



South Colonie Central School District

Instructional Technology Plan



2022-2025

Revisions: July 2022; March 2021; August 2018

NYSED Approval: June 2022; June 2019; June 2017



1.0

Introduction

This technology plan is intended to be consistent with and supportive of South Colonie’s educational mission and program initiatives. It focuses on the use of technology to transform education and to improve student performance, as envisioned in the New York State Learning Standards. The plan was developed from the strong belief, supported by research, that technology can significantly enhance the learning environment, increase staff productivity, and improve the teaching and learning process. Furthermore, technology is seen as a critical component for the preparation of our students. This technology plan defines the vision and objectives for moving the students forward into the 21st century.

1.1 Technology Instructional Council Members:

The K-12 IT Instructional Council members for 2021-2022 are:

Erynn BarberTeacher, Colonie Central High School

Gregory Bearup.....Supervisor of Math and Science

Brook Bourgeois.....Teacher, Lisha Kill Middle School

Thomas Casey.....Teacher, Colonie Central High School

Brian Czerpak... Teacher, Sand Creek Middle School

Katherine Bianchi... Teacher, Lisha Kill Middle School

Justin Defazzio... Teacher, Colonie Central High School

Daniel Demarco.....Teacher, Sand Creek Middle School

Jeffrey Dutcher... Library Media Specialist, Colonie Central High School

Kelli Budney... Teacher, Veeder Elementary School

John Gehres... Teacher, Colonie Central High School

Colleen Kuno... Library Media Specialist, Forest Park Elementary School

James Lovett Director of Technology/Data Privacy Officer *

Jill Penn... Principal, Forest Park Elementary School

Calvin Pitts... Network Technician



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- Kimberly Ringer... Library Media Specialist, Roessleville Elementary School
- Gregory Sherwin... Teacher, Shaker Road Elementary School
- Marybeth Tedisco.....Principal, Roessleville Elementary School
- Lindsay Tresansky..... Principal, Lisha Kill Middle School
- Richard Thompson... Teacher, Veeder Elementary School
- Matthew Veino... System Administrator

*Chairperson

Acknowledgements

This Instructional Technology Plan is the result of the interest and commitment of Dr. David Perry, Superintendent of Schools, and members of the Board of Education of the South Colonie Central School District. The charge from the superintendent to the Technology Instructional Council was to provide a plan to meet the district’s technology needs, including networking, hardware, software, staff development, maintenance and technical support personnel.

The committee chair would like to thank the members of the Technology Instructional Council for the effort they showed as we attempted to develop a plan that would provide major technology upgrading, integration and utilization in all of our district’s schools (K–12).

The Technology Instructional Council would like to thank all the teachers, students, and individuals from the community who participated in various surveys. They provided the committee with much needed input upon which this plan is partially based.

The initial Technology Instructional Council members were:

- Jack Adams... Director of Information Technology (Committee Chairperson)
- Gregory Bearup... Math Teacher, Colonie High School
- Joseph Botta Technology Teacher, Colonie High School
- Jeanne Bush... Library Media Specialist, Lisha Kill Middle School
- Deborah Gentile... Teacher–grade 3, Saddlewood Elementary School
- Susan Matuszak... Parent/UPSEU Representative, District Office
- Gail Newcomb... Parent/CSEA Representative, Sand Creek Middle School



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Betty Peabody Teacher–grade 3, Shaker Road Elementary School

Dominick Rivera Principal, Lisha Kill Middle School

Christopher Schultz Special Education Teacher, Colonie High School

Dorinne Williamson. Business Teacher, Colonie High School



2.0 District Mission

2.1 The Mission of the South Colonie School District

The mission of South Colonie School District is:

- To ensure that every student develops the essential skills, knowledge and personal characteristics needed to become productive citizens and to live a useful and satisfying life.
- To empower students to be life-long learners in a society where change is constant and technology is integral to day-to-day business and personal activities.
- To create a challenging and developmentally appropriate learning environment that integrates resources (including technology) across all the curricular areas and where all students have equitable access to these technology resources.

2.2 South Colonie Educational Goals

To accomplish its educational mission, South Colonie will plan, organize and manage its resources in order to:

- Provide a learning environment where students are focused on high levels of achievement, and continual improvement.
- Provide a learning environment that actively engages students in independent study, and research-based curriculum emphasizing higher level thinking, inquiry, and decision-making skills.
- Utilize research-based projects and teaching approaches.
- Change the teaching and learning environment to better address the requirements for higher achievement as reflected in the New Standards and Frameworks.
- Integrate technology as a delivery system and as a tool in the teaching and learning environment to extend curriculum, instruction and assessment practices.



3.0 Technology Planning Process

The initial District Technology Committee was established at the direction of Dr. Thomas Brown, Former Superintendent of the South Colonie School District, with the purpose of developing and recommending a technology plan that will support the District goal to improve student achievement.

Surveys were designed and distributed at random to collect data that measured general knowledge, opinion and support for improving instructional technology for the students and community of South Colonie. This process involved a review and compilation of the data, and an analysis of the causes and effects of the problems and concerns presented. The survey results reinforced the District's commitment to move ahead with a technology plan.

The District sought out and employed the services of an outside facilitator to assist in the development of this plan. The Committee evaluated alternatives and built an implementation plan. A step by step procedure was then applied to the recommendations so that all requirements would be in place by the end of the plan. The Committee made recommendations in eight key areas: hardware, software, telecommunications, instruction and curriculum, personnel, staff development and planning.

The Committee meetings operated on the basis of consensus decision making and the Committee members all participated in the preparation of this final report. Each Committee member understands that planning and evaluation is an ongoing process.

The current Technology Committee has revised the original Technology Plan to take the District into the year 2025.



4.0 Technology Vision-

4.1 Educational Vision

South Colonie's curricular, instructional and assessment vision includes a focus on higher levels of achievement for all students. These higher levels of achievement are defined by the International Society for Technology in Education (ISTE) for students and teachers. The district has placed particular focus on reading and communication skills, along with math. Technology is seen as a vehicle to support and extend student learning in these and all other areas of the curriculum. The use of technology tools will be focused on the development of higher level analyses, evaluation, communications, and presentation and decision-making skills. Software tools and software applications are to be selected based on the need to increase student learning within and across the subject areas in order to prepare students for their future in the 21st century.

The technology-enhanced learning environment that is envisioned in this plan is designed to be a powerful vehicle in helping the district to accomplish its educational mission and goals. Technology is also important as a means of changing teaching and learning in order to prepare students with the 21st century skills they need to be successful. This technology-based learning will expand the opportunities available for students to interact with, to understand and to change their world.

Embedded within this vision are the Partnership for 21st Century Skills' "Four Cs of Learning"; creativity, critical thinking, communication and collaboration.

- Technology motivates and empowers students because it gets them actively engaged in learning. Technology-enhanced learning is not passive learning. Rather, technology involves the use of tools to interact with others, both students and adults, to create knowledge and to share knowledge.
- Technology impacts learning positively and significantly, based on a wide range of research studies.
- Technology creates information and knowledge producers, not just consumers. Students and teachers today can research and electronically publish their work, as they collaborate with other "researchers" from around the world.
- Technology creates the opportunity for up-to-date and authentic learning experiences by getting students involved collaboratively in real-world projects and interacting with real-world professionals.
- Technology is a powerful "mind" tool (analogous to a physical tool such as a lever) that students can use for accessing and manipulating information, synthesizing concepts and communication ideas in various forms of digital media.
- Technology prepares students as 21st century information workers and helps them to achieve world class standards and global competitiveness. As noted in the US Department of Labor's SCANS report, technology is an integral aspect of most future occupations.
- Technology allows teachers to individualize learning experiences based on learner needs and to better organize and track student progress.



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- Technology enables student discovery and exploration of alternatives through software simulations. These simulations provide the opportunity to explore new concepts and environments with the time, cost or danger associated with many real-world situations.
- Technology creates learning beyond the four walls of the classroom. It expands the range of learning opportunities and curriculum resources for students who would otherwise be limited to what the division could make available in its library or resource centers.
- Technology connects individuals to new people and promotes understanding and equity by providing a diverse array of resources and experiences regardless of the geographic location of the student.
- Technology offers a multimedia interactive learning environment that is more motivating to today's students who have grown up with television and video games.
- Technology increases teacher and administrative productivity by providing tools that speed up the process of entering and analyzing data.

These points support and explain the district's vision of a technology-supported learning environment, and are important for all members of the school and the larger community to understand.

The South Colonie School District has a vision of technology that includes more than the use of computers, Chromebooks and tablets; it encompasses a view of how multimedia, information and communications technologies can serve as a significant contributor to our district's mission of preparing students for success in the 21st century. The technology vision has four major components:

1. **Robust Network** -Infrastructure to provide access and connectivity.
2. **Hardware**-Proliferation of devices
3. **Professional Development Training and Support** to insure 24/7 Learning-Embedded, On Demand
4. **Digital Content and Curriculum Resources**-Using technology to support our vision of curriculum and instruction

Robust Network:

The plan intends to put the necessary technology infrastructure in place to build an interconnected digital learning community that will provide adequate access to technology tools and resources, as well as provide connectivity for all students, teachers and staff. Teaching and learning involve a process of connecting individuals with each other, as well as with resources and applications. The infrastructure should provide widespread access that allows transparent, user-friendly communications.

Widespread and equitable access are key to gaining the maximum benefits of technology. Putting the appropriate tools in place, along with the necessary technical support ensures that students, staff and the community will gain the maximum positive effect from their use. Using these technology tools will allow students and staff to achieve their educational goals.



HARDWARE:

South Colonie continues to refresh end-user hardware and network infrastructure to enable staff to facilitate learning through technology and students to consume information and compose products representative of their learning. Mobile devices will be integrated throughout the elementary, middle, and high school, in support of learning and in an effort to maximize the District's investment.

PROFESSIONAL DEVELOPMENT TRAINING AND SUPPORT:

Staff development is a critical component of our technology planning. We are committed to ongoing training for all staff to ensure effective use of technology tools, and to help teachers to focus on integration into the curriculum.

The goal of technology-related professional development is to provide an environment where educators will become competent in the use of technology for the support of the curriculum and the management of instruction. The efforts of the New York State Board of Regents, the State Education Department, and the State Professional Standards and Practices Board for Teaching have resulted in formal processes that promote and support professional development for all educators and other school personnel.

In reviewing the district's overall Professional Development priorities, it is clear that training in instructional technology is emphasized in all priority areas. Technology training is critical to our overall Professional Development plan. Staff development is offered throughout the academic year and in the summer. On average, the majority of teachers spend 30-40 hours per academic year on scheduled professional development activities. Below are the different modes of instruction available for teachers to fulfill professional development requirements.

- Professional planning days
- Half days and Superintendent's Conference Days
- Faculty meetings, department or grade level meetings focused on student learning and/or professional growth
- On-going District-wide training in Google Docs, Google Drive, and other Web 2.0 instructional resources
- Workshops provided by South Colonie and Teacher Center staff members
- Out of district conferences and workshops for Teachers and Administrators
- Online classes and courses.

DIGITAL CONTENT AND CURRICULUM RESOURCES:

We envision technology integrated across all curricular areas in order to:

- Actively engage students in learning
- Address individual learning differences; available for 24/7 use
- Support more authentic, research-based, interdisciplinary projects for learning
- Provide access to more current information resources and courses than are available in the division through traditional means



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- Provide students and teachers a means to collaborate on learning projects and lessons with others around the world
- Meet the higher achievement requirements of the New York State Standards and ISTE Frameworks
- Use computing devices to search out, analyze, graphically organize and present information in multimedia format to various audiences, including other students and teachers in the school, as well as students and adults in the global community
- Support the application of higher level thinking and decision-making skills



5.0 Current Technological Environment

Information Technology Department

The South Colonie School District currently has an Information Technology Department which performs administrative and business functions. The Information Technology Department uses Windows Networking Configuration and Server Virtualization. Those many functions include: payroll, transportation, student scheduling, budgetary accounting and textbook accounting. Other functions include electronic document management, New York State data warehousing and data collection integrity and storage.

The South Colonie School District currently uses computers at the levels listed below for instructional applications. Each elementary school has a class set of Chromebooks in grades 2-4. Each K-1 classroom is outfitted with 12 touchscreen Chromebooks and 6 non-touch Chromebooks. All classrooms have a desktop PC teacher station, with core classrooms having interactive boards and encore classrooms having projectors with screens.

Our middle and high schools are 1:1 Chromebook for all students. Technology labs for PLTW and Visual Arts classes remain intact. Teachers at the HS have been provided windows-based laptops in lieu of classroom workstations, the Middle Schools will transition to a similar configuration during the summer of 2023. Grade 5, 6 and HS Technology also have interactive boards installed. All other classrooms have projectors and screens.



6.0 Technology Goals (2022-2025)

Our technology goals for the time period 2022 to 2025 are:

- To utilize our comprehensive technology infrastructure that will provide widespread access and connectivity for students and teachers within the electronic learning community.
- To provide on-going staff development that will help teachers and other staff to use technology tools and resources in ways that will provide the maximum educational benefit.
- To ensure that technology is integrated into the curriculum and instructional activities as an integral part of the mission.

6.1 Goal 1 -Digital Age Skills

Students at South Colonie will have a strong foundation of technology skills that are supported through the development of communication, collaboration, creative thinking, and creativity.

NYSED Alignment - Develop a strategic vision and goals to support student achievement and engagement through the seamless integration of technology into teaching and learning.

Action Steps

- Develop and implement a K-12 Digital Literacy ISTE-aligned crosswalk
- Develop blended learning opportunities which personalize learning at the K-12 level
- Implement Digital Literacy assessments for grades 5 and 8 as a method of tracking student progress against ISTE standards
- Develop and implement virtual reality (VR) units to allow deeper student exploration of content
- Offer access to credit bearing course work outside of the confines of the school day and brick and mortar classroom space
- Develop an Assistive Technology Specialist position to further assist staff and students with the integration of AT devices into learning
- Reduce and/or combine current software offerings to produce a more streamlined, ED Law2D-approved toolkit for staff and students.
- Design lessons which use coding to engage students in the exploration of content(Coding as a Literacy)

Evaluation

We will use a variety of formal and informal assessment tools, including but not limited to; faculty, student, and parent surveys, NYSED CBT data, 21st Century Skills benchmarking via Bright Bytes, Learning.com, or similar.

While we acknowledge that technology proficiency is a moving target and can never be fully "mastered", we will use the data to track progress and improve incrementally year over year.

6.2 Goal 2 -Digital Equity

All teachers and students at South Colonie will have access to digital resources to ensure they will



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be successful teachers and learners both at school and at home.

NYSED Alignment - Increase equitable access to high-quality digital resources and standards based, technology-rich learning experiences

Action Steps

- Standardize learning technology across elementary buildings, specifically access to interactive boards and personal computing devices
- Provide 1:1 access to all students in grades K-12
- Upgrade network infrastructure to support computer based testing, personal devices, and 1-1 computing
- Identify current needs and procure cellular based connectivity for students without reliable internet connections at home
- As part of the current replacement cycle, work with building-level stakeholders to migrate away from desktop PCs and toward flexible devices, i.e. windows based laptops for all District Faculty and staff
- Protection of student data in accordance with Parent's Bill of Rights via employee training/awareness and the creation of an internal

Evaluation

We will use various digital equity surveys to identify and support students in need of connectivity. We will also continue our progress toward a fully 1:1 student body, as well as begin the process of providing faculty members with Windows-based laptops in lieu of their desktop workstations. We want to continue to provide our faculty with the ability to host virtual meetings, classes, and office hours, and providing them with flexible devices will help us accomplish that goal.

We will measure progress via the completion of the PC replacement cycle and faculty/staff/parent surveys. We will also work closely with our McKinney-Vento Liaison to become aware of and secure any grants we are eligible for.

6.3 Goal 3 - Professional Development

All staff at South Colonie will have opportunities to expand their teaching through the use of technology by being a part of a supportive culture of engaging professional development activities

NYSED Alignment - Increase equitable access to high-quality digital resources and standards based, technology-rich learning experiences

Action Steps

- Update current professional development cataloging software to allow easier access for instructors and attendees to locate and/or facilitate appropriate PD sessions
- Offer web-based learning opportunities for staff members relative to online security and safety, including but not limited to password security, email safety and protection against malware
- Continued Collaboration between the administration and the teacher's union (via PD Committee, bargaining, etc) to develop, offer and assess high quality, rigorous training opportunities for our staff.

Evaluation

We will measure and evaluate our Professional Development goal via subscribing to



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MyLearningPlan, surveys, and feedback from faculty and administrators as well as the presence of high-quality sessions. These sessions should be offered in-person and online, self-paced and live.

7.0 Evaluation

We have developed both formative and summative evaluation components of our plan.

Our formative component includes examining the timeliness and completeness of implementation of all components. For this component, we will review the completion of each objective targeted for that year. We will also survey staff and students each year in terms of their skill levels and use of technology to identify areas for improvement.

For the summative evaluation we will be looking at the impact our technology has had on teaching and learning. The summative evaluation design is intended to answer the question:

Has the implementation of technology in the school improved and changed the level of learning for students?

We have started to collect baseline information about our student and teacher use of technology across all grade levels and subject areas. This information includes the following: levels of technology access in the school, levels of technology use, and perceptions of staff/students toward technology, perceptions of the impact of technology on student learning, student achievement data including local, state and national test data. A critical measure we expect to use will be our student portfolios and the new Statewide Regents exams that are linked to the Standards and Frameworks.

The evaluation design will collect a variety of formative or process data to answer the implementation questions. These implementation questions include identifying what was accomplished and when. Summative or impact evaluation will use a variety of outcome measures, including:

- State tests
- Assess student skill of technology
- Dropout rates
- Attendance
- Suspension rates
- Student activity on the system
- Student time on the system
- Student results within the Pearson software or replacement iReady
- Surveys of teacher and students
- Effective schools data
- Teacher survey
- Post-graduation data 3 years of data
- Entrant survey for teachers and students
- Community survey
- Exit survey for each training session
- Norm referenced test instruments –item analysis
- PSAT test for all students

The Technology Instructional Council will continue meeting regularly to discuss and review the implementation process and will provide feedback on the implementation of the plan.