

ORANGE COUNTY
BOARD OF EDUCATION

AGENDA ITEM ABSTRACT

Meeting Date: October 3, 2011

AGENDA ITEM No. 11-10-11

ACTION: (Y/N) N

SUBJECT: School Technology Report

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ATTACHMENTS: 1. Technology Update Spreadsheet
2. Current and Future State and Local Technology Initiatives

PURPOSE: To provide the Board of Education a report on the past, current and future planning for the use of instructional technology in the Orange County Schools.

BACKGROUND: This technology report provides a five year review of the district's technology infrastructure and an overview of the instructional use of technology.

For this report, the Board of Education is being provided two pieces of information: a comparison spreadsheet of the district's technology status in 2006 and 2011 as well as a column devoted to future planning and direction. A narrative report that describes some of the local and state technology initiatives that the district must plan for and react to over the next several years is also provided.

Over the last five years, the district has seen a substantial decrease in state and federal funding. In response to this decrease, the Board of Education responded by providing local funding to support various projects: i.e. to install wireless networks, purchase hardware and software and other devices for the schools.

The presentation will include photos of how students are using Orange County School technology resources.

FINANCIAL IMPACT: In 2006, technology funding came from two sources: federal and state dollars – the combined amount received was \$198,607.00. Five years later there is no longer any federal funding – only state dollars – 2011-2012 state funding amount (fines and forfeitures only) - \$88,377.00.

Board of Education financial support from the CIP funds for 2010-2011 was \$611,096 and for the 2011-2012 it is \$500,000. Of these amounts each year approximately \$150,000 is distributed to the schools to enable them to purchase bulbs, laptop batteries, cables, replacement equipment and the other technology and audio needs of the individual schools. There is a Media and Technology Advisory Committee (which is now the School Improvement Team) that decides the use of technology money for their respective schools.

RECOMMENDATION: The Superintendent recommends that the Board of Education receive for information the instructional technology report.

	Where we were	Where we are going
	2006	2011
Infrastructure:		Future
Network	Housing individual servers for various services; schools have a minimum of 3 servers; decentralized approach	Evaluating security and capacity of network; virtualizing some servers
	25 mg bandwidth (internet connection)	100 mg bandwidth
	No devices on network unless owned by OCS	Most devices owned by OCS; others are checked by tech department to meet minimum security settings
Equipment		
Smartboards-	25	471
Document cameras	5	196
Servers	43	56
Student Response Systems	130	1049
Digital devices	2961	4860
Wiring	Hard wired devices	Wireless; majority still hardwired
Energy Management	None	Shutting down desktop computers at 6:45 each evening
Academically:		
Assessments	Paper and pencil	Some online state & local testing
Software	Purchased programs	Some purchased programs; some web based software
On line curriculum	None--or very little	An option for teachers but not widely used
Instruction	Traditional Face to Face teacher method	Face to face and some student centered /blended learning (combines traditional face-to-face classroom methods with more modern computer-mediated activities)*Wikipedia
Staff development	Face to face training; support in the classroom	Face to face and some online training; reduced support in the classroom
State & Federal monies	\$198,607	\$88,377
*Wikipedia Sources		

CURRENT AND FUTURE STATE AND LOCAL TECHNOLOGY INITIATIVES

Overview

Orange County Schools (OCS) has many varied uses for technology in schools which influences teaching practices, leadership, decision making and student learning. All support departments for the district also use technology in the daily operations of the plant. Including students, there are over 8,400 users on the OCS network.

The district migrated to Google Education during the summer of 2011 to provide email services, and other supports.

Current District Initiatives

MCNC, a company that “provides technical infrastructure to educate, innovate and enhance economic development throughout North Carolina,” is currently performing a network and security evaluation of the OCS network. They will be submitting a report with commendations and recommendations to the district. They have also agreed to assist in the development of a 21st Century topography design for the network.

All middle and elementary schools (10 schools) have Ipod carts (32 Ipods in each). There are 52 wireless Dell computer carts K-12, containing a total of 1152 laptops of various ages. Ipad2s have been purchased for the School Board and cabinet members. Principals, Assistant Principals and Directors (Leadership team) will be receiving a netbook very soon purchased with Race to the Top funds.

OCS has procured the services of CSI (a technology engineering firm) to write scripts that will help us update our many databases (over 10) each evening; presently the district is updating these databases manually, and it is difficult to keep them all current.

In an effort to move our media centers into e-books, all media specialists received and were trained on the Nook from Barnes and Noble. We also have several Nooks in various locations around the district, with 12 at Partnership Academy alone. A Nook allows for sharing e-books with six different devices or with other Nook users.

Electronic data security for the district has been increased through the following measures:

- student records will continue to be monitored for social security numbers and the removal of them
- additional firewall protection will be added to enhance the prevention of “hacking” our network
- software containing personnel information will be evaluated to ensure the security of employee social security numbers
- copier hard drives will be erased

District Professional Development

For the second consecutive summer, the district offered a local 3-day technology conference, “Catch the Wave.” A preconference day provided teachers in depth sessions on Google, advance Smartboard and other web programs. The 2nd and 3rd days were geared to technology in the

elementary and secondary classrooms, respectively. Professional development continues throughout the year at the district and local level. The district has 26 technology professional development sessions scheduled for the year; this does not include the offerings at the school level or any professional development that might arise during the year.

State Initiatives

Along with the new Common Core Curriculum that comes on board next year for Math and English, OCS teachers will be required to complete four online modules in a state program called NCFALCON. NCFALCON is a program that will give teachers training on formative assessments (assessments completed daily to check for understanding of what was taught that day).

A new 2-year technology plan is due April 5 (though the state no longer requires a technology plan, the federal government requires one for those applying for e-rate). This technology plan will provide a blueprint of how OCS will move into the new common core curriculum digitally and also in how to change the pedagogy and delivery methods used by teachers to reflect 21st century needs and engagement of students.

The North Carolina Department of Instruction (NCDPI) will be offering some cloud (not being housed inside our network) services, of which OCS will take advantage. Two of these services will be free Internet filtering and firewall security. Long term, NCDPI plans to offer reduced pricing on virus protection and several academic programs that most districts in North Carolina use, such as Discovery Education and Nettekker (safe student search engine). They also hope to offer a “single sign on” so that a student or teacher will not have 5-10 user names and passwords to remember.

With the state requiring districts to have students take end of course and end of grade tests online, the district is exploring how to best implement this initiative seamlessly and with a smooth transition for teachers and students.

Future Questions for Technology (For Board Discussion)

Along with the need for more devices for testing and classroom use, the district will be making decisions on how to provide content to students— will it be through:

- blended learning
- E-textbooks
- Online resources
- Traditional textbooks

How will STEM initiatives integrate with Orange County Schools technology resources? Will all students need their own device? If so, will the district provide this device or will OCS go to a “bring your own device” (BYOD) model? What would be the implications for professional development and technical support? When and how would the professional development be delivered? What kinds of high school classes might be offered? What are the budget implications of replacing old or adding new technology for students? These are all questions and decisions that the district will be discussing and making in the months ahead.