

ORANGE COUNTY  
BOARD OF EDUCATION

AGENDA ITEM ABSTRACT

Meeting Date: January 17, 2012

AGENDA ITEM No. 12-01-(2)-08

ACTION ITEM: (Y/N) Y

SUBJECT: One-to-One Laptop Initiative Proposal

INFO. CONTACT: Patrick Rhodes/Dr. Denise Morton/ Angie Veitch PHONE: 732-8126

ATTACHMENTS: 1. Proposed Funding Plan for One-to-One Laptop Implementation  
2. Project Plan/Timeline  
3. Article from NBC Education Nation – *Give Students Mobile Devices to Maximize Their Learning Time*

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**PURPOSE:** To provide the Board of Education a proposed budget and timeline to implement a student one-to-one laptop initiative in the Orange County Schools (OCS).

**BACKGROUND:** During the January 3, 2012 meeting, the Board of Education heard a presentation on future OCS technology initiatives. The purpose of that presentation was to gather the board's input on the development of the required technology plan which will be submitted to NCDPI this spring. A major component of the proposed technology plan is the implementation of a student one-to-one computer initiative. As was reported, OCS already has in place most of the components and infrastructure for successfully providing laptop computers for student use.

During the presentation, the Board responded positively and directed staff to develop a funding plan and to provide additional information on hardware and potential collaborative efforts with LENOVO.

Orange County Schools staff have engaged in partnership discussions with LENOVO. Their international headquarters are located in Morrisville, North Carolina and they are a world-wide leader in the manufacturing of mobile computer hardware.

Jason Mooneyham, Executive Director, U.S. Public Sector Sales at LENOVO, will provide a national perspective of technology in schools, discuss elements of a potential partnership with Orange County Schools, and show examples of hardware for student and teacher use.

**FINANCIAL IMPACT:** If approved, this project will be funded through a combination of state and local funding sources. The major funding source will be appropriations from the county's quarter cent sales tax. A more detailed funding plan including leasing options is attached.

**RECOMMENDATION:** The Superintendent recommends that the Board of Education discuss the proposed funding plan, make any needed modifications and approve the project. The Superintendent is also recommending the Board provide direction to staff related to the implementation of a One-to-One laptop initiative in the district.

## 1:1 Pilot Financing

(3 year financing)

QUOTE:

| Amount      | Rate  | Payments     | Factor    | Payments Per Year | Term    | Adv. / Arr. |
|-------------|-------|--------------|-----------|-------------------|---------|-------------|
| \$2,600,000 | 2.60% | \$889,028.14 | 0.3419339 | 1                 | 3 Years | Advance     |
| \$1,500,000 | 2.60% | \$512,900.85 | 0.3419339 | 1                 | 3 Years | Advance     |
| \$1,000,000 | 2.60% | \$341,993.90 | 0.3419339 | 1                 | 3 Years | Advance     |

(4 year financing)

| Amount      | Rate  | Payments     | Factor  | Payments Per Year | Term    | Adv. / Arr. |
|-------------|-------|--------------|---------|-------------------|---------|-------------|
| \$2,500,000 | 2.60% | \$649,227.04 | 0.25969 | 1                 | 4 Years | Advance     |
| \$2,000,000 | 2.60% | \$519,381.63 | 0.25969 | 1                 | 4 Years | Advance     |
| \$1,500,000 | 2.60% | \$389,536.22 | 0.25969 | 1                 | 4 Years | Advance     |
| \$1,000,000 | 2.60% | \$259,690.82 | 0.25969 | 1                 | 4 Years | Advance     |

**FUNDING:**

**Phase 1**

**2011-2012 School Year**

|                             | <b>No. of Computers</b> | <b>Unit Price</b> | <b>Total</b>         |
|-----------------------------|-------------------------|-------------------|----------------------|
| <b>K-12 Certified Staff</b> | <b>650</b>              | <b>\$600</b>      | <b>\$ 390,000.00</b> |
| Tech budget                 |                         | \$200,000         |                      |
| CTE                         |                         | \$16,900          |                      |
| Textbooks                   |                         | \$123,100         |                      |
| Other                       |                         | \$50,000          |                      |

**Phase 2**

**2012-2013 School Year**

|                             | <b>No. of Computers</b> | <b>Unit Price</b> | <b>Total</b>           |
|-----------------------------|-------------------------|-------------------|------------------------|
| <b>Students Grades 6-12</b> | <b>4100</b>             | <b>\$600</b>      | <b>\$ 2,460,000.00</b> |

**Phase 3**

**2013-2014 School Year**

|                            | <b>No. of Computers</b> | <b>Unit Price</b> | <b>Total</b>         |
|----------------------------|-------------------------|-------------------|----------------------|
| <b>Students Grades 4-5</b> | <b>1150</b>             | <b>\$600</b>      | <b>\$ 690,000.00</b> |

# Orange County Schools 1:1 Project Plan



| Task Name   | Q1 2012 |     |     | Q2 2012 |     |     | Q3 2012 |     |     | Q4 2012 |     |     | Q1 2013 |     |     | Q2 2013 |     |     | Q3 2013 |     |     |  |
|---|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|--|
|   | Jan     | Feb | Mar | Apr     | May | Jun | Jul     | Aug | Sep | Oct     | Nov | Dec | Jan     | Feb | Mar | Apr     | May | Jun | Jul     | Aug | Sep |  |
| 1 2011-2012   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 2 Planning Phase  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 3 Meeting with School Board to give info and receive approval for project |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 4 Technology/Textbook Committee Meetings                                  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 5 Distribution Phases   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 6 Phase 1: Computers to staff   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 7 Order staff computers-650   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 8 Computers are setup and inventoried                                     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 9 Computers are distributed to staff                                      |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 10 Information Distribution Phases  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 11 Meeting with staff   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 12 Meeting with parents about 1:1   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 13 Communication -- getting out info on 1:1 to community                  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 14  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 15 2012-2013  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 16 Phase 2: Computers to Grades 6-12                                      |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 17 Order 6-12 computers-1700  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 18 Computers are setup and inventoried                                    |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 19 Computers are distributed to students                                  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 20 Laptop Carts moved to Elementary 3 Grade Classrooms                    |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 21 2013-2014  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 22 Phase 3: Computers to Grades 4-5                                       |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 23 Order Grade 4-5 computers-1150   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 24 Computers are setup and inventoried                                    |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 25 Computers are distributed to students                                  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 26  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 27 2012-2014  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 28 Training Phase   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 29 Learning Management System-- Moodle or other---- how to create         |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 30 Common Core and technology use   |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 31  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |





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## Give Students Mobile Devices to Maximize Their Learning Time

Chris Dede // Jan. 5, 2012 // 12:15 PM

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The Education Department's 2010 National Educational Technology Plan (NETP) presents a transformational vision for 21st century education, depicting how new technologies can help people learn lifelong and "life-wide" - in libraries and museums and their homes, and through interactions with people in their neighborhood and community.



In particular, mobile devices enable learning anywhere and anytime, moving education beyond the industrial era model, where classrooms are the primary place of learning, the school day is the primary educational time, and the teacher is the primary source of information.

We know that students' lives outside school are filled with technology, giving them 24/7 mobile access to information and allowing them to participate in online social networks and communities where people worldwide share ideas, collaborate, and learn new things. Our education system should leverage students' interest in technology and the time they spend learning informally outside the regular school hours to extend learning time in a way that motivates them even more.

Mobile broadband devices now have six senses:

1. Knowing where you are
2. Interacting with networks
3. Sensing local content and services
4. Discovering relevant things
5. Enhancing your surroundings with information and simulation
6. Learning your interests, as well as how and with whom you like to learn

This new capacity for learning, which is infused with global information, is a powerful way of

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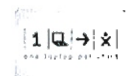
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complementing the traditional model of learning, which is isolated from the world in classroom settings.

Cellphones, tablets and other mobile devices now provide access to a much broader and more flexible set of learning resources than is available in classrooms. They also create connections to a wider and more flexible set of "educators," including parents, informal educators, and community-based coaches, tutors, and mentors. And, learning experiences can be customized for individual learners with content and instructional styles designed to fit the interests and experience of each person.

For example, when students are learning online, there are multiple opportunities to use technology for assessment. As students work, the system can capture information about their problem-solving sequences, knowledge, and strategies, as reflected by the information they select or input, the number of attempts they make, the number of hints and feedback given, and the time it takes them to solve a problem.

But there are some limitations. Four key areas must be resolved to realize the power of mobile broadband for ubiquitous learning:

**Devices and infrastructure:** How can we best balance educational investments between wired computers and the emerging infrastructure of wireless mobile devices?

**Safety and privacy:** How can we use internet access and digital student data to enhance education, while preventing various forms of abuse?

**Digital assets and assessments:** How can we drive innovation in digital learning materials and services when the education market is notoriously fragmented and slow to adapt, and when the strengths and limits of mobile devices for learning are not well understood?

**Human capital:** How can we empower educators and other stakeholders to realize the potential of anytime, anyplace mobile learning through evolutionary, revolutionary, and disruptive transformations that move beyond the model of industrial era schooling?

And, barriers in each of these areas create difficulties for progress in the others.

A ubiquitous technology infrastructure that supports anytime, anyplace learning is the hallmark of a 21st century educational system. I believe that every student and educator should have a mobile broadband device, with training and support for its optimal usage to empower learning. As discussed in the NETP, policy makers should systematically explore mechanisms to fund such an infrastructure for every district, school, and student, regardless of economic status.

*Chris Dede is the Timothy E. Wirth Professor in Learning Technologies at Harvard's Graduate School of Education. Each fall, he co-hosts a major conference for Qualcomm on mobile learning.*

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