

**DEPARTMENT OF TECHNOLOGY AND MEDIA SERVICES  
Wilmette Public Schools**

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**INFORMATION ITEM**

**Date:** June 24, 2013

**To:** Raymond E. Lechner, PhD.  
Superintendent of Schools

**From:** Adam Denenberg  
Director of Technology and Media Services

**Subject:** Highcrest 6<sup>th</sup> Grade iPad Pilot Program

**Technology Integration Background**

District 39 has a successful history of technology integration over the past twelve years. Technology tools have been used to differentiate instruction, conduct research, facilitate assessments, demonstrate learning, and to create transformative learning projects. Students in kindergarten through eighth grade have participated in these activities while sharing access to computers and laptops in every school. For the past six years, with a wealth of interactive web based resources and further development of productivity and creativity applications, students have been collaborating on assignments and presentations, creating multimedia projects, and posting work online for a global audience. Throughout this time professional development on technology tools that support curriculum has been offered to district teachers.

**History of 1:1 Learning Environment Research**

The District 39 technology department has carefully researched 1:1 learning environments over the past nine years. In 2004 visits were made to Palatine School District 15 and Avoca District 37 to observe early forays into 1:1 learning initiatives. Many visits since then have occurred at other area schools. In addition, members from the technology department regularly attend annual local and national technology educator conferences, collaborate with educational technology leaders, and examine research and implementation strategies for 1:1 learning programs. Discussions on device management, best practices, and lessons learned from other 1:1 initiatives have been documented. Additionally research, surveys, and recommendations from this year's CRC study have been reviewed. During all of this time, explorations of various types of 1:1 devices have been ongoing. As new technology products and tools have been released throughout the past nine years, the district has been eagerly waiting for a cost effective device that would be our District 39 "tipping point."

### **History of iPads in District 39**

The release of iPads in 2010 presented a potentially transformative and low cost tool for our consideration. At this time research and tinkering intensified in District 39. Since many teachers began purchasing their own personal iPads which utilize many of the same creative and productive applications that they were already using with students (iMovie, Garage Band, Keynote, Pages), teachers quickly embraced iPads. Other iPad benefits observed by teachers included its portability, increased battery life, a wide range of educational apps and tools, and ease of use. Teachers also began to find educational resources, collaborate, and incubate curricular uses for iPads.

### **iPads for Student Services and Reading Support**

Through Special Education grants, Title 1 funding, and an Educational Foundation Gripp Grant, iPads were purchased for Reading Specialists, English Language Learners, Speech and Language Pathologists, Occupational Therapists, and special education students. The portability, durability, and efficient battery life of these devices as well as the highly developed set of accessibility features provide many benefits for these children. For the first time, some of these students were working independently on classroom assignments that previously required adult support for dictation and writing.

Additionally, the iPads have been used as communication devices, audio recorders, text-to-speech converters, as well as helping students develop life skills. Some of the life skills supported on iPads include organization, scheduling, time management, social stories, and visual learning activities. The onscreen keyboards make it easier for students to type and offer features such as Slow Keys, Sticky Keys, and Mouse Keys to accommodate various physical and motor needs. For students in need of visual and spatial accommodations, iPads can invert colors and magnify areas of the screen. Teachers are also utilizing an accessibility feature called Guided Access that prevents students from quitting or leaving an app. This allows teachers to monitor and focus student usage on iPads. The iPads are not only a tool to assist student development of skills and participation in classroom activities, they also provide an opportunity for students to use devices that are identical to those used by their typically developing peers.

### **iPads for Teachers**

An iPad has also been purchased for technology innovators in District 39 to tinker and incubate curricular uses. Over the last three years iPads were given to technology teachers, librarians, differentiation support teachers, student service teachers, administrators, and members of the district technology support department. In addition, physical education teachers are using iPads to collect fitness data in gyms and on the fields. Also, six iPads were purchased through an Education Foundation Gripp Grant for a first grade classroom at Romona School and ten iPads were purchased by the McKenzie PTA for use in kindergarten classrooms. In kindergarten these iPads are used in learning centers to reinforce and support literacy and phonics lessons. At Romona School the iPads are used for

differentiating instruction in spelling, math and phonics, as well as for creating journals and multimedia projects. Children use iPads both independently and collaboratively in small groups.

### **Shared iPad Carts in Schools**

As highlighted at last month's Board of Education Meeting, two years ago a cart of iPads was purchased for every school for teachers to checkout and use with their classes. Like the laptop carts at our schools, the teachers are using the iPads to differentiate instruction, and the students are conducting research, collaborating on assignments in Google Drive and other Internet resources, completing assessments, and creating engaging projects. With the wealth of apps that allow students to record audio and video as well as upload pictures taken with the iPad, students are able to create truly transformative multimedia projects. These carts are in high demand at all schools and requests for additional carts have been made.

### **Student Benefits for 1:1 Learning Environments**

As reported last month, a technology task force worked alongside CRC this year to further research 1:1 learning environments. The CRC review of literature, case studies, and survey data highlighted the following student benefits associated with 1:1 learning environments:

- Transforms students from consumers of information to creators of content
- Increases student engagement and ownership in learning
- Provides access to "anytime anywhere learning"
- Supports the information literacy requirements of the Common Core Learning Standards (CCSS) and the National Education Technology Standards (NETS)
- Promotes the vision of the District 39 CONNECTED Strategic Plan

Benefits to students are the core reasons for the CRC recommending the district move forward with a 1:1 pilot program during the 2013-2014 school year.

### **Sixth Grade Pilot**

A sixth grade house at Highcrest Middle School has been chosen for the pilot next school year. This house contains four teachers and a learning behavior specialist. They will receive regular support and collaboration time with the Highcrest technology teachers and the district technology staff next year. These teachers have committed to leading future professional development and support if the pilot program is successful and future expansion is found to be appropriate for District 39. Other factors in choosing sixth grade as the target year for the pilot is the potential for continued device usage from sixth through eighth grade and a projected three-year useful product life span. In this pilot program each student involved will receive a district iPad for use at school and home. Fifth grade parents were provided an opportunity to opt their children out of this pilot program and have them placed in a different house. Out of 470 students, fourteen students were opted-out of the pilot program. This small pilot will provide information regarding

cost, the technical support needed to manage the program, the rate of broken or lost devices, the core set of apps, and any necessary peripheral devices such as keyboards or a stylus. Data will also be collected on district technical resources required to support this program.

### **Pilot Program Measures**

Throughout the 2013-2014 iPad pilot, valuable parent, teacher, student, and administrator feedback will be collected. The following mechanisms have been identified as data sources:

- Parent, teacher, student, and administrator surveys
- Parent, teacher, student, and administrator focus groups
- Teacher and student field notes

All of this information will be used to help determine if a 1:1 program is appropriate for District 39. It will also be used to communicate and address concerns, problems, and successes of the program. This data will be considered in any future expansion plans for the 1:1 program.

### **Implementation Strategies from Project Red**

This year's CRC committee reviewed the *Project Red Roadmap for Transformation* report. This was a large-scale national study conducted by a group of educators and industry professionals to identify factors that make great K-12 technology implementations. These researchers examined programs at over a thousand schools and identified nine key implementation factors for successful 1:1 programs. Each factor is described below with additional information on how District 39 is implementing these strategies.

**1 . Change led by building leadership.** Project Red recommends the following model for leading a successful 1:1 implementation:

- Principal modeling
- Provision of teacher collaboration time
- Online professional development
- Change management strategies
- Regular professional development

These recommendations have been followed at Highcrest Middle School. Principal Dr. Dave Palzet and Grade Level Administrator Cindy Anderson have been leaders in developing the iPad pilot program and have provided the resources for proper planning and collaboration throughout the 2012-2013 school year. This has included weekly meetings with the Sixth Grade Pilot Teachers, Learning Behavior Specialist, the Highcrest technology team, building administrators, and the Director of Technology and Media Services. Structures have also been put in place to accommodate additional collaboration and to

share resources over the summer and during the 2013-2014 school year. This includes common planning periods, regular pilot planning meetings, a wiki for sharing ideas, problems and concerns, and a series of professional development classes. Dr. Palzet and Cindy Anderson also participated in training on using apps and iPads and creating electronic books with iBook Author. They attended regular iPad Pilot planning meetings, conducted site visits of 1:1 iPad schools, and have modeled technology and iPad usage as building leaders. One way they have modeled technology usage is by creating an iPad data dashboard that all Highcrest and junior high teachers use to analyze data, maintain instructional notes on students, and make instructional decisions. This has been a valuable tool and has allowed teachers to make data driven decisions regarding instruction. Another example of the administration team modeling technology use is by using iBook Author to create and publish the electronic eBook version of the Highcrest Middle School and Wilmette Junior High School Improvement Plan.

- 2 . Intervention classes.** Project Red defines technology-transformed intervention classes as those in which technology plays an integral role in learning. It is a learning environment in which every student has a computer or device and has the curriculum delivered electronically. They recommend technology be integrated for English language learners, Title 1, special education, and reading intervention programs. The piloting teachers will be using a learning management system (LMS) that will allow them to post assignments, links, and curriculum materials online and have students submit their work electronically. It will also provide a way to give instant feedback to students and to conduct online assessments. This LMS is already being configured by the pilot teachers and modified by the team's learning behavior specialist. As already mentioned earlier in this report, iPads are already used for many intervention areas throughout the district, including Highcrest Middle School.
- 3 . Online collaboration.** Project Red found that many students that have trouble with a concept use technology-based collaboration tools to query a peer for assistance. They also recommend students use technology daily for online collaboration. Furthermore, they found that online collaboration tools erase the barriers of time and distance. Collaboration can extend beyond an individual's immediate circle of friends and create a larger network made up of mentors, tutors, and experts. Online collaboration is a regular part of technology integration throughout the district with the use of collaboration tools such as Google Drive and other Web 2.0 tools. In addition, online collaboration is an integral part of the LMS system being adopted for the pilot program at Highcrest Middle School.
- 4 . Core subjects.** Project Red also found that 1:1 programs that incorporate core curriculum on technology every week have the most success. Project Red recommends technology is integrated into core curriculum on a weekly basis or even more frequently. With the use of a learning management system, ongoing

collaboration, and professional development, the pilot teachers will be prepared to deliver core curriculum on iPads on a daily basis. The teachers are reviewing their curriculum maps and the Common Core Learning Standards and transitioning lessons and materials to iPads. They are striving to deliver a paperless version of the sixth grade curriculum.

**5. Online formative assessment.** Project Red also recommends 1:1 programs implement online formative assessment. With tools such as Google Forms, Nearpod, and the LMS system being implemented next year, sixth grade teachers will have the resources and support for creating regular online assessments. The teachers have received professional development on these tools and have started to create online assessments.

**6. Student computer ratio.** Project Red reported that the lower the student to device ratio is, the better the outcomes of the program. This will be tested in the 1:1 pilot program next year. Data will be collected through a variety of ways already discussed in this report including parent, student, teacher, and administrator surveys, focus groups, and the collection of field notes.

**7&8. Virtual field trips & Search engines.** Project Red also found that monthly virtual field trips and daily usage of search engines contributed to successful 1:1 programs. The use of virtual field trips as well as search engines are just some of the many technology integration teaching strategies already being implemented throughout District 39. Having devices available on a daily basis will only increase these opportunities for students. Lessons on information literacy, Internet Safety, and Cyberbullying will also continue to be part of the instruction for the sixth grade students.

**9. Principal training.** The Project Red research also found that principals must ensure teacher buy-in, model best practices, and be trained to lead effective implementation. The Highcrest administrators are modeling iPad and technology tools throughout their administrative duties as well leading ongoing dialogue about the iPad pilot with all Highcrest Teachers. They will be participating in the creation of the Student and Parent iPad Handbook and teacher resources, as well as communicating with parents and students in the pilot program.

### **Student and Parent Handbook and Orientation**

A parent meeting will take place in late August to review the procedures and information in the Student and Parent iPad Handbook. The Highcrest administrative team and the Director of Technology will lead this meeting. This handbook will include information and resources for families. A website is being developed to house the handbook, as well as frequently asked questions, and other necessary resources for the pilot program. Some information to be covered in the handbook and at the orientation meeting will include:

- A student pledge for iPad usage
- iPad device identification
- Creating an iTunes account
- Random teacher check-ins
- Care of the iPad (carrying, storing, charging, cleaning, case usage)
- Home Internet access recommendations
- Digital Citizenship, Internet Safety, and Cyberbullying
- Usage outside of school
- Student discipline and rules against “jailbreaking” the operating system
- Apps, software updates, and restrictions for installing personal apps
- Setting a passcode and Find My iPhone (iPad) tool for protecting data
- Suggestions for user passwords
- Questions and comments

Materials and information will be posted online and arrangements will be made for any parent who may not be able to attend this event.

### **iPad Technical Support**

Technical support for students and families will be provided through (but not limited to) the following resources:

- A dedicated email address will be created for parents, teachers, and students to answer common questions about procedures, school use, and technical support for district iPads.
- A district employee will be assigned to provide a daily before school drop-in resource for students.
- A website will be created to post electronic resources and tips for usage and troubleshooting for parents and students.

### **District Technology Pilot Preparation**

The district technology staff and the technology teachers took many steps in preparation for a potential pilot program next year. Some of these steps included:

- Tested, watched demonstrations, and met with districts implementing Mobile Device Management (MDM) tools to evaluate and select an MDM solution
- Added additional wireless access points in pilot rooms
- Increased district bandwidth to the Internet
- Purchased developer copies of iPad and iPhone Operating System Software (iOS) to test and stay updated on new features and developments
- Met regularly with local technology support teams (New Trier High School and sender schools, North Cook Technology Director Meetings, Glenview District 34 iPad user meeting) to evaluate, share, and collaborate on device management tools and implementation strategies

- Conducted in-depth lab testing of pilot core apps, the distribution process of apps, management of iOS settings with Apple Configurator and the MDM tool
- Attended multiple device management trainings at the Chicago Apple Education Briefing Center
- Evaluated Learning Management Systems
- Monitored the development and release of new wireless standards and products

Throughout the pilot program next year, Internet bandwidth, device management and support needs, as well as new software and device developments will be carefully monitored by the district technology support team. This will also include a continued review and evaluation of other mobile devices, and a quick response to student, teacher, and parent support requests.

**Fees and iPad Accidental Damage or Theft**

A self-insurance/usage fee of \$60 for each student participating in the iPad pilot program will be charged. This self-insurance/usage fee is similar to the plan followed by New Trier High School. With an approximate cost of \$600 for an iPad, apps, and a case, and an estimated 10% lost, stolen, or broken iPads, a \$60 contribution will be used to create a self-insurance plan. With the possibility of a device being damaged or lost more than one time, a structured repair and replacement program is outlined here:

<i>Occurrence</i>	<i>Damaged Device</i>	<i>Lost/Stolen Device</i>
1	<i>no charge</i>	\$60
2	\$60	\$75
3	\$540	\$540

Students and parents are responsible for full payment of *intentional* damages to the iPad. The Apple warranty and the district self-insurance/usage fee does not cover intentional damage of the iPad. In the event of damage, participating families and students should notify their homeroom teacher immediately. Further procedures will be highlighted in the student handbook and presented at the August parent and student orientation meeting. For the pilot year of this program participating students will be required to use a district purchased iPad. This will allow the district to handle initial device configurations, app installations, and make sure all students and teachers participating in the pilot are working with the same hardware and software. In the event of a future expansion of this program, this will be re-evaluated with considerations for parents purchasing their own iPads for student usage.



### **Professional Development**

Over the past two years Wilmette has offered many professional development opportunities on iPads. These have occurred during institute days, before and after school classes, as well as during lunch and common planning time. The piloting teachers have also been receiving professional development targeted at preparing them to deliver District 39 sixth grade curriculum to students through iPads. Classes are being offered over the summer and additional classes are being prepared for the 2013-2014 school year. Any district teacher may take these classes next year and efforts will be made to post course materials and videos online.

In the event the pilot is expanded beyond the pilot class next year, sixth and seventh grade teachers completing iPad staff development classes will be eligible for a district iPad. This will provide teachers more opportunities to tinker and incubate ways to deliver curriculum and differentiate instruction with iPads.

### **Cost of Ownership and Long-Term Financial Impact**

Next year an analysis will be conducted to help determine the long-term financial impact of the 1:1 iPad pilot. Savings as well as unknown costs will be identified and documented. Some of the expense areas to monitor include:

- Rate and cost of iPad repairs and device replacement
- Amount of time required by the district technology staff to setup and support the pilot program
- Resources required for the before school technology support program
- Wireless capacity and Internet bandwidth
- Cost of cases and peripheral devices such as a keyboard or a stylus
- Cost of apps and subscriptions

### **Potential Areas for Savings**

If the pilot program is successful and future expansion is implemented the following factors have been identified by the Project Red Research as potential areas for cost savings:

- Copy machines
- Student disciplinary actions
- Improved teacher attendance
- Paperwork and forms
- Space savings
- Cost of notebook or handheld hardware compared to a full featured laptop
- Online assessments
- Adoption of digital supplemental materials and eBooks
- Online professional learning

In addition to these potential areas for savings, the district is exploring specific electronic supplemental curriculum resources, creating our own electronic eBooks

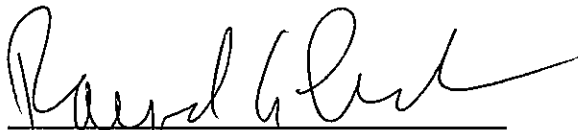
with iBook Author, as well as keeping our eye on a dramatically less expensive graphing calculator app that may replace the district calculator currently required by New Trier High School. By working with districts like New Trier and the sender schools, we will continue to explore potential cost savings as well as share research and resources.

Highcrest Middle School currently has over 150 desktop computers, 220 laptops, and 7 dedicated data servers dedicated for student usage. Decreasing and potentially replacing the desktop and laptop purchase and replacement cycle at schools with the addition of 1:1 devices can realize further savings with any future expansion of a 1:1 iPad pilot program. In addition, with students managing their iPad data through online collaboration tools and saving documents to the "cloud," the purchase and replacement cycle for district network servers can be significantly reduced.

### **Moving Forward**

In conclusion, with the strong history of technology integration, research and exploration of one-to-one learning environments, and recommendations from CRC this year, piloting teachers are eager and poised to lead a pilot program next year. Analysis of surveys, focus groups, and field notes will be used in conjunction with data on district technology support resources required for the program. The number of iPads lost, stolen, or damaged throughout the year will be documented. Updates will be provided to the Board of Education during the 2013-2014 school year on the data collected during the pilot as well as any future struggles and successes of the program.

**Recommended for presentation  
To the Board of Education**



**Raymond E. Lechner, Ph.D., Superintendent**