Administration and Supervision of a Planned Growth Program for Bayonne, New Jersey Public

Schools

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Background

Bayonne is a city with a population of approximately 67,000 residents, (Census Bureau,

2017). Foreign-born residents account for 30% of the community, and 30% of residents are

under the age of 18. Geographically, Bayonne is situated between Staten Island, New York, and

Jersey City, New Jersey. Due to growth and the addition of housing developments and apartment

complexes, the Bayonne, New Jersey Public School District will add two new elementary

schools and one middle school to meet the needs of the growing community and influx of

school-aged children. The three new schools will open in September 2019 as the building

construction will be completed by June 2019.

Bayonne School District Mission *"Moving from Good to Great"*

"The mission of the Bayonne Board of Education Technology Department is to enable

students to solve real-world problems, foster critical thinking and innovation, and prepare for

college and career as they meet the challenges of the 21st century global society." (Bayonne

School district, 2018). From the mission, the school district's technology plan supports the

integral role technology takes in empowering students to solve real-life problems that enable

them to succeed in life. Students will be able to think critically and cognitively, and also

understand, work together, and be innovative.

Over the years, Bayonne School District has become one of the leading schools in New

Jersey with its innovative growth of technology. Student population is growing in Bayonne while

technology in the schools are evolving. Technology is changing at a rapid rate in the school

system. Therefore, as educators, it is the goal to implement a strategy in this digital age so that

students can be successful in their academic life and career. The use of technology in our district can also help build students' executive functions. Van de Sande, Segers, & Verhoeven (2017) define executive functions as a set of processes that have to do with managing oneself and one's resources to achieve a goal. This process (executive functions) allows students to manage life tasks, self-regulate and carry out daily routines.

Goals

The goals of the three new schools, Broadway Elementary School, Bridge Elementary School, and Bay Middle School are to incorporate the mission and goals of the Bayonne Board of Education, align all individual school plans with the district's goals, along with the three-year technology plan 2016-2019. However, the district is amid a new technology plan where the new schools may have an opportunity to pilot new technologies. Therefore, the technology team's charge is to ensure a feasible program, determine resources, create a systematic approach to technology management, design appropriate evaluation tools and establish data-driven assessment measures with the overarching goal of creating the long-term vision for the district's technology program.

Long-term Vision

A vision to enhance the technology program for the future of the students is a driving force of the schools' long-term vision and goals. Although the district has had a large population surge due to the building of several new housing developments and apartment complexes; including two new elementary schools and a new middle school are planned to open in the next year, our vision is to continually prepare diverse students to meet the challenges of a changing society. Our school is continuously adapting to change and striving to build a stronger community in this technology era. Our diverse graduates are therefore prepared for the

challenges they may face in the future because they are a community of lifelong learners with the ability to think critically and have a creative mind. The technological skills gained will allow students to work in any workplace competently.

School Population and Staff

According to the 2017-2018 Strategic Plan, Bayonne has 6,800 K-8 students and 2,597 in (9-12). There is one gifted and talented school for grades 5 through 8 with 444 students (p.4). As of 2016-17, the district enrollment was 9,998 students and 679.6 classroom teachers for a student-teacher ratio of 14.58. Each elementary school will have approximately 500 students each, and the middle school will have a capacity of 1,800 students for expected growth throughout the years. There are now 1,500 students with special needs, and we anticipate enrolling 200 more. The expected number of students is 1,000 new k-12 and 600 new middle school students. To maintain the 14:1 student to teacher ratio, the Board needs to hire at least 114 new teachers with additional support staff, technology and special education teachers. ("Strategic Plan 2017-2018", p. 4).

New Jersey School Law

The State of New Jersey Department of Education's technology standards comprises of 8.1 Educational Technology and 8.2 Technology, Engineering, Design and Computational Thinking, which work systematically to give exemplary students required skills for college and career readiness. As stated in the 2014 New Jersey Core Curriculum Standards for Technology, students are supposed to use technology to access, organize, evaluate, and synthesize information so that they can be able to solve real-life problems, collaborate with one another, be creative, and communicate effectively (State of New Jersey Department of Education, n.d.). Students are able

to gain an understanding of technology concepts, systems, and operations by demonstrating critical thinking to plan and conduct research and manage projects.

For a successful and effective use of technology, it is important to improve and innovate the educational process for the schools, its administrators, students, and teachers within the district. Therefore, the Bayonne School District provides its own law and policy for the benefits of the schools and its students and staff for educational purposes. The district also provides necessary technological tools such as computer equipment, computer services, and Internet access to its students and faculties to improve the learning outcome through various research, teacher training, professional development, collaboration, and better communication (Bayonne Board of Education, 2017).

Furthermore, the district has the right to monitor and carefully observe all activity on network computers so that all parties such as students, staff, parents, and legal guardian(s) know their responsibilities and behave appropriately when using the devices. In addition, when using the internet in the schools, staff are responsible to supervise students at all time and any inappropriate behavior should be reported. According to Bayonne Board of Education (2017) policy, the District Policy 3283 and 4283, staff are required to have their district email accounts as the main source of communication with administrators, staff, parents, and other educational personnel. Also, the usage of personal cell phones, text messaging, and website messaging are prohibited between staff and students. Professional social media outlets are for educational purposes and not for personal use.

Technology Resources

Schools in Bayonne School District collectively have a bank of technology currently in use. See Table 1.

Table 1
Technology Resources

Equipment	2,000 Phase 1 Chromebooks (February 2017 warranty expiration) 6,000 Phase 2 Chromebooks (May 2017 warranty expiration) 2,000 Phase 3 Chromebooks (October 2018 warranty expiration) 1,950 Phase 4 Chromebooks (October 2019 warranty expiration) 2,000 Phase 5 Chromebooks (RFP for future purchases) - Teacher laptops - Printers - Tablets
Assistive Technology Workstations and Computer Software	- Smartboards - Digital Cameras - Scanners - Storage and equipment management carts for Chromebooks - Headphones - Sound Systems - Personal Computers with Assistive Technology - Systems and Software - Network Capacity for the Internet and Bandwidth - Learn 360 - on-demand streaming educational video database - Email - Office 365
Learning Management System	- Firewall, Security and Filtering Software - Backup Servers

	● Open Educational Resources
New Technology Staff	● One technology coordinator for each school ● One librarian/media specialist for each school

Review of Library Resources

Each school will have an innovation center which is a media center with a library, computers, and creative spaces. The focus is to provide a library with books and other resources to further supplement all STEAM initiatives:

- Partnership with the public library

- Resources to support the curriculum

- Analysis of existing resources

- Open source and open access products

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Needs Analysis

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The Bayonne School District Technology Committee members will meet with principals, administrators and members of the community to determine needs of the schools and how they will function within the existing school system, technology, network and infrastructure. The first step is to perform a needs analysis to assess the acquisition of the new facilities, staff, budget, and technology. See Table 2.

Table 2
Needs Analysis

Acceptable Use Policy
Professional Development
Digital Tools

PARCC
Three-Year Technology Plan
Computer Hardware/Software

Systematic Approach to Technology Management

Bayonne's School District's 2016-2019 Technology Plan addresses the concerns of improving infrastructure, technology support, professional development of digital literacy and 21st century skills. The technology plan addresses the need for assessing the utilization of technologies by adopting a professional development series, covering various technologies for the district's educators.

Professional development opportunities will provide training to district and school staff on new software and equipment used in the classroom. Pedagogical topics covered in these sessions will include digital citizenship, cyberbullying, digital footprints and online responsibility (p. 69). To adequately facilitate the professional development sessions, the district will infuse the SAMR model to inform technology coaches and support staff on how to efficiently incorporate procured digital learning technologies (p. 67). Furthermore, the district has committed to increasing staff support to effectively utilize new and existing technologies (p. 67). The plan must be altered to include the increased demand from the additional three schools.

To address the district's goal of promoting digital citizenship (NJCCC Standard 8.1) in all classrooms, the district will facilitate training for the technology team and academic directors on digital citizenship. This training will include learning modules covering cyberbullying, digital footprints, and online responsibility. Additionally, students in the district will be provided with instruction on their digital presence and cybersecurity (p. 69).

The district is committed to ensuring a stable and secure infrastructure to properly maintain and enhance its systems. Throughout the three years, the district will evaluate the technology and assess the need for infrastructure enhancements and upgrades that are necessary to maintain and adopt existing and new technologies (p. 70). The technology team will perform these tasks in order to support the increase in school enrollment.

The three new school plans will align with the three-year technology plan for 2016-2019. However, the district is amid a new technology plan where the new schools may have an opportunity to pilot new technologies. With construction of the buildings, the technology committee will implement action plans for the new schools. It will focus on student achievement, staff development, and operations committees. To best address the addition of the schools and stakeholders' needs, the committee will take a systematic approach to technology management. Frazier & Hearrington (2018) Senge's (2006) theory of systems thinking applies to technology implementation as each development or each person's work is part of the end result.

Procedures

At Bayonne School District level, a collaborative effort by the Director of Technology, Assistant Director of Technology, and the Assistant Supervisor of Special Programs and Technology will ensure the necessary steps are taken in order to successfully implement the technology plan for the three new schools in the Bayonne School District. There are ten steps involved in executing an effective technology plan according to Barnett (as cited in Frazier & Hearrington, 2017). These steps involve creating a vision, involving all stakeholders, gathering data, reviewing the research, integrating technology into the curriculum, committing to professional development, ensuring a sound infrastructure, allocating appropriate funding and budget, planning for ongoing assessment and monitoring, and preparing for tomorrow.

Initially, the Director of Technology will refer to the current 2016-2019 Bayonne School District Technology Plan to review what has taken place thus far. Other resources, from the Office of Educational Technology at New Jersey and the U.S. Department of Education, will be relied upon as well. This will help with the vision in creating the 2019-2021 technology plan with the new schools included. Based on the needs assessment, as already indicated above, a plan will be devised after conferring with all stakeholders. The Director will take into consideration all departments' needs with a workable budget and forward the proposal to the local board of education. All elements of the budget will be allocated appropriately (Frazier & Hearrington, 2017). See Table 3.

Table 3
Budget Elements

hardware and equipment	35%
software and applications	15%
contracts and services	10%
professional development	20%
support and maintenance	10%
upgrades and other needs	10%

After further discussion, negotiations, and the Director's evidence to justify what is being requested, the technology leader will move forward with implementation to secure future ready schools with a sound technological infrastructure for learning.

Referring to the needs assessment, borrowing from the district's current initiatives (Network Readiness, Technology Readiness, and Device Readiness) and conferring with network administrators, the technological infrastructure will be put in place at the schools which will involve local access network (LAN) wiring and installation and internet connection to ensure operations are sufficiently functioning to accommodate the buildings' requirements.

Hardware and software will be installed to ensure the three schools will be up to expectations of building administrators and all other involved parties.

The Director of Technology and other team members will convene an initial meeting with newly appointed technology coordinators, assistants, and building administrators of the new schools. An effective plan needs to be executed for teacher technology training to nurture students in becoming equipped with the necessary 21st century skills, such as teamwork, collaboration, creativity, critical thinking and problem solving that will assist students in future careers and businesses.

Professional development will be provided to school administrators and teachers in all departments throughout the new schools such as STEM, English Language Learning and Special Education. These sessions will better equip educators how to fully utilize and integrate the latest technology into the curriculum. A teacher training team will be contracted to provide sessions with hands-on demonstrations and lesson plans giving student autonomy in the learning process, as opposed to the technology substituting for older techniques with teacher-centered lessons.

The district will continue utilizing the SAMR (Substitution, Augmentation, Modification, and Redefinition) Model. It is a model used by educators for a gradual process of technology integration in the classroom. Ruben Puentedura, the one who developed the model, stated, "Learning activities that fall within the substitution and augmentation classifications are said to enhance learning, while learning activities that fall within the modification and redefinition classifications are said to transform learning" (as cited in Romrell, Kidder, & Wood, n.d.). This will serve well in the three new school environments. After the professional development sessions have ended, the technology coordinators will be available in the schools to aid in troubleshooting.

Teachers will have the responsibility of transferring the knowledge gained from the training sessions into the classrooms to enhance student learning. The technology coordinators will observe and monitor how teachers are integrating technology into their lessons and student responses in terms of behavior, attitude, and academic progress in assignments and assessments overall. In addition to utilizing technology for educational purposes, it will also be a means of communication between teachers, students, and parents. In this course, all involved parties will be educated in digital citizenship to help in maintaining a healthy, safe and productive virtual environment.

Evaluation

Bayonne's Technology Plan evaluates the current state of technology, the level of usage, management of existing technologies and plans for integrating new technologies. The school district evaluates digital tools, infrastructure and professional development needs through meetings within the district and individual schools. These meetings include staff members of the district office, technology department directors and staff, principals, academic directors, supervisors, teachers and students. Although the parties involved in the process lead to a "whole-school" perspective, additional data can be retrieved for analysis. The inclusion of the educators and staff from the additional schools is necessary.

The district's technology department has tools and resources to access and evaluate student usage data of the technologies currently being utilized. Data from all of the district's school sites, including the three additional schools, must collectively provide data for this evaluation. Access to this data will provide the district with information on what technologies are being used, when they are being used and at what level the tools are being used. Student usage data along with the data retrieved from research, as mentioned in Goal 2 of the district's

technology plan, conducted by Bayonne's Central Office Administration and Technology

Department ("Bayonne School District Three-Year Technology Plan 2016-2019," n.d., p. 68) the

previously mentioned parties will have the appropriate collection of data to ensure that the

academic departments are effectively integrating technology into the curriculum in order to

improve 21st century skills and digital citizenship.

The collection of student and teacher usage data, student outcomes and other student

records will provide Bayonne's school district with valuable information in evaluating the

achievement and/or progress of achieving the goals. Frazier (2017) explains that this important

data can be easily accessed from Student Information Systems (SISs) in order for educational

institutions to evaluate current systems and make data-driven decisions on how technologies can

assist with "systematically and effectively [guiding] instruction" (p. 152). Bayonne School

District will address a number of goals as noted in the technology plan. Goals must be evaluated

by collecting data from individuals who are directly or indirectly affected by the implementation

of initiatives. Frazier (2017) states that assessment tools should be utilized in order to evaluate

the plan's effectiveness which can include "surveys, interviews, observations, focus groups,

checklists, paper and pencil or online instruments, and analysis of additional data, such as

standardized test scores or results from state or local assessments" (p. 176).

Finally, the Bayonne School District will utilize the "District Factor Groups (DFG)"

resource for evaluating and comparing student achievement scores and outcomes ("District

Factor Groups (DFG) for School Districts," n.d.). This will provide the district with comparable

data on how well students and faculty are utilizing the resources available to them. A comparable

study will take place on a yearly basis in order to assess the effectiveness of technology

implementation. The information and data received from the assessment will act as a tool for implementing a needs analysis.

<div align="center">**Data-driven Decision Making**</div>

For the Director of Technology, data-driven decision making is pivotal when deciding the course of action to take at a later stage of implementing the technology plan. Frazier & Hearrington (2017) defines it as "the process of getting student data into the hands of teachers. The technology coordinator plays an important role by providing the technology resources, professional development, and support necessary to help teachers make effective decisions…" (p. 161). With a personalized professional learning program, not only will information be gathered from student assessments but additional information from teacher data, a collection of questionnaires, previous training sessions, and administrative observations.

One popular tool that is being utilized in schools from approximately 30 different states is the Performance Matters Platform. This data analytic program compiles student and teacher information to assess performance and propose solutions. This will prompt teachers to take necessary measures that align with student needs with the ultimate goal of higher achievements both on the part of the students and teachers.

The Performance Matters Platform will be initiated at the three new schools as a pilot program. Building administrators and school district officials will be able to access the information as well to determine the extent of student achievement and the impact of professional development for educators. Lynch (2016) believes this analytic tool plays an integral role in improved student performances and well-informed teacher decision-making in instruction and evaluation. Data-driven programs enable decision-makers to provide and support unending advances in student learning and instruction.

Conclusion

Introducing three new schools to the Bayonne School District requires clear direction, planning and the appropriate tools and resources to implement technology-related initiatives and maintain the district's current practices. The methods and specific measures outlined in this growth plan will provide a clear roadmap for integrating the three new schools into the system systematically. The goal of improving 21st century skills within the district was taken into account with every initiative and section of this growth plan.

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