

DEPARTMENT OF TECHNOLOGY AND MEDIA SERVICES
Wilmette Public Schools

INFORMATION ITEM

Date: December 16, 2013

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

From: Adam Denenberg
Director of Technology and Media Services

Subject: Highcrest 6th Grade iPad Pilot Program Update

Review of Program Goals

At the start of the 2013-2014 school year, the iPad Pilot Program was implemented in four sixth grade homerooms. The iPads are tools for students to conduct research, collaborate and communicate with teachers and peers, participate in online discussions, create and lead presentations, take assessments, design creative projects, and use as an organizational tool for assignments, both at school and at home.

The goals of the 1:1 program are:

- To transform students from consumers of information to creators of content
Student learning can be modified and redefined through assignments and projects with daily access to a 1:1 device. Multimedia components such as sound and video can enhance student projects and offer something not available with the non-technology traditional assignments. Additionally wikis, blogs, online discussions, and collaborative writing assignments can be published online for peer feedback from a small select audience or a larger global audience.
- To provide access to “anytime anywhere learning”
When students have their own devices to use at home and school, and no longer have to share or reserve one, opportunities to learn anytime and anywhere are optimized. With their own device, students can collaborate on projects and communicate with their peers and teachers during and outside of the school day. Students can access information and resources when they have time in their schedules and when a learning need or interest presents itself.

- To increase student engagement and ownership in learning
Research has indicated that students in 1:1 environments are engaged in their work and take pride and ownership in their learning. They use their devices to look for answers, problem-solve, and communicate when they need assistance. Teachers use technology to differentiate instruction for all learners. The ability for students to collaborate with others through online learning opportunities such as Google Drive, email, video chatting, online discussions, and other Web 2.0 options increases student engagement.
- To support the information literacy requirements of the Common Core State Standards (CCSS) and the National Education Technology Standards (NETS)
The pilot team is providing learning experiences through technology-integrated lessons that align with the sixth grade curriculum and the Illinois Common Core State Standards. In addition, instruction on Internet Safety, Cyberbullying, and Digital Footprints is being provided.
- To promote the District 39 CONNECTED Strategic Plan
A 1:1 learning environment that uses technology as one tool to deliver core instruction will also provide students with opportunities to view global perspectives, learn and practice social responsibility, collaborate in learning, and develop strong communication skills. These CONNECTED skills will prepare students to be lifelong learners and develop the skills and knowledge for the future.

The effectiveness and impact of the pilot program on student learning, organization, and innovative experience is being measured throughout the year through observations, surveys, and parent and student focus groups. The focus groups will be conducted in January to acquire additional feedback on the impact of the program on the learning environment. Random student and parent participants will be selected from each homeroom class and results will be shared in an upcoming Board of Education Report.

Technology Pilot Preparation

The district technology teachers and support staff took the following steps to prepare for the 1:1 pilot program:

- Met with districts implementing Mobile Device Management (MDM) tools to research, test, evaluate, and select Meraki as the district 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 an 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 this year, Internet bandwidth, device management and support needs, as well as software and 1:1 device developments are being carefully monitored, tested, and evaluated by the district technology support team. This will also include a continued review and evaluation of other mobile devices, including the Google Chromebook and Nexus 7 Tablet, and a quick response to student, teacher, and parent support requests. The data gathered this year will be used in preparing for any potential expansion of the 1:1 program.

The Sixth Grade 1:1 Pilot Team

Beginning last spring the pilot team made up of four Sixth Grade teachers, a Learning Behavior Specialist, Technology teachers, the Highcrest Administrative Team, the Director of Technology, and members of the District Technology Support Staff began meeting on a weekly basis. Several meetings and writing projects were completed over the summer and weekly meetings resumed with the start of the school year. Some of the work completed so far has resulted in the following projects:

- Staff development on creating Electronic Books (eBooks) with the software application iBooks Author
- Staff development on the identified core pilot program apps
- Creation of the 1:1 iPad parent and student website
- iBooks for a student math guide and characteristics of successful learners resource guide
- Training and course development in Schoology
- A series of sixth grade flipped grammar lessons consisting of instructional videos, online assessments, and enrichment activities
- The development of rules and expectations for students participating in the 1:1 pilot program
- An opportunity for weekly brainstorming, resource sharing, curriculum planning, technical support, and success/achievement celebration

Orientation and the iPad User Agreement

Before pilot students were allowed to take iPads home they were required to attend an orientation meeting with a parent/guardian, to sign an iPad Acceptable Use Agreement, and to pay a \$60 self-insurance/usage fee. At the orientation meetings the goals of the 1:1 Pilot Program were presented, the iPad User Agreement was reviewed, and an opportunity for questions and answers was provided. Individual meetings were scheduled with any students and parents/guardians unable to attend an orientation meeting.

Below are some of the highlights of the iPad User Agreement:

- The District Board of Education Policy on Electronic Networks and the Student and Computer Internet Use Agreement apply to District 39 student iPads.
- Procedures for losing or damaging an iPad include notifying the homeroom teacher as soon as possible and sending a notice to the dedicated iPad support email address when possible.
- 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 is being collected to create a self-insurance program. With the possibility of a device being damaged or lost more than one time, a structured repair and replacement program has been developed:

<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.

- Instructions for caring for iPads including how to clean, handle, and protect the iPads are provided.
- When using the iPads outside of the District, students are bound by the same policies, procedures, and guidelines as when using the iPads in school.
- Managing your files and saving your work is the responsibility of the students. (However, students have received instructions and guidance for saving and backing up their data).
- Personal content on iPads (including, but not limited to, documents, music, audio files, and photographs) stored on the Mobile Device potentially could be subject to access by third parties pursuant to law or subject to discovery in a legal proceeding.
- Parents need to monitor and supervise their child’s use of the Mobile Device outside of school and make every effort to ensure their child’s compliance with the obligations and responsibilities described in the Agreement and in all applicable Board Policies related to their use of the Mobile Device.
- In the Waiver of Mobile Device-Related Claims section parents and children are asked to acknowledge that they have read, understood, and agreed to follow the guidelines and policies outlined or referenced in the user agreement. It states further that by signing this agreement, they “waive any and all claims you or your child (and each of your respective heirs, successors, and assigns) may have against District No. 39, its Board of Education, and its individual Board members, officers, employees, and agents relating to, connected with, or arising from the use of the Mobile Device or this Agreement.”

Pilot Launch

After years of research and preparation, the 1:1 iPad Pilot program officially kicked off on September 4, when 108 sixth grade students received their district iPads. All students gathered in the cafeteria for another review of the iPad Acceptable Use Agreement and instructions for caring for their iPads. When students went back to their homerooms teachers led discussions on classroom procedures and behavioral expectations related to iPad usage.

All student iTunes accounts were created with a parent or guardian and were configured without credit cards to prevent any students from purchasing apps. Students were reminded that they were not allowed to download any free apps without getting special permission from their teachers and that this will be monitored by random spot checks. So far there have been three or four random checks made by each homeroom teacher and several students were instructed to delete unapproved apps. In addition, a report will be run monthly using the district's mobile device management tool, to help check if any unapproved apps have been installed on student iPads.

Learning Management System and Workflow

The pilot team is using a learning management system (LMS) called Schoology that allows them to manage assignments and student resources. With Schoology, teachers can post instructional videos and links to curriculum materials and Internet resources. They can also conduct online assessments, facilitate discussion boards, handout assignments, and offer online written and/or video feedback. Accessing this system anytime with their iPad and Internet access, students can download, complete, and submit assignments from their iPads. Students also have the ability to message their teachers, view a homework calendar with dates from all of their classes, participate in discussions, take assessments and polls, and connect to work in their Google Drive accounts. Schoology also has a parental access feature, which has recently been activated for parents/guardians to view their children's participation in the pilot program.

While some tasks are required to be completed on an iPad and using Schoology, students may still choose paper and pencil for many assignments. When handwriting an assignment, students can upload a photo of their work on Schoology to submit upon completion, or they can submit a paper copy in school the next day. Students have also become more comfortable using iPads for math and are now completing more math assignments on the iPad rather than with paper and pencil.

Pilot Assignment Updates

Here are some of the ways students are learning with their 1:1 iPads so far this school year. As can be seen from the examples below, students are using their iPads in a variety of ways and across many subject areas.

General Examples

- Students are using blog entries to create individual electronic portfolios. Parents are posting online comments for their children and classmates have the ability to do so as well.
- A team blog, updated weekly by a student news director, has been created to share and communicate sixth grade activities with families.
- Students use their iPads to research, present, and lead discussions on current events.
- Homeroom i-Wonder Wednesdays have students using the app Wonderopolis to pick and research an interesting “wonder” topic and participate in a follow-up class discussion on Schoology.

Social Studies

- Students are collaborating on the creation of a website for their civilization project using Google Sites on the iPad. It includes student-researched information about farming and lifestyle, the food they eat, the irrigation system they use, their clothing, the shelters they live in, and the necessary jobs for their civilization.

Writing

- Grammar lessons are being flipped. Students watch videos at home created on the app Explain Everything and then take an online adjective quiz on Schoology. The results of the quiz guide instruction and activities the next day. Students are split into groups based on their performance on the quiz so that instruction is tailored to their current understanding of adjectives or other parts of speech.
- Students are submitting pre-writing expository webs, graphic organizers (with an option to create their own using the App Popplet) and rough drafts through Schoology. Teachers provide direct feedback on Schoology for students to use in the revision process in class the next day. Alternatively students who handwrite their webs or rough drafts submit photos taken with their iPads to Schoology to receive quick teacher feedback.
- After completing their country expository writing assignment, students are using the app Pic Collage to create a visual project.

Math

- During their study of rates and ratios, students used the iPad timer to collect data related to the time it takes to travel the distance from one class to another during a passing period. They entered and analyzed the quantitative data into a shared Google Drive spreadsheet. Using their data and digital photos students used the app Explain Everything to present their argument.
- Teachers are pre-assessing students on math concepts in Schoology and having students use apps to make their own concept maps.

Science

- Students participate in a Schoology science discussion board to serve as a study guide and peer feedback tool.
- Students are starting to document their experiments and the steps of the scientific process with notes and photos taken on the iPads.

World Languages

- Mandarin students are using Schoology to participate in discussion boards, and are using apps to create and submit projects.
- French students are making video recordings to monitor their speaking.
- Latin students have access to an iBook created by their teacher as well as other resources posted in Schoology.

Physical Education

- Students are monitoring and recording their heart rates during various exercises in Schoology and the UPAD app. The students are then reflecting on the experience in a Google Doc.

Measures of 1:1 Pilot

To begin gathering data and feedback on the success of the pilot program, parent, and student surveys were administered in October. As described in the District 39 CONNECTED Strategic Plan, the following indicators were identified for determining the success of the pilot:

- Student engagement and ownership of learning, increased school work and project completion, and less reliance on homework assistance structures
- Improved or expanded tools for organizational skills
- Observation of purposeful use of the device for academic endeavors
- Increased collaboration with teachers and classmates
- Increased content creation and easier access to information
- Improved abilities for providing feedback to students
- Expansion of instructional repertoires through technology integration
- Appropriate structures of support for transitioning to a 1:1 environment
- Responsiveness to students' social emotional challenges of functioning responsibly, respectfully, and safely with 1:1 tools
- Aspects of learning management system that were most beneficial

Parent Survey Results

With 108 students participating in the pilot program, 85 parents provided feedback on the 1:1 program. Below are the survey results from the parents. Clearly the majority of parents in every question (from 67%-89%) are supportive of the program so far and reporting positive benefits.

- 89.4% report they are Somewhat Satisfied or Very Satisfied with their child's participation in this initiative, 5.9% are Neutral, and 4.7% are Somewhat Dissatisfied.
- 84.7% report the academic impact of the 1:1 program on their child's educational experience is Good or Very Good, 14.1% report it is Fair, and 1.2% report it is Poor.
- 67.1% believe the social emotional impact of the program on their child's educational experience so far is Good or Very Good; 16.5% report it is Fair, and 4.8% Report it is Poor or Very Poor. 11.8% stated that the social emotional impact of the program on their child is Not Applicable.
- 87% report the iPad is a Useful Tool for Completing School Work, 9.4% are Neutral, and 3.6% report it is a distraction or hindrance to schoolwork.
- 88.2% Agree or Strongly Agree that the iPad has provided opportunities for their child to problem solve (communicate when they need help, find resources on their own, attempt multiple solutions), 8.2% are Neutral, and 3.5% Disagree
- 74.1% believe the iPad has provided opportunities to collaborate (email and discuss work with peers and teachers, complete joint assignments in Schoology and Google Drive), 24.7% are Neutral and 1.2% Disagree.
- 78.8% report the impact of the iPad tools on their child's organization of his/her school work has been Good or Very Good, 18.8% state Fair, and 2.4% report Poor.
- 80% report the level of self-advocacy their child is experiencing (ex. taking charge of their learning, communicating with their teachers, persistence in searching for answers) has been Good or Very Good, 17.6% report Fair, and 2.4% report Poor.
- 89.4% report their child's level of engagement and attitude toward school and learning this year is Good or Very Good, 8.2% report Fair and 2.4% report Poor or Very Poor.

Given an option for open-ended questions, benefits and concerns were expressed by parents. In terms of the positive feedback and benefits of the program, the main themes were that children are taking more ownership in their learning, are more independent, and are more organized and engaged in their learning.

While a relatively small percentage of parents reported concerns with the program in the survey, they provided written feedback in the open-ended questions. The main themes among their concerns centered around the question of the effectiveness of working on math problems on the iPad v. paper and pencil. In

addition, the feeling that it is harder to be involved and updated on their child’s learning without as many paper assignments coming home was expressed.

As a result of this feedback, the pilot teachers continue to provide students with a choice to use paper and pencil instead of the iPads. During the last few weeks, teachers have observed that when presented with a choice of paper and pencil or an iPad for math, most students are now selecting the iPad. The students are now more comfortable with drawing and writing on the iPads. Further discussion on math activities and instruction on iPads will be topics in upcoming focus groups.

In response to concerns about communication and awareness of their children’s assignments, on November 22nd parents were given access codes to Schoology. Access to this tool will provide parents the opportunity to view class assignments, resources, rubrics, submitted student work, and a homework calendar. With access to this tool and continued updates from the pilot team, efforts to improve communication to parents have been put in place.

Student Survey Results

101 students provided feedback on surveys in the fall. Below are the survey results from the students. Clearly the data provided illustrates that the majority of students report being comfortable and engaged with completing schoolwork on the iPads and they believe iPads are improving their learning tasks.

- 52.5% of students were Very Happy when they found out about being a part of the iPad Pilot, 40.6% were Interested, and 6.9% report they were Anxious.
- 42.6% describe their experiences using an iPad daily in school and at home as Improved or Enriched, 52.2% report they are Comfortable with the technology, and 5% report being Frustrated.
- No students reported being cyberbullied or teased by another student.
- Students were asked how the iPad impacts their ability to do specific tasks. here are the responses:

Answer Options	makes it harder	neither harder nor better	makes it better
Stay on task	19.8%	61.4%	18.8%
Participate in classroom activities	1%	42.6%	56.4
Complete assignments	6.9%	12.9%	80.2%
Learn	2%	26.7%	71.3%
Organize your school work and assignments	1%	13.9%	85.1%
Collaborate and work with your classmates	7.9%	31.7%	60.4%
Communicate with your teacher	0%	20.8%	79.2%
Access information & resources for learning	1%	5.9%	93.1%
Receive feedback from your peers & teachers	2%	13.9%	84.2%

Given an opportunity to answer open-ended questions, many benefits and positive comments were expressed by students as well as some concerns. The common benefits were related to using Schoology, feeling more organized, enjoying the ease and speed of receiving feedback from their teacher and peers, and having more ownership and engagement in their learning. In terms of concerns, some students are frustrated having to carry a heavy binder and iPad. Other students want to use more content specific apps such as math review games. Some reported preferring to use paper and pencil for assignments rather than the iPad.

As a result of this feedback, teachers continue to provide opportunities for students to choose paper and pencil for assignments instead of the iPad. In addition, in response to the complaints about carrying a heavy binder and an iPad, a small group of sixth grade students is now studying the current binder system and piloting alternative solutions. They are also reviewing the current sixth grade supplies list in order to make recommendations to change or remove items from the supply list.

Technology Support

Technical support for students and families has been provided by (but not limited to) the following resources:

- A dedicated email address has been created for parents, teachers, and students to answer common questions about procedures, school use, and technical support for district iPads. The email address is iPadsupport@wilmette39.org.
- A district employee has been assigned to provide a daily before school drop-in resource for students. This resource is located in the Highcrest Library and is available daily from 8:15 to 9:00 a.m. The program averages two-three students per week. Most issues have been related to Apple IDs, setting up iCloud backups, and restoring iPads that have been locked from external keyboards not being turned off in transit to and from school.
- A website was created to post electronic resources, QuickStart guides, Board of Education iPad Pilot updates, tips for usage and troubleshooting, and a list of the core apps provided on the iPads.

To date, one iPad screen was broken from a drop, and the speaker on one iPad broke as a result of a drop. In both cases the students were provided with a replacement iPad and the original iPad was sent in for repairs. Also, several iPad covers were replaced due to cracking from being dropped.

In addition to monitoring support email questions and problems addressed during the morning help desk, time studies are being conducted by the technology support staff and teachers to monitor the time required to manage and support this program. Updates on these studies will be provided during future Board of Education reports to guide any technology support or resources that may be considered or recommended if the pilot program is extended to all sixth and seventh grade students next school year.

Professional Development Update

Over the past two years all Wilmette teachers have been offered many professional development opportunities on using iPads as an instructional tool. These have occurred during Institute Days, before and after school classes, as well as during lunch and common planning time. The piloting teachers are participating in professional development targeted at preparing them to deliver District 39 sixth grade curriculum to students through iPads. Classes were offered over the summer and additional classes are being offered this year. Training for the pilot teachers this year has included Schoology, core app training, troubleshooting tips, and options for mirroring (or displaying) iPads on classroom SMART Boards.

Potential Financial Impact Study

A long-term financial impact of the 1:1 iPad pilot program is underway. Savings, as well as potential new 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 (both technology support and technology teachers) 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 any required peripheral devices if needed, such as keyboards
- Cost of apps and software subscriptions

Savings and Benefits

If the pilot program is successful and future expansion is implemented, the following factors have been identified as potential areas of benefit and/or cost savings:

- Reduced copy machine usage and toner fees
- Reduction (or elimination) in student binders and school supplies
- Reduction of desktop, laptop, and server equipment
- Reallocation of iPad carts, and laptops to students not participating in 1:1 programs
- Online professional learning

Highcrest Middle School currently has over 150 desktop computers, 220 laptops, and 7 data servers for student use while Wilmette Junior High has 243 desktop computers, 210 laptops, and 7 data servers. It will be possible to reduce the replacement cycle of this equipment and reallocate existing equipment to elementary schools if there is an expansion of the 1:1 student iPad 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 may also be significantly reduced. A further analysis of this data with some suggested financial implications will be presented at the May Board of Education meeting.

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. Working with New Trier High Schools and the sender schools, we will continue to explore potential cost savings as well as share research and resources.

Next Steps

Staff development, weekly meetings, and careful monitoring of technology support and resource needs will continue to occur over the remainder of the school year. Upcoming Board of Education reports will have more information on the following topics:

- Student focus group data in February
- Parent Focus group data in March
- Pilot teacher survey results and feedback in April
- Additional curriculum updates in all pilot reports
- A cost analysis report detailing expenses and necessary resources for expanding the pilot program to sixth and seventh grade in May
- End of the year student, parent, and teacher survey data and feedback in May

In conclusion, the initial feedback and results of the program indicate while there are areas to improve, the overall distribution and support of the program has been positive. Teacher and student surveys indicate the iPads are making a difference in student learning and the goals of the program are starting to be realized. With continued program updates and communication to pilot families, as well parental access to Schoology, the district hopes to continue to report positive impacts on student learning and a realization of the pilot program goals. During the February Board of Education meeting student focus group data will be presented followed by parent focus group data in March. The pilot teacher feedback will be compiled and presented in April and a cost analysis, end of the year student, and parent feedback, and recommendations for next school year will be reported in May.

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



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