

Henry Johnson Charter School
Technology Plan

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Developed
By
Henry Johnson Charter School Technology Planning
Committee

Introduction

This three year technology plan is consistent with and supportive of the Henry Johnson Charter School (HJCS), a recently established public charter school in Albany, NY. The school will open in fall 2007 to 125 K-1 students, and will ultimately be a K-4 school.

Henry Johnson models itself after the best of the best: the Milwaukee College Preparatory Charter School (formerly named Marva Collins Preparatory Charter School). Milwaukee Prep has produced very impressive gains in student academic performance, and HJCS believes this model can be replicated.

Major Sections of the Plan

- 1.0 Mission and Goals
- 2.0 Technology Planning Process
- 3.0 Present Context
- 4.0 Technology Vision
- 5.0 Goals and Objectives (2006-00)
- 6.0 Projected Budget, Funding Sources and Schedule
- 7.0 Staff Development
- 8.0 Community Involvement and Support
- 9.0 Integration Into the Curriculum
- 10.0 Evaluation
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1.0 Mission and Goals

1.1 Mission

The mission of the Henry Johnson Charter School is to ensure that all students reach the highest levels of scholastic achievement in an environment that instills character, virtue and “habits of mind” that ensure success both within and outside of the classroom: diligence, courage, respect, self-reliance, duty, and responsibility.

1.2 Educational Goals

1. **Achieve academic excellence:** Henry Johnson will accelerate the learning and academic skills of students so that they achieve mastery of the skills necessary for success in middle school, high school, college, and life – especially reading, writing, math, and critical thinking.
2. **Become active, valued citizens:** Henry Johnson will develop students who take responsibility for themselves, their school, their community, their country, and their role in the global community by learning to think critically about issues that affect them and by making participation in society while at school a regular activity.
3. **Effectively apply knowledge:** Henry Johnson will develop students that are able to apply what they have learned creatively in a range of circumstances and new situations, drawing insightful conclusions and offering unique perspectives on problems.

Achievement Goals

Henry Johnson will strive to provide an educational program and a learning environment that provides each student, without exception, the opportunity to succeed on each state exam and other assessments administered at the school. Continuous, measurable improvement and ultimate success will be fundamental goals of all administrators, teachers, and students at Henry Johnson.

To these ends, Henry Johnson establishes the following specific goals for student achievement:

- Each cohort and entire class of students at Henry Johnson who take the school’s nationally-normed standardized exam will annually increase its rank from the baseline measurement in every subject tested.
- Students who attend Henry Johnson consistently and continuously from the beginning of the Kindergarten through the 4th grade will be expected to pass (that is, score in Level 3 or Level 4) New York State 4th-grade exams in all subjects in which such assessments are administered. While striving for 100 percent, Henry Johnson also recognizes the realistic difficulty of achieving perfection, and states as its goal for these students an aggregate passage rate of 75 percent.
- Students who do not take the New York State exams because of the prescriptions of their IEPs will show continuous improvement on tests taken in accordance with

their IEPs.

2.0 Technology Planning Process

2.1 Central Coordination Efforts

Coordination of instructional technology with existing and planned facility technology implementation is essential. The implementation of this plan will capitalize on all existing technology and training resources including e-mail, database and telecommunication systems. Policies and procedures will be developed to ensure education staff has access to training programs, including courses to prepare them to effectively use technology in their classrooms.

3.0 Present Context

3.1 Classrooms and Computer Laboratories

Using the resources of school's general fund, and Title I and Title 2D federal funding, computers will be employed in varying degrees within the classrooms to assist students to learn new concepts, apply academic skills in simulations and develop student creativity. Henry Johnson Charter School fully expects the majority of its student population to be impoverished, resulting in an expected E-Rate eligibility rate at the 90% threshold. The non-E-Rate eligible portion of end user equipment will be purchased with dollars from funds other than E-Rate. While the E-Rate funding will ultimately fund eligible equipment, an even more sizable investment is typically made in PCs, Laptops, peripherals, and other non-eligible products, especially during any new school's initial two or three years.

4.0 Technology Vision

4.1 Educational Vision

Henry Johnson Charter School's curricular, instructional and assessment vision includes a focus on higher levels of achievement for all students. These new benchmarks of achievement are defined in the New York State Standards and Curriculum Frameworks.

Technology is seen as a vehicle to support and extend student learning in these and all other areas of the curriculum. At Henry Johnson Charter School, the use of technology will be focused on allowing our students to develop higher level analytical, communication and decision-making skills. Henry Johnson Charter School will seek to integrate technology into the academic program and not hold it apart, or separate from the curriculum. Software tools and software applications are to be selected based on the need to increase student learning in order to prepare students for their future in the 21st Century. Reading, math and writing software can be maneuvered and manipulated so well by even the youngest of students. We plan to allow no lengthy waiting period for use of our technology, until a time when our students are able to read. Contrarily, we

plan to use technology immediately to complement our ability to teach them how to read now.

The technology-enhanced learning environment envisioned in this plan is designed to be a powerful vehicle in helping Henry Johnson Charter School to accomplish its educational mission and goals. Technology is also important as a means of changing teaching and learning in order to provide 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. Within this vision, technology is important for Henry Johnson Charter School because it does the following:

- 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 (such as basic word processing, graphics, and the Internet) to interact with others, both students and adults, to create and share knowledge.
- Technology creates information and knowledge producers, not just consumers. Students and teachers today can research and electronically publish their work on the World Wide Web, as they collaborate with other "researchers" from around the world. To this point, our school plans to have a strong relationship with our sister school, Milwaukee Prep. In order to maintain an efficient relationship, we need access to high speed internet, at a minimum.
- Technology creates the opportunity for more up-to-date and authentic learning experiences by getting students involved collaboratively in real-world projects and interacting (internet, email, teleconferencing) with real-world professionals such as poets, museum guides, and scientists. Due to the age of our students, we expect interactive experiences to come in the form of virtual field trips in upper elementary grades, to places like museums and conservatories.
- 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 communicating ideas in video, text and audio media. At Henry Johnson, many of our students will come from homes lacking exposure to print and media. We will use our computers to not only access educational information online, but also use advanced technology to allow our students to develop presentations and other creative works.
- Technology use prepares students to be more productive future members of the 21st Century workforce; as noted in the US Department of Labor's SCANS report. Technology will be 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.
- Technology enables student discovery and exploration of alternatives through software simulations. These simulations provide the opportunity to explore new concepts and environments without 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 whose "reach" would otherwise be limited.
- 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 and attractive to today's students, most of whom have grown up spending significant time watching television and playing video games, but few reading print or listening to educational programming.

- Technology increases teacher and administrative productivity by providing tools that speed up the process of entering and analyzing data.
- Based on a wide range of research studies, technology impacts learning positively and significantly.

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

Henry Johnson Charter School has a vision of technology that includes more than the use of computers; it encompasses a larger view of how multimedia, information and communications technologies can serve as a significant contributor to Henry Johnson Charter School's educational mission of preparing students for success in the 21st Century, specifically middle school.

The Henry Johnson Charter School technology vision has three major components:

1. Infrastructure to provide access and connectivity
2. Training and support to insure integration into the curriculum
3. Using technology to support the Henry Johnson's vision of curriculum and instruction

INFRASTRUCTURE TO PROVIDE ACCESS AND CONNECTIVITY

The plan is intended to put the necessary technology infrastructure in place to build an interconnected electronic 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 will provide widespread access that allows transparent, user-friendly communications.

Widespread and equitable access is critical to gaining the maximum benefits from technology. Configuring the best possible system hardware, along with effective technical support, ensures that students, staff and the community will gain the maximum positive effect from their use. In addition, the demographic the school is expecting will likely mirror that of the surrounding school system; therefore most students may not have access to technology in the home, making the school's role that much more important.

The technology infrastructure for Henry Johnson will include:

- A laptop computer for each teacher, in order to create lesson plans, email,

- and use the Internet for educational purposes.
- A Library Media Center with network access.
 - Wireless capability throughout the school.
 - Peripherals for the computer, including scanners, digital cameras and projectors.
 - Shared access to large screen projection capability for computers and video, and digital projectors to project large images of the Internet. This allows a teacher to take her students on a virtual field trip.
 - Network connections for all computers in each classroom, lab and library media center.
 - E-mail capability for staff within the building and beyond.
 - Filtered Internet (High speed dedicated Internet Access on a bandwidth between T-1 and OC-3) with access from all designated workstations.
 - Telephone access in each classroom, as well as voice mail for all staff.
 - Multimedia and graphical production, focused on presentations.
 - Videoconferencing capability.
 - Connections to video programming sources including cable television and satellite downlinks.
 - Teacher and administrator access to school network resources via dial-up.
 - Community use of school technology resources within the school.

TRAINING AND SUPPORT TO ENSURE INTEGRATION INTO THE CURRICULUM

The implementation of the infrastructure (including the purchase of hardware, software and networking) is only the first step in the technology vision. This plan is intended to put the necessary staff development in place in order to insure that the technology resources and capabilities are used to the maximum advantage for students and teachers. In order to make maximum use of technology, the following must be provided:

- On-going training to allow users to learn new software applications.
- Opportunity for staff to refine their skills in the use of technology tools and applications within and across the curriculum.
- Necessary courses and training of staff.
- Necessary time and support to experiment and explore new ways to improve teaching and learning through technology.
- Appropriate staffing provided to teachers in the form of on-site and off-site training.
- Multimedia learning materials.

There is a tremendous need for staff to understand the learning potential of different technologies, as well as for leadership support to help staff identify and use the technologies that will best serve each individual student's needs.

In addition, the technical support requirements (keeping hardware and software running) will be addressed in the plan through the assignment of additional staff and the establishment of new support responsibilities, coupled with a comprehensive support structure. This support structure will start with the training of teachers in basic trouble shooting.

SUPPORT OF OUR VISION OF CURRICULUM AND INSTRUCTION

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

- Support more authentic, research-based, interdisciplinary projects for learning.
- Provide students and teachers a means to collaborate on learning projects and lessons with others around the world. This will allow faculty and students to reach beyond the text-only resources of the past.
- Meet the higher achievement requirements of the New York State Standards and Frameworks.
- Use computers and networking technology 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 Goals and Objectives

Instructional technology goals for the time period 2006 to 2009 are:

- To install and implement a 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 insure that technology is integrated into the curriculum and instructional activities as an integral part of the mission.
- To make technology more readily available to the families of our students through an “open-door” policy where parents can use Henry Johnson computers in our Library/Media Center or labs.

The objectives for accomplishing these goals include the following, for the school year time period—July 1 to June 30 of each school year:

2006-07

- Budget and begin building infrastructure
- Make application for E-Rate discount on all eligible components
- Establish acceptable use policy
- Identify new computer workstation requirements, and establish workstation standards

2007-08

- Begin training of staff, with focus on integration of technology into the curriculum during in-service training in summer 2007, before our first students arrive
- Welcome our first cohort of students
- Establish a strong focus on learning standards, and identify where technology can

- support the standards across all areas
- Address full-time staffing requirements
- Utilize technology in the classroom, as well as email, file storage

2008-09

- Continue deployment process of technology to ensure equity, while addressing the highest priority educational needs of the agency
- Continue staff development
- Initiate evaluation design to assess technology impact, such as impact of technology on student test scores on value added assessments over the first two years.
- Assess technology and educational trends, and revise technology plan to address emerging needs

6.0 Projected Budget, Funding Sources and Schedule

Included in this section is a more detailed technology budget that itemizes the various components of the technology plan and vision. The budget provides a more concrete view of the specific technology vision, as well as the infrastructure design.

Non-erate eligible funded items - 3 year plan

Items	2006-07	2007-08	2008-09
PC and laptops	\$20,000.00	\$20,000.00	\$20,000.00
Printer and upgrades	\$ 5,000.00	\$ 2,500.00	\$ 2,500.00
Network Software, licenses	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
Peripherals (digital cameras, video cameras, toners)	\$ 1,000.00	\$ 500.00	\$ 500.00
Non-Erate eligible MDF Equipment	\$11,500.00		
Digital Overhead Projectors	\$15,000.00		
Totals	\$55,000.00	\$25,500.00	\$25,500.00

Budget Components and Conceptual Infrastructure Design

The overall goal of this effort is to plan, design and implement technology that would improve teaching and learning and better prepare students with the necessary information technology skills for the 21st Century.

In addition, Henry Johnson’s educational requirements will be supported through this technology infrastructure. The design includes the following:

- **Stability**—Create the technology infrastructure once and preserve investment in infrastructure through application of the best design and management practices in the information technology industry.
- **Flexibility**—Provide for expandability and scalability of the design in order to address new or undefined needs.
- **Manageability**—Adhere to industry standards and commit to controlling costs through centralized management and control techniques.
- **Performance**—Apply capacity planning and bandwidth allocation techniques to

support present and future applications including Internet, video and multimedia interactive technology.

- Cost Effectiveness—Integrate voice, video and data networking, where feasible, as well as focusing all technology investments on the critical need for all technology to support the teaching and learning environment.
- Support of the entire educational program, including instructional and administrative applications, through a comprehensive technology infrastructure. This design provides a comprehensive infrastructure that will position Henry Johnson well into the 21st Century, and allow access to the full range of technology capabilities and resources that will be necessary for us to remain effective in educating students.

7.0 Staff Development

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

We will develop staff proficiency in the use of the keyboard, mouse, files and networking. In addition, all staff will receive training in basic tool applications such as e-mail and the World Wide Web. Beyond this, we will provide on-going training to our staff in the integration of technology into their curricular areas. We will also work to link technology with the Standards and Frameworks.

Staff development in technology as well as the application of networked technology for staff training is critical to our ability to meet Professional Development Plans that are now required by the New York State Education Department. NYSED now requires the recertification of all new teachers every five years, and our teachers will now have to complete 175 hours of continuing education units (CEU's) during that time. We see distance learning and applied instructional technologies as the most efficient delivery of this training.

8.0 Community Involvement and Support

Henry Johnson Charter School was born of a community demand for an innovative alternative to the existing public school options available in the City of Albany, NY. As the community was involved in the school's birth, so it shall be in its life.

9.0 Integration Into the Curriculum

Students will eventually use technology to access information from the Internet, prepare a variety of reports in textual and multimedia formats, and present information to a variety of audiences. We envision that students will be using a range of technology tools such as word processing, spreadsheets, graphics, databases, and network tools (e-mail and web browsers) to access, analyze and present information

across all disciplines. Technology will play a crucial role in English/Language Arts, Science, Social Studies, Mathematics, as well as the other disciplines. We will be training our teachers in each subject area to use technology both as a teaching tool and as a student learning tool.

The ultimate goal is the improvement of student learning. With technology, teacher-planning resources will be more available, including all curriculum materials and technology enhanced lessons. A professional library will be established, with linkages to Standards and Curriculum Frameworks, including lesson resources and technology tools.

10.0 Evaluation

Henry Johnson will develop both formative and summative evaluation components of its Educational Technology 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. Surveying our student population will take place when they become upper elementary age students.

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.

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?

This information includes the following: levels of technology access in the school, levels of technology use, perceptions of staff/students toward technology, perceptions of the impact of technology on student learning and achievement including local, state and national test data. A critical measure we expect to use will be our student portfolios and the new exams that are linked to the Standards and Frameworks.

Summative or impact evaluation will use a variety of outcome measures, including:

- State tests
- Student skills in use of technology
- Student activity on the system
- Student time on the system
- Surveys of teachers and students
- Effective schools data
- Teacher survey

- Entrant survey for teachers and students
- Community survey
- Norm referenced test instruments-- item analysis

11.0 Next Steps

A. Completion of the Present Capital Project Planning

B. Policies and Procedures Development

Although not always included in the discussion of infrastructure, it is critical to establish a clear set of policies and procedures in a number of areas, including the following:

- Acceptable Use Policy for technology and the Internet
- Internet firewall and filtering
- Software evaluation criteria and selection process
- Policies for adding software to the network, including addressing copyright issues
- Training requirements for teachers and others--how to identify and meet training needs
- Support requirements for the system and technical training needs
- Problem identification, tracking and resolution procedures
- Web information policies for public dissemination of information electronically
- Developing a taxonomy and sequence by age/grade level of learner skills related to technology tools