Planned Growth Program: Jersey City Public Schools District Technology Plan

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This plan has been created to address the technology implementation for the three additional schools that are now part of the Jersey City Public Schools District. The expectation is for individual school buildings to use the Jersey City Public Schools District Technology Plan as a framework when assessing their needs and developing their specific technology implementation plan.

**1. Mission and Vision**

Our mission at Jersey City Public School District is to ensure that all students have equal access to all educational opportunities. It is our mission to provide an academically rigorous learning environment that fosters innovation and develops 21st century skills. Our mission is to cultivate and maintain partnerships between teachers, parents, and the community to ensure our students’ successful development. It is the mission of Jersey City Public Schools to prepare our students for college and career.

The Jersey City Public School District has provided its students and staff with the infrastructure on which to build a technology-enhanced and supportive learning environment. The district is committed to infusing appropriate technologies into highly effective instructional applications in order for students to develop the critical thinking, creative thinking, collaboration, and communication skills needed for students to be successful in a 21st century world. The district is also committed to helping students develop literacy skills including: information, media, and technology literacy.

The district is committed to providing digital equity for all learners in order for them to have more challenging and rewarding educational experiences. The district is also committed to implementing cost-effective strategies that are proven to enhance learning outcomes. Jersey City Public Schools believe in innovative technologies and programs, evaluation of those programs, and steady progress.

**2. General Introduction/Background**

The Jersey City Public School District is the second largest district in New Jersey. It has a very diverse population. Jersey City Public Schools’ demographics show 39% Hispanic, 33% African American, 16% Asian, and 11% White (JCPS Strategic Plan, 2015). Throughout the district, 14% are Students with Disabilities, 9% are English Language Learners, and 70% are eligible for free or reduced lunch (JCPS Strategic Plan, 2015).

Jersey City has a total of fourteen Elementary Schools, thirteen Grammar Schools, four Middle Schools, six High Schools, one Secondary School, one Alternative Program, and three Early Childhood Centers. Sixteen schools have been identified as either focus or priority schools.

This technology plan takes a systems approach to educational technology. It addresses the “who”, “why”, “when”, and “how” of instructional technology. It focuses on the implementation of technology and building capacity amongst staff in order to lead our students to high intellectual performance. The district will shift its focus from technology assets including investments in hardware, software, facilities, infrastructure, and support to student learning outcomes. The assets “job” is to support the objectives from this technology plan.

As part of the District Improvement Plan to transition Jersey City from state to local control, the district has mandated that all students in Grades 3-8 complete 60 minutes per week of Math Edge. Math Edge is an online adaptive learning program that serves as an intervention program for students. All students in Grades K-8 are required to use MyOn, which is a platform that offers a digital library that is digitally enhanced in order to help students improve their Lexile levels.

The district is preparing for PARCC by upgrading its infrastructure and ensuring all devices are accounted for and functional. The district is also ensuring all devices are being appropriately employed. The district is making efforts to implement the ISTE National Education Technology Standards.

**3. Needs Assessment/Goals**

The technology coordinator will conduct a needs assessment for the three new schools and determine their instructional, administrative, telecommunications, and technology needs. The main purpose of this needs assessment is to evaluate and anticipate needs in hardware, software and services. These needs will include all aspects of technology integration in instruction, assessment, curriculum development, online learning, Internet safety, professional development, and infrastructure. Therefore, a district wide online survey will be emailed to teachers and administrators. The survey will focus on collecting data related to technology use in all aspects of instruction, assessment, and curriculum development. In addition, the technology coordinator will conduct a district wide inventory in order to identify all equipment and their specifications. This inventory will help not only to identify all existing resources and their usability, but also determine needs in terms of purchasing, allocating, moving, and sharing resources throughout the district. This holistic approach of the needs assessment ensures that the three new schools get an equitable share of resources and be included in the Jersey City Public School District Technology goals. The Jersey City Public Schools District Technology goals are:

1. Learning

Goal:  All teachers and administrators will exhibit continuous technology growth through the demonstration of innovative technology use for classroom and administrative purposes. To meet this goal, it is recommended to adopt standards that reflect 21st century learning and advance STEM learning.

2. Assessment

    Goal:  All administrators and teachers will use technology to improve the collection,

analysis, and reporting of formative, summative, and state student achievement data.

To meet this goal, it is recommended to build the capacity to use technology to improve all aspects of assessment: design, development, and feedback.

      3. Teaching

    Goal: All teachers will embrace and incorporate technology within the parameters of

             the curriculum. To meet this goal, it is recommended that all staff is provided

           professional development that encourages technology use in ways that improves

            instructional practices.

      4. Infrastructure

Goal: The Jersey City Public Schools District will maintain a reliable information technology infrastructure for the pursuit of 21st century skills. To meet this goal, it is recommended to ensure that schools have reliable broadband access and wireless connectivity. It is recommended every teacher and student has at least one Internet accessible device for use in school.

         5. Productivity

Goal: All levels of the educational system will make efficient use of time and resources to take advantage of technology in order to improve learning outcomes. To meet this goal, it is recommended that technology programs are implemented and evaluated to ensure student progress.

6. Communication

          Goal: All schools within the district will improve communication between the home and

          school. To meet this goal, it is recommended that schools implement an online

          communication and data collection program allowing access to parents.

**4. Funding**

The district actively seeks competitive sources of technology grants. In order to establish a collaborative method to amplify the educational experiences for all students, the district seizes various opportunities including: local, state, federal, business, and community grants; resource partnerships; and other sources of funding.

The district strongly encourages individual school buildings to use their funding for technology resources and professional development. Schools have many options. All Jersey City Public Schools receive Title I and Title II funding, and many receive Title III funding as a result of their large ELL population.

On the building level, Title I is an option for individual school buildings in funding technology and technology programs. Title I, Part A (Title I) of the Elementary and Secondary Education Act, as amended (ESEA) allocates financial funding to primary and secondary schools. Financial assistance is provided to local educational agencies (LEAs) and schools with high percentages of children from low-income families. The school must focus Title I services on students who are at-risk of failing to meet academic standards. A Title I school with at least 40% of students from low-income families can use the funds to operate a school-wide program. This means Title I services can be provided to all students. All costs associated with Title I must be necessary, reasonable, allocable, and legal under state and local law. Title I funds must be used to supplement, not supplant, educational programs and materials required by law. Title I funds can be used to purchase technology and technology-related services if the rationale proves that using a particular technology for instruction is necessary to supplement teaching and learning in a core area.

According to the Every Child Succeeds Act (2015), Title II, Part A is related to teachers and administrators, with the intention of improving student achievement by improving teacher quality. Allowable expenses are based on a needs assessment and must meet certain criteria. This criterion includes being aligned with state academic and achievement standards. A rationale as to how a specific technology can be aligned with academic and achievement standards in at least one of the core content areas would have to be provided in order to determine eligibility of using these funds to pay for the technology related expenses. Title II, Part A is strictly for teacher resources. This includes professional development for teachers in core content areas. Materials related to the professional development activities would be included, as long as they are for the teacher. For example, an iPad for the teacher to model activities for the students would qualify.

Frazier (2012) suggests funds be allotted to the categories listed in the chart below. The percentage of funds allocated varies by district. All costs listed are recurring costs.

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| --- | --- |
| Hardware | 15% |
| Software | 15% |
| Contracts and Services | 10% |
| Professional Development | 20% |
| Maintenance and Upgrades | 15% |
| Network | 15% |
| Filtering | 5% |
| Miscellaneous | 5% |

**5. Technology Acquisition Plan**

As described by Frazier (2012), an effective technology acquisition plan should incorporate the acquisition of hardware, the vision, the stakeholder, planning, budgeting, data gathering, research review, integration of technology into the curriculum, commitment to professional development, appropriate funding and an ongoing assessment. The opening of two Elementary Schools and one Middle School requires the development of the technology acquisition plan to meet the district’s instructional goals and needs assessment. The technology plan will address the needs assessment of the three schools and will provide the necessary instructional equipment and resources. The needs assessment indicates needs in hardware and software alike, which includes computers, iPads, networking capabilities to share resources such as printers, educational programs, applications, and technical support.  Appropriate resources must be in place to support and maintain networks and equipment in order to have a positive effect on student learning outcomes.

    The first step in developing the technology acquisition plan will be visiting the three schools. The purpose of the visits is for the technology coordinator to study the learning environment; observe faculty, staff, students, and administrators in their working environment; and make decisions on the arrangement of equipment, allocation of resources, and safety. The technology coordinator should then meet with the teachers and administrators to better understand their needs in terms of how they collaborate, exchange, and share data.

The acquisition plan will consist of:

* A local area network (LAN) will be installed in every school. The LAN will connect all computers and resources to a local server to provide sharing and collaboration services.
* Infrastructure necessary for each school to connect to the Internet. This will include landline internet connections for computers and wireless connection for the Chromebooks and iPads. The infrastructure includes: servers, routers, modems, cable or fiber, operating systems, and software to manage signal transmission.
* A media center for each school. The media center will contain 40 desktops, a printer, a projector, a smart television, and a copy machine. The arrangement of the computers in the media center should provide the ability for students to be comfortably seated and work in centers. Therefore, five round tables with adjustable chairs will be needed. Each table will contain four computers and enough space for students to collaborate. Considerations include: monitor size, room lighting, space between computers, and space between tables to allow the teachers to circulate and monitor progress.
* Chromebook and iPad carts each containing 30 Chromebooks/iPads will be provided to classrooms for the purpose of incorporating technology in instruction.
* Web-based technologies that will enable students to interact with one-another online and with the teachers will be incorporated. These web-based technologies include Google classroom, Wikis, Twitter, YouTube, and other social media sites that have content that is based on user participation, contribution, and discussion forums.
* Purchasing the appropriate equipment and resources will be based on proposals and bids. The technology coordinator will compare prices and analyze technical specifications for both hardware and software before any contract is awarded. A formal bid will be used to describe all items that need to be purchased as well as a timeline for bids. Support and maintenance are important services. The technical coordinator must select a provider that will manage the iPads, Chromebooks, and desktops, as well as the network providers in case of technical issues.

**6. Access**

Each teacher will have access to Chromebook and iPad carts in the classroom. Teachers can request the carts from the IT department in order to incorporate technology in their instruction. In addition, teachers can also schedule access to the media center in their respective schools. The building technology coordinator will set a schedule so that each teacher will have access to the carts and the media center on a weekly basis. The teachers will also have access to various web-based technologies such as Google classroom, Wikis, Twitter, YouTube, and other social media sites that have been board approved and provide students the ability to share and participate in online discussions. However, before the infrastructure is made available to students, teachers and staff will need to be appropriately trained to utilize the hardware, software, and strategies on how to integrate technology in the classroom (Frazier, 2012).

The technology coordinator must guarantee an equitable access to technology for all students regardless of learning abilities (Noeth & Volkov, 2004). The technology coordinator is responsible for planning, organizing, and evaluating access to technology and how it is used to enhance students learning experiences and its impact students’ achievement. Parents will also be made aware of the technology available in the three schools as well as being access the school’s web site, teachers’ web pages and staff email addresses. The technology coordinator will also provide access to digital services for all teachers in the three schools which include eBooks, data base subscriptions, and online tutorials and videos. Furthermore, the technology coordinator will address safety, security, and confidentiality of minors when accessing data online or using email as described in the district’s acceptable use policy for access to the World Wide Web. The technology coordinator must ensure that inappropriate content is blocked and that the school’s network is protected from malware and viruses that can infect the school’s data.

**7. User Support Plan**

End-user support includes: user services, help desk support for hardware and software, repair tickets, 1-to-1 laptop initiatives, equipment purchase and allocation, inventory, ergonomics, furniture and security issues. In a survey conducted by the National Center for Educational Statistics on school technology use (Gray, Thomas & Lewis, 2010), 31% of public school employed a full-time IT staff for technology integration and support. In order to create an efficient support system for each school in the district, including the new two elementary schools and middle school, a full time technician will be permanently assigned to new schools, the technician’s job is to consult with the technology coordinator and provide solutions to students, teachers, administrators and staff and meet their various needs and assist in various ways for different purposes.

In a poll conducted by the U.S. Department of Education National Center in 2000, about two-thirds of the teachers reported that the lack for technical support was a barrier to their use of technology. Therefore, in order to meet the district’s goals to incorporate technology in the classroom and teach students 21st century skills, a help desk will be used in all schools including the new schools to provide technical assistance by phone or email to teachers and staff. A help desk software will track requests for support and maintenance (NCES, 2002).  The help desk software will generate tasks and tickets which will help meet end-user requests for support in a timely fashion.

The technology coordinator must seek help from knowledgeable teachers and staff to assist with technical issues. Schools are encouraged to hire teachers to serve as technology support. Students can also provide valuable help and can be of great assistance to teachers in the classroom especially if enrolled in programs such as the Generation Yes that specifically teaches students to solve problems and help teachers utilize technology in the classroom.

**8. Staff Training Plan**

Professional development for administrators, faculty, and staff in methods concentrating on best practices for technology integration is imperative to assist our students in becoming 21st century skills ready. A longitudinal study conducted by Desimone, Smith, and Phillips (2013) noted that there is a connection between staff professional development, teacher change of practice, and student achievement. It is part of the district’s mission to take on this responsibility by mandating technology usage and technology implementation professional development for administrators, faculty, and staff.  This professional development must bring administrators, faculty, and staff to the level of technology proficiency required for the successful implementation of the plan.

The current addition of faculty and staff due to the increased student enrollment and construction of two new elementary schools and one new middle school warrants research into the technology proficiency of the new faculty and staff starting at the aforementioned institutions.  The initial endeavor is to conduct research to identify the skill sets of the new or transferred administrators, faculty, and staff. The technology planning committee will conduct this research by distributing an online survey to be filled out by administrators, faculty, and staff. This data will be analyzed and become the foundation of the initial professional development for the upcoming school year.

* Technology Use Training Sessions: Utilizing the survey data, district technology coordinators along with the technology committee will conduct staff training sessions on the use of the technology currently purchased for implementation in the new schools before the start of the upcoming school year.
* Technology Implementation Training Sessions: District technology coordinators and subject area supervisors will conduct technology implementation training sessions which focus on the effective integration of technology into the curriculum.
* District Professional Development: All administrators, faculty, and staff will take part in the scheduled district-wide professional development on the use of innovative technology. There will be four scheduled sessions per academic year.
* Peer-Coaching: Faculty who have demonstrated a comprehensive understanding and have effectively integrated technology into the curriculum will work with new or less experienced faculty as peer coaches.
* Professional Learning Communities: All schools will form PLC’s that address the technology demands of the 21st century with the members working cooperatively to learn innovative techniques to implement in the classroom setting.
* Independent Training Sessions: Online training modules and resources will be provided as references to all administrators, faculty, and staff.
* In-Class Support Sessions:  In-class support will be provided on an as needed basis.

**9. Program Evaluation**

To uphold the tenets of the mission and vision of the current technology plan, the district will implement ongoing evaluation practices regarding technology integration into the curriculum, administration/faculty/staff/ technology proficiency, and student technology proficiency. This evaluation process will be carried out by the technology coordinator and the technology planning committee. There will be ongoing management of the technology plan as well as monitoring of the proficiency of all users.  The use of continual assessment provides the insight into areas experiencing difficulty, allowing for adjustments to be determined and executed (International Society for Technology in Education, n.d.). It is imperative to have a vision of what you expect from the evaluation process along with a clear understanding of the stakeholders being represented. Evaluations will be carried out by observations, collection and analysis of data produced by online services, and survey information provided by administrators, faculty, staff, students, and parents.

Areas of Evaluation:

* Are faculty and staff proficient in the use of technology within the classroom setting?
* Are faculty and staff implementing technology in all areas of the curriculum and corresponding standards?
* Have students gained proficiency in the use of technology within the classroom setting?
* Is technology being utilized as part of student assessment?
* Are administrators implementing technology into the daily operations of the school?
* Is there improvement in summative and formative assessment scores?
* Has the professional development provided met the needs of faculty and staff?

**10. E-Rate Program Planning Criteria (E-Rate Plan Addendum)**

The adoption of the E-Rate Modernization Order by the Federal Communications Commission (FCC) in July of 2014 was initiated as a means of restructuring the Schools and Libraries Universal Support Program.  For E-Rate approval schools must have a technology plan that states technology goals, addresses professional development, and a plan to evaluate progress made towards achieving the goals of the technology plan.

The three goals of the order are as follows:

* Providing affordable access to high-speed broadband, which can support digital learning and connectivity in all schools and libraries.
* Insuring that all E-rate purchases demonstrate cost-effectiveness.
* Insuring that the E-rate application process is timely and efficient. (Federal Communications Commission, n.d.).

Through this program schools and libraries will have access to affordable telecommunications and information services. The E-rate modernization order has the goal of ending the apparent Wi-Fi gap that exists across the United States. This expansion of Wi-Fi connections in schools will provide equal access to 21st century skills for all students.

For the maximum benefit of the E-rate modernization order, the technology committee representing the stakeholders needs to commit to meeting all E-rate application deadlines and complying with all E-rate regulations. Plans for the best means of expanding Wi-Fi access need to addressed to ensure the wisest use of E-rate funds. The E-rate program affords all schools despite the economic level of the community the ability to provide students with 21st century skills preparing them for technology-based careers. Jersey City Public Schools will aggressively pursue E-rate program opportunities.

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