

ORANGE COUNTY  
BOARD OF EDUCATION

AGENDA ITEM ABSTRACT

Meeting Date: April 8, 2013

AGENDA ITEM No. 13-04-11

ACTION ITEM: (Y/N) N

SUBJECT: Elementary 1:1 Initiative – Phase III Update

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- ATTACHMENTS:
1. Background Information.
  2. Program Planning.
  3. Professional Development.
  4. Digital Resources.
  5. Elementary Digital Conversion Questions and Answers.

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**PURPOSE:** The purpose of this agenda item is to provide the Board of Education information concerning Orange County Schools (OCS) Digital Conversion, Phase III, Grades 3-5.

**BACKGROUND:** On April 16, 2012 the Board of Education approved a two-year technology plan for submission to the State. Strategic priorities of this plan include goals for providing universal access to digital teaching and learning devices.

In May of 2012, the OCS Board of Education approved a Digital Conversion Plan consisting of three phases.

- Phase I, teacher laptop distribution and professional development (completed June 2012)
- Phase II, providing all students grades 6-12 a laptop computer (completed August-September 2012)
- Phase III, a tentative elementary digital conversion plan, was presented to be completed in the 2013-2014 school year.

A more detailed description of the OCS Digital Conversion Plan can be found at [www.orange.k12.nc.us/1to1/1\\_to\\_1.html](http://www.orange.k12.nc.us/1to1/1_to_1.html).

During this meeting, presentations will be made by teachers and administrators to demonstrate some representative current uses of technology in our elementary schools, as well as their thoughts on how technology has enhanced the instructional program.

An addendum to the *Preparing Orange County Schools for the Digital Classroom* is under development. This document includes specific information concerning infrastructure upgrade, device information, communication plans, technical/instructional support needs, digital resources, policies and procedures and a timeline. Following the processes used in the secondary conversion, this information will be brought back to the board for further consideration.

continued

**FINANCIAL IMPACT:** The cost for implementation of Phase III includes purchase of the elementary devices, digital resources, technical/instructional support staff and the wireless upgrades for each elementary school. Funding recommendations, device selection and other decision points will be a part of future board meeting agendas.

**RECOMMENDATION:** The Superintendent recommends the Board of Education receive presentations, discuss the Phase III plan and provide direction to staff as needed.

## BACKGROUND INFORMATION

### Students and Technology

Although technology has always been widely used in Orange County Schools (OCS), over time, the need for increased independent learning became apparent to many teachers. The ability to differentiate lessons, have more one-to-one face time with students and develop authentic lessons using technology available in college and job arenas were some of the concerns of the teachers.

From January through May, the Orange County Board of Education received information concerning how students today are living in an on-demand digital world. Conversations occurred on how students were “powering down” when they came to school and were lacking interest in getting all their content knowledge from books. Teachers and students were not maximizing their creativity in school to the same extent as at home.

Presentations/testimonials by school leadership teams, teachers and students were given, digital resources were cited, and professional development was planned. Plans were also made on how to communicate with parents; policies and procedures were reviewed or created; funding was made available; meetings with parents and students to give information on responsibilities and acceptable use were held; and laptop roll out procedures were developed.



During the 2011-2012 school year, OCS developed a three phase implementation plan for a digital conversion.

- Phase I—Teacher laptop roll out—June 2012  
Refreshing the teacher computer at this time would not only provide them the same device as the student in the fall, but would also allow them the summer to put together lessons digitally and become familiar with the laptop.
- Phase II—Secondary student laptop roll out – August–early September 2012  
As students received their laptop, they were given a “laptop care” presentation, and the policies concerning laptop use were reviewed again.
- Phase III—A tentative plan for grades 3-5 was developed  
The plan consisted of moving the existing laptops and carts from the secondary schools to 3<sup>rd</sup> grade classrooms and the creation of a committee during the 2012-2013 school year (made up of teachers, school leaders and parents) to review needs, devices, policies and procedures, as well as bring concerns from staff for consideration for the roll out of devices at Grades 4 and 5.





## PROGRAM PLANNING

An Elementary Digital Conversion committee was created that was made up of a representative from each school at grades 3, 4, and 5, special subject areas (music, art, physical, world language), an administrator, a parent who had a student at the secondary and elementary levels, and district central office leadership.

This committee's charge was to review the vision of the district, discuss the needs of a digital device, professional development, frequently asked questions concerning a potential 1:1 at the elementary level, and to serve as the conduit of information to their respective staffs.

Committee work started with a review of the technology vision for the district:



### **Orange County Schools Technology Plan**

**2012-2014**

#### ***Vision Statement***

*Orange County Schools, with support from the community, will prepare students to be college and career ready. Students will use technology to become self-directed learners, complex thinkers, quality producers, collaborative workers, and community contributors. Technology will play an integral part in preparing our students to be productive and competitive citizens in a global society.*

Next, the committee discussed the OCS secondary digital conversion and some of the lessons learned; parent meetings; professional development; roll out procedures; forms; policies, etc.

The committee then created a document listing those items they felt that students need to be able to do and considerations for the type of device for Grades 4 and 5 to use.

Below are the concerns regarding these considerations:

Students need to be able to:

- type documents, create presentations, movies and spreadsheets
- search the Internet safely
- use sufficient word processing program like Microsoft Word – Google, Libre office
- create photo stories



The device needs to be:

- durable, since students are not always as vigilant with the equipment
- have reliable Internet access (at school and home)
- teacher monitoring ability
- user friendly device
- load the Smart Notebook program
- movie maker/Photo Story/video camera
- use Google Chrome!
- iTunes for educational apps
- connect to printers
- headphone ports so they can bring earbuds
- keyboard to improve typing skills— discussion was that a minimum need was that students are aware of letter location on the keyboard to speed up the input process
- be able to plug in and continue working if their battery needs to be charged
- light enough to not cause issues (full-size laptop is too big and weighty)
- specialized software on the image for image creation/manipulation Music... PE... World Languages...
- USB port to plug in flash drives or a mouse if needed
- instruction should not be application dependent
- the device should have enough battery life to last all of the school day



Other considerations:

- extra chargers/cleaning wipes
- bag/backpack to carry them from place to place
- report tech issues in an easy way
- requirements to purchase (should district subsidize) headphones? 5GB flash drive?
- keyboard large enough not to cause damage to motor function in hands
- keyboard small enough to make sure they have adequate space on desk for other papers
- device should be as consistent as pen and paper
- teachers should have the same device as student

Several articles were shared that discussed using digital devices to support learning and steps to consider before purchasing a digital device for the classroom. (*"Would you buy a new car with a blindfold on?"*, *"Supporting Deep Conceptual Learning with Technology"* These articles are included in the "Articles" section of this addendum.)

## PROFESSIONAL DEVELOPMENT

For the past two years, OCS has been modeling the use of technology when providing staff development for staff. From the Common Core training to the summer *Catch the Wave* technology conference, teachers are being shown how to incorporate and use various programs as tools for their lessons.

The following is a list compiled by the Elementary Digital Conversion committee of professional development they would like to have for their schools. (Note: Schools self identified their choices by adding the school initials after the professional development item.)

### Elementary Professional Development Needed for Digital Conversion

- Further training on Google Docs, Spreadsheets, and presentations, as well as file organization, to be able to instruct students/share documents...(GAB) (CPES) (HES), CES, ECE (PES: tiered)
- Basic tech training for teachers (GAB), CES, ECE
  - A universal way to save student material that can be taught county-wide (i.e., Student Name. Description) (CPES), ECE, HES
  - Common errors and how to solve them (ex: wireless down) (CPES), ECE, HES
- Any new software that might be on the computers (CPES)(GAB),
- Parent education (GAB), CES, HES (if taken home)
- Must have a solid professional development plan for teachers to make productive use of the device (CPES)(GAB), CES (PES), HES
- How to convert files easily and what glitches may occur (in the sharing/moving of files) (GAB) , CES, ECE (CPES)
- Troubleshooting simple computer issues (GAB) (PES), CES, ECE, HES, CPES
- Differentiated tiered year-long PD that staff can become masters in a tool rather than exposure to many with no training. (GAB) (NH)(PES, CES definitely needs tiered training), ECE, HES (CPES)
- Must have consistent expectations for use of device (PES) (GAB), CES, HES
- Mandated PD in certain software/troubleshooting areas (PES)(HES)(GAB), CES, CPES
- PD in Google sites so teachers can have a place for students to access web-links or how to share those links in Docs (PES)(GAB), CES, ECE
- How to effectively use technology in a way that is meaningful (and not just fun)

A Professional Development Committee has been created by the district to oversee professional development that will pursue a tiered level of in-service trainings.

## DIGITAL RESOURCES

The following pages list the currently available digital resources for the elementary level. These resources are currently being purchased and supported by OCS. (See next three pages listing Digital Resources for the elementary grades the district is already using)

Other resources\*:

[Kindergarten Livebinders](#)

[1st Grade Livebinders](#)

[2nd Grade Livebinders](#)

[3rd Grade Livebinders](#)

[4th Grade Livebinders](#)

[5th Grade Livebinders](#)

\* Shared by the Winston-Salem/Forsyth County Schools



RESOURCE	URL	GRADES	How can it be used in the classroom or as a professional resource?	DESCRIPTION
Discovery Education	ocs.discoveryeducation.com	All K-12	Many of the topics have Teachers Guides and online quizzes that are graded for you.	Great source for videos and for complete lesson plans
Discovery Education Science TechBook	ocs.discoveryeducation.com	All Science K-12		The Discovery Education Science Techbook is a complete digital curricular resource that replaces traditional K-12 science textbooks and significantly lowers district costs.
Don Johnston	<a href="https://www.starttofinishbooks.com/">https://www.starttofinishbooks.com/</a>		Retrieving student's digital work, polling/quizzing students, assigning work, digital library, post messages, connect with parents and Calendar.	
Don Johnston	"Read Out Loud"	K-12	Read Out Loud provides text-to-speech and study tools that help you read files, websites or emails with comprehension.	
Edmodo	orange.edmodo.com	District required LMS for K-5 use. Cannot replace Moodle at the secondary level.	Online docs for individual or group development. Provides peer review and content sharing.	Edmodo's design is similar to Facebook, and provides teachers and students a secure place to connect, collaborate and share content.

RESOURCE	URL	GRADES	How can it be used in the classroom or as a professional resource?	DESCRIPTION
<b>Google Education</b> (Google Docs, Presentations, Spreadsheets, Sites)	<a href="https://docs.orange.k12.nc.us">docs.orange.k12.nc.us</a>	All	IXL is not just about helping your students learn math. Unlike traditional workbooks and exercises, IXL's practice game boards engage students in their math lessons. As they work for hours to uncover new prizes on their game board, they'll be gaining new math skills and confidence along the way.	Google Apps for Education offers a set of customizable tools that enable faculty, staff and students to work together and learn more effectively. Google Docs and Google Sites enable students and teachers to share documents online, at any time and from any location.
<b>IXL Math</b>	<a href="https://ixl.com/signin/oc">ixl.com/signin/oc</a>	6th Grade - Geometry Elementary is piloting this program 2012-2013 school year	Learning A-Z's teacher and student resources can be used in a variety of ways. Printable worksheets and other learning materials at 27 levels can be distributed to students, who can then use the resources for in-class instruction and at-home practice.	Interactive Math Site.
<b>Learning A-Z</b> (Reading A-Z, Raz-Kids, Vocabulary A-Z)	<a href="https://elearning.orange.k12.nc.us">elearning.orange.k12.nc.us</a>	K-12	Assignment submission, Discussion forum, Files download, grading, online calendar, online news and announcement, online quiz, wiki	Also known as Raz for Kids.

RESOURCE	URL	GRADES	How can it be used in the classroom or as a professional resource?	DESCRIPTION
<b>Moodle</b>	<a href="http://elearning.orange.k12.nc.us">elearning.orange.k12.nc.us</a>	All (best for later elementary-12) District required LMS for 6-12, but can be used at any grade level.	By helping teachers quickly find and manage content to match exactly what a student needs, netTrekker streamlines the critical path to personalized learning.	An e-learning platform or a learning management system. Moodle can be used for education, training and professional development.
<b>NetTrekker</b>	<a href="http://www.nettrekker.com">http://www.nettrekker.com</a>	All	Interactive, standards - based resources for grades 6-12 in English language arts, science, social studies, mathematics and Spanish	netTrekker is an Internet search engine created for K-12 students, teachers, librarians and parents.
<b>Study Island</b>	<a href="http://www.studyisland.com">www.studyisland.com</a>	Grades 6-12 and some elementary schools	Provides teachers with online access to the Teacher Guide. Also provides learning games, activities and tutorials for teachers to use in class and students/parents to use at home.	
<b>ThinkCentral</b>	<a href="http://www-k6.thinkcentral.com">www-k6.thinkcentral.com</a>	K-5		K-5 Math Resources that are aligned with the K-5 Math Expressions program.
<b>Time for Kids</b>	<a href="http://www.timeforkids.com/">http://www.timeforkids.com/</a>	Elementary	Centers, extension of classroom activities.	A student version of Time magazine.
<b>Tumblebooks</b>	<a href="http://www.tumblebooks.com/">http://www.tumblebooks.com/</a>	Elementary, ESL		An online collection of interactive e-books that students can read or have read to them.



<b>Voicethread</b>	orange.ed.voicethread.com	All	<a href="http://www.edutopia.org/voicethread-interactive-multimedia-albums">http://www.edutopia.org/voicethread-interactive-multimedia-albums</a> <a href="http://thinkingmachine.pbworks.com/w/page/22187721/Think-VoiceThreads">http://thinkingmachine.pbworks.com/w/page/22187721/Think-VoiceThreads</a>	With VoiceThread, group conversations are collected and shared in one place from anywhere.
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## ELEMENTARY DIGITAL CONVERSION QUESTIONS FROM STAFF

- 1. Will students be required to take their laptops home every day?**  
In general, the consensus of the elementary digital conversion committee is that these should not go home, or at least not initially. Concern: laptop carts will be needed for the classroom for storage and security.
- 2. Will students have email?**  
Students already have email, but it is turned off at the elementary level. The district can turn this on at any time or teachers may use Epals email, which provides the teacher a copy of all correspondence through email.
- 3. How do they access Google email? When they log in, there is no tab at the top that says mail. I was told that they did not have access to it. I have received assignments from students and emailed them to let them know they have been turned in and they have not been able to access them.**  
It will not show until it is turned on. Teachers can request this now if they would like.
- 4. Will students be responsible if the device breaks?**  
Like all OCS equipment, the person to whom the device is checked out to is responsible for repair/replacement unless there are unusual circumstances. If the student takes the computer home, he/she is responsible for breakage.
- 5. How will the devices be charged in the classroom?**  
Devices will need a cart for charging, or multi-port surge protectors will be purchased.
- 6. How do we monitor abuse of shared documents among students with non-school related and/or inappropriate subject matter? Is there a way to see who types what on a document?**  
There is a way to see who types what on a document...it is under "see revision history." The matter then becomes a discipline issue--probably with parent involvement.
- 7. At the school level, who will be responsible for technical issues with student computers? Currently, our school has only a half-time tech position, and that has not been filled this year.**  
This is a decision that will ultimately be made by the Board of Education, since it involves personnel and additional budgetary concerns.
- 8. Ideally, it would be desirable to have a part time technician at every school and a full time computer teacher. Has this been thought about?**  
Yes. This committee will make this recommendation to the Superintendent.

9. **How will we address the health concerns of carrying a lot of weight in backpacks? Will the district issue specific backpacks, as was done in the MS?**

This issue will depend on whether the students will take the devices home and the weight of the devices.

10. **Will we have school-wide training for students on tech issues, both logistical (e.g., how to charge the battery appropriately, remembering to shut down) and appropriate use of documents and web searching? Some kids have a good sense of it, but even those kids don't know everything.**

There will be a "laptop care" session with every elementary student before students use the devices the first time.

11. **Will parent notifications regarding the laptops be made available in the family's home language?**

It is district policy to translate all communications in English and Spanish.

12. **Will there be a wi-fi upgrade so that students don't get "bumped" off?**

The elementary schools will have a wireless upgrade prior to August. (July for Hillsborough Elementary.)

13. **If they can't take the laptops home, how are we preparing them for middle school when they do take them home (especially fifth grade)?**

The team will have to make its recommendation to the Superintendent and Board of Education based on the parent poll and general consensus.



14. **With Discovery Ed., assignments can be made for students to complete. This can't be done if they can't take laptops home.**

Good point. The district will be working with the Kramden Institute to make sure each OCS household has a computer available.

15. **Will the software be kept up to date so that devices run efficiently?**

Most of the software is web based. The county does not purchase much software that needs to be installed on the computer.

16. **Will teachers receive training on the technical issues since we might not have a tech person available?**

Teachers can be given some basic troubleshooting tips. This should go on the Professional Development list.

17. **Will there be parent meetings to prepare for this?**

Each school will be having several meetings for parents to provide information about the digital devices. A Family Academy Night for the Elementary Digital Conversion is already being planned.



**18. What if the parent cannot/will not pay the bill when the computer is broken?**

If students were to take them home, and the parent did not pay the repair bill (for something that was not under warranty), the student would not be allowed to take the computer home and could only use the device in the classroom.

**19. If computer can be taken home, what about home Internet access?**

The district will do a survey to evaluate how many students have the Internet at home. Families qualifying for free and reduced lunch will have information about enrollment in the \$9.99 a month high speed Internet from Century Link. If a student does not have Internet access at home, lessons will have to be downloaded to their device if they will be expected to complete the work at home.

**20. Do you have an outline of what the instructional requirements are for K-5 students? (i.e. by 3rd grade they need to be able to type a 1 page paper, students need to be able to create a 2 min video with audio & pics, etc.). This has an effect on what device is appropriate and/or the total cost of the device.**

Yes, and these requirements vary at each grade level. We do not want to purchase a device that will perform only limited functions.

**21. Does the district funding model support refreshing the machines every 3 or 4 years?**

Yes, for the secondary it is every 4 years. It will depend on the device selected as to the refresh cycle for the elementary.

**22. Will there be a common drive to save materials and to share SMART documents with students?**

At this time, all types of documents can be uploaded to Google Drive and shared by putting them in a folder that has been shared with everyone.

**23. What is our plan for maintaining the devices that we currently have, along with the new devices we will be placing in classrooms?**

There is a district technology plan that includes a refresh cycle for devices.

**24. If laptop usage/ take home is not started immediately or soon, will it happen (if teachers get comfortable keeping them at school will they ever "make the change")**

This is part of the discussion when considering whether the device will go home or not.

**25. What happens when students are not in their classroom at the end of the day, eg., they have specials, and the Specials teachers want to make use of the device in that class.**

A schedule will have to be developed so that students can return them to the classroom.

**26. Will there be a committee, or will it be this committee that will decide what software will be included in the device image?**

This committee will make suggestions on what needs to be on the system image; the district technology staff will add programs to the image that are currently used or necessary for security.

**27. Is it possible with ZScaler to have a greater level of internet protection/restrictions for elementary students based on login?**

Yes, the district plan provides a more restrictive filtering model for elementary schools.

**28. Will there be more technology support in the elementary schools to assist with troubleshooting and installing all the additional devices?**

This is a recommendation of the Elementary Digital Conversion Committee for the Superintendent and Board of Education.

