

Strategic Technology Plan for Jersey City Public Schools

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**Jersey City Public Schools**

**STRATEGIC TECHNOLOGY PLAN**

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**1. MISSION AND VISION**

1.1 Mission

The mission of the Jersey City technology program is as follows:

With the understanding that technology has the ability to allow students to redefine and transform learning to realize their full potential, it is the responsibility of the Jersey City school district to provide the resources necessary to achieve that end. Our program will personalize each student's educational experience by cultivating collaboration, problem solving strategies, non-

cognitive competencies, global connections and 21<sup>st</sup> century skills through project-based learning. We will provide equitable access to technological resources for all learners and teacher-scholars. These resources will encourage students to become lifelong learners and responsible global citizens in an increasingly complex and interconnected world.

## 1.2 Vision

We envision the future of technology in the three new schools as part of the Jersey City school district as one which will:

- provide the tools necessary to enhance academic programs and curricula.
- accommodate individual learning rates and styles.
- implement the 4 C's- collaboration, communication, critical thinking and creativity.
- allow learners to meet the challenges of a global society.
- develop non-cognitive competencies (self-awareness, executive function, cooperation, control of impulsivity, relationships, and care of oneself and others).
- present opportunities to virtually move outside of the classroom to experience other learning opportunities.
- encourage students to pursue personal interests and/or passions.
- help to close the digital divide for all learners.
- incorporate multimedia communication into academic subjects as well as ancillary program and extra-curricular activities.
- face real-world challenges using project-based learning activities.
- increase student engagement in learning, both individually and collaboratively.
- stimulate curiosity.

- link home, school and community.
- encourage continuous professional development for teacher-scholars.

## **2. GENERAL INTRODUCTION/BACKGROUND**

### **2.1 District Profile**

Jersey City, New Jersey is an urban community located in Hudson County. The public school district is the second largest in New Jersey, educating approximately 28,000 students. The Jersey City school district prides itself on having a diverse representation of students, combining various global views and multicultural traditions. According to the New Jersey Department of Education (2014), 32% of Jersey City's students are African-American, 38% Latino, 17% Asian, 11% White, and 2% identify as either multiracial, Native American or Pacific Islander. There are 40 languages represented and Jersey City is home to many immigrants from Latin America and has a large population of students from the Middle East, India, and Pakistan. Currently, the district includes 39 schools including fourteen Elementary Schools (Pre-K--5), thirteen Grammar Schools (Pre-K-8), four Middle Schools (6-8), six High Schools (9-12), one Secondary School (6-12), one Alternative Program (serving grades 6-12), and three Early Childhood Centers.

The Jersey City school district is one of thirty-one districts included in the New Jersey Schools Development Authority (SDA). The SDA is responsible for the construction, renovation and repair of schools in the district according to legislation passed in 2008 to provide funding for all project costs for the former Abbott districts. The building of additional public schools in the community needs to be approved by the Department of Education and managed by the SDA.

The city of Jersey City is currently in a high growth state. In a recent New York Times article, Ronda Kaysen (2016) describes how many New Yorkers are relocating to Jersey City due

to the easy commute and more reasonable housing prices as compared to Manhattan and Brooklyn. The resulting development boom is projected to increase school enrollment by 25 percent by 2017 (McDonald, 2104), resulting in a student population totaling close to 35,000. This population growth is putting a strain on Jersey City schools so three new schools are slated to open next year.

## 2.2 Planning Process

In developing the technology plan for the three new schools, all aspects of technology use as well as the needs of all stakeholders were considered. Needs assessment, program goals, funding, technology acquisition, access, user support, professional development, and program evaluation were evaluated and included in the plan. Additionally, the district Director of Family and Community Engagement was utilized as a resource to promote the development of community partnerships. Business and industry leaders were consulted to support the implementation of technology in all aspects of the instruction and administration including, but not limited to: special needs/students with disabilities, Bilingual/ESL programs, hardware needs, security, Point-of-Sale (POS) services, content management, and financial management.

This strategic technology plan took into consideration all local, state and federal laws and funding regulations related to educational technology. The following guidelines also were considered in the formation of this plan: National Educational Technology Plan (US Department of Education, 2016), the New Jersey Technology Planning for Digital Learning materials (New Jersey Department of Education, 2016) and the New Jersey Student Learning Standards (New Jersey Department of Education, 2016).

### 3. NEEDS ASSESSMENT/GOALS

It is important to base the purchase, policy and use of technology on careful research and planning to ensure the final implementation of a plan that is manageable and practical for success suggest Frazier and Bailey (2004, p.14). The JCPSD conducted a comprehensive needs assessment to determine the anticipated technology requirements for all end users of the two elementary and middle schools designated to open Fall 2017. Utilizing surveys, open-ended questionnaires, material inventories inclusive of hardware and software, review of district current infrastructure in relation to the increase load estimated with the expansion of personnel, material and digital traffic. Data was also gathered related to the expected level of usage for learning, teaching, classroom management, administrative and business-related technology purposes.

To prepare for the opening of the two elementary and the middle schools, the stakeholders representing all identified categories of end users were presented with assessment measures determined to be appropriate by the members of the JCPSD Technology Planning Committee. Prospective classroom teachers and administrators were asked to complete an online Teacher/Administrators Technology Needs Assessment Survey designed using Google Forms to reflect the diverse needs of the different programs and populations. Parents within the designated school zones were offered opportunities to attend planning meetings in which open-ended questionnaires and scripted interviews were used to gather data on student and parent needs. Formal data sources compiled from sending schools within the district that are reflective of student assessment needs were also utilized to determine possible learning and teaching needs.

The results of the needs assessment were used to guide the development of the student, staff, and administration objectives. These reflect the district goals for learning, assessment and professional development and align to NJSLS 8.1 Educational Technology and 8.2 Technology

Education, Engineering, Design, and Computational Thinking Programming. Goals and objectives with recommendations are as follows:

### **Goal and Objectives**

#### 1.0 Learning

All learners will have opportunities to actively engage in learning experiences that occur in and out of the physical school building that prepare them to become effective, resourceful, well-informed, and ethical contributors to a global society.

To prepare learners to meet this goal the technology committee recommends:

1.1 Adoption of the new ISTE 2016 student standards for technology use to be integrated for the purpose of updating the current district student learning standards.

1.2 Evidence of the use of the incorporation of technology resources supported by approved and accepted research design principles for learning.

1.3 Discovery and employment of learning options and materials that make use of the available range and depth of technology to provide learning that is inclusive of all students and not hindered by time or place constraints.

1.4 Ensure the use of advances in science and technology learning to promote student access and opportunities to information and fields that relate to S.T.E.M./ S.T.E.A.M (Science, Technology, Engineering, Art and Mathematics) career choices.

#### 2.0 Assessment

Technology will be used for the systemic assessment of students, staff and administration to allow for continued growth and improvement based on end-user outcome results.

To meet the goal for assessment of all end-users, the technology committee recommends:

2.1 School-supported staff or designated personnel-developed assessments that inform end-users in a timely manner with relevant and actionable data to improve achievement and instruction.

2.2 Continuous training for educational staff on the use of technology to support the development of appropriate assessment materials and measures designed to improve student outcomes.

2.3 Employing practices that promote the continuous review, updating and reassessment of practices and policies that relate to technology and assessment to ensure the effectiveness of safe use and student information privacy.

### 3.0 Teaching

All professional educators will participate in the review and assessment process independently or in supported teams utilizing technology to access data, information, shared resources, and occurrences for further learning experiences in order to promote growth and effective teaching practices.

To meet this goal, the technology committee recommends:

3.1 Through the process of designing, developing, and implementing technology-based learning material in blended learning environments, educators will work collaboratively to promote effective practices for personal and professional growth.



3. 2 Utilize technology to provide access to the most effective teaching and learning resources to engage learners and professionals on all levels.

#### **4. FUNDING PLAN**

In order to coordinate and control the technology purchases for the district it is important to not only focus on the maintenance of the system but also the funding of innovations, developing of policies and procedures, and evaluating the effectiveness of the plan.

Funding percentages must be set for budgeting purposes, which can be adjusted yearly with approval at the district level. The funding for the district will come from all sources including but not limited to State and Local Support, Federal Support (Title 1, Abbott, E-Rate), and innovative source (grant writing, crowd funding, corporate partnerships). The district technology budget will consist of:

Maintenance (50%)

- o Infrastructure
- o Hardware
- o Software

Innovations (25%)

- o Equipment
- o Supplies
- o Contracts
- o Vendor Support

Policy and Procedure Development (10%)

Professional Development (15%)

Miscellaneous (5%)

Committees will be developed yearly to update, rewrite, and develop new policies. As the technologies develop it is important create policies that govern them. Acceptable, and ethical use policies, guidelines for social media uses and individual technology application guidelines are all developed at the district level.

## **5. TECHNOLOGY ACQUISITION PLAN**

Based upon the results of the needs assessment for the three new schools opening Fall 2017, JCPSD has set forth to equip each building with the technology infrastructure, materials and access designed to promote an effective learning environment for all end- users. Frazier and Bailey (2004) identify teaching and learning as critical parts of all educational groups and thus, the primary focus of the technology coordinator. (p.30) The technology committee considers the development of a plan detailing the acquisition of technology required to enhance opportunities for end-users teaching and learning a key component to the planning process.

The JCPSD suggest the following as needed for both elementary schools and the middle school:

5.1 Schoolwide infrastructure/ network- hardwired and wireless/Onsite and Cloud Storage

5.2 Technology equipment/ computers/mobile devices/ smartboards/tablets/ assistive technologies when appropriate as designated through students Individual Educational Plans

5.3 Software and online options / educational site licenses for classroom instructional support and student learning/ individual and or lab pack licenses for instructional material when deemed appropriate to meet student or staff needs/ network classroom and business software to promote schoolwide exchange and documentation of shared information

5.4 Security system that filters and blocks access to and from unapproved sites and sources.

## **6. ACCESS**

The Jersey City Public School District brings together a diverse population of students, educators and administrators. The variety of end-users necessitates that a plan for access to the provided technology be met in variable ways. As such the JCPSD proposes the use of Universal Design for Learning (UDL) in the development and implementation of course material for all students. UDL practices are to be implemented in the design process for all school websites and publications to cultivate and promote an inclusive environment for all end-users.

## **7. USER SUPPORT PLAN**

It is the responsibility of the district to ensure a certain level of maintenance for all technology purchases. The district will acquire quotes and advise specific purchases for the following equipment and materials:

- Approved Tablet Devices (IPAD and Microsoft Surface)
- Approved choices for laptops and desktops (Windows based and MAC operating systems)
- Approved choices for Chromebooks and carts
- Approved presentation technology (wall mounted and portable - Smart and Promethean)

All quotes will be created with a 3yr. minimum warranty, 5 yr. when possible. The district will develop procedures for requiring building inventory yearly and a managing of fixed assets through a 5-year obsolete cycle. The district will ensure that principals are allocating the appropriate school based funds to maintain this cycle.

All new technology initiatives will require district approval, at which point the district will ensure new initiatives are added to the approved quotes list. This will create uniform technology from building to building. Although individual principals will have discretion of the initiative, the district will be responsible for providing equitable use of technology.

The district will secure service contracts for items that do not have a manufacturer's warranty or when in need of an extended service maintenance contract. These purchases will be secured and managed through district funding.

The district will secure professional development contracts through a Request for Proposal (RFP) process; these funds will come from school level budgets, and from district funds depending on the focus. Individual principals and schools will identify the amount of available funds to start the budgeting year for professional development. This school based PD will focus on the needs of the individual building. Administrators will conduct surveys to identify needs, and the school will schedule accordingly. The district will secure specific vendors with district funds based on the goals and objectives for technology literacy as listed throughout the mission and vision of the technology plan. This professional development will focus on individualized learning, various 1-to-1 technologies and supports (i.e. Chromebooks and Google applications for students).

## **8. PROFESSIONAL DEVELOPMENT PLAN**

As per Frazier, (2012), when planning a technology professional development program, it is important for leaders to begin with a review of the district technology plan while integrating the national standards for students, teachers, and administrators. These standards and related resources provide a solid basis for determining what teachers and administrators should learn as a part of a technology professional development program.

The Jersey City Public School district has made a commitment of funds to implement technology in its schools. The district continues to focus on identifying technology training as a requirement in certified staff Professional Improvement Plans: adopted the national Technology

Standards for Schools Administrator (TSSA): and adopted the ISTE standards for teachers, students and support staff.

Professional Development Goals include:

1. Creating professional learning communities (PLC) using mobile social media products.
2. Provide professional development opportunities to support best practices reflected in staff evaluation models.
3. Build teachers' capacity to engage in online learning community
4. Professional development to PreK-12 teachers to effectively access, utilize and monitor the selected educational websites.
5. Providing teachers and administrators with preparation and professional learning experiences powered by technology that close the gap between students' and educators' fluencies with technology.
6. Provide workshops utilizing technology in the district to engage 21st Century learners including the technology tools to support 1:1 personalized learning strategies.
7. Continue professional development for K-8 teachers using Web 2.0 tools.
8. Provide in-service to teaching using the Smart Board, Digital Storytelling, Video Conferencing, and Promethean Boards.
9. Provide K-8 teachers with the opportunity to collaborate and communicate with their staff and colleagues in the district regarding technology.
10. Provide professional development for teachers and administrators for Online Assessment Procedures.

11. Provide professional development resources for training on Personalized Learning, Flipped classroom, podcasts and QR codes and Project Based Learning.
12. Provide professional development to implement the TPACK Technology Pedagogical Content Knowledge Framework effectively with technology.
13. Provide professional development opportunities to develop online instructional skills through offering professional development workshops, Google Classroom, Docs, Slides and Hangouts.
14. Provide professional development opportunities for training in STEM and STEAM learning.

The district is meeting this need by providing resources that offer daytime, after-school, and summer technology workshops for the staff of the Jersey City Public Schools. During the school year, professional development training will be defined on a school by school basis addressing the individual needs of each school as defined by online surveys/assessments tools. Each school will create a school-based technology team to determine the resources and needs of the staff. Staff development providers will be provided to supplement existing district resources.

Technical skills for members of district departments are maintained through turnkey training by technology analysts, offsite attendance at workshops, on-site workshops provided by consultants and vendors, and on-site coaching. Staff members will be provided with professional development opportunities on a selection of assistive technologies and specific application training as needed. Supervisors will collaborate to integrate technology within the curriculum and identify training for effective integration of technology tools into the curriculum addressing

the CCS/NJCCCS/Workplace Readiness Standards. Strategies implemented to provide technology training include:

- a. Grant funded training at local institutions of higher education.
- b. Partnerships with local businesses and higher education
- c. In-District programs for Mastery Certification of Core Topics
- d. Free access to an open-source-e-learning software platform

## **9. PROGRAM EVALUATION**

According to the National Education Technology Plan, (2016), states and school districts must develop useful metrics for the educational use of technology. There is currently not much data on how technology is actually used to support teaching, learning, and assessment is collected and communicated systematically. Only by shifting our focus to collecting data on how and when technology is used will we be able to determine the difference it makes and use that knowledge to improve outcomes and the productivity of our education system. The results deemed through the assessment of a technology program can play a large part in the decision making process. As per Frazier, (2012), “As with any other part of the educational program, technology evaluation must be a systematic process. The technology coordinator must begin by identifying how the evaluation will be structured and what is to be learned from it. Assessment tools should be selected or developed based on the fundamental goals of a school’s or district’s technology plan. They may include surveys, interviews, observations, focus groups, checklists, paper-and-pencil or online instruments, and analysis of additional data such as standardized test scores or scores from state or local assessments” (p. 151). Furthermore, no technology plan is complete without an evaluation component: teacher, staff and student use of technology must be regularly monitored and assessed for progress. The assessments should be compiled and shared

with stakeholders for further analysis and use in future planning. The Jersey City Public School district has implemented new systems for analyzing data, formative assessments, student/financial management and assessment. It needs to improve its integration of data systems to prevent duplication of effort, inefficient use of resources, inaccurate data and high cost. The evaluation of the technology plan will address these issues. Jersey City's Educational technology plan will include school district, and external review components including:

1. The implementation of district-generated on-line student and staff surveys with results including curricular integration, student achievement of 21st Century skills, global collaboration and outreach, development of lifelong learning skills and Professional Development.
2. The Building Level Teams will be monitoring the effectiveness of technology through the use of rubrics based upon walk-through classroom observations.
3. The district will utilize online assessments in grades four, eight and eleven to assess student proficiency with the use of educational technology.
4. The District Technology Plan Committee will review the goals/objectives and assessments through the implementation of activities incorporating educational technology
5. The administration will be sharing the results of the Technology Implementation Status Reports to stakeholders such as the Board of Education and district staff members and parents for further analysis and review.
6. The district will be utilizing the expertise of outside evaluators and vendors to assess the proficiency of the technology plan through the use of checklists, observations and interviews with staff.



7. The district educational technology team will complete necessary revisions to the Technology Plan through analysis of data derived from all evaluation tools. The analysis will also be utilized for future program revisions.

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