounding the new technology, provided information on insurance for the device, and shared applications that students should become familiar with before school started. Typically these sessions were offered during the day, and in the evening at the beginning of August. A scheduling system was used to give parents/guardians an opportunity to schedule and sign up for a date and time for the device Driver's Ed. Using this system allowed the school to cap sessions at 50 students as to not get overwhelmed with questions. The evening sessions served to accommodate parents' schedules. In addition, a school might want to hold community tech nights where the community could drop in to hear about various initiatives and attend a range of specific workshops each month. Such events generally last 90 minutes and include a brief presentation followed by a hands-on learning exercise.

**Establish Support Metrics and Track Progress over Time**

Develop an assessment tool to evaluate the technology integration and associated support systems. These data are key for they help provide evidence for future technology initiatives. The data collected also help with planning the following year's budget for systemic support.

## Formal Cycle for Review and Replacement: Readiness Score of 7

Teams continuously monitor technologies—software, hardware, and infrastructure—to ensure upgrades, additions, and, when called for, sunsetting/eliminations in a timely, environmentally responsible, and proactive manner.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| Technology leaders investigate and model review and replacement policies. They conduct a comprehensive internal inventory and review disposal policies. | Technology leaders commit to a review and replacement policy that is both economically efficient and environmentally responsible. This policy is formally documented and integrated with district teaching and learning priorities. | Technology leaders build a plan for reviewing and replacing all technology devices and infrastructure. They build this into annual maintenance and operations budgets. | Technology leaders prepare a comprehensive plan that documents and updates policies, current inventories; defines upgrade and replacement schedules; identifies annual budgets; and outlines an environmentally responsible disposal policy. |

## Gaps & Strategies for Formal Cycle for Review and Replacement

Gap 4.1

District leaders have not yet established "upgrade and replacement" cycles for hardware, software, and infrastructure, ensuring that such processes are environmentally responsible and economically efficient.

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**Strategies to Close Gap 4.1**

**Keeping Pace within Fiscal Constraints**

Follow a detailed plan that was constructed by all stakeholders in the educational community. Ultimately, this plan should be approved and critiqued by the schools board of directors or school committee. Additionally, this plan should be assessed every year regardless of the length. With the ever-changing pace of technology, it is important for district leaders to host consistent round table discussions regarding the technology plan as well as the current state of technology and digital learning in the district or school.

**Practitioner Advice**

Follow best practice from successful programs. Review these practical technology director tips: 1. Evaluate technology needs, effectiveness, and expandability 2. Be willing to change plans along the way. Identify what "industry standards" are and what is actually feasible for a district (e.g., new hardware for staff and students every 3 years) 3. Reuse refreshed hardware to fill other district needs 4. Sell back or trade in older technology to help fund new devices 5. Infrastructure refresh every 5-7 years 6. Access point refresh every 5 years 7. Switches, controllers, routers, servers, and other network equipment refreshed every 7 years 8. Accept "good enough" when necessary. A 4-year refresh for staff and student devices isn't ideal, but may be necessary 9. Connect with local tech recyclers to recycle often 10. Donate obsolete hardware to local initiatives such as maker spaces.

**Establish a Replacement Cycle**

Translate the district's vision for digital learning into a specific plan of action informed by use cases as well as national and state standards and trends for digital learning. For example, a district might interpret the district vision of equitable, robust access to digital learning to mean that every student has 24/7 access to a personal, school-provisioned device. Once agreed upon, this universal access will serve as a foundation for an inventory system and budgetary system that, upon purchase or lease establishes the life cycle of the device, and budgets for acquisition, repair, maintenance and operations.

# Gear 4: Data and Privacy

Data and privacy are foundational elements of digital learning. A personalized, learner-centered environment uses technology to collect, analyze, and organize data to improve the effectiveness and efficiency of learning. Data is the building block of diagnostic, formative, and summative assessments—all of which are key elements in a system where learning is personalized, individualized, and differentiated to ensure learner success. The district ensures that sound data privacy and security policies, procedures, and practices are in place at the district, school, classroom, and student levels.

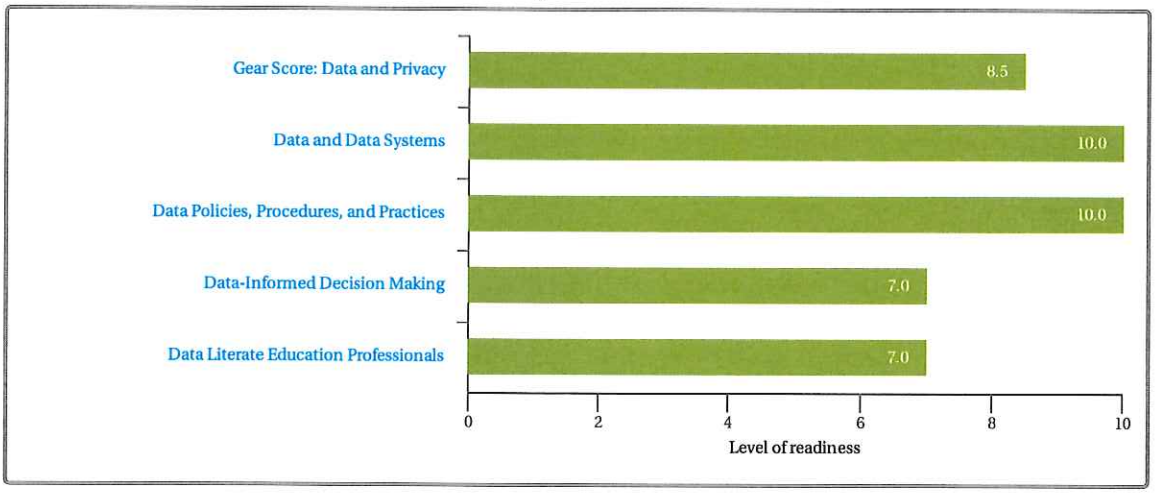
### Elements of this Gear:

- Data and Data Systems
- Data Policies, Procedures, and Practices
- Data-Informed Decision Making
- Data Literate Education Professionals

### Your District provided the following Data and Privacy vision:

Providing secure systems that protect access and dissemination of data is a priority as well as the implementation of the use of social media and the social dynamics of protecting data and systems.

### Your District's Stage of Readiness for Data and Privacy



## Depth of Your District's Knowledge Base: Data and Privacy

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Data and Privacy | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss data governance policies and procedures that ensure privacy, safety, and security in data collection, analysis, storage, retrieval, exchanges, and archiving, to meet standards and legal requirements (i.e., FERPA and CIPA). | | | X |
| Discuss the data systems, security procedures, and support systems required to ensure that a range of accurate, reliable data sets and associated reports are available, on demand, to authorized users. | | | X |
| Discuss the challenges and opportunities in transitioning to a culture of evidence-based reasoning (a data culture) using accurate, reliable, and accessible data. | | X | |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| The district has up-to-date policies, procedures, and practices that address the privacy and security of data, and the use of data, technologies, and the Internet that meet or exceed legal requirements and federal guidelines. | | | | | X |
| The district is operating digital data systems that enable secure data collection, analysis, reporting, storage, exchanges, and archiving for authorized users. | | | | | X |
| Evidence-based reasoning and data-driven decision making are part of the school and district culture for staff, students, and parents. | | | | X | |
| All staff are knowledgeable and skilled in using data, technology, and data analytics to inform instruction, curriculum, assessment, and their own professional practices. | | | | X | |

## Rubrics for Data and Privacy

### Data and Data Systems: Readiness Score of 10

To facilitate data-driven decision making, appropriate data (i.e., data dashboards and data analytics) are readily available, easily comprehensible, and useful for supporting the decision making processes. The data are available at any time, on any desktop, and from any location, made available through real-time access to data dashboards, data analytics, and data warehouses.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate new models for storing and accessing data, including systems for learning management, online assessment, student information, and longitudinal data. | District leaders envision how online assessments and data systems will operate in the context of other district reforms. They are working to ensure data are readily available, secure, easily comprehensible, and useful for supporting the decision making process. | District leaders write technical specifications for the data systems required to attain the vision for learning, teaching, and management (e.g., infrastructure, data systems, student information systems, longitudinal data systems, learning management systems, support, etc.). They develop a plan for acquiring, deploying, operating, securing, maintaining, supporting, and upgrading the system over time. | District leaders establish data systems and online assessments (e.g., release of RFP, hiring of contractors, etc.). They hire and/or train the information technology staff members required to deploy and maintain such a system. The system includes real-time access to data dashboards, data analytics, and data warehouses for authorized users. |

### Gaps & Strategies for Data and Data Systems

**Gap 1.1**

The district has not yet established an integrated system of data structures (e.g., data warehouses, data dashboards, data analytics, on-demand reports, etc.) that is readily available, easily comprehensible, and useful for decision making throughout the district.

**Strategies to Close Gap 1.1**

**Plan to Take Action**

Develop a strategic, long-term data plan, which is informed by the guiding questions, needs assessment, and the feasibility study. The process should be led by the Chief Privacy Officer and be completed by a multi-functional team of stakeholders from the district, schools, and community. The plan should address topics such as an integrated system of data structures to provide a wide variety of data to stakeholders (e.g., student information systems with basic student data, data warehouses with current and historic data, curriculum management systems for instructional supports, assessment systems for district-specific assessment data), privacy and security, data governance, training for staff and parents, and authorized user accessibility. The document should be a living document that is updated on a regular schedule to reflect progress and changing priorities. It should include long-term goals and shorter-term actions, with assigned responsibilities supported through allocated budgets.

**Reach Out to Other School Districts**

Coordinate with other districts to combine resources and offer joint professional development, training, and other supports. Reach out to organizations with initiatives specializing in providing trainings and systemic supports related to data systems and use (e.g., TERC's Using Data Initiative and Harvard's Strategic Data Project).

**Value Added**

Plan a "marketing campaign" that communicates the value of the updated data system regarding the users' respective roles and responsibilities to end users. In addition, a series of orientation sessions should be planned (in-person and archived), with opportunities for more in-depth sessions, as users become oriented to the district's data systems and the potential value for the end user.

**Gap 1.2**

The district has not developed a support system for system wide data-informed decision making through: clarity of data definitions, access to data applications, easy access and reporting, necessary training and professional development, and procedures for privacy and security.

**Strategies to Close Gap 1.2**

**Implement a Marketing Campaign**

Implement a "marketing campaign" that communicates to end users the value of using data for informed decision-making in terms of student achievement outcomes. In addition, a series of orientation sessions should be made available, live and archived with opportunities for more in-depth sessions, as users become oriented to the district's data systems and the potential value for the end user.

**Practice What you Preach**

Set a good example by modeling data-informed decision-making. Begin by posing questions and modeling the process of collecting, analyzing, and interpreting data from multiple sources prior to taking action. District leaders should have open conversations about data with administrators and educators, honestly sharing what the data say about students, teachers, and instruction in the district as a whole. Provide instructional resources aligned to district-wide weaknesses identified in the data. Emphasize providing adequate time for educators to look at data and use it to make informed decisions.

**Feedback Loops**

Tap key users across the district to provide feedback to the district data committee during the design, implementation, and continued development and rollout of data systems. Establish a formal communication feedback loop to ensure that users understand how to communicate with district leadership about data needs and concerns, as well as input about the availability and adequacy of existing resources.

## Data Policies, Procedures, and Practices: Readiness Score of 10

Using the Family Educational Rights and Privacy Act (FERPA) as the basis, the district has up-to-date policies, procedures, and practices that address legal, ethical, and safety issues related to the privacy and security of data, and the usage of data, technology, and the Internet. Such policies, procedures and practices address the collection, storage, analysis, reporting, transmission, and archiving of data, as well as the usage of data, the Internet, and technology by students and education professionals in the course of teaching, learning, communications, and the management of school services.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate federal, state, and local laws on privacy and security of data in education systems. They also review policies and procedures on safety, security, and privacy in other districts. | District leaders conduct in-district discussions with policymakers related to the legal, ethical, and safety issues related to privacy and security of data in schools. They secure common understanding among district leaders on the topic. | District leaders draft data governance policies and procedures related to data usage, privacy, and security for review and commentary. | District leaders adopt formal governance structures (policies and procedures) related to data usage, privacy, and security. They then develop a communication, implementation, oversight, and evaluation plan to ensure comprehensive application. |

## Gaps & Strategies for Data Policies, Procedures, and Practices

Gap 2.1

Data governance policies and procedures related to data usage, privacy, and security have not yet been adopted, communicated to stakeholders, and implemented.

**Strategies to Close Gap 2.1**

**Communicate, Communicate, Communicate**

Launch a communication plan once you have a data policy, and the communiqués and guidelines for various groups. Regular communication with all stakeholders is essential to ensuring that the policies and guidelines are implemented as intended. This responsibility should fall to the district staff member responsible for student privacy. Personalize the communications for each group, emphasizing the components of the policies that are most relevant to them in their role. Provide them with the context, training, information, and opportunities to practice following the new policies. Since old habits die hard, it is imperative to keep lines of communication open to ensure that new practices become habit.

**Be an Informed Consumer**

Review all contracts and agreements carefully if your district is using outside vendors for data or learning management systems. The vendor's standard contract may or may not be consistent with the district's data privacy and security expectations or state laws. It is important that the district's contract with these vendors is consistent with the district's privacy and security policies. Have an expert review all contracts, and insist on modifications as necessary. In all contracts with vendors, districts should maintain exclusive control and ownership of the data to ensure that district policies are followed at all times. This is especially important as the use of third-party apps in classrooms increases and student data are stored in the cloud by vendors.

## Data-Informed Decision Making: Readiness Score of 7

The use of formative and summative assessment data is part of the school culture, with administrators, teachers, and, perhaps most importantly, students actively using this data to improve learning. Assessment is not viewed as punitive, but rather as part of the teaching and learning process. There is an expectation in the district that data will inform all teaching and learning practices and decisions. This is modeled at all levels of the school system, from administration to the students themselves.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate what it means for decision making to be data-informed. In doing so, they document various models of evidence-based reasoning and data-driven decision making as well as learning management systems that support those processes. District leaders listen to other district leaders report on their work in building towards data cultures and identify models where students are engaged in a culture of evidence-based reasoning. | District leaders re-envision the district as a strong data culture. Scenarios within that vision incorporate all aspects of the process, including typical days in the lives of students, staff members, and parents operating in such a culture. | District leaders embark on a community-based planning process designed to transition the district into a culture of evidence-based reasoning and data-informed decision making. The plan includes a timeline, budget, and defined path toward the vision. | District leaders set formal expectations for data-driven decision making and evidence-based reasoning at the district and school levels. They integrate these concepts into school improvement plans, staff development offerings, decision-making processes, and investment set-aside. Curricular materials are purchased; teaching training sessions are offered, and evidence-based reasoning is integrated into student learning standards. |

## Gaps & Strategies for Data-Informed Decision Making

Gap 3.1

District leaders have not yet set formal expectations for data-driven decision-making and evidence-based reasoning at the district and school levels. These concepts are not yet integrated into school improvement plans, staff development offerings, decision-making processes, and budgets at all levels.

**Strategies to Close Gap 3.1**

**Align Strategy and Resources**

Conduct a critical review of the district strategic plan, school strategic plans, documented decision making processes (including district, school, and even school board), professional development offerings, and budgets. Ensure that the district's emphasis on data-driven decision making is consistent across all of these documents and processes, revising as necessary to communicate the importance of using data to make key decisions and provide adequate resources (e.g., staffing, data systems, time, professional development) to support staff as they implement plans and make decisions.

## Data Literate Education Professionals: Readiness Score of 7

Educators in the system are data-literate. They are aware of the legal and ethical responsibility to ensure security, accuracy, and privacy in the collection, analysis, exchange of, and reporting of data. They understand the potential uses and misuses of data in the teaching and learning process and act accordingly. All education professionals in the district use data to inform instructional and administrative decision making. Data literacy extends to students as well as curricula are reviewed and updated to make effective use of evidence and data a priority for all.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate evidence-based reasoning and data-driven decision making, focusing on the types of training and professional development all staff members will need to use sophisticated data systems effectively. | District leaders create a new vision for a data-based environment that includes scenarios defining an informed, well-trained, knowledgeable staff and data-savvy students. | District leaders embark on a community-based planning process designed to transition the district into a culture of evidence-based reasoning and data-informed decision making. The plan includes a timeline, budget, and defined path toward the vision. | District leaders set formal expectations for data-driven decision making and evidence-based reasoning at the district and school levels. They integrate these concepts into school improvement plans, staff development offerings, decision-making processes, and investment set-asides. Curricular materials are purchased; teaching training sessions are offered, and evidence-based reasoning is integrated into student learning standards. |

## Gaps & Strategies for Data Literate Education Professionals

Gap 4.1

The district has not yet set expectations for data literacy for staff and students. Such expectations are neither a formal part of the district vision nor are they integrated into school improvement processes, professional evaluation or student learning standards. Appropriate definitions, guidelines, teacher training and support materials, and assessments are lacking.

**Strategies to Close Gap 4.1**

**Establish a Standard**

Plan to provide the professional learning and training required to ensure educators are prepared to meet and exceed job responsibilities related to data. Insure students and parents are equipped to use data effectively. Base training on a clear understanding of the data sets available in the district, the questions asked and answered through data, data roles and responsibilities, and data uses in the district and definitions of data literacy. Consider that instruction will need to be offered at several levels: accessing data; selecting data; interpreting data; and making decisions with data. The professional development must provide scaffolding for staff during their learning process, as well as just-in-time offerings and support to assist staff during the decision-making process.

**The Good News: People Can Be Taught to Think Critically Using Data**

Guide staff in critically thinking about data by adopting a framework to promote a common and consistent vocabulary to guide discussions about data. Critical thinking can be taught. The critical thinker does not just make decisions, but uses specific strategies to ensure that their decisions are data driven, of the highest quality, and as close to objective truth as possible. This includes both vertical and lateral thinking used iteratively...the former to logically reach conclusions, and the latter to broaden his or her understanding of the issues and alternatives that comprise the problem. For example, Bruce Wellman and Laura Lipton's Data Driven Dialogue emphasizes a four-step process: Predict, Explore, Explain, and Take Action. This simple process, or a similar one, can be used as a guiding framework for all district data activities. Educators must be directly taught to use the framework in real-world, decision-making contexts until they are comfortable implementing the framework independently. Build in appropriate supports and scaffolds for educators, such as guiding questions or data coaching, to ensure appropriate implementation of the framework and data-informed decision making process.

# Gear 5: Community Partnerships

Community partnerships include the formal and informal local and global community connections, collaborative projects, and relationships that advance the school's learning goals. Digital communications, online communities, social media, and digital learning environments often serve as connectors for these partnerships.

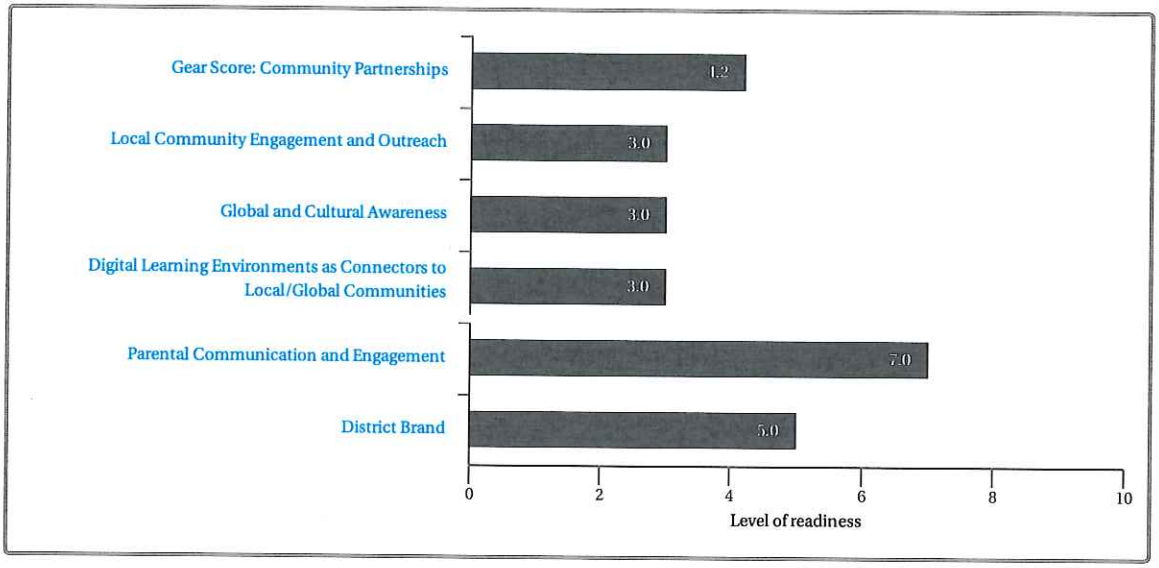
### Elements of this Gear:

- Local Community Engagement and Outreach
- Global and Cultural Awareness
- Digital Learning Environments as Connectors to Local/Global Communities
- Parental Communication and Engagement
- District Brand

### Your District provided the following Community Partnerships vision:

Communication with the community, including employers, parents, students and other interested members of the community is important to fostering an educational and learning environment that crosses all aspects of the community.

### Your District's Stage of Readiness for Community Partnerships



## Depth of Your District's Knowledge Base: Community Partnerships

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Community Partnerships | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss how teaching and learning can be enriched through local community partnerships (i.e., increased access, relevance, opportunities for public exhibitions of student work, etc.). | | X | |
| Discuss community partnerships that can build global and cultural awareness in students. | | X | |
| Strategies for ensuring that digital/online learning environments serve as vehicles to enable local and global community partnerships. | | | X |
| Discuss home-school communication that are enhanced and enriched through technology. | | X | |
| Discuss district creation of a "brand," that positions the district as a positive, 21st Century force in the lives of students and the community. | | X | |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| The school serves as a hub of the community and actively involves the community in achieving its learning goals. | | X | | | |
| Students' global and cultural awareness is deepened through face-to-face and online community partnerships. | | X | | | |
| The school district has deployed a digital learning environment with education programs that facilitate safe online peer-to-peer, student-teacher, and student-expert interactions. | | X | | | |
| The district has designed and deployed a robust digital communication system that is responsive to individual families as staff use it to draw parents into frequent interactions about their child's education. | | | | X | |
| The district has built a brand that conveys preferred messaging with students' families, the community, and beyond. | | | X | | |

## Rubrics for Community Partnerships

### Local Community Engagement and Outreach: Readiness Score of 3

The school serves as a hub of the local community. As such, it actively involves the community in achieving its learning goals, reaching out to the community to (1) extend learning into community centers, libraries, businesses, higher education institutions, museums, and other public spaces; (2) bring relevance to curricula through partnerships that take the shape of apprenticeships, community service, and the use of community-based experts and resources; (3) implement community-based exhibitions, reviews, critiques, and celebrations of student work; and (4) coordinate after school programs, including collaboration with the school and students' teachers. Community Engagement and Outreach.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders annually survey the community for opportunities for partnerships and cooperative relationships. Their communication outreach and public forums provide community members a voice in school decisions and activities. | District leaders are continuously seeking community partnerships (e.g., extending learning into community centers, libraries, museums, community-based exhibitions, coordinated afterschool programs). | District leaders establish a formal plan or plans to engage the community in viable partnerships and coordinated activities (e.g., extending learning into community centers, libraries, museums, community-based exhibitions, coordinated after school programs). | District leaders establish school-community partnerships as a strategic goal, with clear parameters for such partnerships, including processes for considering, vetting, and engaging in such partnerships. Partnerships include: 1) the extension of learning into the community, connections related to exhibitions and reviews of student work, and 2) coordination of after school programs. |

### Gaps & Strategies for Local Community Engagement and Outreach

**Gap 1.1**

The district does not serve as the hub of the community, where community members, groups, and businesses are actively engaged in activities that expand opportunities for students, while serving mutually beneficial goals for the community.

**Strategies to Close Gap 1.1**

**Meet With Local Community Groups**

Meet with community groups (i.e., clergy groups, community centers, YWCA/YMCA, etc.) to gain an understanding of the needs of the community. In these meetings, focus on listening in order to gather informal information to determine what the community's priorities are, what resources exist, and who the key leaders are.

**Brainstorm Together**

Once partnerships are formed, regular meetings should be scheduled where updates can be exchanged, and ideas shared for specific events and projects.

**Gap 1.2**

The district has not yet committed to the concept of local and global community engagement and outreach beyond connections with parents.

**Strategies to Close Gap 1.2**

**Knowing the People in the Neighborhood**

Research the history and culture of the local community to spark ideas for partnerships, for example, celebrating community successes, honoring past accomplishments, and connecting with experts to serve as resources for student projects, etc. Identify staff members who can provide information to their colleagues regarding the local community and can serve as liaisons between school district staff and community members.

**Meet with Clergy**

Meeting with clergy groups is a powerful way to gain understanding of the needs of the community. A school district may even consider setting up Clergy Advising Council. Individual clergy members should be encouraged to start an outreach program with their neighboring school(s), which could focus on supporting student mentorship, food banks, school supplies for needy students and/or multiple other opportunities for partnership.

**Conduct a District Partnerships Needs Assessment**

A needs assessment and focus groups with school staff and parents should be conducted to determine what the district's needs are that could be addressed through community partnerships. A needs assessment involves documenting both the current state and desired state of community-based services or programs for students, identifying any discrepancies between the two, and creating a plan to bridge the gap.

## Global and Cultural Awareness: Readiness Score of 3

The community partnerships extend and deepen students' knowledge, understanding, and appreciation of cultures and communities other than their own. Digital networks enable students and education professionals to connect, interact, and collaborate with other students, experts, and organizations from outside of their locale. The school builds the capacity of students to recognize and value diversity, enabling them to participate successfully in community partnerships online and face-to-face.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders conduct a review of effective models of school-community partnerships that build global and cultural awareness. Representatives attend conference sessions, talk with district leaders who are implementing such programs, and identify key characteristics of effective learner-centered practices. | District leaders conduct public and internal sessions on school-community partnerships locally and globally. Educators across the district envision such environments at all levels. District leaders include global and cultural awareness in their district and school visions. | District leaders establish a formal planning process to develop an implementation plan that supports/establishes local and global community partnerships at all levels. That plan includes a glide path, budget, and pathway for schools to make this transition. | District leaders establish and communicate clear expectations that schools/classrooms will include opportunities for local and global community partnerships. All capacity-building elements are in place or carefully readied for implementation (e.g., associated series of professional development and training, models, curricular materials, and instructional coaches). |

## Gaps & Strategies for Global and Cultural Awareness

**Gap 2.1**

The district may have committed to the value that local and global partnerships bring to learning, but it does not formally communicate expectations internally to district and school administrators and other education professionals, nor does it establish structures that serve as a bridge to such partnerships, while building capacity to leverage such partnerships in the service of learning.

**Strategies to Close Gap 2.1**

**Set the Standard**

Incorporate linkages to the community in the district mission statement, include blog posts about community activities and events on the district website, and highlight community outreach activities in district newsletters. Districts can begin by emphasizing the importance of community partnerships in all of their communications.

**Be a Copycat**

Work with local county offices of education or regional service centers to learn how other districts are leveraging local and global partnerships. District staff might visit other school districts when they have events targeted to building local and global partnerships. Build on these ideas by exploring similar options and opportunities with the district's local community or across communities.

**Gap 2.2**

While individual classroom teachers may be providing global and cultural experiences, the district does not systematically encourage, support, and monitor such experiences.

**Strategies to Close Gap 2.2**

**Local Cultures**

A district team should collaborate with school teams and community leaders to assemble a history of the community focusing on local cultures. That information should be shared across the district and community through the district website, social media, and through cooperative releases with community agencies (e.g., historical society, religious organizations).

**Learning from the Neighbors**

Assemble or utilize a community resource guide for the district to identify local experts and cultural resources that are available to school staff, students, and parents. Provide opportunities for district and school leaders to attend presentations by local leaders or visit local cultural organizations. Provide the community resource guide in a searchable, online format that allows for individuals to search by keywords and include vetted comments regarding their experiences. The comments can be used to refine the guide by expanding upon descriptions or removing entries.

## Digital Learning Environments as Connectors to Local/Global Communities: Readiness Score of 3

The school district has established a digital learning environment that offers students access, e-communication, resource libraries, file exchanges, and Web tools, which facilitate interactions among peers and between teachers, parents, and students in school and beyond. District leaders build digital citizenship in students and structure online communities that to ensure online safety and security.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders review information on the critical elements of an online learning environment (e.g., access, eCommunication, resource libraries, file exchanges, and Web tools) that facilitate interactions among peers and between teachers, parents, and students in school and beyond. | District leaders map the elements of a digital learning environment to its vision of personalization of learning, student-centered learning, deeper learning, and global and cultural awareness. In doing so, they envision student work, interactions, exchanges, and contributions at all levels, within the school and beyond, with local and global communities. Pilots of various aspects of the environment have been authorized and are underway. | With stakeholder input and collaboration, district leaders build a plan that outlines the steps and milestones to establishing a digital learning environment, with outreach into local and global communities. They align the elements of that environment to its vision. The school reviews the results from various authorized pilots that test the elements of the environment to inform final decisions. | District leaders finalize the technical specifications for a digital learning environment with outreach into local and global communities. They build and deploy the environment or authorize and fund a group to do so. They offer training and professional development to ensure effective use. Support structures are in place. |

## Gaps & Strategies for Digital Learning Environments as Connectors to Local/Global Communities

**Gap 3.1**

The district has not yet established a digital learning environment that offers a broad spectrum of the features to enable interactive communication with local and global partners.

**Strategies to Close Gap 3.1**

**Beyond Tin Cans and Strings**

Create an easily updatable online database for documenting the digital communication tools and resources available to students, staff, and the community, both inside and outside of district facilities. It is important to document the resources available in the broader community, both to foster potential partnerships and to create a complete picture of the learning environment available to students before, during, and after school. In addition to entering the existence of various tools, current uses of the tools should be included to identify potential barriers to effective use of digital tools for interaction and communication.

**Gap 3.2**

The district does not have a program in place to ensure that all students build digital citizenship competencies, including online safety and security, prior to their online interactions in local and global partnerships.

**Strategies to Close Gap 3.2**

**Standards Review for Digital Citizenship**

The district's leadership team for curriculum and learning should review existing standards and curriculum to learn what all students should know and be able to do with regard to digital/information literacy as defined by their state's learning standards. Additionally the district leadership should become familiar with the ISTE standards for students across all grade levels and determine how they currently align with the school district's curriculum for all core content subjects.

**Gap 3.3**

District policies related to online learning, teleconferencing, cell phones, filtering and other aspects of technology policy limit educator professionals and students access to digital networks.

**Strategies to Close Gap 3.3**

**Status Review**

Conduct a study of district policies related to online learning, teleconferencing, cell phones, filtering and other aspects of technology policy to see the extent to which they enable or limit educator professionals and students access to digital networks. Solicit feedback through questionnaires and focus groups from educators, students, staff members, and the community regarding their opinions on the district's current policies to inform potential revisions.

**Gather Intel**

Obtain policies from other districts and recommendations from regional or national education technology organizations to gather additional information on policies impacting digital learning. Sort policies into those that seem most promising for your district, then conduct further research by visiting the districts or speaking with staff members about technology and student safety, privacy, and security.

## Parental Communication and Engagement: Readiness Score of 7

School leaders engage parents and students in home-to-school communications through a variety of venues. While this may include internet-based solutions, it also includes options that do not depend on connectivity in the home.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders research options for parental communications and engagement. They survey connectivity needs among parents before designing communication systems. | District leaders include specific language and requirements for parental communications and engagement in all district plans, instructional and technological. They envision a communication system designed for parents that is flexible and adaptable to meet the families' needs. | District leaders develop a comprehensive plan for parental communication and engagement that includes both connected and traditional communications media. | District leaders design, produce, and deploy a robust communication system that is responsive to the needs of individual families. The system is flexible and adaptable at the school level. It includes specific strategies for drawing parents into frequent dialogue with staff members regarding the needs and accomplishments of their children. |

## Gaps & Strategies for Parental Communication and Engagement

Gap 4.1

The district does not systematically ensure that school's digital learning environments used by students and teachers on a daily basis are parent-friendly and accessible, (i.e., parents have secure access to many of the features their students are engaged in online), nor does the district ensure that parents have opportunities to contribute while in that environment.

**Strategies to Close Gap 4.1**

**Panoply of Parent Supports**

A plan for bringing parents into the system, assigning access that also assures data security, and a process for educating parents must be a core part of any Learning Management System (LMS), Student Information System (SIS), or digital learning environment. Provide ample resources to acclimate parents to the system, which may include training sessions in schools and out in the community, instructions available in-print and on-line, a telephone help line, as well as training for key community leaders such as librarians or church staff members to ensure all parents have access.

Gap 4.2

The district has not yet established policies on parental outreach that ensure that parents who do not have Internet access have alternative avenues for communication.

**Strategies to Close Gap 4.2**

**Reaching Everyone**

Have a clear plan and strategy for online communications that meets the needs of the majority of stakeholders. Each selected mode of communication must take advantage of the unique features of the medium. The plan must also include methods for providing information about students' progress for parents with limited or no Internet access. Standard practices for off-line communications with parents include establishing parental access from the school and/or community centers, partnering with employers to provide Internet access before and after shifts or during breaks to employees, calling parents individually, or delivering paper notices via U.S. Mail or through in-person deliveries.

## District Brand: Readiness Score of 5

Branding is defined as the marketing practice of creating a name, symbol, or design that identifies and differentiates a product from other products. It's critical that our schools develop a brand as well, and that the brand represents visionary thinking and 21st Century learning. The brand should be transparent to all members within the organization—they must all be telling the same story, one that they believe in and stand behind.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders research models for establishing a brand. They survey the community to gather information on current perceptions of the district. | District leaders conduct focus groups and interviews related to the story that various constituents want the brand to convey. | District leaders develop a comprehensive plan to define the brand and use the Internet and interactive multimedia to develop the brand. | District leaders develop the web structure for the branding and the initial content for the brand. Their model includes opportunities to refresh continuously the stories that represent the brand. |

## Gaps & Strategies for District Brand

Gap 5.1

The district has not yet established a brand for 21st Century, digital learning that drives all policies and practices.

**Strategies to Close Gap 5.1**

**Scenario Building/Commitment to an Effective Brand for 21st Century Digital Learning**

Organize a team of stakeholders that includes teachers, administrators, staff members, students, parents, and community members. The team should display the necessary leadership aptitude traits such as "thinking outside the box," courage, confidence, tact, and diversity of thought and opinion. As a group, brainstorm scenarios of what effective 21st Century digital learning looks like at various age levels and within various content areas. Extend that work to describing what the district's brand would look like if it were an effective 21st Century Learning environment. Create a list of essential components of the district's brand.

# Gear 6: Personalized Professional Learning

Technology and digital learning can increase professional learning opportunities by expanding access to high-quality, ongoing, job-embedded opportunities for professional growth for teachers, administrators, and other education professionals. Such opportunities ultimately lead to improvements in student success and create broader understanding of the skills that comprise success in a digital age. Digital Professional learning communities, peer-to-peer lesson sharing, and better use of data and formative assessment, combined with less emphasis on "sit and get" professional development sessions eliminate the confines of geography and time. These ever-increasing resources offer teachers and administrators vast new opportunities to collaborate, learn, share, and produce best practices with colleagues in school buildings across the country. Digital leaders establish this type of collaborative culture. They model and are transparent with their own learning. In addition, educators must be engaged in more collaborative, goal-oriented approaches to the evaluation of their own teaching to serve as a personal model for the experiences that they might bring to students.

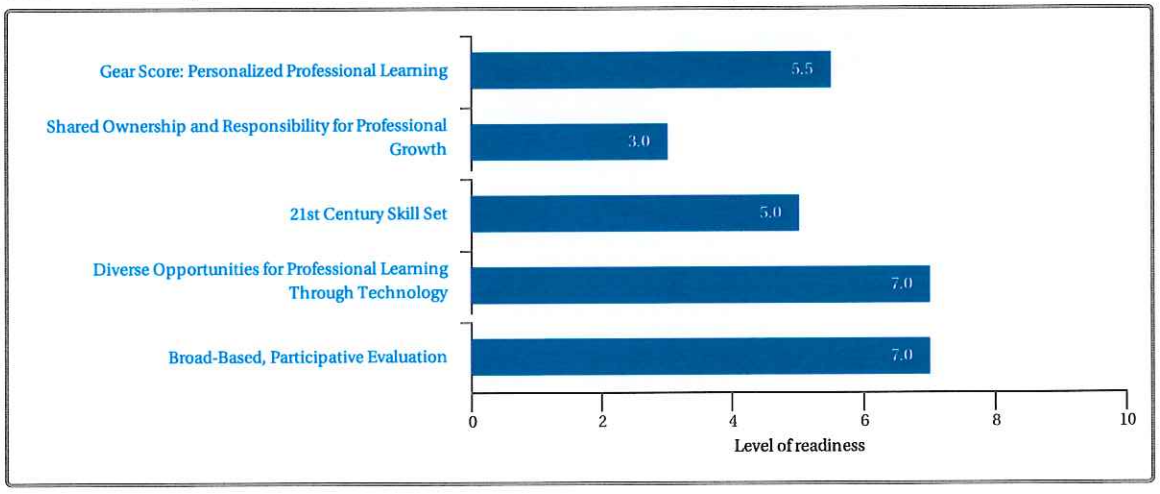
### Elements of this Gear:

- Shared Ownership and Responsibility for Professional Growth
- 21st Century Skill Set
- Diverse Opportunities for Professional Learning Through Technology
- Broad-Based, Participative Evaluation

### Your District provided the following Personalized Professional Learning vision:

We continue to encourage and implement both individual and district-wide initiatives for improving instructional skills and strategies. Technology allows for a variety of tools and access that would support this initiative.

### Your District's Stage of Readiness for Personalized Professional Learning



## Depth of Your District's Knowledge Base: Personalized Professional Learning

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Personalized Professional Learning | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss models of shared ownership of professional development, where district policy encourages and supports teachers and administrators in self-directed uses of online, social media for professional growth. | | X | |
| Discuss the pedagogical shifts and associated professional development required to ready staff for 21st Century digital learning. | | | X |
| Discuss the models and merits of staff evaluation models that are goal-oriented, participatory, and focused on metrics directly related to 21st Century digital learning. | | | X |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| Shared ownership and shared responsibility for professional growth of education professionals. | | X | | | |
| New instructional practices and professional competencies necessary to support 21st Century Skills/deeper learning. | | | X | | |
| Alternative, personalized models of professional development are enabled through technology and social media (i.e., EdCamps, Twitter Chats, etc.), and encouraged and supported through coherent district policies. | | | | X | |
| New models for evaluation that involve education professionals in self-assessment, goal setting and professional collaboration in support of those goals. | | | | X | |

## Rubrics for Personalized Professional Learning

### Shared Ownership and Responsibility for Professional Growth: Readiness Score of 3

Teachers, administrators, and other education professionals actively support their own professional practices by using technology, eLearning, and social media to optimize learning and teaching. They are actively taking responsibility for their own professional growth through professional learning networks (PLNs), online communities of practice, eLearning, and social media (e.g., Twitter feeds, EdCamps, blogging and following bloggers, on-demand videos, etc.). Educators have access to collaborative tools and digital environments that break down classroom, school, and district walls. Professional development encourages, facilitates, and often requires that they individually and collaboratively create, join, and sustain professional networks both within and outside of the district, frequently leveraging the latest in social media. The district has established flexible policies and practices that encourage and credit the personalization of professional learning for teachers, administrators and other education professionals.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate the use of technology, the Internet and social media in self-directed professional learning of teachers, administrators, and other education professionals. They review the research on adult learning related to personalized, self-directed learning, and to outside of education to identify models in other sectors. | District leaders build on key research studies and the opportunities that digital and social media present to today's education professionals as they conceptualize shared ownership and responsibility for professional learning. They build scenarios for a preferred future, identifying the policy, practice, and cultural shifts their district will need to implement personalized learning successfully for all education professionals. | District leaders formulate a plan for shared ownership and responsibility of professional growth based on their investigations, research, and their preferred future scenarios. They pilot the new approach within a limited number of current programs, evaluate, and adjust the plan through lessons learned. | District leaders model the innovative use of technology, eLearning, and social media in the professional learning offered through the district. They do the same as they take ownership of their own professional growth, in part by engaging in self-directed professional learning networks on a daily basis. They formally adopt policies and procedures and set expectations for shared ownership and responsibility of professional learning among all education professionals in the district and build the capacity of all leaders in the district to implement the plan using established policies and procedures. |

### Gaps & Strategies for Shared Ownership and Responsibility for Professional Growth

**Gap 1.1: Personalized Learning Not Supported by the District**

District policies, practices, and culture do not encourage or support personalized professional learning among staff. As a result, administrators, teachers, and other education professionals are not taking ownership for their own professional learning. Embedded daily use of technology, PLNs, and social media is the exception rather than the rule. Professional growth toward the targets set by the district, team, and individual is limited.

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**Strategies to Close Gap 1.1: Personalized Learning Not Supported by the District**

**Create a Representative PD Task Force**

Form a Future Ready Schools (FRS) Professional Development task force to examine current professional development practices in the district. Involve stakeholders from instruction, assessment, leadership and technology to investigate options. Insure that the team follows a model of shared leadership and members have the appropriate leadership aptitude characteristics such as diversity of thought, the ability to think outside the box, tact, and resolve.

**Research Options for Professional Learning**

Review current models of practice from innovative districts. Ask questions to guide next steps such as: • What gaps in professional learning exist that cannot be closed by in-house resources? • What are district expectations of teachers regarding professional learning such as time outside the school day or job embedded? • What percentage of a teacher's professional learning should be district provided versus teacher selected? • Are district taking ownership for their own professional learning? Consider how access to on-demand, social professional development (e.g., Twitter, Classroom 2.0, and edWeb.net) could provide learning opportunities to fill these gaps.

**Research Innovative Approaches**

Identify the research base for personalized, professional learning that is job embedded and outcomes-based. Use traditional research methods and social media to conduct a search to identify meaningful, new approaches to professional learning from resources such as LearningForward, New Teacher Center, National Commission on Teaching and America's Future (NCTAF), National Education Association (NEA), American Federation of Teachers (AFT), Twitter feeds, EdCamp, follow bloggers, edWeb, Connected Educators, etc. These approaches would provide options for meeting the individual needs of education professionals. Check the correlation between the desired outcomes and the new models to establish a relevant body of research to inform your decision making.

**Assess Needs Regarding Staff Capacity to Implement New Approaches**

Conduct a comprehensive survey of all staff, seeking specific feedback on what is already known regarding the goals of the comprehensive teaching and learning plan, the skills to be developed, strengths they already possess, and the areas in which they are willing to lead colleagues in learning. In identifying needs, the survey should focus on addressing the professional learning needs of staff given the district's current learning priorities and strategic plans, as well as the priorities of the teacher for his/her classroom. This type of assessment should be conducted annually. From an analysis of the results, identify local policies, practice and internal expectations that may hinder teachers' pursuit of more personalized professional development opportunities. Determine if those policies should be altered to provide incentives for education professionals to engage deeply in personalized learning progressions.

**Reach Out to Colleagues Inside and Outside the District**

Conduct interviews or focus groups with administrators, teachers, and other education professionals inside the district who are already actively using digital learning and social media for their own professional growth. Analyze the benefits of their experiences as a way to inform the potential new directions for the district. Highlight and celebrate the teachers who are currently "the exception rather than the rule", when it comes to their own personalized professional learning. Visit a school district that has successfully accomplished personalized professional learning. Ask questions such as: • How does your district credit or recognize education professionals with what they learn independently through technology? • How does the district provide the time and resources to personalize and differentiate professional learning? • From which data are the goals for the professional learning developed?

**Review Other Districts' Plans for Personalizing Professional Learning**

Review sample district plans that address personalized professional learning. Consider how personalized learning plans from other districts may inform your district's approach in providing educators with this new level of support. Identify strategies or tactics such as peer observation and collaboration, timelines, budgets, and staging that could be implemented in your district.

### Gap 1.2: Seat Time Remains the Principal Measure of Professional Learning

The accountability/assessment for professional learning has not yet shifted away from seat time measures to alternatives such as performance-based, competency-based achievement of professional learning targets.

**Strategies to Close Gap 1.2: Seat Time Remains the Principal Measure of Professional Learning**

**Explore the Personalized Learning Landscape**

Identify definitions of emerging trends and innovation labels such as deeper learning, blended learning, connected learning, online learning, and personalized learning. Conduct a research review on the basic components of personalized learning, noting the opportunities and challenges with implementing systems that support competency-based learning, authentic learning, technology-enabled instruction, portfolio assessments, and the use of data to improve learning outcomes. Include deeper learning which requires students to think, question, pursue, and create—to take agency and ownership of their learning. Investigate to determine: • Are these approaches all the same, different, or related? • How do these models inform the vision for professional learning in your district? • How will these strategies inform district expectations of teachers, or shift the role of the teacher in the classroom?

**Discuss the Benefits and Challenges**

Identify the challenges associated with Personalized learning Approaches. Make sure to include student and teacher accountability, personalized professional learning, changing classroom instructional models, as well as tackling potential strategies for supporting teachers, parents and students in the shift to personalized learning environments. Work with the Future Ready Schools team to develop a list of pros and cons to be addressed.

**Analyze Options, Strategies and Tools**

Investigate accountability strategies for professional learning associated with professional learning networks (PLNs), professional learning communities (PLCs), online learning, and social media. Consider accountability systems for professional learning beyond seat time that might include a system of badges for tracking mastery, or micro-credentials that recognize proficiency, observations of application to practice, presentations to colleagues, and other related strategies.

**Findings and Viability in Context**

Develop a set of findings within your district's context at the conclusion of the research analysis, landscape scan, and tool review. Schedule a meeting that includes guiding questions to facilitate a meaningful conversation with the FRS leadership team for a strategic discussion about personalized learning strategies. Consider capturing the next steps that emerge regarding your district's vision for professional learning, relating to your overall FRS implementation plan.

### Gap 1.3: Personalized, Professional Learning Not in District Plan

The district is not yet providing the digital structures that encourage and empower educators to personalize their professional learning. As a result, they have not yet built the capacity of district leaders to personalize their own professional learning, in part through modeling the use of a range of technology tools.

**Strategies to Close Gap 1.3: Personalized, Professional Learning Not in District Plan**

**Check Out the Technology Toolshed**

Investigate a range of options that technology and social media bring to professional learning. Review current models of personalized professional learning. Consider how access to on-demand, robust digital resources, apps and technologies, collaborative tools, online communities of practice, and social media (e.g., Twitter, Classroom 2.0, edWeb.net) opens new opportunities for learning and sharing among educators. Conduct a needs assessment as to what technologies, tools, and social media educators in the district are already using, and what they would like to learn more about. Analyze results, document strengths and gaps for future action.

**Using Technology to Assist with Reflection**

Investigate technology solutions that can track teacher attainment of professional development goals as opposed to tracking hours. Preview at professional digital portfolios where teachers can reflect on their learning and how it will improve their instruction. The digital portfolio would have the capability to be shared with peers or supervisors as needed.

**Gaps in Shared Ownership and Responsibility for Professional Growth**

Your data indicate that your district is fairly well-staged for ensuring that educators working in your district share ownership and responsibility for their own professional growth. The strategies provided below might be helpful in expanding and fine-tuning your readiness in the area.

**Strategies to Close Gaps in Shared Ownership and Responsibility for Professional Growth**

**Check Out the Technology Toolshed**

Investigate a range of options that technology and social media bring to professional learning. Review current models of personalized professional learning. Consider how access to on-demand, robust digital resources, apps and technologies, collaborative tools, online communities of practice, and social media (e.g., Twitter, Classroom 2.0, edWeb.net) opens new opportunities for learning and sharing among educators. Conduct a needs assessment as to what technologies, tools, and social media educators in the district are already using, and what they would like to learn more about. Analyze results, document strengths and gaps for future action.

**Using Technology to Assist with Reflection**

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## 21st Century Skill Set: Readiness Score of 5

Educators have the opportunity to expand their knowledge and skills to address a 21st Century focus (e.g., critical thinking, collaboration, creativity, communication, technology competencies, self-direction, information literacy, etc.). Professional learning includes immersion in the learning sciences research to provide support and insights into more student-centered instructional practices and for the purposeful promotion of deeper learning/21st Century skills in all students. Educators master a variety of new, research-based instructional strategies to better engage students and prepare them for college and beyond. In doing so they broaden their own 21st Century skill set.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| The investigative focus is on the learning sciences research related to 21st Century learning and technology-enabled learning. | District leaders build on key research studies and associated effective practices related to 21st Century skills to inform scenario building and visioning. They envision student learning environments and their individual and team professional practices, which incorporate 21st Century skills, technology/media-enabled learning, and technical skill development. | District leaders develop a professional learning plan that addresses 21st Century skills. It includes staying current with research and trends on 21st Century skills, plus policies and funding for professional learning that, when implemented will result in increased capacity by teachers, administrators, and other education professionals to integrate proven 21st Century skill sets into classroom practices and professional learning. | District leaders assign roles and responsibilities for the implementation of the plan. They formally adopt expectations for education professionals to acquire such competencies within a specified timeframe, offering diverse pathways for staff to acquire such competencies. They establish sets of metrics to gauge progress. Plans include competency-based skill assessment for 21st Century learning and technology-enabled learning in professional learning that are designed to lead to integration in classroom practices and professional practices. |

## Gaps & Strategies for 21st Century Skill Set

**Gap 2.1**

The district has not yet fully developed a culture that encourages innovation in the use of 21st Century skills. Part of the issue is a lack of communication and emphasis on the research as to why 21st Century Skills are important and how they advance learning.

**Strategies to Close Gap 2.1**

**Envisioning Research-Based Solutions in Practice**

A district committee reviews the findings and recommendations from the Task Force investigating 21st Century Skills. Based on that work, the committee identifies research-based solutions for building a district and school culture that embodies 21st Century skills/learning. For example, the new culture will require evidence-informed decision making, where educators are expected to think critically and make decisions using research and evidence; educators are given the autonomy and flexibility to be creative and innovative as they work toward achieving agreed upon standards; and educators are expected to make collaborative decisions, working as teams to meet the needs of all students in their district. They build scenarios such as a "day in the life of a teacher, principal, curriculum director" to describe the way in which personalized learning would add value to the school and district. This work informs the vision for digital learning developed for the district.

**Change Management**

Interview technology experts to consider transformational change models required for successful implementation of a 21st Century digital learning culture. Conclusions are shared with stakeholders.

Gap 2.2

The district has not communicated the reasons why 21st Century skills are important to its graduates and its staff, nor have they emphasized the research that shows how these skills increase the relevancy, engagement, and deep learning by students.

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**Strategies to Close Gap 2.2**

**Envisioning Research-Based Solutions in Practice**

Review the findings and recommendations from the Task Force investigating 21st Century Skills. Based on that work, the committee identifies research-based solutions for building educators 21st Century skills (and technology skills) that will enable independence and self-directed in their own professional learning. In addition, the committee identifies strategies for building students' 21st Century skills and how that topic will be addressed through professional learning. They build scenarios such as a "day in the life of a teacher, principal, curriculum director" to describe the way in which personalized learning would add value to a teacher's professional practice. Based on these scenarios and their research, they identify the competencies teachers, administrators, and other education professionals will need for 21st Century learning and teaching.

**Apply Investigative Findings to the District**

Consider the range of options for building the capacity of education professionals in using 21st Century skills in learning that were identified in the investigative phase, work for your district, e.g., consider how social professional learning (e.g. online courses, MOOCs, webinars) could be leveraged. In doing so, consider the shifts and changes in policy, culture, beliefs, practices, etc. that would be necessary. For the social professional learning example, how would policy need to change to document individual teachers uses outside of school when seat time monitoring is not an option?

**Vision Building**

Develop a vision for 21st Century skills in personalized professional learning in collaboration with stakeholders. That vision should include the knowledge and skills the district will expect education in the district to acquire and apply to their professional practice and to their job responsibilities. Include a "Profile" for educators that identify the "21st Century Skills/Deeper Learning" they will need to excel in their individual and collaborative professional learning, professional practice, and instructional practices. Once the district identifies the competencies that educators will need for 21st Century learning and teaching, district leaders commit to that vision, and the new professional learning focuses it will require.

Gap 2.3

The district hasn't explicitly set clear, high expectations that all staff will become knowledgeable and competent with 21st Century skills and that all staff will use such skills in their work in the district.

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**Strategies to Close Gap 2.3**

**Tools as Targets**

Consider the technologies required for classroom digital learning as targets for professional learning. Review professional learning targets related to digital learning in the classroom: social media, conferencing or collaboration software, digital content resources, interactive simulations, social networking, cloud-based digital libraries and expert directories, online "collaboratories," probe-ware, mobile learning devices, survey/polling applications and response systems, etc.

**Pedagogical Approaches that Connect**

Investigate research-based, innovative pedagogies and curricula for digital learning as background for the professional learning required by teachers, administrators, and other education professionals. Those research-based approaches might focus on one or more of the following: project-based learning, authentic learning projects, personalized learning, blended learning, virtual learning, intelligent adaptive learning, continuous feedback, collaboration, etc.

**Confidence in Competencies**

Assess the educator competencies required to teach in a Digital, 21st Century Classroom/School The technology competencies of educators and the level of their incorporation of 21st Century skills in teaching and learning are assessed to determine professional learning needs. There is a clear differentiation between assessing technical competency (a precursor to effective uses of technology), and measuring the capacity to embed technology into lessons that promote deep learning, self-direction in students, and cognitive and social-emotional engagement in learning.

**Share and Share**

Summarize and share research with stakeholders in order to create a common understanding of key technology-enabled learning needs and required proficiencies. FAQs are shared to clarify the difference between technical competency and mastery of technology-enabling instructional design and implementation. Best practice models are identified, analyzed and shared with stakeholders in preparation for planning. Recommendations from experts are used to build decision matrices. The District might work with stakeholders and subject matter experts to create a curated repository of technology-enabled learning tools and active learning methodologies for review and recommended use.

**Funding Implications**

Consider the scope of the professional learning that will be required over the upcoming transition to digital learning. District leaders should document that scope and implications for time allocation and budget. Based on the investigations of the district committee and discussions related to how the research applies to this district, work with stakeholders to establish a vision for the professional learning required to be ready to implement digital learning.

## Diverse Opportunities for Professional Learning Through Technology: Readiness Score of 7

Digital leaders model new types of professional learning and ensure that educators have access to (and the technology savvy necessary to leverage) professional development opportunities that are diverse, customizable and often supported by the latest technologies. Professional learning is available anytime in a variety of modes. Alternative models are supported through coherent policies and practices in the district.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders collect research on the effectiveness of a broad spectrum of professional learning options and recent cognitive science research on the importance of choice and participant engagement in adult learning. | District leaders consider their research findings as they strategize on the benefits and pitfalls to new, alternative forms of professional learning now possible through technology and social media. They have made efforts to understand current professional learning practices (both formal and informal) of education professionals, and have started to expand their own use of technology mediated professional learning. | District leaders have collected data on current practice, skills, and available technologies. They have used that data to develop a plan for professional learning that includes a broad spectrum of opportunities from face-to-face, through new technology-mediated options. The plan addresses elements essential to the success of these new options including the assurance that education professionals have required technologies and associated skills, and that policies related to professional learning support such options. | District leaders have shared their plan for professional learning, being transparent about the link between the professional learning in the district and recent research. They encourage, model, and provide opportunities for a broad spectrum of professional learning. That spectrum ranges from series of face-to-face professional learning, to professional learning through social media. There is access to required technologies, and opportunities to develop the skills that enable the use of those technologies. Education professionals are expected to choose options that meet their needs and to participate fully in the professional learning District policies are revised to ensure coherence. |

## Gaps & Strategies for Diverse Opportunities for Professional Learning Through Technology

**Gap 3.1**

The district has not fully researched, developed, and offered a broad range of professional learning options that use technology and social media that provide authentic, personalized professional learning.

**Strategies to Close Gap 3.1**

**Consider Updated Practices**

Redraft policies around professional learning, and gauge the readiness of the district to accept those changes. Conduct that review by asking key staff members in the district to take the "Professional Learning Assessment." Once their assessments are complete, review the consolidated report and seriously consider their collective perspectives. Ensure that there is clear alignment between new policies and the district's vision for digital learning and personalized learning for students and educators.

**Write Your Plan of Action**

Write a plan that will bring that vision into action. Determine goals, action steps, implementation plan, and timelines once a district wide professional learning team establishes a new vision for professional learning. Include compelling, innovative approaches such as: • introductions to the vision (video segments by superintendent) • personalized learning plan (e.g., exchange ideas, share, model) • Personalized Learning Networks (PLNs) • incentivized "off-the-clock" professional learning (Twitter Chats, EdCamps, etc.), • "20% time" within learning plan for exploration and innovative.

Gap 3.2

The district has not yet ensured that all staff have 24/7 access to up-to-date devices, and high-speed broadband, nor access to collaborative online tools and communities of practice.

**Strategies to Close Gap 3.2**

**Assess Needs, Analyze, then Summarize Results**

Gather information about currently available technologies and technology skill levels of education professionals. Identify ways that school and/or district personnel currently participate in professional learning through technology, especially social media, also identify ways that they could participate in the future. Identify necessary technologies that will promote access to quality technology-based professional learning.

**Update Current Technology Plan to Include Professional Learning**

Review the current technology plan (if one exists). Determine how professional learning through technology could be utilized. (e.g., listing opportunities for self-directed professional development) Professional learning through technology should also be spelled out in the district's strategic plan and in campus improvement plans. As your district develops a plan for personalized learning, take into account the research on adult learning, options for "off-the-clock" learning using technology and social media. The plan should be reviewed and updated by a leadership team at each level on a regular (i.e. monthly) basis. During the regular review process action items should be marked as Complete, In Progress or Not Started Yet. The plan should: • align new and emerging forms of professional learning, including technology-based, and social media-based options to current practice. • articulate research-based expectations for professional learning with technology, especially social media. • provide examples of effective professional learning through technology and social media. • identify a broad spectrum of professional learning, including technology-based, and social media-based options that are customizable. • link new and emerging forms of professional learning, including technology-based, and social media-based options to current practice.

## Broad-Based, Participative Evaluation: Readiness Score of 7

In order to promote goal-oriented, self-regulated professional behaviors, evaluation is participative (i.e., the educator who is the subject of evaluation is actively involved in goal-setting, collecting indicators of progress, and self-evaluative behaviors). Professional evaluation uses a broad set of indicators that includes student achievement, evidence of improved instructional practice, student engagement, and 21st Century skill attainment.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders explore and document new models for participative evaluation, but they do not yet define specific new directions. All stakeholders have representation in this exploration and communication of progress and findings are provided to all. | District leaders describe and select new research-based models of evaluation that are supportive of digital learning goals. In these models, teachers play more active roles in the evaluative process and data sources enable teachers to establish goals and independently track their progress toward goals. District leaders use data sources beyond standardized assessments. | District and school leaders plan the transition to a system where evaluation is a collaborative process. Multiple data sources are identified that will allow educators to discover areas of need and collaboratively plan to meet those needs. Digital tools are identified that allow educators to access data, communicate, and collaborate in the service of professional development for digital learning. | District and school leaders make initial changes that will lead to a more collaborative evaluation process. Multiple and diverse sources of data related to student learning and twenty-first-century skill development are made priorities in plans and budgets. |

## Gaps & Strategies for Broad-Based, Participative Evaluation

Gap 4.1

The district has not yet fully researched and developed, and instituted a system for evaluating staff that is participative, using a broad range of criteria and data sources.

**Strategies to Close Gap 4.1**

**Plan for Performance Evaluation System**

Formulates a general plan for the implementation once the participative model for evaluation has been identified or constructed. The team develops a plan for the implementation of a performance evaluation system that assesses teachers' and principals' professional skills as well as incorporating measures of student growth. To ensure clarity, the plan includes specific standards for each area to be evaluated and the criteria for success. In addition, the plan includes the provision of professional learning resources and strategies that will be available to assist professionals in actively developing skill in identified areas of need. Include timelines for implementation, communicating with all stakeholders throughout the process.

**Key Issues**

Address the following issues in the plan: expectation for annual professional learning goal setting by all staff, clear descriptors of professional excellence as the basis for teacher evaluations, policy revisions necessary to ensure coherence with the new approach, standards of excellence, collaborations with key stakeholders such as teacher unions, state and federal requirements, and collaborations with teacher evaluation teams.

Gap 4.2

The district has not yet ensured a broad base of criteria and associated evidence for educator's evaluation. Nor has the district aligned such criteria with the district vision for digital learning?

**Strategies to Close Gap 4.2**

**Develop an Action Plan**

Develop an action plan to implement the preferred teacher evaluation model. Include in the model: clear definitions of terms; factors to take into consideration that may be out of the control of the teacher, clear indicators of success (e.g., range of instructional expertise, classroom management, student engagement, student achievement, student attainment of 21st Century skills, etc.), with percentages of overall rating; measures and instruments for each indicator of success; timelines, methodology for data collection and analysis; process for data informed goal setting by educators, etc. As with any action plan, include goals, actions, responsibilities, timelines, and metrics for successful implementation.

Gap 4.3

Programs and policies to support participative evaluation practices that include opportunities for collaborative goal setting and professional improvement are currently not in place.

**Strategies to Close Gap 4.3**

**Needs Assessment**

Ask all teachers the following questions as the district begins transforming the teacher evaluation process: What should we keep doing? What should we stop doing? What should we start doing? Begin drafting policies and procedures hat align with the answers to these questions as they relate to educator effectiveness and evaluation.

**Map Out a Strategy for Policy Review and Update**

Based on the review of policy coherence with the new approach to teacher evaluation, map out a strategy for changing those policies may serve as barriers, update or add those needed to institute this new system.

# Gear 7: Budget and Resources

An effective budget development and review process is guided by a deep understanding of school finance at the District, State and Federal levels. Funding a digital learning environment requires strategic, short-term and long-term budgeting that leverages the use of learning-enabling technology and resources to optimize student learning. All budgets at the district and the school level are aligned in order to prioritize student learning and cost-efficiency, with consistent funding streams for both recurring and non-recurring costs. The District's financial model includes the metrics and processes to determine Total Cost of Ownership (TCO) for developing and sustaining the digital learning environment and to ensure accountability for determining learning Return On Investment (ROI).

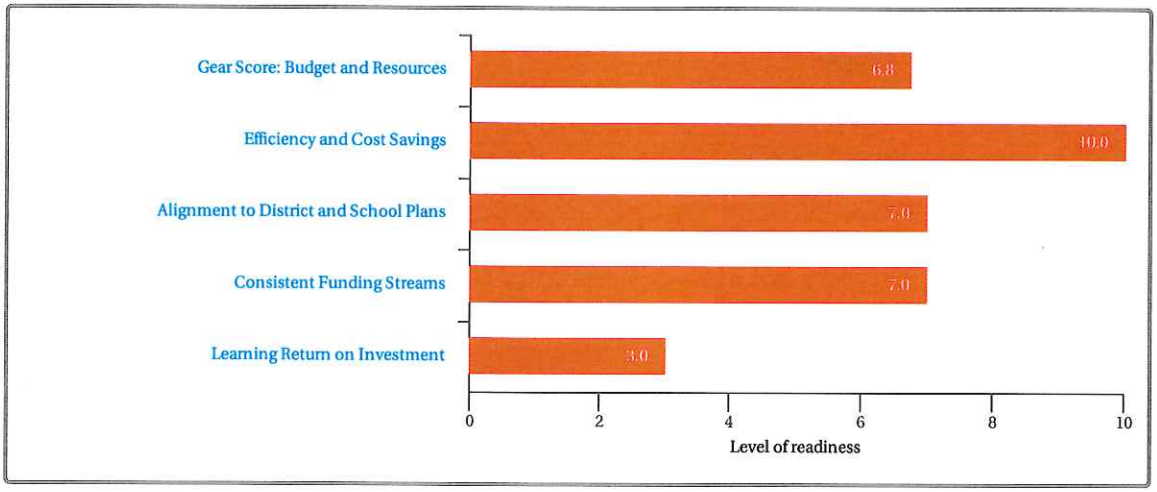
### Elements of this Gear:

- Efficiency and Cost Savings
- Alignment to District and School Plans
- Consistent Funding Streams
- Learning Return on Investment

### Your District provided the following Budget and Resources vision:

Student learning goals and the efficient use of technology involves both maintenance of already purchased equipment as well as a constant and deliberate influx of new technology devices, software and training.

### Your District's Stage of Readiness for Budget and Resources



## Depth of Your District's Knowledge Base: Budget and Resources

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Budget and Resources | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss ways to support students with tools and resources for digital learning that offer efficiencies and cost savings (e.g., BYOD, Web 2.0 tools, free apps, etc.). | | X | |
| Discuss strategies to support systemic digital learning that offer efficiencies and cost savings (e.g., online courses or blended learning, cloud computing solutions, digital resources to replace textbooks, "going green", etc.). | | | X |
| Discuss use of non-recurring funding for short-term digital learning initiatives (e.g., for innovative pilot programs) by leveraging business partnering, community donations and special grants. | | | X |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations and plans are in place |
|---|---|---|---|---|---|
| Policies, procedures and timelines for transitioning to cost-saving strategies that leverage digital systems, tools and resources. | | | | | X |
| District and school level plans for digital learning justified and linked with consistent annual funding streams. | | | | X | |
| Funding identified for digital learning programs in the district's annual maintenance and operation budgets. Non-recurring funding allocated for short-term initiatives or pilots. | | | | X | |
| Metrics and methodology for monitoring the relationship between budget priorities and student learning goals. | | X | | | |

## Rubrics for Budget and Resources

### Efficiency and Cost Savings: Readiness Score of 10

Innovative funding for digital learning leverages technologies to improve teaching and learning as well as to increase efficiency and cost savings. A cross-functional District budget development team is formed that is composed of District leaders, key stakeholders, and subject matter experts who collectively represent the District's interests. This team employs strategies for calculating the total cost of ownership (TCO) for all technology resources; focusing on learning-enabling technology, digital resources and instructional practice.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| A cross-functional District leadership and budget development team does a high-level review of current District, State, and Federal financial processes. They identify current barriers to budgeting for digital learning and collect strategies and best practice examples of innovative funding structures and scenarios that effectively determine Total Cost of Ownership (TCO). The team identifies innovative solutions to funding the transition to digital learning. | Innovative, proven practice examples, funding structures and budget scenarios inform District leadership and budget development efforts. The District's creates a vision for transformational and sustainable funding for a high performing and effective digital learning environment. | District leaders and budget development teams define their strategies, processes and metrics for determining Total Cost of Ownership (TCO). The district develops sound policies and procedures for the ongoing review and analysis of cost variables for equitable funding of digital learning. The District designs a communication plan that illustrates cost/benefit opportunities associated with digital learning. | District leaders and budget development teams conduct timely reviews of the analysis of efficiencies, effectiveness, and costs of implementing and sustaining a digital learning environment The cross-functional District leadership team develops implementation strategies and viable timelines to activate procedures and practices needed to maximize educational investment. The District communicates actual costs, efficiencies, and effectiveness of implementing and sustaining a digital learning environment. |

### Gaps & Strategies for Efficiency and Cost Savings

**Gap 1.1**

Cost effectiveness and efficiencies in the budget for digital learning have not yet been achieved.

**Strategies to Close Gap 1.1**

**Is It In The Plan?**

Before making expenditures ask, "Is it identified or supported in the budgetary plan?" All digital learning expenditures should be vetted according to policies, implementation strategies, accountability metrics and timelines. Leaders and staff should be able to clearly establish how expenditures are determined and approved.

**Putting Your Best Foot Forward**

Select the correct district leader, who has the appropriate leadership aptitude to proactively communicate the budgetary process and funding decisions to all stakeholders. Who is best able to communicate and defend actual the costs, efficiencies, and effectiveness of expenditures needed to implement and sustain the district's digital learning environment?

**Making It Student-Centered**

Have students demonstrate examples of technology-enabled learning and 21st Century skills made possible through the district's investment in digital learning as part of budget communication meetings. Examples of such personal learning include: virtual music lessons, a webinar with an expert on water quality, virtual tutors, or a collaborative research project with other districts. Use data from review metrics such as TCO to illustrate budgetary decisions that made the student learning possible.

**Activating Policy**

Evaluate specific digital learning expenditure or programmatic requests through multiple lenses during budget development. Review each request with the following criteria questions: • Does the technology-enabled learning resource, tool, or practice fit within budget constraints when TCO is applied? • Can the digital learning innovation eliminate the need for an existing expenditure that fails to produce needed results? • Can the potential benefit of the expenditure be absorbed across multiple programs? • Can it bring value to all students? • Does the initiative prioritize both student achievement and cost-efficiency?

**Illustrating Desired Outcomes**

Implement the budget communications plan according to plan's timeline. Monitor and address stakeholder responses in order to build and maintain strong systemic support. Use data from review metrics such as TCO illustrate decisions.

**Gap 1.2**

To date, the district has not achieved any real cost savings through the use of technology, nor has the district been very proactive in seeking out and implementing cost saving measures that leverage technology.

**Strategies to Close Gap 1.2**

**Pilot New Ideas for Cost Savings to be Achieved Through Technology**

Identify cost savings area that are viable for your district and pilot them after investigating how other districts are using technology to achieve such savings. Document the cost savings in the pilot over time. Analyze the results and scale what works to other sites or programs.

**Use the TCO Model To Track Cost Savings**

Ensure that all staff in the district involved in budgeting and reporting of expenditures use the same codes or chart of accounts. Consistent budget coding enables your district to analyze TCO over time to check for cost savings.

**Impacting Change**

Identify the shared leadership team who can best communicate and defend actual costs, efficiencies, and effectiveness of implementing and sustaining a digital learning environment. The team will need to portray leadership aptitude characteristics such as thinking outside the box, seeking diverse opinions, having confidence and displaying tact. Have students demonstrate examples of technology-enabled learning and 21st Century skills made possible through the district's investment in digital learning as part of budget communication meetings.

## Alignment to District and School Plans: Readiness Score of 7

Priorities for budget and resources are clearly linked to district- and building-level strategic and tactical plans and to continuous improvement goals. All expenditures must be justified as supportive of these plans. Innovative programs are funded conditionally upon their alignment to the district's vision and mission.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders ensure that annual academic planning processes inform and guide technology budget development activities. A cross-functional budget team identifies best practice examples of district-and building-level strategic and tactical plans that map funding structures to technology-enabled learning tools and resources, and 21st Century skill development. | District leaders and budget development teams analyze best practice funding structures and scenarios to help define the District's vision for a sustainable digital learning environment. They explicitly link funding requirements to strategic and tactical plans. The District shares its vision for sustaining a digital learning environment with stakeholders. They communicate logic and best practice examples in order to broaden support. | As District leaders and key stakeholders build district- and building-level strategic and tactical plans they explicitly map curriculum integration to digital learning expenditures to viable funding streams, timelines, and accountability measures. The planning process identifies and prioritizes multiple funding and accountability scenarios. | District leaders build a broad base of stakeholders to support their strategic and tactical plans. The District illustrates the alignment of curriculum, instruction, and technology-enabled resources. District leaders and key stakeholders are prepared to communicate strategic and tactical plans. They can justify budgets and identify cost-saving strategies that leverage technology and the academic return of investment. |

## Gaps & Strategies for Alignment to District and School Plans

Gap 2.1

The District's annual academic planning process is not used to inform and guide the budgetary process. The curriculum and instruction plans are not aligned or mapped to digital learning resources, outcomes and expenditures.

**Strategies to Close Gap 2.1**

**Be Data Informed**

Do an inventory of all digital learning resources and technology. Determine the frequency and quality of student use of current digital learning resources and technology. Do you know what digital learning resources are actually being used by students and how often? Do you know how staff and students use these resources to meet their learning goals? Answers to both questions are used to determine digital learning needs.

**Waste Not**

In order to find cost savings, identify tools or resources that do not map to the curriculum or support instruction for potential elimination in order to find cost savings. Identify innovative and effective digital learning resources that may be used to fill gaps or replace ineffective or inefficient technology or resources.

**Maximizing Potential**

Map each digital learning resource and tool to the district's curriculum and instruction plans to identify gaps and redundancies. Focus on maximizing the potential for student-centered learning. Include frequency and quality of student use. Then prioritize needed resources according to the potential to contribute to personalized and engaged learning and other 21st Century skill development. Finally, explicitly link district funding requirements to the strategic and tactical plans to support student-centered, digital learning. When there are competing tools and resources use your digital learning experts to developing decision matrices that can be used to guide decisions.

## Consistent Funding Streams: Readiness Score of 7

The District has consistent and flexible funding that enables equitable access to optimal learning environments. Budgets for technology-enabled learning tools and resources are addressed in short and long-term fiscal plans. Funding sources are identified in the District's annual maintenance and operation budgets with minimal reliance on grants or other temporary sources. Funding for digital learning is integrated across multiple budget areas where appropriate.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate and analyze innovative and best practice methods for consistent and sustainable funding of digital learning environments and technology-enabled learning initiatives as part of annual maintenance and operation budgets. District leaders and budget development teams also investigate alternative funding sources (i.e., public/private partnerships, community donations, foundation awards, etc.) that can assist the district initiate or maintain consistent funding. | District leaders analyze current budgeting strategies relevant to technology-enabled learning tools, resources and instructional practice. This would include budgeting for broadband, network infrastructure, hardware, technical support, instructional content, and professional learning. A cross-functional budget team uses the analyses of innovative and best practice examples and practices to envision and propose potential transformational funding strategies and scenarios. | Based on District vision and priorities for supporting digital learning, district leaders develop a viable plan that identifies funding priorities, propose viable funding streams and timelines, and define accountability measures. | District leaders have identified viable funding sources for short and long-term funding. The District is committed to consistent and sustainable expenditures with explicit intent to support digital learning over time. |

## Gaps & Strategies for Consistent Funding Streams

**Gap 3.1**

The district does not have a clear strategy for using recurring and non-recurring budgets to ensure a consistent funding stream to support digital learning, or if the strategy is clear, the district is not fully implementing this strategy. The District is not prepared to illustrate or defend potential budgetary scenarios and potential funding streams in order to justify adequate and consistent funding of technology-enabled teaching and learning.

**Strategies to Close Gap 3.1**

**Creating Possibilities**

Today's education funding systems are not flexible or agile. They are not designed to address the innovation and sustainability requirements of the digital learning environment. One way to address this discrepancy is to identify new and existing specific funding streams that can be flexible and support redistribution of spending; integrating digital learning technology and resources across multiple budgets, program areas, or instructional practices.

**Put it in the Plan**

Prioritize the use of funding streams in the district's annual maintenance and operation budgets that have minimal reliance on grants or other temporary sources as part of the process of defining strategies to integrate potential funding solutions across multiple programs and initiatives. Develop a viable plan that identifies funding priorities, proposes viable funding streams, and defines implementation timelines, and accountability measures.

**Get input and Support**

Review the fiscal plan with key internal and external stakeholders that collectively represent the district's interests for their input and systemic support. Be sure to emphasize the need for consistent funding and how the investment in digital learning (i.e., digital content, productivity software, digital tools, multi-media resources, etc.) can be divided across multiple budgets.

## Learning Return on Investment: Readiness Score of 3

All metrics for review of budget priorities and cost-efficiency are based on their demonstrated relationship to student learning goals. District leaders have strategies and tools for measuring Return On Investment (ROI) in digital learning; focusing on learning-enabling technologies, resources, instructional practice and student learning.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders investigate return-on-investment models and metrics that can be used to relate budget priorities for digital learning to student learning goals. | District leaders propose metrics and a methodology that demonstrate budget priorities for digital learning that relate to student learning goals. | District leaders have a plan and tools for monitoring the relationship between budget for digital learning and student learning goals. | District leaders build the financial model with metrics and a methodology for monitoring budget priorities for digital learning, based on student learning goals. |

## Gaps & Strategies for Learning Return on Investment

Gap 4.1

The District may not yet be able to track and/or demonstrate the academic return on investment for expenditures for digital learning.

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**Strategies to Close Gap 4.1**

**L-ROI: What is It?**

Learning Return on Investment (L-ROI) is the amount of academic outcome achieved for a given amount of investment made. Determining L-ROI requires a comprehensive investigation of methods of evaluation that measure effectiveness and efficiencies inherent to the learning environment. (i.e., student learning, teacher effectiveness, scheduling of students and professional staff, Total Cost of Ownership of digital learning technology and resources, etc.)

**Where to begin?**

Gather expertise and examples. Form an L-ROI sub-committee of subject matter experts (curriculum specialists, technology integration specialists, digital learning coaches, effective instructors, etc.) to research and collect examples from successful digital learning programs that clearly illustrate how technology enables personalized learning and the development of 21st Century skills. Research methods used to measure Return on Investment (ROI) in other industries (i.e., higher education, workforce training programs, etc.) to determine how they can be applied to K12 education.

**Don't Reinvent the Wheel**

Collaborate and collect! Collect case studies and sample metrics on Learning Return on Investment (L-ROI) specific to digital learning and 21st Century skill development. Meet with budget development teams from other districts who have successfully embedded L-ROI metrics into their continuous improvement planning and budget review process. Attend conferences where experts on L-ROI are presenting case studies or doing training. Compile examples of evaluation measures used to illustrate that students are meeting their learning goals.

**Indicators of Student Learning**

Do a comprehensive analysis to link data to technology-enabled learning resources and instructional practice that supports 21st Century skill development. District leaders and subject matter experts begin with identifying where they will find indicators of student learning. A first step is to review the district's curriculum and instruction to identify indicators of student learning (i.e., access to quality content and resources, types of assignments and student products, methods of evaluation, formative and summative assessments, observations, surveys, etc.)

# Gear 8: Across the Gears: Collaborative Leadership

The Future Ready framework is a systemic planning framework around the effective use of technology and digital learning to achieve the goal of "career and college readiness" for all students. While the seven interdependent Gears provide a roadmap toward digital learning, success within a district is dependent on innovative leadership at all levels. First and foremost, leaders within a district must be empowered to think and act innovatively; they must believe in the district's shared, forward-thinking vision for deeper learning through effective uses of digital, 21st Century technologies. Critical to their success will be a culture of innovation that builds the capacity of students, teachers, administrators, parents, and community to work collaboratively toward that preferred future. The policy foundation that results must be coherent with that vision. Unleashed in a culture of vision and empowerment, leaders will have the flexibility and adaptability they require to prepare their students to thrive in the 21st Century.

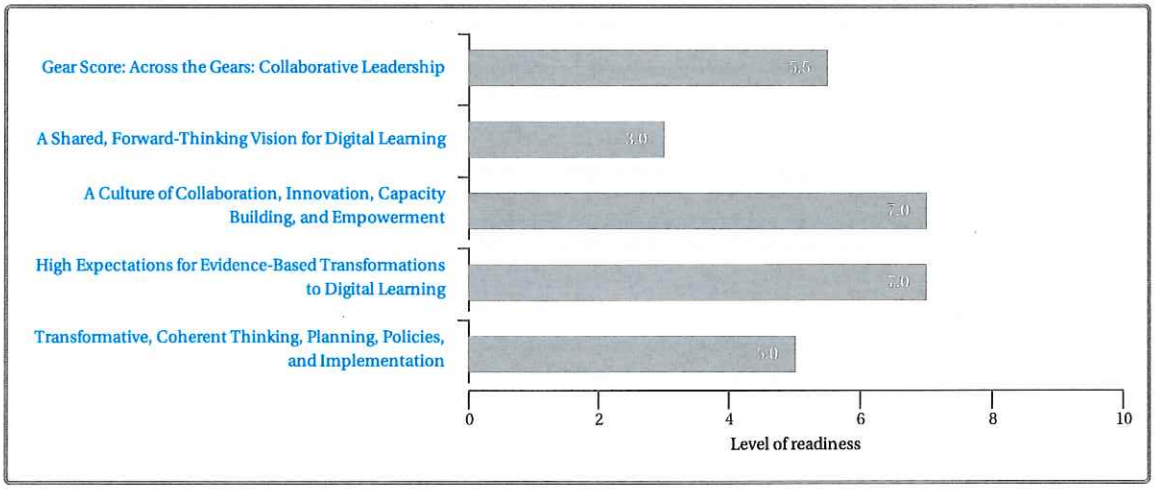
### Elements of this Gear:

- A Shared, Forward-Thinking Vision for Digital Learning
- A Culture of Collaboration, Innovation, Capacity Building, and Empowerment
- High Expectations for Evidence-Based Transformations to Digital Learning
- Transformative, Coherent Thinking, Planning, Policies, and Implementation

### Your District provided the following Across the Gears: Collaborative Leadership vision:

The district encourages new learning strategies that are pedagogically sound, planned well, cost conscious, and includes sufficient professional development strategies to provide the greatest opportunity for success.

### Your District's Stage of Readiness for Across the Gears: Collaborative Leadership



## Depth of Your District's Knowledge Base: Across the Gears: Collaborative Leadership

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base.

| Confidence of Your Leadership Team in Discussing Topics Related to Across the Gears: Collaborative Leadership | Not Yet Prepared to Discuss | Could Discuss After Additional Research | Could Discuss with Confidence Now |
|---|---|---|---|
| Discuss the district's strategy for developing, communicating, implementing, and evaluating a shared, forward-thinking vision for digital learning. | | X | |
| Discuss strategies to establish a culture of collaborative innovation, where leaders at all levels are informed, trusted, empowered, and ready to lead. | | X | |
| Discuss the high expectations that will be required of all students, education professionals, and family/community if the district is to realize continuous, sustainable progress toward the vision. | | X | |
| Discuss the coherent strategic, tactical, and budgetary policies and planning required to achieve the vision. | | X | |

## Status

The status that your district leadership team reported for each question is displayed below.

| | Not currently a priority | Actively researching | Formalizing our commitment | Developing district plans to implement | District policies, expectations, and plans are in place |
|---|---|---|---|---|---|
| The district has involved the community in establishing a shared, forward-thinking vision for personalized, digital learning. | | X | | | |
| The district and schools have established a culture where leaders are informed, collaborative, and empowered to innovate. | | | | X | |
| The district leadership team has established high expectations for transformation at all levels. | | | | X | |
| District leaders have coherent policies, plans, and budgets for achieving the vision. | | | X | | |

## Rubrics for Across the Gears: Collaborative Leadership

### A Shared, Forward-Thinking Vision for Digital Learning: Readiness Score of 3

The district recognizes that, to prepare their students to thrive in today's connected, fast-paced society will require an education that engages students in evidence-based, deeper learning through smart uses of technology and new pedagogies. The district has engaged students, teachers, administrators, parents, and the community in the envisioning of a transformed education system that personalizes learning for all students through the effective uses of technology.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| A cross-functional team participates in conferences and discusses strategies with other districts and experts on a vision for digital learning. The team explores the economic, social, educational, and ethical underpinnings for such a vision. | The district uses the research and investigations to conceptualize the essential elements of their vision for digital learning. They develop scenarios as to how those elements would be actualized in their district, noting the benefits and consequences. | District leaders establish strategic and tactical plans for: a) developing a shared vision for digital learning, b) formally adopting that vision as a component of the district's overall goals, c) aligning all programs to the vision, and d) establishing metrics to assess progress toward the vision. | District leaders have engaged students, teachers, administrators, parents, and the community in the envisioning of a transformed education system that provides personalized, deeper learning through the effective uses of technology. The vision has been formally adopted, communicated internally and externally. |

### Gaps & Strategies for A Shared, Forward-Thinking Vision for Digital Learning

Gap 1.1

District leaders do not yet have a formal, approved, forward-thinking vision for digital learning—one that addresses what students need to thrive in the 21st Century, based on current research and societal trends. And, if a vision has been developed, it may not be included as a key component of the district's strategic plan.

**Strategies to Close Gap 1.1**

**Establish Consensus with Respect to Learning Goals**

Organize a team comprised of all stakeholders that is tasked with establishing district-wide learning goals focused on successful learning for every student. Review practices within the district and in other districts in light of current educational research to inform the team's efforts. Considering the district's current state of operations, identify any gaps between the current state and the preferred state. Develop appropriate goals for moving the district forward to close these gaps. Once there is consensus on goals and definitions, the team can proceed to envisioning the use of technology to support these goals. Incorporate the goals into the mission and vision for digital learning.

**Capacity for ALL Students as the Goal**

Spend time discussing what proficiency means to the stakeholders. There needs to be agreement that the goal for successful learning is for every student, not just the easy to teach, compliant, and advanced student. Team members, particularly those not currently aware of accountability for student learning, must understand that re-teaching, re-testing, remediation, and recovery are all part of strategies to have every student work toward proficiency. After there is agreement on the relevance of the learning strategies and the desire to have EVERY student learn, the team can move forward to Envisioning the use of technology to systemically support this goal. Incorporate the goal into the mission and vision for digital learning.

**Establish a Common Understanding "Glossary"**

Prepare a "glossary" of terms and definitions that team members agree upon. "Begin with the End in Mind" is one of the 7 Habits of Highly Effective People by the late Stephen Covey from his book of the same name. Part of the challenge in investigating a shared, forward-thinking vision for digital learning is agreement and commitment from stakeholders. The cross-functional stakeholder team needs to include parents, students, teachers, administrators, school board members, local business leaders, and community members. While it sounds fairly straightforward, the definition of an education that engages students in evidence-based, deeper learning through smart uses of technology and new pedagogies—one that prepares them to be college and career ready—requires broad based agreement on what this means. The team needs to come to an agreement regarding the specific definitions for concepts like "evidence based, deeper learning," "proficiency," and "college and career ready," while representing each representative's specific context and perspective as well as the teaching and learning literature. In a climate of testing and accountability, parents, board members, community members, administrators and teachers may not be in agreement of what this entails as it may not be the type of learning they experienced as students.

**Develop Data Driven Objectives**

Review current student achievement data to ensure actions are student and learning focused, not just technology-focused. Synthesize findings to identify trends. District administrators can present the findings to the team with identified areas of need highlighted. Keep data at the forefront of decision-making. Identify what would be needed to continue data informed decision making into the daily culture of the schools and the district.

**Plan for Professional Use of Technology Resources**

Become familiar with the current school district technology resources, how they are used, their effectiveness as measured by student learning, and the associated costs. Team members should then be aware of the new technologies available, considerations related to updating hardware and infrastructure, and ongoing financial responsibility of a commitment to digital tools. Stakeholders should consider attending national conferences (e. g., ISTE, iNACOL, CoSN) and statewide association conferences, as well as keeping up-to-date through reading trade magazines (e.g., T.H.E. Journal, Tech and Learning). The team can also invite consultants for presentations or company representatives for demonstrations of innovative products. Develop a plan for incorporating these tools into the district's daily operations, for example, in communications among stakeholders, communication with the community, and professional development for educators.

Gap 1.2

A district's vision for digital learning has not been broadly and effectively communicated internally with staff and/or externally with parents/community stakeholders.

**Strategies to Close Gap 1.2**

**Communicate, Communicate, Communicate!**

While internal and external communications have occurred during the formation of the team, visioning, and adoption of the vision by the school governing body, once formal approval occurs, a strategic communications plan needs to be implemented to move the process forward. Identify all stakeholders and organize them into stakeholder groups for planning and communication purposes. Enlist the help of a district communications specialist or outside assistance such as the National School Public Relations Association (http://www.nspra.org) to initiate the communications planning process.

## A Culture of Collaboration, Innovation, Capacity Building, and Empowerment: Readiness Score of 7

The District leadership team has established a collaborative culture of innovation in which leaders at all levels are empowered to innovate. The capacity of leaders to innovate is maximized through a culture of trust and respect, providing leaders with the flexibility and adaptability they require to lead. This culture leads to sustainable change, informed by research and facilitated by digital leaders.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders are becoming more deeply informed about creative, innovative, empowered leadership. They have established a research base that identifies the potential outcomes for a culture of collaboration, innovation, capacity building, and empowerment in leadership. | Based on their research, district leaders have identified the type of leadership that has the greatest potential for transforming the district. The leadership they identified as optimal is collaborative, where leaders at all levels are empowered to act innovatively and creatively, provided such actions have high potential for advancing the district vision. | District leaders have established a plan for transitioning to a collaborative culture of change, where empowered leaders have the flexibility, adaptability, responsibility, and authority to act, provided such actions have high potential to advance the vision. | The capacity of leaders to innovate is maximized through capacity building within a culture of trust and respect. This culture provides leaders with the flexibility and adaptability to innovate, which in turn leads to sustainable change, informed by research and driven by the district vision for digital learning. |

## Gaps & Strategies for A Culture of Collaboration, Innovation, Capacity Building, and Empowerment

Gap 2.1

District leaders have not fully established the type of flexible, adaptable, collaborative culture of innovation in which educators at all levels are trusted, respected and empowered to innovate. As a result, the capacity of leaders and other education professionals to achieve the district's vision may be minimized.

**Strategies to Close Gap 2.1**

**Customize the District Leader Supervision Process**

Encourage the leadership team to add a leadership aptitude component to their evaluation that addresses collaborative and distributed leadership. This example is from the Pennsylvania Department of Education's Framework for Leadership, a rubric designed for use in evaluations of principals: 1c: Builds a Collaborative and Empowering Work Environment: The school leader develops a culture of collaboration, shared leadership, and continuous improvement conducive to student learning and professional growth. The school leader empowers staff in the development and successful implementation of initiatives that better serve students, staff, and the school.

**Utilize Collaborative Supervision in Support of Shared Leadership**

Encourage the leadership team to use a collaborative supervision model with teachers which focuses on formative assessment with the goal of every teacher attaining proficiency. Supervision is not evaluation. Supervision is ongoing and supportive in nature as opposed to being evaluative. In this type of supervision the principal is a partner providing instructional guidance, supports, and resources. This process begins with a goal collaboratively set between teacher and principal. Progress in working toward that goal is discussed periodically throughout the year, with adjustments made as needed. Progress is measured at the end of the year with this information used to design the following year's goal. The climate of collaborative supervision allows for teachers to take risks, take advantage of a wide range of professional development opportunities, grow professionally, and contribute to school-wide goals.

Gap 2.2

District leaders have not identified the change processes required in their context, which is limiting the district's ability to initiate and/or sustain the necessary to changes to achieve the district vision.

**Strategies to Close Gap 2.2**

**Recruit Agents for Change**

Identify who the agents of change are at the district and school level. Kotter (1995) suggests that one of the key errors organizations make is not recruiting the right people to lead and facilitate change. Rogers (1983) identifies categories of individuals in terms of their response to innovations, suggesting that those who are both respected by others and open to trying new things should be included in the planning process, as their support is essential to the success of change efforts in an organization. Begin conversations, individual and collaborative, with these individuals, in order to establish a common set of issues to address and a sense of urgency for making changes to address them.

## High Expectations for Evidence-Based Transformations to Digital Learning: Readiness Score of 7

Across the district, teachers, administrators, and students are expected to show progress toward the district vision. The district has established metrics for gauging such progress and is working across the district to monitor progress and to use evidence-based decision making to ensure that technologies are implemented in ways that advance the vision.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders analyze research studies on the potential impact of digital leaning on student attainment of the learning goals, thus forming a knowledge base on digital learning. They also document various models of evidence-based reasoning and models of change management. | District leaders carefully review the knowledge base on digital learning resulting from their investigations. Based on that evidence, they envision a time when instructional decisions are informed by this knowledge base. | District leaders develop plans for building the capacity of education professionals to use the knowledge base to inform decisions. They pilot projects where teachers collaborate to identify and close gaps in student learning through digital learning. | District leaders set high expectations for the district, schools, and classrooms to adopt the types of digital learning shown to be effective in meeting the learning needs of all students to achieve academic and 21st Century learning goals. To ensure success, the district provides the conditions essential for local, evidence-based decision making related to digital learning. |

## Gaps & Strategies for High Expectations for Evidence-Based Transformations to Digital Learning

Gap 3.1

District leaders have not set explicit expectations with timelines as to the progress they expect district/school-based staff and students to make toward the district vision for digital learning.

**Strategies to Close Gap 3.1**

**Plan for Professional Development**

Using the research-base and district needs assessments, develop a plan for ongoing professional development for all current and new employees so that the digital vision is highlighted and sustained. Consider alternative models, such as offering "credit" for professional learning community study groups. The "credit" can be actual in-service credit, time, or even payment.

**Assessing Progress**

Develop a logic model that identifies the long-term, intermediate, and short-term outcomes the district expects to attain through digital learning. Develop the metrics for assessing these outcomes and then fund and implement a system for measuring the progress of all outcomes as well as indicators of success.

Gap 3.2

The district has not yet established a complete set of metrics for collecting and analyzing indicators of progress toward the district vision for digital learning, including analyses as to how technology is being used in learning, teaching, leading, and assessment, with standards set based on sound educational research.

**Strategies to Close Gap 3.2**

**Analyze Pilot Results**

Assessment informs instruction. In this case, assessment data from pilot projects guides the timeline for full scale implementation. Interview data provide context for the timeline with realistic deadlines and expectations, as well as helping to learn about potential roadblocks or problems. Review data and findings to inform revisions to your vision and plan.

## Transformative, Coherent Thinking, Planning, Policies, and Implementation: Readiness Score of 5

The district's forward-thinking vision is advanced through leaders' transformative thinking. Leaders have ensured that the district's policies are coherent with the philosophy underpinning the vision (e. g., personalizing professional learning for education professionals, just as they personalize learning for students). They have developed strategic plans that map potential pathways to the district's preferred future, and have created the tactical and financial plans and dedicated budget necessary for implementation. As they implement they monitor, adjust, build capacity, and incrementally improve.

| Investigating (0-3) | Envisioning (4-5) | Planning (6-7) | Staging (8-10) |
|---|---|---|---|
| District leaders study the processes by which other districts successfully transformed their school system to deepen and extend learning through technology. | District leaders identify the changes that will be required in their schools in order to attain the vision they have set for digital, 21st Century learning. | District leaders develop a strategic plan to advance digital learning. The plan uses the Future Ready framework to ensure coherent thinking across the system's policies, procedures, cultures, practices, and investments. | District leaders work with policymakers to adopt the strategic plan as a way forward to attaining the vision. While working toward coherence across the district, the plan is implemented in ways that empower district and school leaders and teams with the flexibility to think and innovate as they make decisions that meet the needs of learners. |

## Gaps & Strategies for Transformative, Coherent Thinking, Planning, Policies, and Implementation

Gap 4.1

Leaders have not yet ensured that the district's policies are aligned and coherent with the philosophy underpinning the vision for digital learning (e. g. , student-centered pedagogy; focus on authentic, 21st Century, deeper learning; personalized learning for students and education professionals; flexibility in the use of time to ensure learning needs of all students are meet).

**Strategies to Close Gap 4.1**

**Use a "What if?" Matrix**

After review of possibilities, team members can align possibilities with identified needs with the goal of creating a district digital resource plan. This can be done as a team electronically using mind mapping or brainstorming tools. (Examples of free and low cost tools can be found at http://mashable.com/2013/09/25/mind-mapping-tools/). The matrix would have identified needs along one axis and possible solutions along the other. This initial exercise should not be limited by considerations of cost, time, or feasibility. The solutions will be narrowed in the next step.

**Determine Realistic Solutions**

A second matrix is now developed to bring the brainstorming closer to reality by examining actual feasibility and determining of actions needed to systemically support the technology initiatives. In this matrix, the digital activities are listed along one axis and the needed processes and policies are listed on the other. Also consider how existing practices may or may not fit into your plan. Examples of these processes might include changes in pedagogy, allocation of time, adjustments to schedules, providing professional development, or allocation of funds.

Gap 4.2

District leaders have not dedicated appropriate resources to the data analysis, interpretation, and capacity building necessary for informing instruction and improvement.

**Strategies to Close Gap 4.2**

**Identify Needs and Strategies**

Determine what needs should be addressed in order to attain the district vision based on an inventory of the district's current capacity related to data collection and analysis. Create a chart which aligns identified needs to possible strategies and solutions. Consider needs of all types, including infrastructure, resources, staffing, levels of access, and professional development.

Gap 4.3

District leaders do not have a management plan and process in place that maps potential pathways to the implementation of the district's preferred future; nor is the district fully supporting the work with capacity building, dedicated time for collaborations and committee work, and necessary resources/funding streams.

**Strategies to Close Gap 4.3**

**Use the Counter Measures to Envision Areas for Change**

Use a Five Whys technique (see Investigating strategy for description) to investigate issues related to change management, pathways to the implementation, capacity building, dedicated time for collaborations and committee work, necessary resources, metrics for monitoring progress to enable data-informed continuous improvements, and established funding streams to systemically support the work. Use the "Counter Measures" to envision the changes needed to make the transformation.

# KEARNY: Vision for Digital Learning

A summary of your district's vision statements from your district's self-assessment:

### Curriculum, Instruction, and Assessment (Gear 1):

Curriculum, instruction, and assessment practices will leverage the full range of technology and digital resources to ensure students are immersed in rich, authentic, relevant learning experiences that enable 21st Century Skills/deeper learning across the disciplines.

### Use of Space and Time (Gear 2):

Our district supports the notion of anyone, anytime, anywhere learning and the use of technology to assist fulfilling this vision.

### Robust Infrastructure (Gear 3):

In order to effectively implement the anytime, anywhere notion of the use of technology for learning activities, we will provide sufficient bandwidth and access for all users and all applications.

### Data and Privacy (Gear 4):

Providing secure systems that protect access and dissemination of data is a priority as well as the implementation of the use of social media and the social dynamics of protecting data and systems.

### Community Partnerships (Gear 5):

Communication with the community, including employers, parents, students and other interested members of the community is important to fostering an educational and learning environment that crosses all aspects of the community.

### Personalized Professional Learning (Gear 6):

We continue to encourage and implement both individual and district-wide initiatives for improving instructional skills and strategies. Technology allows for a variety of tools and access that would support this initiative.

### Budget and Resources (Gear 7):

Student learning goals and the efficient use of technology involves both maintenance of already purchased equipment as well as a constant and deliberate influx of new technology devices, software and training.

### Across the Gears: Collaborative Leadership (Gear 8):

The district encourages new learning strategies that are pedagogically sound, planned well, cost conscious, and includes sufficient professional development strategies to provide the greatest opportunity for success.

# Glossary

**21st Century Skills:** 21st Century Skills are essential skills that children need to succeed as citizens and workers in the 21st century. They include core subjects, 21st century content, learning and thinking skills, ICT literacy, and life skills.

**Adaptive learning:** An approach that uses technology to engage students in interactive learning activities, which are customized to meet each individual's learning needs, based on continuous feedback and data analytics.

**Authentic learning:** A general model for designing learning activities that are rigorous, in-depth and have value beyond the classroom. The work assigned in authentic learning environments often mirrors the type of work done in the real world.

**Blended learning:** Blended learning describes models of learning where a student learns at least in part at a supervised brick and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace; often synonymous with hybrid learning. (Horn and Staker, 2011)

**Collaborative Workspaces:** Any tool that allows for collaboration or access to shared documents such as Google Docs or TeamBox.

**Competency-based:** A type of learning where the student advances in mastery of a set of competencies at a pace, and often in an order, determined by the student.

**Data culture:** An educational environment characterized by the effective use of data and evidence-based reasoning.

**Deeper learning:** Deeper learning prepares students to know and master core academic content, think critically and solve complex problems, work collaboratively, communicate effectively, and be self-directed and able to incorporate feedback. It enables graduating high school students to be college and career ready and to make maximum use of their knowledge in life and work.

**Digital Citizenship:** Understanding the safety concerns, rights and responsibilities necessary to access and participate in online communications or communities.

**Document Management:** Tools for storing, sharing and organizing documents such as drop boxes, file storage and organization tools, shared public spaces, etc.

**Performance-based:** Learning activities that require complex performances as demonstrations of knowledge.

**Personalized learning:** An approach to learning that is student-centric, where students have a significant degree of control and choice in what, when, and how they learn.

**Privacy:** The balance between collection and dissemination of data, technology, and individuals' right to have their personal information kept private. (Source: Data Quality Campaign.)

**Project-based learning:** Inquiry-based learning where learning takes place in response to a complex question or challenge.

**Security:** The policies and practices implemented at the state, district, and school levels to ensure that data are kept safe from corruption and that access is limited and appropriate. Data security helps ensure privacy and protects personally identifiable information. (Source: Data Quality Campaign.)

**Synchronous Tools:** Communication tools that support real-time communication such as webinars, Skype or chat rooms.

**Visualization Tools:** Tools that support the visual representation of thinking and ideas such as charting, graphing, or concept mapping tools.

# Appendix E

## Board Resolution Approval

# Appendix F

## County Approval Letter